2018-2019

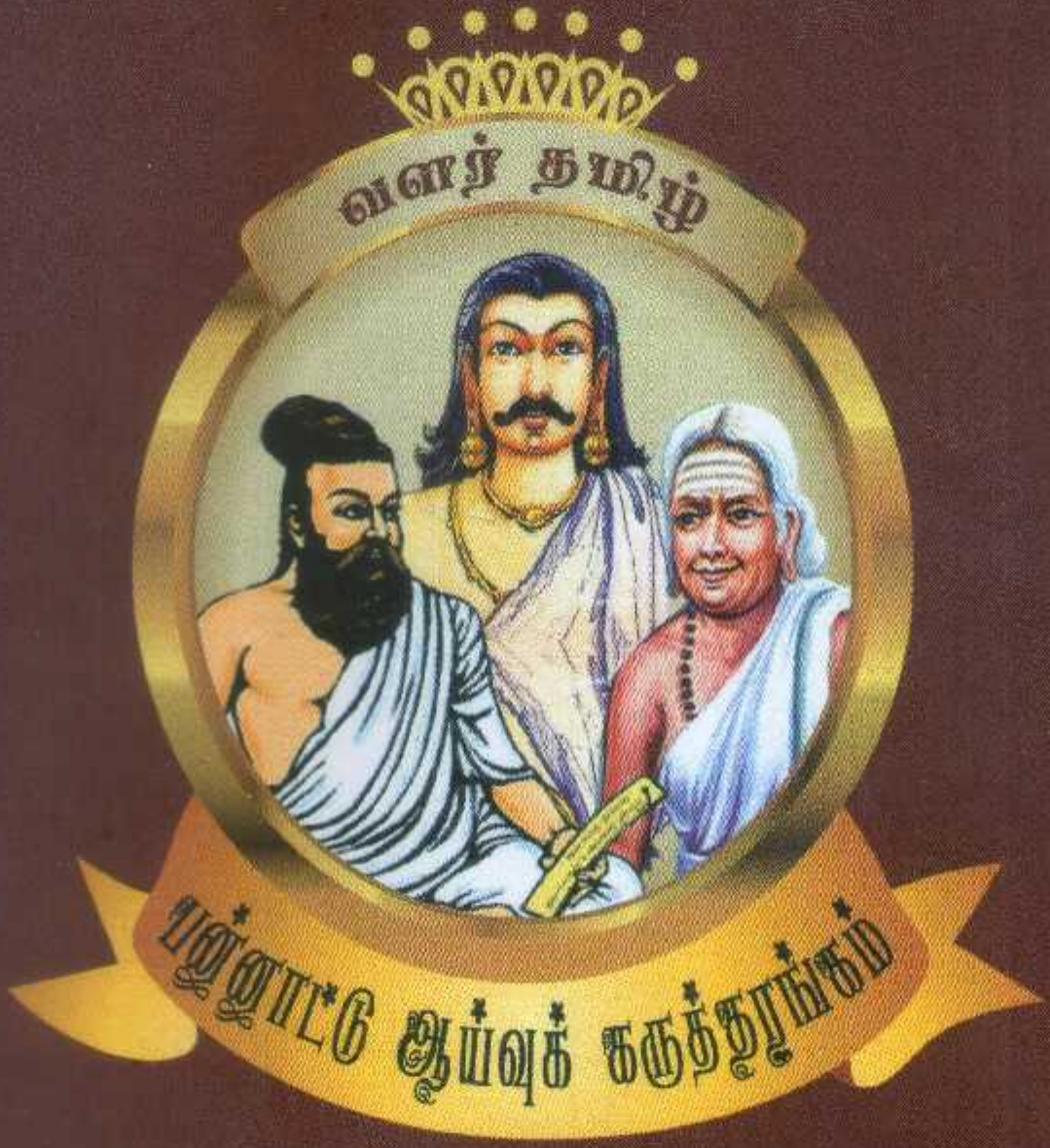
Explanatory Note for the Evidences

The evidences related to the Books and Chapters in edited volumes published by the faculty of Department of Tamil run from page no: 2 to 90. The titles are given in near equivalent English terms.

S.No	Title of the book / Chapter published
1	Tamilum Isaiyum
2	Kaviya Kannadasan
3	The cults and cultural elements of the people of Tirupur in the Subrabharathimaniyan Pudinangal
4	Heart-melting condolences on the Kaviyarasarin Kavithaikal
5	Culture of Sangam Tamils
6	Aatanathi Aadhimandhi Kaviyathil Maruthi
7	Characteristic interests of women showing in kurunthogai
8	Kavignar Kannadasanum Thathuvangalum
9	Kaviyathalaivanin Thathuva Sinthanaigal
10	Business Resources in Pandianatu (Maduraikanchi vazhiel)
11	The action and grace of Lord Shiva in Thirumanthiram
12	Kannadasan's Social Thoughts
13	Eight qualities that Jesus epic shows in yesu kaviyam
14	Arthamula Indhumathathil Merkol
15	Kannadasan Devotion and Philosophy
16	Devotion in Kannadasan Kavithai
17	Pavai Nokil Thaipavaiyum Thirupavaiyum
18	Extrinsic Thoughts in kannadasan kavithai
19	kannadasain devotion
20	Folklore in Kaviyarasu songs
21	Yappu in Kannadasan's poems
22	Nadukal worship in the literature and contemporary worship

அரசு கிளை நூலகம், இனாம் கரூர்
(வாசகர் வட்டம்)

தமிழியல் மீளாய்வு மையம்



பதிப்பாசிரியர்கள்

தமிழ்த்திரு ம. மோகனசுந்தரம்

தமிழ்த்திரு ஜெ. கார்த்திக்

வெளியீடு :

தமிழியல் மீளாய்வு மையம்

பொருளடக்கம்

6.தமிழும் இசையும்

முனைவர் ஆர். நிர்மலா தேவி
தமிழ்த்துறைத் தலைவர்
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 638 012

இசை என்பது இனிய கலை. மனிதர் மட்டுமின்றி அ.றிணை உயிர்களும் இசைக்குக் கட்டுப்படும். இசையைக் கேட்டால் கோழி அதிக முட்டையிடும், பசு அதிகமான பாலைத் தரும். இசைக்குக் கட்டுப்படாதவன் எத்தகைய கொடுஞ் செயலையும் செய்யக்கூடியவன் என்று ஷேக்ஸ்பியர் தெரிவித்திருக்கிறார். இசைக்கு இனிமை, புகழ், பாட்டு, என்ற பொருளைப் பெயர்ச்சொல்லாக இருக்கும்போதும், இணங்கு, உடன்பாடு என்ற பொருளை வினைச்சொல்லாக இருக்கும்போது தருகிறது. இசையைக் கேட்கும் எவரும் அதன் இனிமையில் மயக்குவார்கள், உடன்படுவார்கள் என்பதால் முதனிலை தொழிற்பெயராகிய இசை காரணப் பெயராகிறது. தமிழர் வாழ்வில் இசை பெரும் பங்குள்ளது. குழந்தைப் பருவத்தில் தாலாட்டு, விளையாட்டுப் பருவத்தில் காக்கை, நிலா பற்றிய பாடல், உடற்பயிற்சி நிலையில் கைவீசச் சொல்லிப் பாட்டு, திருமணத்தின் போது நலுங்குப் பாட்டு, இறைவனை வணங்கும் போது பக்திப் பாட்டு, கதை கேட்கும் நிலையில் நாட்டுப்புறக் கதைப் பாடல், வசதியும் ஓய்வும் கொண்டோருக்கு மேடை இசைப்பாடல்கள், இறப்பின் போது ஒப்பாரிப் பாட்டு என்று தமிழரின் வாழ்வில் எல்லா நிலைகளிலும் இசை இடம் பெற்றுள்ளது. ஒரு மலை முகட்டிலிருந்து மற்றொரு மலை முகட்டில் வாழும் தம் சகாக்களுக்குத் தேவையான தகவல் கொடுப்பதற்காகவும், ஓய்வு நேரங்களில் மகிழ்ச்சியாக இருப்பதற்காகவும், தம் வேட்டைத் தொழிலின் போது விலங்குகளை ஓட்டி உணவு தயாரித்துக் கொள்வதற்காகவும் இசைக்கருவிகள் பயன்படுத்தப்பட்ன.

தோலிசைக் கருவிகள், துளையிசைக் கருவிகள், கஞ்சக்கருவிகள், நரம்புக்கருவி, மிடற்றுக்கருவி எனப் பலவகைக் கருவிகள் நாட்டுப்புற மக்களிடம் உபயோகத்திலிருந்தன. நாட்டுப்புற மக்கள் பயன்படுத்திய முதல் இசைக்கருவி அவர்களுடைய வாய். வாயினால் எழுப்பப்படும் ஒரு வகை ஒலி குலவை ஒலி என்று பெயர் பெறும். குலவையின் ஓசை ஊதுவது போல் இருக்கும். வயலில் நாற்று நடும் போதும், மகிழ்ச்சியான சூழ்நிலையிலும் தங்கள் வாய்களால் எழுப்பும் ஓசை குலவை போடுதல். நாற்று நடும் போது வரம்பில் பெரியவர்கள் வரும்போது குலவையிடுவது ஒரு மரியாதை. அதற்குப் பிரதிபலனாக அவர்கள் வெற்றிலை பாக்கு வாங்க அவர்களுக்குப் பணமுடிப்பினைத் தருவது அவர்களுக்கு மரியாதை. திருமணங்களில் மாப்பிள்ளையைக் கிராமப் பெண்கள் வரவேற்கும் சடங்கின் போதும் குலவையிடுதல் மரபு.

தாளம் ஆட்டத்திற்கும், பாட்டிற்கும் அடிப்படையாகும். தாளம் தரும் இசைக்கருவிகள் பல. கும்மி ஆட்டத்தில் பெண்களின் கைக்கொட்டுதலே தாளமாக அமையும். பலர் சேர்ந்து எதுகை, மோனை நிரம்பிய இசைப்பாடல்களுடன் ஆடுவர். பாட்டின் இசை, கைகள் கூடுவதால் உண்டான ஓசை ஆகியவற்றால் காதுக்கும், ஆடுகின்ற பாணியும் கூடி நடந்து செல்லும் பாங்கும் கண்களுக்கு, கலை விருந்தாக அமையும் கும்மி நடனத்துக்கு ஏற்றவாறு கைகொட்டியும் பாட்டுப்பாடியும் நடனமாடுவது கொம்மாய் எனப்பெறும். இச்சொல் விருந்தே கும்மி என்னும் சொல் ஏற்பட்டது. கையினால் தாளமிட்டு ஆடிய முறையிலிருந்து மாறுபட்டு காலினில் சலங்கை கட்டி ஆடும் முறை வந்தது. அதனை ஒயில் கும்மி என்று அழைத்தனர். ஆடவர்களும் இதில் பங்கேற்றனர். கால்களில் சலங்கையைக் கட்டிக் கொண்டு புராணக்கதைகளைச் சொல்லியவாறு கால் சலங்கையை ஒலியின் ஓசைக்கேற்றவாறு நடனமாடுவார்கள். இங்கு சலங்கை இசைக்கருவியாக செயல்படுகிறது. அடுத்தபடியாக கையில் கோல் கொண்டு நடனமிட்டார்கள். அந்த நடனத்திற்குக் கோலே இசைக்கருவியாகப்

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

பொருளடக்கம்

கவியரசரின் கவித்துவத்தில் நெஞ்சை உருக்கும் இரங்கற்பாக்கள்

வாழ்க்கை என்பது இன்பமும் துன்பமும் நிறைந்த ஒன்று. மனித வாழ்க்கையில் இன்பத்தைவிடத் துன்பமே பெரும் பகுதியை தனதாக்கிக் கொண்டுள்ளது. முதலில் மனிதன் இன்பத்தில் பாடியதை அடுத்துத துன்பத்தில் தான் பாடியிருக்க வேண்டும். இன்பம் எளிதில் மறையக் கூடியது. ஆனால், துன்பம் என்றும் திரும்பத் திரும்ப நம்மைச் சிந்திக்கச் செய்வது வாழ்க்கையில் துன்பம் தான் ஒவ்வொரு மனிதனையும் பண்படச் செய்துள்ளது. மார்க்ஸ் முதல் கண்ணதாசன் வரை வாழ்க்கையில் ஏற்பட்ட துன்ப நிலைகள் அவர்களை உயர்த்தியுள்ளன. உயர்சிந்தனைகளை வளர்த்துள்ளன. கண்ணதாசன் வாழ்க்கையில் தான் பட்ட துன்ப அனுபவங்கள் தான் தன் கவிதை சிறப்பிற்குக் காரணம் என்று தனது வனவாசத்தில் கூறுகிறார்.

துன்பம் எளிதில் மாறக்கூடியது அன்று. அந்தத்துன்பம் பல நேரங்களில் இன்பம் தரும் துன்பமாக மாறுவதுண்டு கண்ணதாசனின் துன்ப நினைவுகள் நமக்குக் கவிதை இன்பத்தைத் தந்துள்ளன. கண்ணதாசனின் இறந்தவர்களை நினைத்து பெற்றோர், உற்றார், உறவினர், தலைவன், தலைவி, புரவலர், நண்பர், அன்பிற்குரியோர், மதிப்பிற்குரியோர் ஆகியோரின் இழப்பால் மனத்துயருற்று அவர்களின் குணநலத்தைச் சிறப்பித்து உரைக்கும் பாங்கு தனித்தன்மையினது,

கவிஞர் கண்ணதாசனின் உள்ளடக்கத்தில் இரங்கற்பாக்கள் மிக முக்கிய இடத்தைப் பெறுகின்றன. கவிஞர்களின் அவல உணர்வு வெளியீட்டுத்திறன் கற்பவர்களின் நெஞ்சை ஈர்க்கும் தன்மை கொண்டது. ஏனைய பாக்களைவிட இவரது துயரப்பாடல்கள் அனைத்தும் நெஞ்சை உருக்க வல்லன. இவை உள்ளம் குமைந்து நெஞ்சம் நெகிழ்ந்து பாடப்பட்ட கண்ணீர் சித்திரங்களாகும். கண்ணீர் கவலையைத் தீர்க்கும் அமைதியைத் தரும். ஆறுதல் அளிக்கும் நெஞ்சத்தில் நிம்மதியைத் தோற்றுவிக்கும் அதைக் கவிஞர் கையாளும் போது அவரது கவிதைகள் தன்னிறைவு பெறுகின்றன என்பதை இவ்வடிகள் காட்டுகின்றன.

"கண்ணீர் ஒன்றே கவலையைத்தீர்க்கும்
கவலை முடிவில் அனுபவம் சேர்க்கும்
ஆற்றா அழுகை அமைதியின் அன்னை
அஞ்சும் நெஞ்சும் அழுதால் தெரியும்"

"அன்புக்கோ இருவர் வேண்டும்
அழுகைக்கோ ஒருவர் போதும

*முனைவர் மு.ஹேமலதா, *உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி, ஈரோடு.*

தமிழ் இலக்கிய மரபில் பண்பாட்டுக் கூறுகள்

பன்னாட்டுக் கருத்தரங்கம்

ஆய்வுக்கோவை

ஆசிரியர் குழு

தமிழ்த்துறை

கோபி கலை அறிவியல் கல்லூரி(தன்னாட்சி)

கோபிசெட்டிபாளையம்

ஈரோடு மாவட்டம், தமிழ்நாடு – 638 453.

பிப்ரவரி – 2019

தலைப்பு	:	தமிழ் இலக்கிய மரபில் பண்பாட்டுக் கூறுகள்
முதற்பதிப்பு	:	பிப்ரவரி 2019
பதிப்புரிமை	:	பதிப்பாசிரியர்கள்
தாள்	:	டெம்மி 1/8
அட்டைப்படம்	:	ச. சக்கரபாணி, மென்பொருள் மேம்பாட்டாளர், கோபி கலை அறிவியல் கல்லூரி.
பதிப்பகம்	:	பாவை பதிப்பகம் 37 – A வடக்காவணி மூல வீதி, மதுரை - 1.
வெளியீடு	:	தமிழ்த்துறை கோபி கலை அறிவியல் கல்லூரி(தன்னாட்சி) கோபிசெட்டிபாளையம் ஈரோடு(மாவட்டம்) - 638 453.
பக்கங்கள்	:	595
விலை	:	325/-
இ.பு.த.எ.	:	978-81-939777-1-2
Title	:	Tamil Ilakkiya Marabil Panpaattuk Koorukal
First Edition	:	February 2019
Paper	:	Dummy 1/8
Wrapper Design	:	S.Chakkrapani, Software Developer, Gobi Arts & Science College
Printed by	:	Paavai Pathippagam 37 – A, North Avani Moola Street, Madurai.
Published by	:	Department of Tamil Gobi Arts & Science College(Autonomous) Gobichettipalayam – 53.
Pages	:	595
Rate	:	325/-
ISBN	:	978-81-939777-1-2

99. சுப்ரபாரதிமணியன் புதினங்களில் திருப்பூர் மக்களின் சிறுதெய்வ வழிபாடுகளும் பண்பாட்டுக்கூறுகளும்

முனைவர் மு. ஹேமலதா
உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி
(தன்னாட்சி).
ஈரோடு-12.

முன்னுரை

வழிபடு தெய்வம் நிற்புறங்காப்பு
பழிதீர் செல்வமொடு வழிவழி சிறந்து
பொலிமின்

(தொல் - செய்யு - 106)

என்ற தொல்காப்பியர் கூற்றுப்படி இறைவனை அடைவதற்கு வழிபாடு ஒன்றே மார்கம் என்பதை அறிகிறோம். இறைவனை வழிபாடு செய்வது உடலோடு உயிரைப் பாதுகாப்பதோடு இவ்வுலகில் சிறப்போடுவாழத் தேவையான கல்வி, அறிவு, புகழ், பொருள் போன்றவைகளைப் பெற வேண்டும் என்ற எண்ணமும் காரணமாகும். ஐம்பூதங்களை வழிபாடு செய்த மனிதன் தனது பரிணாம வளர்ச்சியின் அடுத்தகட்டமாகக் கடவுளைத் தோற்றுவித்து வணங்கினான். நம் முன்னோர்கள் நமது பழக்கவழக்கங்களையும் பண்பாட்டையும் இறை நம்பிக்கையின் அடித்தளத்திலேயே கட்டிக்காத்தனர். இன்றைய காலக்கட்டத்தில் இயந்திர வாழ்கைக்குத் தன்னைப் பழக்கிக்கொண்ட மனிதனுக்கு காலம்காலமாக நாம் போற்றி வந்த பண்பாட்டையும் கலாச்சாரத்தையும் இன்றைய இளைய தலைமுறையினருக்கு உணர்த்த வேண்டியது மிகவும் அவசியமானதாகும். பல்வேறு வகையான மதங்களும் சமயங்களும் காணப்பட்டாலும் அவற்றின் சாரம் மனிதனின் ஆண்ம வளர்ச்சி ஒன்றையே குறிக்கோளாகக் கொண்டது. அவ்வகையில் இன்று தமிழ் இலக்கிய உலகில் பெரும் செல்வாக்குப் பெற்றுவிளங்கும் புதினங்களில் நம் பாரம்பரியம் எவ்வாறு

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

பொருளடக்கம்

கவியரசரின் கவித்துவத்தில் நெஞ்சை உருக்கும் இரங்கற்பாக்கள்

வாழ்க்கை என்பது இன்பமும் துன்பமும் நிறைந்த ஒன்று. மனித வாழ்க்கையில் இன்பத்தைவிடத் துன்பமே பெரும் பகுதியை தனதாக்கிக் கொண்டுள்ளது. முதலில் மனிதன் இன்பத்தில் பாடியதை அடுத்துத துன்பத்தில் தான் பாடியிருக்க வேண்டும். இன்பம் எளிதில் மறையக் கூடியது. ஆனால், துன்பம் என்றும் திரும்பத் திரும்ப நம்மைச் சிந்திக்கச் செய்வது வாழ்க்கையில் துன்பம் தான் ஒவ்வொரு மனிதனையும் பண்படச் செய்துள்ளது. மார்க்ஸ் முதல் கண்ணதாசன் வரை வாழ்க்கையில் ஏற்பட்ட துன்ப நிலைகள் அவர்களை உயர்த்தியுள்ளன. உயர்சிந்தனைகளை வளர்த்துள்ளன. கண்ணதாசன் வாழ்க்கையில் தான் பட்ட துன்ப அனுபவங்கள் தான் தன் கவிதை சிறப்பிற்குக் காரணம் என்று தனது வனவாசத்தில் கூறுகிறார்.

துன்பம் எளிதில் மாறக்கூடியது அன்று. அந்தத்துன்பம் பல நேரங்களில் இன்பம் தரும் துன்பமாக மாறுவதுண்டு கண்ணதாசனின் துன்ப நினைவுகள் நமக்குக் கவிதை இன்பத்தைத் தந்துள்ளன. கண்ணதாசனின் இறந்தவர்களை நினைத்து பெற்றோர், உற்றார், உறவினர், தலைவன், தலைவி, புரவலர், நண்பர், அன்பிற்குரியோர், மதிப்பிற்குரியோர் ஆகியோரின் இழப்பால் மனத்துயருற்று அவர்களின் குணநலத்தைச் சிறப்பித்து உரைக்கும் பாங்கு தனித்தன்மையினது,

கவிஞர் கண்ணதாசனின் உள்ளடக்கத்தில் இரங்கற்பாக்கள் மிக முக்கிய இடத்தைப் பெறுகின்றன. கவிஞர்களின் அவல உணர்வு வெளியீட்டுத்திறன் கற்பவர்களின் நெஞ்சை ஈர்க்கும் தன்மை கொண்டது. ஏனைய பாக்களைவிட இவரது துயரப்பாடல்கள் அனைத்தும் நெஞ்சை உருக்க வல்லன. இவை உள்ளம் குமைந்து நெஞ்சம் நெகிழ்ந்து பாடப்பட்ட கண்ணீர் சித்திரங்களாகும். கண்ணீர் கவலையைத் தீர்க்கும் அமைதியைத் தரும். ஆறுதல் அளிக்கும் நெஞ்சத்தில் நிம்மதியைத் தோற்றுவிக்கும் அதைக் கவிஞர் கையாளும் போது அவரது கவிதைகள் தன்னிறைவு பெறுகின்றன என்பதை இவ்வடிகள் காட்டுகின்றன.

"கண்ணீர் ஒன்றே கவலையைத்தீர்க்கும்
கவலை முடிவில் அனுபவம் சேர்க்கும்
ஆற்றா அழுகை அமைதியின் அன்னை
அஞ்சும் நெஞ்சும் அழுதால் தெரியும்"

"அன்புக்கோ இருவர் வேண்டும்
அழுகைக்கோ ஒருவர் போதும

*முனைவர் மு.ஹேமலதா, *உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி, ஈரோடு.*

தமிழ் இலக்கிய மரபில் பண்பாட்டுக் கூறுகள்

பன்னாட்டுக் கருத்தரங்கம்

ஆய்வுக்கோவை

ஆசிரியர் குழு

தமிழ்த்துறை

கோபி கலை அறிவியல் கல்லூரி(தன்னாட்சி)

கோபிசெட்டிபாளையம்

ஈரோடு மாவட்டம், தமிழ்நாடு – 638 453.

பிப்ரவரி – 2019

தலைப்பு	:	**தமிழ் இலக்கிய மரபில் பண்பாட்டுக் கூறுகள்**
முதற்பதிப்பு	:	பிப்ரவரி 2019
பதிப்புரிமை	:	பதிப்பாசிரியர்கள்
தாள்	:	டெம்மி 1/8
அட்டைப்படம்	:	ச. சக்கரபாணி, மென்பொருள் மேம்பாட்டாளர், கோபி கலை அறிவியல் கல்லூரி.
பதிப்பகம்	:	**பாவை பதிப்பகம்** 37 – A வடக்காவணி மூல வீதி, மதுரை - 1.
வெளியீடு	:	**தமிழ்த்துறை** கோபி கலை அறிவியல் கல்லூரி(தன்னாட்சி) கோபிசெட்டிபாளையம் ஈரோடு(மாவட்டம்) - 638 453.
பக்கங்கள்	:	595
விலை	:	325/-
இ.பு.தா.எ.	:	978-81-939777-1-2
Title	:	**Tamil Ilakkiya Marabil Panpaattuk Koorukal**
First Edition	:	February 2019
Paper	:	Dummy 1/8
Wrapper Design	:	S.Chakkrapani, Software Developer, Gobi Arts & Science College
Printed by	:	**Paavai Pathippagam** 37 – A, North Avani Moola Street, Madurai.
Published by	:	**Department of Tamil** Gobi Arts & Science College(Autonomous) Gobichettipalayam – 53.
Pages	:	595
Rate	:	325/-
ISBN	:	978-81-939777-1-2

19. சங்கத்தமிழரின் பண்பாடு

முனைவர் ந.மு.கவிதா
உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு-12.

உலகில் நலம் பயக்கும் ஒழுக்கங்களை உணர்ந்து அதற்கேற்ப வாழ்வதே பண்புடைமையாகும். "பண்பெனப்படுவது பாடறிந்து ஒழுகல்" என்று கலித்தொகையில் கூறப்படுகிறது. ஒரு மனிதன் சான்றாண்மைகளில் வழுவாது நின்று வாழ்வதே பண்பாடாகும். சங்ககாலம் தொட்டே தமிழர்கள் அன்பு நிறைந்தவர்கள், சமுதாய நல்வாழ்வினையே மூச்சாகக் கருதியவர்கள். அவர்கள் பொதுமக்களின் நல்வாழ்விற்கு அடிப்படையாகச் சில கொள்கைகளை வகுத்துக் கொண்டமை இன்றைய சமுதாய நல்வாழ்விற்கும் வழித்துணையாய் வருகின்றன. அத்தகு சிறப்புமிகு சங்கத்தமிழர் வகுத்துக்கொண்ட கொள்கையே பண்பாடாகும்.

சங்கத் தமிழரின் தலையாய கொள்கை

நாட்டில் உள்ள மக்கள் பசியும் பிணியும் இன்றி வாழ வேண்டுமானால் அரசு நன்னெறியில் நடக்க வேண்டும். உள்நாட்டில் குழப்பமும் அயல் நாட்டுப் பகையும் ஏற்படாது அரசாங்கம் நடைபெறுதல் வேண்டும் என்பதைத் தெளிவான கொள்கையாக கொண்டிருந்தனர்.

"வாழி ஆதன் வாழி அவினி
பசிஇல் லாகுக பிணிசேன் நீங்குக
வேந்து பகை தணிக
ஆண்டு பல நந்துக
அறம் நனி சிறக்க அல்லது கெடுக"

என்ற ஐங்குறுநூறு பாடலில் அவினி என்னும் அரசன் வாழ்க என்ற வாழ்த்துடன் மக்கள் பசி என்னும் பிணி வருத்தாமல் வயிறார உண்டு வாழவேண்டும், உயிர்களைத் துன்புறுத்தும் நோய்கள் நீங்க வேண்டும் என்று தலைவி வேண்டுகிறாள். எல்லா உயிர்களும் எல்லா நலமும் பெற்று வாழவேண்டும் என்ற சிறந்த பண்பினையே சங்ககால மக்கள் தங்கள் மனதில் கொண்டு வாழ்ந்தனர்.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

ஆட்டனத்தி ஆதிமந்தி காவியத்தில் மருதி

கண்ணதாசன் பன்முகத் திறமை கொண்டவர். கவிதை, கதை, கட்டுரை, நாடகம், தத்துவம் என பல துறைகளிலும் மிகுதியாக எழுதியவர். ஆயிரக்கணக்கான திரையிசைப் பாடல்களை இயற்றியுள்ளார். இவருடைய தென்றல், கண்ணதாசன் ஆகிய இரு இதழ்களும் தனித்தன்மை பெற்று விளங்கியவை. தமிழக அரசு கவிஞராக வாய்ப்பு கிடைக்கப் பெற்று சிறந்து விளங்கியவர். இவர் எழுதிய குறுங்காவியம் ஆட்டனத்தி ஆதிமந்தி. அக்காப்பியத்தின் முன்னுரையில், "சங்க இலக்கியங்களில் காணப்பட்ட ஒரு காதல் காவியக் குறிப்பு என் சிந்தையைக் கவர்ந்தது... புரட்சிக் கவிஞர் பாரதிதாசன் இதே கதையைச் சேர தாண்டவம் என்ற பெயரில் எழுதிருப்பதையும் படித்துப் பார்த்தேன். பல்கலைக்கழகப் பேராசிரியர்கள் பலரையும் கலந்தேன். 1956இல் எனது முல்லை பத்திரிக்கையில் அதே வரலாற்றைக் கற்பனை கலவாது குறுங்காவியமாக எழுதினேன். கற்பனை கலந்து அதே ஆண்டில் மன்னாதி மன்னன் என்று திரைக்கதையாகவும் அதனை தந்தேன். வரலாற்றுச் சான்றுகளை மீறாத ஒரு சிறிய காவியம் இது" (கண்ணதாசன், ஆட்டனத்தி ஆதிமந்தி, முன்னுரை) என்று குறிப்பிட்டுள்ளார்.

"எட்டாவது மட்டுமே படித்த கண்ணதாசனின் இயற்பெயர் முத்தையா. ஆனால் பழந்தமிழ் இலக்கியங்களை நன்கு பயின்று தமிழ் இலக்கிய மரபை உணர்ந்தார். அதனால் இவருடைய பாடல்களில் அதன் தாக்குரவைக் காணலாம். ஆட்டனத்தி ஆதிமந்தி என்னும் காப்பியம் அனநாலூற்றுப் பாடல் குறிப்பு ஒன்றை அடிப்படையாகக் கொண்டு எழுந்ததே"(மா.செல்வராசன், இலக்கிய மெல்லுரை, ப.48) என்பார் மா.செல்வராசன்.

பரணர் பாடிய அகநானூற்றுப் பாடல்களிலும் வெள்ளிவீதியார் பாடிய அகநானூற்றுப் பாடலிலும் ஆட்டனத்தி ஆதிமந்தி பற்றிய குறிப்புகள் காணப்படுகின்றன.

ஆட்டனத்தி

சேரநாட்டு மன்னன் அத்தி ஆடற்கலையில் சிறந்து விளங்கியதால் ஆட்டன் என்னும் அடைமொழி பெற்று ஆட்டனத்தி என்று அழைக்கப்பட்டான். ஆத்தி தான் கற்றுத் தேர்ந்த ஆடற்கலையைப் பிறர்க்குப் பயிற்றுவித்தான். பலர் ஆட்டனத்தியிடம் ஆடற்கலையைக் பயின்றாலும் நாகைப்பட்டினத்துக் கன்னி மருதியும், சோழன் மகள் ஆதிமந்தியும் குறிப்பிடத்தக்கவர்கள். இரு பெண்களும் ஆட்டனத்தி மீது காதல் கொண்டனர். ஆனால் ஆட்டனத்தியின் மனம் மருதியையே விரும்பியது. ஆட்டனத்தியைப் பற்றிக் கண்ணதாசன் கூறுகையில்,

"தேடிடும் மாதரைச் சேர்வதால் இவன்
சேரன் எனும்பெயர் பெற்றானோ?

*முனைவர் ந.மு.கவிதா, *உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு-12.*

ஜி.ஆர்.ஜி நூற்றாண்டு விழா

தமிழ் இலக்கியங்களில் வரலாற்றுப் பின்புலமும் பண்பாட்டுப் பதிவுகளும்

(பன்னாட்டு ஆய்வுக்கருத்தரங்கம்)

1

பதிப்பாசிரியர்கள்

முனைவர் கோ. விசயராகவன்

முனைவர் இரா. சாந்தி

முனைவர் வே. தனபாக்கியலட்சுமி

முனைவர் வி.இரா. பவித்ரா

உலகத் தமிழாராய்ச்சி நிறுவனம், சென்னை

INTERNATIONAL INSTITUTE OF TAMIL STUDIES

பூசாகோஅர கிருஷ்ணம்மாள் மகளிர் கல்லூரி, கோயமுத்தூர்

An Autonomous Institution, Affliated to Bharathiar University)

(Accredited with A Grade by NAAC, An ISO 9001 : 2015 certified Institution

Pelamedu, Coimbatore - 641004

நூல் விவரக் குறிப்பு

நூல் தலைப்பு :	தமிழ் இலக்கியங்களில் வரலாற்றுப் பின்புலமும் பண்பாட்டுப் பதிவுகளும் (பன்னாட்டு ஆய்வுக்கருத்தரங்கம்)
பதிப்பாசிரியர்கள்:	முனைவர் கோ.விசயராகவன் முனைவர் இரா.சாந்தி முனைவர் வே.தனபாக்கியலட்சுமி, திருமதி அர.மரகதவள்ளி, முனைவர் து.சவிதா முனைவர் வி.இரா.பவித்ரா
வெளியீட்டாளரும்: பதிப்பு உரிமையும்	உலகத் தமிழாராய்ச்சி நிறுவனம் இரண்டாம் முதன்மைச் சாலை தரமணி, சென்னை-600 113 தொலைபேசி எண். 044 - 22542992
வெளியீட்டு எண்:	995
பதிவு எண் (ISBN):	978-9385165-02-3
மொழி :	தமிழ்
பதிப்பு :	முதற் பதிப்பு
பதிப்பு ஆண்டு :	2019
பயன்படுத்திய தாள்:	18.6 கிகி டி.என்.பி.எல் வெள்ளைத்தாள் (மேப்லித்தோ)
நூலின் அளவு :	1/8 டெமி
எழுத்தின் அளவு:	10 புள்ளி
பக்க எண்ணிக்கை:	664
அச்சுப்படிகளின் எண்ணிக்கை :	1000
விலை :	ரூ.465 (ரூபாய் நானூற்றி அறுபத்தைந்து மட்டும்)
அச்சகம் :	நவநீதம் அச்சகம் சென்னை-600 096
பொருண்மை :	இலக்கியம்

50. சங்க இலக்கியம் காட்டும் பண்பாட்டுப் பதிவுகள்
மு.ரேவதி

51. முகிலை ராஜபாண்டியனின் படைப்புக்களில்
வேளாண்மைப் புழங்குப்பொருட்கள்
கோ.கலைச்செல்வி

52. சிறுகதைகளில் இடம்பெறும் சிறார்களும்
அவர்களின்விளையாட்டு உலகமும்
திருமதி.செ.துளசி

53. தமிழர் பண்பாடு உணர்த்தும்
வாழ்வியல் நெறிகள்
முனைவர் இரா. ஜோதிமணி

54. அகநானூற்றில் மூவேந்தர்கள்
தி.ராதா

55. குறுந்தொகை காட்டும் மகளிர் பண்புநலன்
முனைவர்த.கவிதா

56. தமிழர் பண்பாடும் நாகரிகமும்
திருமதி.இந்திராணி தங்கவேல்

57. பாண்டியர்களின் அறநெறி
முனைவர் பொ.ராணி

58. குறுநாவல்களில் பண்பாட்டு மாற்றங்கள்
அ. நர்மதா

59. புரட்சிக்கவியின் தமிழுணர்வு
து.பால்ராஜ்

60. சங்ககால திருமண முறைகள்
உ.ஜோதிமலர்

61. தமிழர் பண்பாட்டில் முருகனின் கொடி
முனைவர்ந.மு.கவிதா

62. கண்ணணூர் பாலசுப்பிரமணியசுவாமி
கோயில் வரலாறு **கோ.இளையராஜா**

63. தொல்காப்பியத்தில் பண்பாட்டுக் கூறுகள்
மு.செல்வகுமார்

64. சங்க இலக்கியங்களில் தமிழரின் பண்பாட்டுப் பதிவுகள்
திருமதி ப.ராகசுதா

61. தமிழர் பண்பாட்டில் முருகனின் கொடி

முனைவர் ந.மு.கவிதா
உதவிப்பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு-12.

தமிழர்களின் வாழ்வியல் நெறி அன்புநெறி. எங்கும் நிறைந்திருக்கும் கடவுள் ஒன்றே என்பது தமிழ்ாகளின் எண்ணம். அவ்வாறு எங்கும் நிறைந்திருக்கும் அருவமான கடவுள், அடியவர்களின் மனதில் நிறைந்து, அவர்கள் நினைத்த வடிவில் உருவத் திருமேனி கொண்டு எழுந்தருளித் தத்துவக் கருத்துகளை விளக்குகின்றார். அடியவர் விரும்பிய காட்சி தந்து அருளும் கடவுள் வடிவங்களில் ஒன்றாவன் முருகன்.

முருகன் குன்றுதோறாடும் தன்னிகரற்ற தலைவன். ஒப்பாரும் மிக்காரும் இல்லாதவன். தேவர்களின் தலைவன் இந்திரனை வெற்றி கொண்டவன். அதனால் தேவர்களின் தலைவனாக விளங்கியவன். படைப்புக்கடவுள் பிரம்மாவுக்கும், தம்மைச் சான்றோனாக்கிய தன் தந்தை சிவபெருமானுக்கும் பிரணவத்தின் உட்பொருளை உணர்த்தியவன். தேவர்களும் அசுரர்களும் தன் ஆற்றலைக் கண்டு வியக்குமாறு தேவருலகை ஆட்சி செய்தவன். அத்தகு சிறப்பு வாய்ந்த முருகனைப் பால் மணம் மாறாப் பாலகன் எனச் சூரபத்மன் எண்ணியிருக்க, அவனே வியக்குமாறு ஒப்பற்ற தலைமைப் பண்பினைக் கொண்டு, அறிவில் சிறந்து விளங்கியவன் முருகன். இதனை,

"கோலமா மஞ்ஞை தன்னிற்
குலவிய குமரன் தன்னைப்
பாலனென் றிருந்தேன் அந்நாள்
பரிசிவை உணர்ந்திலேன் யான்
மாலயன் தனக்கும், ஏனைய
வானவர் தமக்கும் யார்க்கும்
மூலகார ணமாய் நின்ற
மூர்த்திஅம் மூர்த்தி அன்றோ?

(கந்தபுராணம், 4:13:433)

என்ற வரிகளால் அறியலாம்.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி
முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :
பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

பொருளடக்கம்

கவிஞர் கண்ணதாசனும் தத்துவங்களும்

செட்டிநாட்டுச் சிங்கம், களஞ்சன் என்பதில் என்பதில் எள்ளளவும் ஐயமில்லை. ஆம் வார்த்தைகளை அவனைவிட சிக்கனமாக வேறு யாரும் கையாண்டிருக்க முடியாது. என்பது போன்ற பல புகழாரங்களை சூடக்கூடிய கவிஞன் கண்ணதாசன். அதற்கு உதாரணங்கள் பல. இன்றைய கவிஞர்கள் தன் கவிதையில் கேள்வி கேட்கலாம் ஆனால் பதில் இருக்காது. கண்ணதாசனின் பாணி அலாதியானது அவனுக்கு முடிச்சுப் போடவும் தெரியும். அவிழ்க்கவும் தெரியும். கேள்வியும் எழுப்பி பதிலும் சொல்வதில் கண்ணதாசனுக்கு நிகர் கண்ணதாசனே. சாதி, மதம் கடந்தவர் கண்ணதாசன். உண்மையான கவிஞன் எப்படி இருக்க வேண்டும் என்பதற்கும், அக்கவிஞன் நாட்டு நடப்பையும் முறையே தெரிந்து வைத்திருக்க வேண்டும். பொது அறிவு நிரம்பியவனாக இருக்க வேண்டும். கற்பனை திறன் மிகுந்த சமயோசித புத்தி உடையவனாக இருக்க வேண்டும். அத்தனை குணங்களும் நிரம்பிய ஒரு கவிஞன்தான் கண்ணதாசன்.

தத்துவங்கள்:

கண்ணதாசனின் தத்துவார்த்த சிந்தனைக்கு உரைகல் "உள்ளம் என்பது ஆமை" என்ற பாடல் காப்பியடிப்பதை எல்லோராலும் சாத்தியப்படும் சிந்தனையை கிரகித்துக்கொண்டு சராம்சத்தை பிழிந்துக் கொடுக்கக்கூடிய திறன் அறிவு ஜீவிகளால் மட்டுமே முடியும். அத்தகைய திறனுடைய கண்ணதாசன் திருமூலரின் திருமந்திரத்தில் காணப்படும் வாழ்க்கைச் சித்தாந்தங்களை பாமரனும் புரிந்துகொள்ளும் வகையில் சொல்வதற்கு கண்ணதாசனையன்றி யாராலும் இயலாது.

திரைப்படப் பாடல்களில் தத்துவங்கள்:

தத்துவங்களை திரைப்படப் பாடல்களின் வழி பட்டி தொட்டிகளுக்கெல்லாம் கொண்டு சென்றவர் கண்ணதாசன். கரையாத உள்ளத்தையும் கரைக்கும் ஆற்றல் மிக்கப் பாடல்கள் பல அவற்றுள் ஒரு சில

"தெய்வம் என்றால் அது தெய்வம்- அது
சிலையென்றால் வெறும் சிலைதான்
உண்டு என்றால் அது உண்டு –
இல்லை என்றால் அது இல்லை"
என்ற தத்துவார்த்தைத் தரணிக்கு உணர்த்தியவர்.

"தொட்டிலுக்கு அன்னை / கட்டிலுக்கு கன்னி / பட்டினிக்குத் தீனி / கெட்டபின்பு ஞானி"- என்ற வரிகளைக் கேட்கையில் கண்ணதாசனின் அனுபவப் பாடம்தான் நாம் அறிந்து கொள்ள துணை செய்கிறது. உள்ளதை உள்ளதுபோல் கூறும் ஒளிவு மறைவு இல்லாதவர். இந்த வெளிப்படையான குணம்தான் ஆத்மார்த்தமான இரசிகர்களை தந்தது கண்ணதாசனுக்கு.

---

*திருமதி ஜோ.கனகவள்ளி, *உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி, ஈரோடு- 12.*

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

காவியத் தலைவனின் தத்துவச் சிந்தனைகள்

இருபதாம் நூற்றாண்டில் மகாகவி பாரதிக்கும் பாவேந்தர் பாரதிதாசனுக்கும் புகழ் சேர்க்கும் வகையில் புதுவகையான கவிதைச் சிந்தனைகளோடு நம் இதயம் நுழைந்த நூட்பத்திறன் பெற்றவர். கவிஞர் கண்ணதாசன் எண்ணங்களை எழுத்தாக்கி, எழுத்துக்களை, கல்வெட்டு என்னும் சொல்வெட்டாக்கிச் சுந்தரத் தமிழுக்குக் கவிதைச் சூடாமணி அணிந்த மகிழ்ந்த கவியரசின் சிந்தனை வெளிப்பாடுகள் அனைவரின் சிந்தனையைக் கவர்வன.

எடுத்தாளும் வகையிலும், அனுபவம் பிழிவுகளை இயம்புகின்ற திறனிலும் தமிழுலகத்திற்குக் கிடைத்திட்ட தவப்பேறாய்த் திகழ்ந்தவர் கண்ணதாசன் மொழி அறிஞர்களின் ஆய்வுக்கெல்லாம் அப்பாற்பட்டு, அவர்களின் அடிக்குறிப்புக்களுக்கெல்லாம் முதற்குறிப்பாக நின்றிலங்கிய கவிஞர் கண்ணதாசனின் கவிதைகள் எண்ணங்களின் புதிய வண்ணம் பூசிய வியப்புகளின் அடுக்குத் தொடராக அமைந்தவை.

பாஞ்சாலத்திற்கு நிகழ்கின்ற நிகழ்ந்த அனுபவங்களைப் பதிவு செய்து பாப்பந்தர் அமைத்த பாவலர் கண்ணதாசனின் கவிதை வரிகள் இன்னும் எத்துணையோ நூற்றாண்டுகளுக்கும் தொடர்ந்து வருபவை.

"மானிட இனத்தை ஆட்டி வைப்பேன் - அவர்
மாண்டுவிட்டால் அதைப் பாடிவைப்பேன் - நான்
நிரந்தரமானசன் அழிவதில்லை –எந்த
நிலையிலும் எனக்கு மரணமில்லை!"

என்று மகாசாசனம் எழுதி மகிழ்ந்த கவியரசர் கண்ணதாசன்.

"ஒன்றுமட்டும் உண்மை
அறிவுற்றிலொரு பாட்டெழுதும்
செந்தமிழ் மாகவிக்கு மரணம் - அது
வந்தபின்பு தான் பெருமை ஜனனம்!"

ஜனத்திலும் மரணத்திலும் சத்திய ஜீவனாகத் திகழ்ந்தவர். வழக்கின் தீர்ப்பைத் தானே வரைந்த புதிய நீதிபதியாக அவர் இலங்குகிறார்.

வாழ்க்கையில் வந்து போகிய வசந்த நாள்களையும், கசந்த நாள்களையும் இசைப்பாடலாக வடித்து, அவற்றை வரலாற்றின் வரிகளாகப் பெட்டகப் படுத்திய கவிஞர் கண்ணதாசன் ஆழ்புலம் கொண்ட அறிவுச் சுரங்கமாவார்.

---

*முனைவர் மு.அய்யம்மாள், *உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு.*

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

பொருளடக்கம்

பண்டைத் தமிழ் இலக்கண இலக்கியங்களும் பாண்டிய நாடும்

முதன்மைப் பதிப்பாசிரியர்

முனைவர் அ.இராஜசேகர்

தமிழ்த் துறை

செயிண்ட் அன்னாள் கலை மற்றும் அறிவியல் கல்லூரி, இராமநாதபுரம்

நூல் விவரம்

நூலின் பெயர் - பண்டைத் தமிழ் இலக்கண இலக்கியங்களும் பாண்டிய நாடும்

பதிப்பாசிரியர் - முனைவர் அ.இராஜசேகர் (முதன்மைப் பதிப்பாசிரியர்)

நூலின் தன்மை - ஆய்வரங்கக் கட்டுரைகள்

மொழி - தமிழ்

முதல் பதிப்பு - செப் 2018

பதிப்புரிமை - பதிப்பாசிரியருக்கு

வெளியீடு - தமிழ்த்துறை
செய்யது அம்மாள் கலை மற்றும்
அறிவியல் கல்லூரி
இராமநாதபுரம்

அளவு - 1/8 டெம்மி

ISBN - 978-93-86568-37-3

பக்கங்கள் - 599

விலை - 580

அச்சாக்கம் - ஷான்லாக்ஸ் பிரிண்டர்ஸ் , மதுரை.

நூல் வடிவமைப்பு - சோ.அறிவுமணி

குறிப்பு : இந்நூலில் இடம்பெறும் கட்டுரைக் கருத்து அந்தந்த கட்டுரையாளர்களுடையது.

பாண்டிய நாட்டின் வணிக வளம் (மதுரைக்காஞ்சி வழியில்)

முனைவர். வே. வளர்மதி
உதவிப்பேராசிரியர்,தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு.

சிறந்த நாகரிகமும், பண்பாடும் கொண்ட பண்டைத் தமிழர்களின் வாழ்வைப் பிரதிபலிப்பவை சங்க இலக்கியம், இவ்விலக்கியத்துள் நெடும் பாடலாகிய பத்துப்பாட்டில் ஆறாவதாக இடம்பெறுவது மதுரைக் காஞ்சி. தலையாலங்கனத்துச் செருவென்ற பாண்டியன் நெடுஞ்செழியனுக்கு நிலையாமையை அறிவுறுத்தும் பொருட்டு மாங்குடி மருதனாரால் பாடப்பட்டது. 782 வஞ்சியடிகளால் விரவிவரும்; மதுரைக் காஞ்சியில் வணிகம் குறித்த செய்திகளை வெளிக் கொணர்வதே இக்கட்டுரையின் நோக்கம்.

"ஒரு சிறந்த நாடு என்பது குறையாத விளைபொருளும், தக்க அறிஞரும், கேடில்லாத செல்வம் உடையவரும் வாழும் நாடாகும்". (குறள் 731) என்கிறார் வள்ளுவர். இத்தகைய சிறப்புகள் அனைத்தும் பொருந்தியதாகத் திகழ்ந்தது பாண்டியநாடு. இங்கு உழவையும், வாணிபத்தையும் முதன்மையான தொழிலாகக் கொண்டு மக்கள் சிறப்புடன் வாழ்ந்ததை,

வியன மேவல் விழுச் செல்வத்து
இரு வகையான் இசை சான்ற
சிறு குடிப் பெருந்தொழுவர்
குடி கெழீஇய நால் நிலவரொடு (மதுரைக் காஞ்சி 121 - 124)

என்னும் அடிகள் உணர்த்துகின்றன. விளைநிலங்களின் தன்மைக்கு ஏற்ப உற்பத்தி மிகுந்திருந்தது. மருத நிலத்தில் நெல்லும், கரும்பும் முக்கிய விளை பொருட்களாய் இருந்ததுடன், கரும்பை அரைக்கும் ஆலைகளின் எண்ணிக்கையும் மிகுந்திருந்தது. முல்லை நிலத்தின் தினை, எள், வரகு ஆகியன

தமிழ் இலக்கியங்களில் சமயமும் சமூகமும்

தொகுதி – II

பதிப்பாசிரியர்கள்

முனைவர் க. முருகேசன்

முனைவர் மா. சிதம்பரம்

முனைவர் சு. குமரன்

முனைவர் சு. இராமலிங்கம்

திரு. கி. பொன்னுதுரை

தமிழ் இலக்கியங்களில் சமயமும் சமூகமும்

தொகுதி - III

பிரடாக் பிரிண்ட்
476/1 பூமாதேவி கோவில் அருகில்
கவுண்டர் மில்ஸ் (அஞ்சல்)
கோயம்புத்தூர் - 29.
அலைபேசி : 98432 73994, 91505 91017

தமிழ் இலக்கியங்களில் சமயமும் சமூகமும்

(பன்னாட்டு ஆய்வுக் கருத்தரங்கம்)

பதிப்பாசிரியர்கள் : முனைவர் க. முருகேசன்
முனைவர் மா. சிதம்பரம்
முனைவர் சு. குமரன்
முனைவர் சு. இராமலிங்கம்
திரு. கி. பொன்னுதுரை

: பதிப்பாசிரியர்கள்

பதிப்புரிமை : நவம்பர், 2018

முதற்பதிப்பு வெளியீடு : தமிழ்த்துறை
கொங்குநாடு கலை அறிவியல் கல்லூரி
கோயம்புத்தூர் - 641029.

: பிரடாக் பிரிண்ட், கோயம்புத்தூர் - 29.

கணினி அச்சாக்கம் : பிரடாக் பிரிண்ட்,
476, பூமாதேவி கோவில் அருகில்
கவுண்டர் மில்ஸ் (அஞ்சல்)
கோயம்புத்தூர் - 29.
அலைபேசி : 9843273994, 7358863327

பக்கங்கள் : XXII + 488 = 510

விலை : உரூ. 400/-

ISBN : 978 - 93 - 80800 - 90 - 5

International Conference on Depiction of Religion and Human Society in Tamil Literature

Editor's : Dr. K. Murugesan. Dr. M. Chidambaram
Dr. S. Kumaran. Dr. S. Ramalingam
Mr. K. Ponnudhurai

Copyright's : Editors

First Edition : November, 2018

Published : Department of Tamil
Kongunadu Arts and Science College
Coimbatore - 641 029.

Computer Printing at : Prdag Print, Coimbatore - 29.

: Prdag Print
476, Near Boomadevi Kovil
G.N. Mills (Po), Coimbatore - 29.
Cell : 98432 73994, 91505 91017

Pages : XXII + 488 = 510

Prize : Rs. 400/-

114. திருமந்திரத்தில் சிவபெருமானின் செயலும் அருளும்

முனைவர் வே. வளர்மதி
உதவிப் பேராசிரியர், தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு - 12.

"ஒன்றே குலம், ஒருவனே தேவன்" என்னும் கோட்பாடு உடையவர் திருமூலர். அவர்தம் திருமந்திரத்தில் பெருந்தெய்வம் என்று சிவபெருமானை ஏற்றுக்கொண்டுள்ளார். சிவனின் பெருமையைச் சொல்லும் போது, "உடலில் உயிர் பொருந்தி உடலை இயக்குதல் போல உலகை இயக்குபவன் சிவன்: ஆதலால் சிவன் உலகிற்கு உயிர்" என்று கூறுவர். உலகங்கள் பலவற்றையும் உடலாக உடையவன் அவன்ரூ அவனே அனைத்து உலகங்களுக்கும் ஒரே தெய்வமாக விளங்குபவன். இதனை,

"ஒன்று கண்டீர் உலகக்கொரு தெய்வமும்"

என்று திருமந்திரம் எடுத்துக்கூறுகின்றது.

திருமந்திரம் பல அரிய உண்மைகளை மக்களுக்கு உணர்த்தப் பல புராணக் கதைகளை ஆங்காங்கே கையாண்டுள்ளது. அவற்றுள் சிவபெருமானின் செயலையும், அருளையும் புலப்படுத்தும் வகையில் அமைந்த திருமந்திரச் சித்திரத்தில் ஈசனின் தன்மையை ஆராய்வதே இக்கட்டுரை. திருமந்திரம் ஈசன் பற்றிய செய்திகளை ஐந்து பிரிவாக பகுத்துப் பார்க்கின்றது. அவையாவன 1.உலகத்தோற்றம் 2. ஐந்தொழில்கள், 3.சிவன் வடிவம் 4.சிவன் அணிகலன்கள் 5.சிவன் செயல்கள் என்பனவாகும்.

உலகத்தோற்றம்

உலகம் இறைவனால் தோற்றுவிக்கப்பட்டது. இறைவன் சிவனே ஆவான். அவன் ஆதியும் அந்தமும் இல்லாதவன் பராபரன். சிவன் சக்தி என்று பிரிக்க முடியாதவன். உலகத் தோற்றத்தின்போது ஒளிமயமான பராபரனிடமிருந்து பரன் தோன்றும் பின் பரையும், பரையிடம் விளங்கும் நாதமும் தோன்றும். சுத்தமாயையில் தோன்றுவன நாதம், விந்து, சிவன் சக்தி, ஞானம், செயல், இச்சை என்பன. இச்சையின் காரணமாகத்தோன்றும் அசுத்த மாயையிலிருந்து ஆகாயம், காற்று, நெருப்பு, நீர் ஆகியன தோன்றும். இவை ஒன்று கலந்து கடினத்தன்மை உடைய நிலமாகும். இவ்வைந்தில் உள்ள ஒவ்வொன்றிலும் ஐம்பூதங்களின் கூறுபாடு கலந்துள்ளது. இதனை,

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :
பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

கண்ணதாசனின் சமுதாயச் சிந்தனைகள்

முன்னுரை

மனித வாழ்வைச் செம்மைப்படுத்துதற்குரிய நெறிமுறைகளை வலியுறுத்தும் இலக்கியப் படைப்புகளே காலங்கடந்தும் நிலைத்து நிற்கின்றன. மனித சமுதாயம் மென்மையுறத் தேவையான அறிவார்ந்த கருத்துகளைச் செறிவாக எடுத்துரைப்பது இலக்கியங்களின் பொது நோக்கம். தமிழனைக்குத் துறைதோறும் துறைதோறும் துவக்கெழுந்தே தொண்டுசெய்த கவிஞர்களில் போற்றற்குரியவர் கவியரசு கண்ணதாசன்.

அர்த்தமுள்ள இந்து மதத்தில்:

தாம் ஒருவருக்கு நன்மை செய்தால் நிச்சயமாக நமக்கான ஏற்படுகிறது ஒருவருக்கு தீமை செய்தால் கண்டிப்பாக அதற்குரிய தண்டனை கிடைக்கிறது. இவை இறைவனின் நியதிகள் என்பதைக் கவிஞர் கண்ணதாசன் தன் வாழ்க்கை அனுபவங்களைக் கொண்டு ஒப்பிட்டுப் பார்த்து, ஆராய்ந்து எழுதிய கட்டுரைகளே கண்ணதாசனின் "அர்த்தமுள்ள இந்துமதம்". இந்துமதம் ஆழமான தத்துவங்களை உள்ளடக்கியது. வாழ்க்கை நெறிகள் செறிந்தது. அறிவதும் அனுசரிப்பதும் கடினம். வேதம் பயின்றவர்களும் ஞானிகளுமே புரிந்து கொள்ள முடியும் என்ற நிலையைப் போக்கி சாதாரண மக்களும் இந்து மதத்தின் அர்த்தங்களைப் புரிந்து கொள்ள முடியும் எனக் காட்டி விட்டார் கவிஞர்.

ஆலமரம் போல தழைத்து குலுங்கி நிற்கும் இந்துமதம் உன் வாழ்க்கையின் ஒவ்வொரு கட்டத்தையும் ஒவ்வொரு விநாடியையும் அளந்து கொடுக்கிறது' "வாழ்க்கையில் நீ எந்தச் சாலையில் போனாலும் சரி! எதிர்படும் மகிழ்ச்சியோ துயரத்திலோ நீ இறைவனின் எதிரொலியைக் கேட்கிறாய். அந்த எதிரொலியில் இந்து மதத்தின் சாரத்தைக் காண்கிறாய்" என்றார்.

சமதர்மச் சிந்தனைகள்

ஆயிரமாயிரம் மனிதர்களைக் கொண்ட சமுதாயத்திற்கு நிம்மதியை வழங்கி எதையும் தாங்கி கொள்ளக்கூடிய துணிச்சலை நெஞ்சங்களில் துளிர்த்திட வைக்கும் அவரது பாடல் வரிகள்

"வாழ்க்கை என்றால் ஆயிரமிருக்கும்
வாசல் தோறும் வேதனை இருக்கும்
வந்த துன்பம் எதுவென்றாலும்
வாடி நின்றால் ஓடுவதில்லை
எதையும் தாங்கும் இதயம் இருந்தால்
இறுதி வரைக்கும் அமைதி இருக்கும்"

முனைவர் ப.இந்திராணி, தமிழ்த்துறைத் தலைவர், வேலாளர் மகளிர் கல்லூரி (தன்னாட்சி), பொருந்தி - 12.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

இயேசுகாவியம் காட்டும் எட்டு வகை குணங்கள்

தமிழுக்கு இனிமையாய், கவிதைக்கு அரசனாய் தமிழகத்தின் தனிப்பெரும் கவிஞராக விளங்கிய கண்ணதாசன் அவர்கள் விவிலிய நூலின் ஒரு பகுதியான இயேசு கிறித்துவின் நற்செய்தியையும் இறைமகன் இயேசுவின் அரிய வரலாற்றையும் கவிஞருக்கே உரித்தான எளிய நடையில் இனிய காவியமாக தமிழ் உலகிற்குப் படைத்தளித்தார். "இயேசு காவியத்தில் கிறித்துவ பொன்மொழிகளை எளிமையான நடையில் எங்ஙனம் கையாண்டுள்ளார் என்பதைப்பற்றி இக்கட்டுரை எடுத்தியம்புகிறது.

பேறு பெற்றவர்கள் :-

"துயரப் படுகிறவர்கள் பாக்கியவான்கள். அவர்கள் ஆறுதல் அடைவார்கள்" (மத்தேயு 5 :4) என்னும் விவிலியப் பொன்மொழிகளை

"துயரம் உறுவோர் பேறுபெற் றோரெனத்
தூயமகன் சொன்னார் - அந்தத்
துயரம் அடைவோர் ஆறுதல் பெறுவர்
துன்பங்களை எண்ணார்

என்று எளிமையாகக் கூறியது மட்டுமன்றி அயராச் சுகமும் மதுவும் கீதமும், ஆயிரம் இன்பங்கள் அடைவதுதான் பெருமை என்று எண்ணும் எண்ணங்களே மனிதன் துயரம் அடைவதற்குக் காரணம் என்று கவிஞர் கூறுகிறார்.

மண்ணை ஆளும் மகத்துவம்:

"சாந்த குணமுள்ளவர்கள் பாக்கியவான்கள். அவர்கள் பூமியை சுதந்தரித்துக் கொள்வார்கள்" (மத்தேயு 5 :5) என்று கூறுகிறது விவிலியம்.

எந்தும் கோபம் பழிவாங் கும்குணம்
எத்தனை எத்தனையோ - இங்கே
இடறி விழுந்தால் கொடுமை நடத்தும்
வித்தகர் எத்தனையோ!
மாந்தர் வாழ்வில் தேவைப் படுவது
சாந்தம் தானென்றார்- அது
மண்ணையும் ஆளும் விண்ணையும் ஆளும்
மகத்துவம் பாரென்றார்

---

*முனைவர் து.லதா, உதவிப்பேரசிரியர், தமிழ்த்துறை, சுயநிதிப்பிரிவு, வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு-12.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

அர்த்தமுள்ள இந்துமதத்தில் மேற்கோள்

கவிஞர் கண்ணதாசன் இந்துமதக் கருத்துக்களை விளக்கும் போது சங்க இலக்கியம், நீதிநூல்கள், காப்பியங்கள், சான்றோரின் சொற்பொழிவுகள் போன்றவற்றிலிருந்து மேற்கோள்கள் எடுத்துக் காட்டியுள்ளார். அவற்றைக் காரணம் காரியத்தோடு பொருத்தி கண்ணதாசனின் மகத்துவத்தினை வெளிப்படுத்தும் நோக்கில் இக்கட்டுரை அமைந்துள்ளது.

ஆசை

வாழ்க்கை ஆசையிலும் நம்பிக்கையிலுமே ஓடிக் கொண்டிருக்கிறது. ஆசை எந்தக் கட்டத்தில் நின்று விடுகிறதோ, அந்தக் கட்டத்தில் சுயதரிசனம் ஆரம்பமாகிறது. ஆசையை மூன்று விதமாகப் பிரிக்கிறது இந்து மதம்.

மண்ணாசை !
பொன்னாசை !
பெண்ணாசை !

ஆகவே ஆசைபொழிந்த பற்றற்ற வாழ்க்கையை இந்துமதம் போதித்தது.

'பரம்பொருள் மீது பற்று வை: நிலையற்ற
பொருள்களின் மீது ஆசை வராது – (அ.இ.ம. - ப.23)

என்கிறது இந்துமதம்

'பற்றுக பற்றற்றான் பற்றினை அப்பற்றைப்
பற்றுக பற்று விடற்கு'

என்ற குறளை மேற்கோளாகக் காட்டி ஆசையின் நிலையில்லாத் தன்மையை விளக்குகிறார்.

'ஆழமுள்ள கிணற்றின் விளம்பில் நிற்பவன்
அதனுள் விழுந்துவிடாமல் எப்போதும்
ஜாக்கிரதையாக இருப்பதைப்போல்
உலக வாழ்க்கையை மேற்கொண்டவன்
ஆசாபாசங்களில் வாழ்ந்து விடாமல்
இருக்க வேண்டும்.' – (அ.இ.ம. - ப.26)

என்ற பரமஹம்சரின் கருத்தையும் எடுத்துக்காட்டி விளக்குகிறார். விவேகம் என்ற அஸ்திரத்தால் ஆசை வீழ்த்தப்பட்டதும் மனம் சாந்தமாகி விடுகிறது.

---

*சி.மோகனாம்பிகை அரசு, முனைவர்பட்ட ஆய்வாளர், வேளாளர் மகளிர் கல்லூரி(தன்னாட்சி), ஈரோடு

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

நான் நிரந்தரமானவன் அழிவதில்லை – எந்த
நிலையிலும் எனக்கு மரணம் இல்லை

பல்லவி பதிப்பகம்

ISBN: 978-93-88312-03-5

14. கண்ணதாசனின் 'தைப்பாவை' யில் பழந்தமிழ் மரபுகள்

*முனைவர் சா.சிவமணி

15. கவியரசரின் பன்முகத்தன்மை

*க.உமாராணி

16. கண்ணதாசன் பாடல்களில் புறவாழ்வியல் சிந்தனைகள்

*வே.ரேணுகா

17. கண்ணதாசனின் பக்தி நெறியும் தத்துவத்தடமும்

*முனைவர் வே.வளர்மதி

18. கவியரசரின் எழுத்தாளுமையில் சமூகம்

*மா.யுவமணி

19. கண்ணதாசன் : வாழ்க்கைச் சிக்கலுக்குத் தீர்வு தந்த 'வ

*மு.முனீஸ்மூர்த்தி

20. கடவுளின் அடிமை கண்ணதாசன்

*முனைவர் கு.நாகராஜன்

21. கண்ணதாசனின் பக்தி

*அ.சக்திரம்யா

22. கவிஞர் கண்ணதாசனின் திரையிசைப் பாடல்களில் பெண்

*முனைவர் புவனேஸ்வரி

23. கண்ணதாசன் பாடல்களில் வாழ்க்கைக் கல்வி

*முனைவர்

கண்ணதாசனின் பக்தி நெறியும் தத்துவத்தடமும்

"இன்னும் எழுத எண்ணங்கள் அதிகம்
எதிர்காலத்தில் இறைவன் அருளுவான்"

தனி மனிதன் தன்னில் அமைதி கொண்டு அதன்வழி இறைப்பணி செய்து தன்னைச் சமூகத்துடன் ஒன்றச் செய்யும் பேராற்றல் பக்தி எனும் நெறி. பாரத நாட்டினைப் பக்தி நாடு என்பாரும் உண்டு. இதற்கு காரணம் இங்கு வாழ்ந்து சென்றவர்கள் விட்டுச் சென்ற பதிவுகளேயாகும். இவற்றில் பழமரபாகிப் போனவையும் பழமரபாகியும் இன்றும் வழிவழியாக மாற்றம் பெற்றும், பெறாமலும் புராணங்கள், தத்துவங்கள் எனும் வடிவில் சமூக மேலாண்மைக்குப் பெரிதும் துணை செய்கின்றன.

இறைவன் நிலைப்பெற்றிருக்கும் கோவில்களுக்குச் சென்று காதலாகி கசிந்து கண்ணீர் மல்கி வணங்குவதும் வழிபாடுகள் புரிவதும் மட்டும் ஆலய வழிபாடு அல்ல: அன்பும் அறிவும் நிறைந்திருக்கும் இடம் யாவும் ஆலயமே என்கிறார் கண்ணதாசன்.

"ஆலயம் ஆலயம் ஆலயம்
கோவில் என்பது ஆலயமே
குடும்பம் என்பது ஆலயமே
நாணயம் என்பது ஆலயமே
நன்றியும் இறைவன் ஆலயமே"

என்றப் பாடலில் நாணயத்தையும் நன்றியையும் ஆலயம் என்று கண்ணதாசன் கூறுவது நோக்கத்தக்கது.

திருமூலர் தன் திருமந்திரத்தில் **"உள்ளம் பெருங்கோயில் ஊனுடம்பு ஆலயம்'** என்றக் கருத்தினை உள்வாங்கி, மனித வாழ்க்கைக்கு இன்றியமையாத நாணயம் என்ற பண்பையும் நன்றி என்ற குணத்தையும் இறைவனின் கோயில்களாக வெளிப்படுத்திய போது அவரது சமூக உணர்வு நன்கு புலனாகின்றது. அதனை

"நன்றி நிறைந்தவர் எங்கே தெய்வம் அங்கே
நன்மை புரிந்தவர் எங்கே தெய்வம் அங்கே"

என்று பாடி நன்றியிலும் நற்பண்பிலும் கண்ணதாசன் இறைவனைக் காணுகிறார். இறைவனைப் போற்றி வழிபட்ட சான்றோர்கள் மக்களுக்கு நல்வழி போதிக்கக் கட்டளை இடுவர். கடவுளின் பத்துக் கட்டளைகள் விவிலியத்தில் வாழும் நெறியாகக் கொடுக்கப்பட்டது. கவிஞர் கண்ணதாசனோ ஆறு கட்டளையென மொழிகிறார். இதனை

*முனைவர் வே.வளர்மதி, உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி(தன்னாட்சி), ஈரோடு.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

பொருளடக்கம்

கண்ணதாசன் கவிதைகளில் பக்திநெறி

இருபதாம் நூற்றாண்டின் இலக்கியப்படைப்புகளிலும், திரையுலகிலும் புகழ்பெற்றவர் கவிஞர் கண்ணதாசன். கண்ணதாசனின் திரையிசைப்பாடல்கள் எக்காலத்திற்கும், போற்றிப்புகழப்படும் இலக்கியமாக திகழ்கிறது. சிறுகூடற் பட்டியில் பிறந்து கவிதையுலகில் நுழைந்த இவரது புகழ் அவர் மறைந்தும் இன்றும் நம்மிடையே நிலவி வருகின்றது. இவர் தன்னுடைய கவிதைகளில், இறைவனை வழிபடும் முறை, தீபம் ஏற்றும் முறை பற்றியும், இறைவன் மீது கொண்டுள்ள பக்தி, அன்பு ஆகியவற்றை இக்கட்டுரையில் காணலாம்.

இலக்கியப்புலமை

பல இலக்கிய நூல்களைக் கற்றுத் தேர்ந்த இவர் அக்கவிதைகளில் இணைத்து பல சிறந்த கவிதைகளை நயம்படப் படைத்துள்ளார் அகம், புறம், நீதி, அரசியல், பக்தி, தத்துவம் எனப் பன்முகத்தன்மை கொண்டவர். நேர்மை, நீதி, நியாயம் தவறாத முன்னோர் கற்பித்த ஒழுக்கம் இவற்றிலிருந்து வழுவாமல் இருப்பதற்கும், நோய் நொடி இல்லாத வாழ்க்கையைத் தர வேண்டும் என்பதற்காக இறைவனைப் பக்தியோடு போற்றும் எண்ணம் கொண்டவர்.

தீபம் ஏற்றும் முறை

நாம் இன்றுபோல் என்றும் நலமுடன் வாழ வேண்டும், புதிய பூமி உருவாக வேண்டும், நம் இதயம் என்றும் புத்துணர்ச்சியோடு ஒளி வீச வேண்டுமென்றால் தீபம் ஏற்றி வழிபடவேண்டும் என்கிறார் பெற்றார், மக்கள், தாய்நாடு, நம்உள்ளம், செல்வம் என்றும் நிலைத்துவாழ சந்திரன், சூரிய ஒளி தென்றல்போல இல்லம் சிறப்புடன் இருக்க தீபம் ஏற்றி வழிபடவேண்டும் என்கிறார். கோதை நாச்சியார் நெற்றியில் வைத்த குங்குமம் போலவும், தங்கத் தட்டில் வைத்த வைரம் போலவும் நாம் வலிமையுடன் வாழ தீபம் ஏற்றி வழிபட வேண்டும் என்கிறார்.

பள்ளிகளனைத்தும் கோயில் செய்குவோம் என்னும் பாரதியாரின் கூற்றிற்கிணங்க

“பயிலும் பள்ளி கோயில்

படிக்கும் பாடமே வேதம்

நடக்கும் பாதை எவ்விதமோ

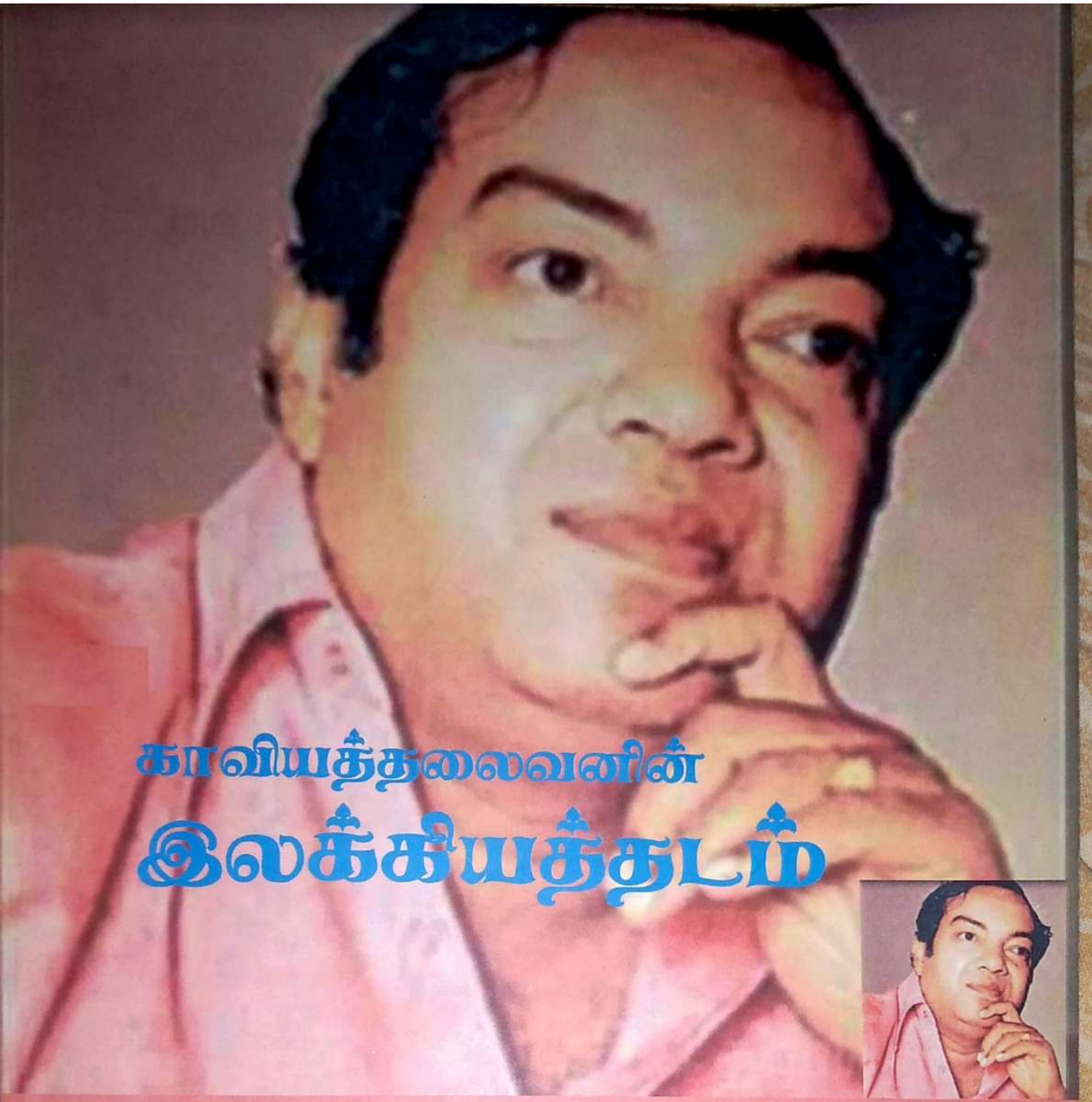
நாளைய பொழுதும் அவ்விதமே”

என்று கல்வி பயிலும் பள்ளியே கோயில் என்பதை எடுத்துரைக்கின்றார்.

இறைவனை எழுப்புங்கள்

ஆக்கல், அழித்தல், படைத்தல் என்று பாகம் பிரித்துக் கொண்டவன் இறைவன். மூன்று பக்கமும் கடலால் சூழப்பட்ட உலகம்தனை ஞானக்கண்ணால் பாதுகாப்பவன். காற்று,

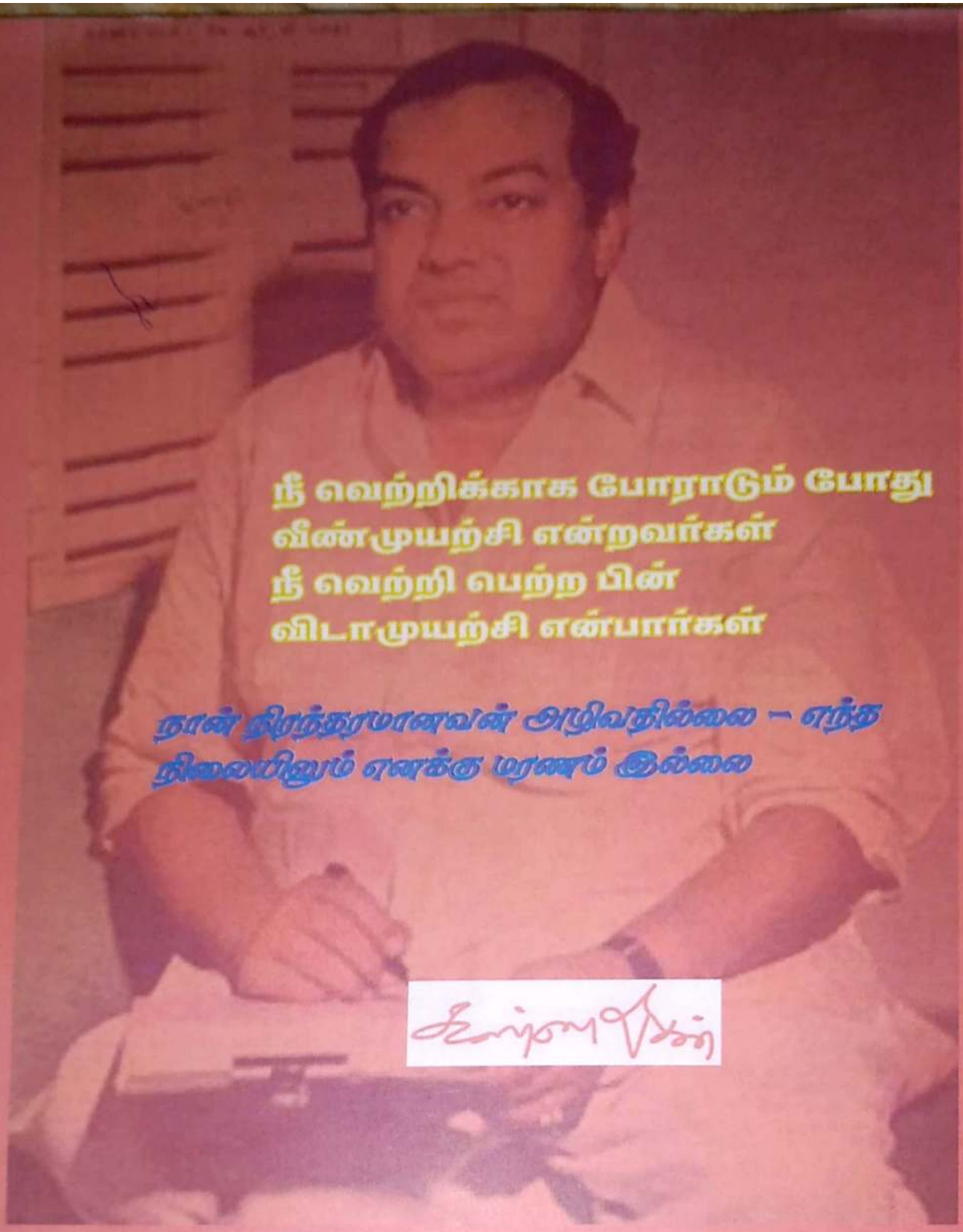
* முனைவர் கோ.மாரியம்மாள், *உதவிப்பேராசிரியர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி, ஈரோடு.*



காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி
முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்



நீ வெற்றிக்காக போராடும் போது
வீண்முயற்சி என்றவர்கள்
நீ வெற்றி பெற்ற பின்
விடாமுயற்சி என்பார்கள்

நான் நிரந்தரமானவன் அழிவதில்லை – எந்த
நிலையிலும் எனக்கு மரணம் இல்லை

பல்லவி பதிப்பகம்

ISBN: 978-93-88312-03-5

காவியத்தலைவனின்

இலக்கியத்திடம்

முனைவர் ஆர்.நிர்மலாதேவி
உதவிப் பேராசிரியர் மற்றும் தலைவர்
தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு– 638 012

முனைவர் வே.வளர்மதி
உதவிப் பேராசிரியர்
தமிழ்த்துறை
வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி)
ஈரோடு– 638 012

பல்லவி பதிப்பகம்

பாலை நோக்கில் மதுரையும் திருப்பரங்குன்றமும்

*திருமதி பா.மகேசுவரி, உதவிப்பேராசிரியர், தமிழ்த்துறை (சுயநிதிப்பிரிவு), வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு -12.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

பல்லவி பதிப்பகம்

ISBN: 978-93-88312-03-5

பொருளடக்கம்

கண்ணதாசன் பாடல்களில் புறவாழ்வியல் சிந்தனைகள்

முன்னுரை:

சங்கத்தமிழகம் அரசியலால் மூன்று பெரும் குறுநிலங்களாகவும் பிளவுண்டு இருந்தது. எனினும் மொழியாலும், பண்பாட்டாலும் பட்டிருந்தது. நாடாளும் மன்னர்கள் அறத்தை உணர்ந்து வேண்டுமென புலவர்கள் விரும்பினர். தங்களது வடித்தெடுத்தனர். அதன் வெளிப்பாடே புறப்பொருள் தொகை

வளர்ச்சிபெரும் ஒவ்வொரு இனமும் தன் இன பழம் பெருமைகளை ஆராய்தல் இயல்பு. அவ்வகையில் வரலாற்றை இனங்கண்டு, புதுமை பல புகுத்தி குறிப்பிடத்தக்கவர் கண்ணதாசன் ஆவார்.

போர் முழக்கம்:

மண்ணாசையும், புகழ் பெற வேண்டுமென்ற ஆர்வமும், போரில் வீர சுவர்க்கமுண்டு என்ற நம்பிக்கையும், பெரிய நாட்டை ஆர்வமும், சில நேரங்களில் மகட்கொடை மறுப்பும் ஆள காரணமாயின. பண்டைய கிரேக்கச் சமுகம் போலப் போர்ச் சங்கப் தமிழகத்தில் பெண்டிரும், ஆடவர்போல் மறவுணர்வு மிக்கோராய் சமுதாயமாக விளங்கினர்.

புண்பட்டு இறந்த மகனைக் கண்டு இறும்பூதெய்திய புறநானூறு காட்டுகின்றது. இறந்து பிறந்த பிண்டத்தையும் புதைக்கும் அளவிற்கு மறவுணர்வு மிக்கவராய் தன்னையும், தன்னைச் சார்ந்த சமூகத்தையும் காக்க அடைந்த வீரர்கட்கு நடுகல் நட்டுத் தெய்வமாக வீரவாழ்வுதனைப் பறைச்சாற்றும் புறநானூறு,

"அடுபோர்ச் செழிய இகழாது வல்லே" (புறம் 18)

எனச்சிறப்பித்துக் கூறுகின்றது. புறப்பொருளை நன்குணர்ந்த கண்ணதாசன்,

"வேலெடுத்து வில்லெடுத்து வீரர் கூடுவார்- இவர்
வெல்கவென்று மாதர்நின்று வாழ்த்துப் பாடுவார்
மேலெழுந்து பாய்ந்தடித்து வெற்றி நாணுவார்-அவர்
வீரவாழ்வைப் பாடலாகப் பாணர் பாடுவார்
காலமுற்றும் போர் படைத்த கன்னிநாட்டிலே"

எனத் தனது **"போர்முழக்கம்"** என்னும் படைநடைப் பாடலில் பாடியுள்ளார்.

***வே.ரேணுகா,** *எம்.ஏ.,எம். பில்.,பி.எட்., பகுதிநேர முனைவர் பட்ட ஆய்வாளர், தமிழ்த்துறை, வேளாளர் மகளிர் கல்லூரி, ஈரோடு.*

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

பல்லவி பதிப்பகம்

ISBN: 978-93-88312-03-5

கண்ணதாசனின் பக்தி

மேன்மையுண்டாகிப் புயங்கள் பருக்கும், பொய்ப் பாம்பு மடியும் மெய்ப்பரம் வென்று நெறிகளுண்பகும் கவிஞர் கண்ணதாசன் நாத்திகராக இருந்து பின் ஆத்திகராகத் மாற்றிக் கொண்டவர். தத்துவங்களையும் இறைவனின் அற்றல்களையும் பற்றி ஆய்ந்து கூறியவர். கடவுள் உண்டு, இறை சக்தி உண்டு என்பதை அழுத்தமாகவும், த்தமாகவும் தனது படைப்புகளின் மூலம் வெளிப்படுத்தி உள்ளார். மேலும் நாத்திகம் து சோம்பேறிகளின் திறமை என்றும் கூறி உள்ளார். மன்னர்கள் கட்டிய கோவில்கள் க்கு புடம் போடுவதாகவும் கருத்துக்களைக் கோர்த்து வழங்குகிறார். விஞ்ஞானம், ய்ஞானம் இவை இரண்டிற்கும் அப்பாற்பட்டது மனிதனின் பிறப்பு, இறப்பு இது போலத்தான் வும், கடவுள் நம்பிக்கையும். பகுத்தறிவின் மூலமாகவே நாம் இறைசக்தியைக் காண முடியும். **"மலரின் மனத்தினை நுகர்ந்துதான் அனுபவிக்க முடியுமே தவிர, சுவைத்து உணர முடியாது"** அறம், பொருள், இன்பத்தை ஏற்றுக்கொள்வது போல் உள்ளவர்களுக்கு றைவுஉண்டாகும். இறைவன் மீது நாம் வைக்கும் நம்பிக்கையே பக்தியாக டுவெடுக்கிறது. இங்கனம் கண்ணதாசனும் பக்தி நெறிகளைப் பற்றி ஏராளமான த்துக்களைத் தொகுத்துக் கூறியுள்ளார். கவிஞரின் பக்தி திறத்தினை இக்கட்டுரை லில்கிறது.

மீனாட்சியிடம் வேண்டுதல்

அம்பிகை அழகு தரிசனம் காட்டும் பகுதியில் கண்ணதாசன் அம்பிகையின் டிவங்களை வருணித்து சக்தியிடம் வேண்டுதல் வைத்து தன்னுடைய பக்தியினை நிலை ட்டுகிறார். மனிதன் ஒருவனேஆறாவது அறிவினைப் பயன்படுத்துகிறான். நம் புத்தியைக் கொண்டுதான் சமூகத்தின் நிலையை நாம் தெரிந்து கொள்ள முயல்கிறோம்.'. இதன் அடிப்படையில் நமது பக்தியின் தன்மையும் அமைகிறது.

மதுரை மீனாட்சியிடம் வேண்டுவன யாதெனில். நல்லறிவாளர்களின் நட்பு, பெரியவர்களின் ஆசி. அழகான மனைவி வாழ்க்கைக்கு ஆதாரமாக விளங்க மதுரை மாநகரில் வீற்றிருக்கும் மீனாட்சியிடம் தமக்குரிய நல்லன எல்லாம் ஒன்று சேர வேண்டும் என்று தம்முடைய வேண்டுதலை வைக்கிறார். மேலும் இந்த உடலானது என்றும் அழியாத நிலையில் வேண்டும். நோய்கள் அண்டாது, பசியின் நிலை அறியாது. ஊழ்வினையின் பயன் வேண்டும் என்று மீனாட்சியிடம் தாம் கொண்ட பக்தியின் பொருட்டு கேட்கும் காமாட்சியின் அருள் நிலை.பக்தியில் உறுதியுடன் இருக்க வேண்டும் இதற்கு உன் அருள் வேண்டும்.

"உன் அருளாலே உன் தான் வணங்கி" என்று சிவபுராணத்தில் மாணிக்க வாசகர் கூறுவது போல் நான் உன்மேல் பக்தியுடன் இருக்க நீ எனக்கு அருள் செய்ய வேண்டும் என்று வேண்டுதல் வைத்து சக்தியின் ஆறு வடிவங்களில் ஒவ்வொரு வடிவத்திடமும் தன் வேண்டுக்கோளை வைத்துப் பாடல்களை இயற்றியுள்ளார்.

காஞ்சி காமாட்சியே உன் அருள் எங்கும் எதிலும் பரவி நிற்கறது. அனைத்திற்கும் காஞ்சி காமாட்சி அருள் பாலித்துக் கொண்டு இருக்கிறாள். காலங்களுக்கும், உணர்வுகளுக்கும், அடியவர்களுக்கும், உள்ளத்தில் பெரியவர்க்கும் காமாட்சி காஞ்சியில் அமர்ந்து அராசாட்சி புரிந்து காத்தருள்கிறாள். என்று காஞ்சி காமாட்சியின் அருள் திறத்தினை கண்ணதாசன் பக்தியின் உறுதியுடன் வெளிப்படுத்துகிறார்.

* அ.சக்திரம்யா, தமிழ்த்துறை, சுயநிதிப்பிரிவு, வேளாளர் மகளிர் கல்லூரி, திண்டல்.

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர். நிர்மலாதேவி

முனைவர் வே. வளர்மதி

பல்லவி பதிப்பகம்

Printed in India
பன்னாட்டு நூல் தரக்குறியீட்டு எண்
ISBN : 978-93-88312-03-5

காவியத்தலைவனின் இலக்கியத்தடம்
Kaaviyathalaivanin Ilakkiyathadam

முனைவர் ஆர்.நிர்மலாதேவி (ம) முனைவர் வே.வளர்மதி
Dr.R.Nirmaladevi & Dr.V.Valarmathi

தமிழ்
Tamil

2019

பக்கங்கள்
Pages :162

விலை
Price : Rs. 375 /-

வெளியீடு :

பல்லவி பதிப்பகம்
118-மேட்டூர் ரோடு, கல்யாண் சில்க்ஸ் எதிரில், ஈரோடு - 638 011.

Printed, Published and Distributed by

PALLAVI PATHIPPAKAM
118-Mettur Road, Opp:Kalyan Silks, Erode-638 011.
0424-2251545, 94422 51549, 97919 51549.
pallavipublications@gmail.com
www.pallavipathippakam.in

கவியரசு பாடல்களில் நாட்டுப்புறத் தன்மை

இருபதாம் நூற்றாண்டுக் கவிதையுலகில் பாரதி, பாரதிதாசனைத் தொடர்ந்து கவிஞர் கண்ணதாசனுக்கும் நிலைத்த இடமுண்டு. இவர் கவிதைகள் திரையிசைப் பாடல்கள் 'நாவல், சிறுகதை, கட்டுரை என்று பல்துறை வல்லுநர். முன்னோர் கருத்துக்களைக் காலத்திற்கேற்றபடி எளிய வடிவில் கவியாக்கித் தந்த பெருமையினால் 'கவியரசு' என்ற பட்டம் இவருக்குக் கிடைத்தது. இவரது பாடல்களில் நாட்டுப்புற வாய்மொழித் தாக்கமும் உண்டு என்ற கருத்தின் அடிப்படையில் இக்கட்டுரை அமைந்துள்ளது.

நாட்டுப்புறப்பாடல்

பாட்டு நம்மை மெய் மறக்கச் செய்வது, தூங்கச் செய்வது, துள்ளச் செய்வது, தொழச் செய்வது, திருந்தச் செய்வது மனித மனங்களை இயங்கச் செய்யும் சக்திகள் கொண்டது.

மனிதன் பிறந்தது முதலே இறக்கும் வரை பாடலோடு பின்னிப் பிணைந்து வாழ்கிறார். தாலாட்டு, விளையாட்டு, தெம்மாங்கு, கும்மி, காவடி, ஒப்பாரி, தெருக்கூத்து என்று பல்வேறு பெயர்கள் பாடலுக்குச் சூட்டி மகிழ்கிறான். மனிதனுடைய அன்றாட வாழ்க்கையில் ஏற்படும் இன்ப துன்பங்களை அறிந்து அவற்றைக் கவிதைகளில் வடித்துக் காட்டி பட்டி தொட்டி மக்களைக் கூட தன் வயப்படுத்தியவர் கண்ணதாசன்.

தாலாட்டு

தாய்மை உணர்வின் வெளிப்பாடாக மலரும் தாலாட்டுப் பாடல்கள் எழுதியதில் கண்ணதாசனுக்கும் தனிச்சிறப்புண்டு. கிராமபுரத்தில் தாய் தன் குழந்தையைத் தூங்க வைக்கப் பாடும் பாடலின் ஊடே தன் பிறந்த வீட்டுப் பெருமையும், குழந்தையின் மாமனது அன்பையும் பாடத் தவறியதே இல்லை.

"யானை படை கொண்டு
சேனை பலவென்று
ஆளப் பிற"

தாய் தன் குழந்தையைத் தூங்க வைக்கப் பாடும் தாலாட்டுப் பாடலில் வறுமையும் சொல்லிப் பாடுவது வழக்கம் அதுபோல

"ஏன் பிறந்தாய் மகனே ஏன் பிறந்தாய்
இல்லையொரு பிள்ளையென்று
ஏங்குவோர் பலரிருக்க
இங்கு வந்து ஏன் பிறந்தாய் செல்வ மகனே"

என்ற பாகப்பிரிவினைப் பாடல் ஒரு தாலாட்டின் தழுவல்தான் என்று சு. சண்முகசுந்தரம் அவர்களும் கூறியுள்ளார் (வைரமுத்துவரை – பக் -144)

*S. மணிமேகலை, *தமிழ்த் துறை (சுயநிதிப் பிரிவு), வேளாளர் மகளிர் கல்லூரி (தன்னாட்சி), ஈரோடு.*

காவியத்தலைவனின்
இலக்கியத்தடம்

முனைவர் ஆர்.நிர்மலாதேவி

முனைவர் வே.வளர்மதி

பல்லவி பதிப்பகம்

பல்லவி பதிப்பகம்

ISBN: 978-93-88312-03-5

பொருளடக்கம்

கண்ணதாசன் கவிதைகளில் - யாப்பும் நோக்கும்

தொல்காப்பியம் தமிழின் மூத்த முதன்மையான இலக்கண நூல். இலக்கிய வகை ஓசைநயமும் நிறைந்து. ஒதற்கு எளிமையாகவும் உண்மையை உணர்த்தும் அரிய நூலாகவும் முன்னை பழமைக்கும் பழமையுடையவனவாகவும், பின்னை புதுமைக்கும் புதியனவாகவும் விளங்குகின்றன. தொல்காப்பியத்தின் பெருமையை எண்ணிலடங்கா சிறப்புடையது. இன்றைய மொழியியல் அறிஞர்கள் அரிதின் முயன்று காணும் மொழியியல் உண்மைகளை அன்றே வகை செய்து வரையறுத்துள்ளார் தொல்காப்பியர். ஒரு பானை சோற்றுக்கு ஒரு சோறு பதம் என்பதை போல தொல்காப்பியர் வகுத்துள்ள செய்யுளியல் என்னும் இவ்வதிகாரம் ஒன்றே தொல்காப்பியத்தின் ஒட்டுமொத்த கருத்துக்களையும் தன்னகத்தே கொண்டுள்ளது.

மொழியின் இலக்கணம் என்பதைத் மட்டும் மனதிற்கொண்டு இயற்றப்பெறாமல் மனித வாழ்வின் மெய்மையியலை விளம்புவதாக உள்ளது. மொழிக்கு முதன்மையான எழுத்துக்களையும் அதனோடு தொடர்புடைய சொல்லையும் அடுத்தடுத்து விளக்கி தொல்காப்பியம் தொடர்ந்து தமிழர் வாழ்வின் தனித்தன்மையை புலப்படுத்துவனவாகவும் செய்யுளியளை அமைத்துள்ளார். செய்யுளியல் மரபுக் கவிதைக்கு மட்டும் இலக்கணம் வரையறுத்துள்ளது என்ற நிலையைத் தாண்டி புதுக்கவிதைக்கும் யாப்புறுப்புக்களை கொண்டு வரைவிலக்கணம் தரலாம் உண்மைச் செய்தியை இக்கட்டுரையின் மூ வெளிக்காட்டியுள்ளேன்.

மரபுக் கவிதையும் யாப்பும்

தொன்று தொட்டு வரும் தன்மையுடையது மரபு. முரபுக் கவிதைகள் காலத்தா முந்தையது. 'பாடுபொருளும் உத்திகளும் மரபு இலக்கணப்படி படைக்கப்படுதலின் இது மரபுக்கவிதை' எனப்படுகின்றன. பல்வேறு இலக்கிய நூல்களாகள் இப்பு நூற்றாண்டுகளுக்கும் மேலாகத் தழைத்து விளங்கும் சிறப்புடையது. இவ்வாறு தான் பாட வேண்டும் என்னும் வரையறை கொண்டு வடிவம் பெற்றது மரபு இலக்கியமாகும். இப்பு பாதுகாக்கப் பெற்று பின்பற்ற வேண்டியது நம் அனைவரின் கடமையாகும். மரபுக் கவித வரும் பாடல் அமைப்பை ஒழுங்கு படுத்தும் விதமாகவே யாப்புறுப்பு படைக்கப்ப சான்றாக,

தூக்கு

தூக்கு என்பது பாடல்களில் அடிதோறும் துணித்து, நிறுத்தலாகிய ஓ வேறுபாடாகும். அகவுதல், கூவுதல் செப்புதல் போன்ற ஓசையில் தூக்கு அமையும். அ அகவிக் கூறும் ஓசை அகவல், செப்புதல் வெண்பாவிற்குரியதாகவும் துள்ளலோ கலிப்பாவிற்குரியதாகவும், தூங்கலோசை வஞ்சிப்பாவிற்குரியதாகவும் இந்நான்கு ஓசை தூக்கு வரும். நான்கு ஓசைக்கு மேல் தூக்கில் வேறு ஓசை இல்லை. இதனை,

தூக்கியல் வகையே ஆங்கென மொழிப (தொல்.செய்:1344)

என்ற நூற்பாவில் தூக்கு நான்கு வகை ஓசையுடையது என்று குறிப்பிட்டுள் தொல்காப்பியர். கண்ணதாசன் பாடல்கள் சில ஆசிரியப்பாவால் அமைந்து என்பதனை.

*வி.நதியா, முனைவர் பட்ட ஆய்வாளர், தமிழ்த்துறை, அவினாசிலிங்கம் மனையியல் மகளிர் உயர்கல்வி நிறுவனம், கோயம்புத்தூர் - 641043.

ஜி.ஆர்.ஜி நூற்றாண்டு விழா

தமிழ் இலக்கியங்களில் வரலாற்றுப் பின்புலமும் பண்பாட்டுப் பதிவுகளும்

(பன்னாட்டு ஆய்வுக்கருத்தரங்கம்)

1

பதிப்பாசிரியர்கள்

முனைவர் கோ. விசயராகவன்

முனைவர் இரா. சாந்தி

முனைவர் வே. தனபாக்கியலட்சுமி

முனைவர் வி.இரா. பவித்ரா

உலகத் தமிழாராய்ச்சி நிறுவனம், சென்னை

INTERNATIONAL INSTITUTE OF TAMIL STUDIES

பூசாகோஅர கிருஷ்ணம்மாள் மகளிர் கல்லூரி, கோயமுத்தூர்

An Autonomous Institution, Affliated to Bharathiar University)

(Accredited with A Grade by NAAC, An ISO 9001 : 2015 certified Institution

Pelamedu, Coimbatore - 641004

நூல் விவரக் குறிப்பு

நூல் தலைப்பு :	**தமிழ் இலக்கியங்களில் வரலாற்றுப் பின்புலமும் பண்பாட்டுப் பதிவுகளும் (பன்னாட்டு ஆய்வுக்கருத்தரங்கம்)**
பதிப்பாசிரியர்கள்:	முனைவர் கோ.விசயராகவன் முனைவர் இரா.சாந்தி முனைவர் வே.தனபாக்கியலட்சுமி, திருமதி அர.மரகதவள்ளி, முனைவர் து.சவிதா முனைவர் வி.இரா.பவித்ரா
வெளியீட்டாளரும்: பதிப்பு உரிமையும்	உலகத் தமிழாராய்ச்சி நிறுவனம் இரண்டாம் முதன்மைச் சாலை தரமணி, சென்னை-600 113 தொலைபேசி எண். 044 - 22542992
வெளியீட்டு எண்:	995
பதிவு எண் (ISBN):	978-9385165-02-3
மொழி :	தமிழ்
பதிப்பு :	முதற் பதிப்பு
பதிப்பு ஆண்டு :	2019
பயன்படுத்திய தாள்:	18.6 கிகி டி.என்.பி.எல் வெள்ளைத்தாள் (மேப்லித்தோ)
நூலின் அளவு :	1/8 டெமி
எழுத்தின் அளவு:	10 புள்ளி
பக்க எண்ணிக்கை:	664
அச்சுப்படிகளின் எண்ணிக்கை :	1000
விலை :	ரூ.465 (ரூபாய் நானூற்றி அறுபத்தைந்து மட்டும்)
அச்சகம் :	நவநீதம் அச்சகம் சென்னை-600 096
பொருண்மை :	இலக்கியம்

பொருளடக்கம்

3. இலக்கியங்களில் நடுகல் வழிபாட்டு முறைகளும் தற்கால வழிபாட்டு முறைகளும்

முனைவர் வே.வளர்மதி
உதவிபேராசிரியர்
தமிழ்த்துறை,
வேளாளர் மகளிர்கல்லூரி, ஈரோடு

பண்டைய காலம் தொட்டு நாட்டைக் காப்பது தன் கடமையாக எண்ணி வாழ்ந்துள்ளனர். நாட்டைக் காக்க போரில் இறந்த வீரர்களுக்குக் கல்நட்டு வழிபாடு செய்து வருவது பண்டையத் தமிழரின் மரபாகும். போரில் இறந்தவர்களின் நினைவாக நடப்படும் கற்களைநடுகல் என்று அழைக்கப்படுகிறது. வேதங்கள், ஆயிரம் பசுக்களைத் தானம் கொடுத்தால் கிடைக்கும் புண்ணியம் போரில் இறக்கும் வீரனுக்குக் கிடைக்கும் என்று கூறுகிறது. புறநானூற்றில் நடுகல் வழிபாட்டு முறைகளைப் பற்றிய செய்திகள் கூறப்பட்டுள்ளன. நடுகல் ஏன், எதற்கு, எப்படி வழிபட்டனர் என்ற செய்திகளையும் சுட்டிக் காட்டியுள்ளது. புறநானூற்றில் காணப்படும் நடுகல் வழிபாடு முறைகளைப் பற்றியும் தற்கால நடுகல் வழிபாட்டு முறைகளையும் ஆராய்கிறது.

நடுகல் - சொற்பொருள்

நடுகல் என்றால் நட்டக்கல் என்று பொருள். நடுகல் என்ற வினைத்தொகை இலக்கண இலக்கியங்களில் பேசப்படுகிறது. நடுக்கல்லை நட்டக்கல், நடப்பட்ட பகல் எனப் புறநானூறும் நாட்டியகல் என இளம்பூரணரும், நடுங்கல் எனச் சிலப்பதிகாரமும், நாட்டப்படுங்கல் எனத் தொல்காப்பியமும் குறிக்கின்றன.

வேறுபெயர்கள்

தமிழகத்தில் வேலூர், திருவண்ணாமலை, சேலம், தருமபுரி ஆகிய மாவட்டங்களில் வேடியப்பன் என்று அழைக்கப்படுகின்றது. சில உட்புற கிராமங்களில் வேடப்பர், வேவடர், கிருடணப்பர், மீனாரப்பர், ன்யாசியப்பர் என நடுகற்கள் அழைக்கப்படுகின்றன. சில இடங்களில் ஆஞ்சநேயர் கல்லு எனவும் வழங்கப்பட்டு வருகின்றது. மேலும் றைமீட்டான், ஊமை வேடியப்பன், இரட்டை வேடியப்பன், சாவுமேட்டு

ISSN INTERNATIONAL STANDARD SERIAL NUMBER
ISSN-2321-7065

IJELLH

International Journal of English Language, Literature in Humanities

Indexed, Peer Reviewed (Refereed), UGC Approved Journal

International Conference on Contemporary Coherence in Brithish Literature and Language

Orgnised by

Erode Arts and Science College

Volume 7, Issue 2, February 2019

www.ijellh.com

Ms P LALITHA

PH D SCHOLAR

ERODE ARTS AND SCIENCE COLLEGE ERODE

India

Ms A SUGANYA

PH D SCHOLAR

ERODE ARTS AND SCIENCE COLLEGE ERODE

India

WOMEN SUICIDE: IN LIFE AND LITERATURE

ABSTRACT

The concept of Suicide and literature are associated with each other. Suicide in real and in fiction is a most arguable topic and as with other issues of life. It is steeped in controversies that have riddled through history, and stubbornly resisting any kind of closure to the riddle itself. Suicide is as old as humankind, and it had its origins in the creation of the Home Sapiens. Its kind, methods and approaches may differ, but humans started restoring to this practice as they realized it could provide an ultimate solution that life itself is unable to resolve. The act of suicide is studied from a gender perspective, besides the analysis of the lives of two women suicide writers Sylvia Plath and Virginia Woolf brilliant in their literary output but who

succumbed to the forces of varying pressure and stress. This paper is about how writers' life and their works reflect the suicidal Literature.

KEY WORDS Virginia Woolf, Sylvia Plath, literature, gendered notions, stress, suicide

Suicide has existed in all human societies with the subject of suicide emerging as one of the storm centers of the intellectual climate. The word "suicide" was first introduced in 17th century. It is said to be derived from the Latin words *sui*(of oneself) and *caedere*(to Kill). Suicide has always been one of the most important philosophical, moral, ethical, and religious problems throughout history. A significant number of writers have struggled with depression and seductions of suicide. Renowned writers like Virginia Woolf, Anne sexton, Sylvia Path have identified with the downward pull of the creative unconscious toward suicide. The focus of this chapter therefore is to study the life and works of two authors who took their own lives. Each case discusses the writers' attitude toward suicide. A strange similarity can be perceived among these two gifted writers, although they belong to socially and culturally different milieus. This similarity is rather interior than exterior. A number of creatively eminent individuals have taken their own lives, including Virginia Woolf, Sylvia Plath, Anne sexton and many other writers. The large number of such cases suggests that there may be a functional relationship between creativity and psychological health. . Gender is much debated issue today, referring to ways of seeing and representing people and situations based on sex difference. While sex is a biological category, gender is a sociological and cultural category influenced by stereotypes' what 'female and male' behavior that exist in our attitudes and beliefs. In general gender pattern for suicide is that rates in male considerably exceed than of females. It outlines a series of male and female writers' suicides and strives to probe into the differential aspects of the two. This chapter has two parts, one is, it attempts to discuss writers in life, and the second part discusses suicides in

literature. It also gives historical perspective of literary suicides from ancient literature to the present.

Virginia Woolf is regarded as a major figure in the modernist movement, and an experimenter and innovator in novel writing. The poetic and symbolic quality of her novels is much appreciated. In her novels, the emphasis is not on plot or action but rather on the psychological life of the characters. Her novels are also known for their delicacy and sensitivity of style, their evocation of place and mood, and their background of historical and literary reference. Psychological effects are achieved through the use of imagery, symbol and metaphor. Character unfolds by means of the ebb and flow of personal impressions, feelings and thoughts.

Virginia was the third of the four children of her parents. Being a nervous and delicate child, she was educated at home, mainly by her parents. While Woolf received no formal education, she was raised in a cultured and literary atmosphere, learning from her father‘s extensive library and from conversing with his friends, who were prominent writers of the era. In May 1895, Virginia‘s mother died from rheumatic fever. Her unexpected and tragic death caused Virginia to have a mental breakdown at age 13. Although mental illness can certainly not be traced to any single event in a person's life, it is clear that the death of Virginia's mother and the accompanying collapse of her father short-circuited an already fragile system, triggering, by that summer, the first of four break downs Woolf was to experience during her life.

The physical symptoms which were present at each successive breakdown included intense agitation, spells of auditory hallucination, and a deep and almost completely incapacitating depression. Through these short interludes of sickness it was the symptoms alone

that were treated, either by exercise or rest or sipping milk in darkened rooms. The emotional strain she suffered due to the tyrannical demands of her father was bad enough. Added to this was the sexual interference from both her half brothers, Gerald and George Duckworth. At a very early and most impressionable age (when she was barely six years old), Gerald assaulted her sexually. This was followed by George's interference when she was thirteen. A second severe breakdown followed the death of her father, Leslie Stephen, in 1904, after a long and painful illness, produced an array of conflicting responses in his children. It would be difficult to have Leslie Stephen as a father and not have a great many confused feelings about him. He commanded grand love with the same ease that he created bitter resentment. Whatever people felt about him, they felt it strongly. Certainly Virginia was deeply affected by his loss. These experiences scarred her very spirit and its guilt was to haunt her until her suicide at the age sixty.

According to nephew and biographer Quentin Bell, her madness was provoked by life-altering events, notably family deaths, her marriage, or the publication of a novel. According to Lee, Woolf's symptoms conform to the profile of a manic-depressive illness, or bipolar disorder. Leonard, her dedicated lifelong companion, documented her illness with scrupulousness.

Sylvia Plath remains the most haunting twentieth -century literary suicide. Since her death in 1963, Sylvia Plath's life and work have provoked a vast and varied commentary. Some writers have attempted to separate her life and suicide from her art; others have devised metaphoric explanations for the concrete reality of her tragedy.

Death is a major theme in Plath's poetry because of her experiences of it in life. She was manic depressive for most of her life and attempted suicide twice before she succeeded in 63. In early childhood, Sylvia was the center of her father's attention and she gloried in being

the family's darling and a special favorite with her grandparents. Soon, Otto Plath's health started deteriorating due to diabetes and a wounded toe aggravated his misery. In November 1940, he died and his death was a great blow to Sylvia who loved her father most dearly she felt a sense of betrayal with her father for deserting her by his death hence, a combination of the hatred and the Electra' love that she felt for him. It was not easy for Sylvia to bury the memories of her father. He emerged in her dreams and in her peculiarly hallucinatory imagination until 1942, when the family of Plath vacated the sea town of Winthrop. Her father menacingly and irresistibly appears again and again in her works as a *Colossus* of a sea – muse or an archetypal Greek king or as a beekeeper or as in the famous poem *Daddy*, a fictitiously brutal combination of husband and Nazi. This tangle of imagery, illogical, surreal, untrue have been inseparable from Plath's psychic reality until her death in 1963.

Life posed itself before her in all its existential mystery and misery. Both marriage and men were a menace to her. Even her children were not an adequate link to reconcile her to her husband. For her, marriage became an institution of empty emotions. Marriage seemed to be a trap, a swamp, a blind ditch from which she was unable to extricate herself. Ted Hughes along with the father ended as a metaphor for hatred. In his book on Sylvia Plath *The Shaping of Shadows*, he believes that Plath attempted suicide because her aim for transcendence was thwarted.

The literature is the reflection of life. Every text, in that sense, is attempting to communicate the author's intentions to his audience. Therefore, when we analyse literature from classical period, we undergo multiple views for suicide. In Thebes and Athens, suicide was not against the law, but those who killed themselves were denied funeral rites and the hand that had been used for the act was severed from the arm. The Greek philosophers' view of suicide ran the gamut from mild consideration to praise. The Greeks believed that life was given and taken away

by the gods; however there was also a belief that life was not sacred. Plato and Aristotle, considered suicide generally as an act of betrayal that bereft the society of its members to function well. Their views, however, were based not on the inherent evilness of the act of suicide but on the inherent good of contributing to one's community. Plato prohibited suicide because he held that Gods were our guardians and even though he held that death is better than life for him, one should wait for his time patiently. Life is a gift from Gods and we should not reject it, for otherwise one will be punished.

In Dante's *The Divine Comedy* he declared that suicide was considered a moral sin, a horror and an object of total moral revulsion. John Donne wrote the first English defense of suicide, *Biathanatos:* and his declaration of that paradox, that self-homicide is not so naturally sin that it may never be otherwise. Although the book was his way of showing off his pedantic wit and learning, the subject of the book was close to his heart. He admitted he had written about suicide because he himself was constantly tempted. Shakespeare used suicide in his plays more than any other of his contemporaries. There are thirteen suicides in all, two in *Romeo and Juliet*, one in *Julius Creaser*, one in *Othello*, one in *Hamlet*, one in *Macbeth* and five in *Antony and Cleopatra*. Hamlets famous 'To be or not to soliloquy can be interpreted as his musings on suicide. Shakespeare's tragedies do not adhere strictly to the Christian doctrine of suicide which was one of it being viewed as a moral transgression and a mortal sin and treated with abhorrence. The modern preoccupation has still to do with death but without the element of an after- life.

In Camus *The Outsider*, the priest helps the outsider to overcome his bleak and thankless view of the world, for as the power of religion weakened the power of suicide grew. Kirilov in *The Possessed*, the theme of logical suicide in his writing, in a monthly document, *The Diary of a Writer*. He wrote in the Diary. During the nineteenth century, new perspectives on the act of

suicide came into existence, following a shift from the rigid religious central to a stacking of ideas based entirely on a religious

A major development of the era was naturalist Charles Darwin's book On the *Origin of Species*. Sigmund Freud through his invention of *psychoanalysis*. His theory that suicide was the result of unconscious aggression haunted against oneself moved suicide 12 from the realm of religion to that of medicine, formulating the belief that suicidal persons were 'sick' rather than being involved with demonic forces. As Freud was presenting his innovative ideas, another writer was making an essential contribution to the study of suicide in France.

Dostoevsky was criticized in justifying suicide. He decided to write an article to clarify his own ideas about suicide in his own voice. With this aim, in December 1876, he wrote an essay called *"Unsubstantiated Statements"* in his Diary. In this text mainly, he tried to show suicide as the disbelief in immortality. Dostoevsky was always impressed with the news of someone killing himself without any obvious reason. He found such suicides mysterious and created several stories about the protagonists who take their life without any reason.

Women writers and their works from nineteenth and twentieth centuries are not to claim that the impulse of suicide is the invention of modern literature, but-first, it is to specify the matter of study so as to achieve more specification. The high incidence of suicide among twentieth-century writers is well known and includes eminent writers such as TadeuszBorowski, John Berryman, Paul Clean, Hart Crane, Romain Gary, Ernest Hemingway, Randall Jarrell, William Inge, Jerzy Kosinski, Primo Levi, Vachel Lindsay, Jack London, Vladimir Mayakovsky, Ross Lockridge Jr., Yukio Mishima, CesarePavese, Virginia Woolf, Sylvia Path, Anne Sexton and John Kennedy Toole. A significant number of writers have struggled with depression and

seductions of suicide.These female characters exhibit complicated and fragmented life histories and re-envision their subjectivity and resistance by challenging the structure created by the patriarchal society .Feminine society is ruled by patriarchs with its male oriented principles that subjugate women socially, economically and politically. This oppressive power structured system-patriarchy-has become the most pervasive ideology of our culture and it dictates the fate of women.

Betty Friedan in *The Feminine Mystique* gives an account of the daily life of a woman: She is trapped simply by the enormous demands of her role as modern housewife: wife, mistress, mother, nurse, consumer, cook, and chauffeur, expert on interior decoration, childcare, appliance repair, furniture finishing, nutrition and education. Her day is fragmented as she rushes from

from a feminist perspective and to expose the construction of madness as a specifically female problem. She has not romanticized madness in her text because it is a painful result of determinist notions relating to femininity. Also, diagnosis and treatment of mental illness are inextricably linked to notions of gender.

An Exploration into suicidal literature and suffering of writers who committed suicide helps to recognize the "cry for help" through their writings. Literature is the most powerful form of human expression. It is the most acceptable way of embodying experiences and ideas. The main factors that contributed to writers' suicide are loneliness and alienation which appears to be large contributing factors of depression among writers. Writers spend hours of time alone, with no company but their own thoughts, and even when among others they tend to think more to themselves than they do aloud. Their field of work requires them to spend all this time thinking and writing alone, but this lifestyle can have a lot of negative effects. The thematic presence of isolation, rejection, death and rebirth, shows a final perceived self-shaped by suicidal thoughts. This alienation created a barrier between themselves and others. They kept a distinct lack of thoughts, Descartes social support and Idiosyncratic thinking patterns another curious trait that is common among writers is an uncanny fixation with death. The topic of death may be a result of the short life expectancies of writers due to inner stress, depression, and suicide. The family can play an important role in its prevention, as it is an avoidable cause of death. Families rarely discuss thoughts of suicide, honestly with one another especially when the issues involve one of the great stigmas in our society. Most suicidal individuals give warning signs or signals of their intentions. The best way to prevent suicide is to recognize these warning signs and know how to respond to them. The breakdown of their family placed Plath and Woolf under tremendous stress and to commit suicide. Thus many women writers create awareness to the women with the help of Literature.

Works Cited

Primary Sources:

Plath, Sylvia. *Ariel*. London: Faber And Faber, 1965. Print.

Woolf, Virginia. *Between The Acts*. London: Hogarth Press, 1941. Print.

Secondary Sources

Alvarez, A. *The Savage God: A Study Of Suicide*. New York: Bantam Books, 1973.Print.

Anderson, Olive. *Suicide In Victorian*. Oxford: Clarendon Press, 1987. Print.

Andrew, Joe. *Women In Russian Literature*. New York: St. Martin's Press,1988.Print.

V.E.T. FIRST GRADE COLLEGE

(Permanently Affiliated to Bangalore University, Recognised U/s 2(f) & 12(B) of UGC Act)
Ph: 080 - 26586808 / 26584760, E-Mail: vetfgc@rediffmail.com, Website: www.vetinst.org

Accredited By NAAC

In Association With

BANGALORE UNIVERSITY ENGLISH TEACHERS' ASSOCIATION [BUETA]

Certificate

This Certificate is awarded to

Mr./ Ms./ Prof./ Dr. S. Puneetha of

P.G. & Research Vellalar College for Women College

for being a Paper Presenter / Participant / Chaired

on title Post-colonial Debates- Nation, Race, Gender & Cultural Identity. in the one day National Level Seminar on

"Post Colonial Debates-Nation, Race, Gender and Cultural Identity"

organised by V.E.T. First Grade College on **9th March 2018,**

Articles Published in ISBN no 9789381-9796-81.

DR. R. PARVATHI
Principal
Academic Director - VET Colleges

MANANDI N.SURESH
Hon. Secretary
Vasavi Eduational Trust

B.R. VISWANATH SETTY
President
Vasavi Eduational Trust

HERTA MÜLLER'S THE LAND OF GREEN PLUMS: A FACTIONAL WORLD OF FISSURES

DR. S. PUNITHA

Cultural identity embraces an individual at all stages of his/her life. This article focuses on the formation and dissolution of cultural identity found in the literary works of Herta Müller, the Romanian born German Nobel Laureate of 2009. Müller belong to the minority ethnic German community and emerged as one of the prominent writer under the totalitarian regime of Ceausescu. Through her poetic prose style of narration, she criticized strongly the Stalinist-Communist dictatorship and questioned the cultural identity of the Banat-Swabian communities in which she grew up.

Müller's strong political involvement and non-cooperation with the Securitate, made her to lead a life under surveillance by these Secret Police of Romania, and had been banned from publishing any kind of literary works in Romania. After a great struggle facing many interrogations, she moved to Berlin in 1987 with her mother and her then husband and a writer, Richard Wagner and voiced for these minorities in her native soil.

Even though these minorities are immigrants, they are not foreigners in Germany, as they are the ethnic Germans and the native speakers of German, they claim for their German identity. The German language and ethnicity, which identified them as "Germans" in Romania and justified their immigration to Germany, made them as much outsiders in Germany as they had been in Romania. The writers among the immigrants had to demonstrate, argue and perform their "German" identity once settling in Germany. The history, cultures, languages and political systems that have shaped the cultural identity of German-Romanian authors distinguish them from any other category of migration writers in Germany. A group of writers started to emerge at the University of Timisoara, in the Banat, which laid the foundation for the literary and political group Aktionsgruppe Banat. Although short-lived (1972-1975), this group had long-lasting influence on future generations of both the Romanian-German and Romanian writers like Herta Müller.

In German migration literature, the idea of in-betweenness was initially conceptualized as a "reservation designed to contain, restrain, and impede new knowledge, not enable it." (Leslie. p-245). Jim Jordan who coined the term of the "two worlds paradigm," remarks that from the late 1970s to the early 1990s, many critics and migrant writers resorted to images, metaphors, and motifs of performance to convey the migrant as suspended, trapped, or stranded between two words, that of origin and of migration. Migrant writers and their literature were expected to "bridge" or "mediate" the gap between the two worlds, cultures, and countries, the ethnic Romanian-German communities bear witness for the aforementioned two worlds.

The author of many literary works of various genres – short stories, novels, short prose writings, essays and collections of collage poems, Herta Müller has received much critical acclaim because of her unique way of bringing the trauma alive among the readers. She through her writings exposed the terror and persecution under Ceausescu's dictatorship as well as the ethnocentrism, rigid norms and collaboration with theNazi regime of the Banat Swabians. Her insistence on exposing the legacy of National Socialism and its influence on the cultural identity of her Banat-Swabian community won her as many critics as admirers.

Every literary work of Müller portrayed her own traumatic past experiences in various ways. The Land of Green Plums (Herztier) published in 1996is a portrayal of the characters of her innate circle of friends. The cultural identity of her protagonists is, however, marked by acute fragmentation as a result of their traumatic experiences in the Banat-Swabian village and communist Romania. She posturizes the effects of migration, displacement, consumerism, the commodification of culture, the sufferings of the women and other common public, and materialism on the formation of cultural identity in post-Communist Eastern Europe and post-unification Germany.

The Land of Green Plums describes the anxieties of a group of youngsters (Edgar, Kurt, Georg and the narrator) with a peasant background arriving in the city for their study distancing themselves from their rural communities. Müller identifies real-life people on whom her characters are based. The will to think and act for themselves, i.e., their autonomy and individuality, binds the group of friends and it also separates them from their regimented environment. Their own difference opens their eyes to those who deviate from the norm in other ways, the confused and the demented, whom the novel's four friends see as a mirror image of the delusional totalitarian state: a man's long wait for his prison-died girlfriend; lectures conducted by a philosopher to an audience of trees and telegraph masts; an old man dragging his sledge through the street, in summer as in winter; and a deaf-mute midget who is regularly raped and impregnated by many workers. They are completely alienated from their normalcy and points an alarming reality to these friends.

A close network connects these friends throughout their studies and over large geographical distances. The totalitarian regime insists on no group activities as they might trigger any revolutionary acts in the society. All the day-to-day activities of the suspected people are monitored by their own close circle of friends or relatives or even their neighbors. Nobody trusts anybody – is the state of the people as their lives are under surveillance of the authorities. The four friends too are unable to withstand the pressure of persecution by the Securitate, which had been initiated even from their student life.

The terror administered by the Secret Police, Securitate, successfully resulted in the expulsion of their own lives. Even though all these friends are scattered across the country, they

Dr. S. PUNITHA, Assistant Professor of English PG & Research Department of English Vellalar College for Women, Erode-12.

ISBN :9789381-9796-81

cannot escape the clutches of the Securitatepersonnel. In each and every stage of their life, the tremors experienced by these four friends, stands a testimony to their life and hope of their survival. The authorities acted as 'messenger of fear' to instill the fear among the targeted people.

Being oppressed in both the Banat-Swabian village and under Ceausescu's regime, Müller's characters refute any territorial or cultural notions, a refusal owed to her own experiences. All the characters do lead a dual life in order to identify their identity. Müller through these characters of her literary work justifies the factional world of fissures.

PRIMARY SOURCES:

- Hofmann, Michael, translator.The Land of Green Plums.By Herta Müller, Metropolitan Books, 1996.

- SECONDARY SOURCES:

- Haines, B. and Lyn Marven, editor.Herta Müller. Oxford University Press, 2013.
- Leslie, A. Adelson. "Against Between: A Manifesto." Unpacking Europe: Towards a Critical
- Reading, edited by Salah Hassan and IftikharDadi Nai, 2001.
- Jordan, Jim. "More than a Metaphor: The Passing of the Two Worlds paradigm in German-Language Diasporic Literature." German Life and Letters.Vol.59.4. October 2006.p-488-99.

PERIYAR UNIVERSITY
Reaccredited with 'A' Grade By the NAAC
Periyar Palkalai Nagar
Salem – 636011 , Tamil Nadu

Language in India

UGC Approved Online Journal Serial Number 49042

ISSN 1930-2940

Special Issue January 2019

A Two Day National Seminar on

Food is not Just a Curry: Raison d'etre of Food in Literature (FDLT-2019)

Organised by
Department of English
Periyar University
Salem-636011

Pull up a chair. Take a taste. Come join us. Life is so endlessly delicious -
Ruth Reichl

Contents

Language in India www.languageinindia.com
ISSN 1930-2940
11249 Oregon Circle
Bloomington, MN 55438 USA
languageinindiaUSA@gmail.com
1-952-412-3583
UGC Approved List of Journals Serial Number 49042

February 10, 2019

Certificate of Publication

This is to certify that the article The Potentate Hunger and the Camouflaged Angel in Herta Müller's The Hunger Angel by Dr. S. Punitha was reviewed and accepted for publication in ***Language in India*** www.languageinindia.com in **Volume 19:1 January 2019** issue. The article is published and is available in the following link.
http://languageinindia.com/jan2019/periyaruniv/punitha.pdf

1. Language in India www.languageinindia.com is an international monthly online journal with its own Library of Congress ISSN Number. ISSN 1930-2940. It is included in the **UGC Approved List of Journals, Serial Number 49042.**
2. Language in India is published from the United States, Bloomington, MN.
3. Authors from many nations including those from India, Pakistan, Bangladesh, Sri Lanka, Singapore, Malaysia, Indonesia, Thailand, Vietnam, China, United States, UK, several European nations, Iran, Turkey, Jordan, Yemen, Saudi Arabia, Oman, Nigeria, Ghana, Kenya, etc. publish their research through Language in India.
4. Articles and dissertations published in Language in India are indexed in four major International databases: EBSCOHost, ProQuest (Linguistics and Language Behavior Abstracts), MLA International Bibliography, and Gale Search. The journal is also included in the Cabell's Directory, a leading directory in the USA.
5. Articles are easily accessible to scholars all around the world through the established Databases and open access Internet.
6. The journal does not charge any fee from readers or institutions to access articles, and thus the journal is freely available 24/7 to help researchers and students for personal use and not for distribution.
7. The journal is consistently and regularly published for the last 18 years.
8. Articles published in the journal are reviewed before publication by one or more members of the Board of Editors and/or another specialist, and authors are given an opportunity to revise their papers based on such reviews.

With best wishes

Madasamy S. Thirumalai, Ph.D.
Managing Editor

Language in India www.languageinindia.com ISSN 1930-2940 Vol. 19:1 January 2019
India's Higher Education Authority UGC Approved List of Journals Serial Number 49042

The Potentate Hunger and the Camouflaged Angel in Herta Müller's *The Hunger Angel*

Dr. S. Punitha

The fundamental human activity, eating, is very essential both for the survival and social functioning. The fundamental qualities to endorse the understanding of human society overviews the eating habits, rituals, the choice of dining companions and the reasons behind these purposes. Food is not only meant for the survival purpose but also to delight the individual. Themes related to food are quite common among all types of writing, and they are often used as a literary device in promoting both verbal and visual impact. For example, the attractive display of the menu card leaves the best impression on a foodie.

Food is also a noteworthy theme in literature by and about each region, religion, class, and culture. They play a vital role in determining the identity of any individual by bringing out the emotions through the likeness or hatred, starving or hunger, anger or happiness. When food provides the path, it is the literature that acts as the truck in delivering the message to the readers.

In addition to reflecting social order and civilization, food is often the representative of the limitations imposed upon an individual, bleeding well with the idea of excess as a key element of the author's imagination. It offers a means for powerful imagery in adult literature as well. The aim of this paper is to try to portray how food as a means of communication picturizes the pains, the sufferings, anguish and fear under an undesirable situation.

Herta Müller, a 2009 Nobel Laureate, reminiscent the Romanian-born German writer, Oskar Pastior's irreparable past through the protagonist Leo Auberg in her novel *The Hunger Angel*. It clothes the historical event of the deportation of the Germans in Romania to the gulags of Russia in 1945 with flesh and blood and gives an emotional dimension to it. The novel depicts the trauma of hunger faced by the people in the deportation camps through the character of Leo Auberg, a seventeen-year old deportee.

Hunger, personified as an Angel, strikes each and every individual to transform them to be more and more selfish. The internees in the camp are given very little to eat and are made to sweat away their blood. The insatiable Hunger gets a full energetic life during the sleep after a

day's hard work. The craving for food makes them partly lunatic in their behavior. The hunger angel invariably approaches all the people in the camp:

> Uploading was always a job for two or three people. Not counting the hunger angel, because we weren't sure whether there was one hunger angle for all of us or if each of us had his own. The hunger angel approached everyone, without restraint. He knew that where things can be loaded, other things can be loaded. In terms of mathematics, the results could be horrifying: if each person has his own hunger angel, then every time someone dies, a hunger angel is released. (The Hunger Angel 74-5)

The hunger embracing all the people, marks a great impression that cannot be easily erased: "The hunger angel looks for traces that can't be erased and erases traces that can't be saved." (78)

The narrator elaborates on how in the camp they tried to alleviate their hunger by eating orach, the mountain spinach and dill, a kind of grass. They also "stole before, during and after work" (16), begged and combed the rumble heaps. He describes the chronic hunger inflicted on them by "the hunger angel" (18). Leo reveals the never-ending hunger of the internees by his repetitive talk about 'the hunger', 'the chronic hunger', 'hunger . . . always new', 'the hunger echo', 'the hunger angels, 'starvation', pictures their hunger "which is always greater than [they] are" (17). He says that no words are adequate for the suffering caused by hunger" (18) and for 60 years, ever since he came back from the camp, he has been eating against starvation.

The text narrates about the eternal omnipresence of the omnivorous hunger in the internees, throughout their camp days. They had to shovel for their bread and "1 shovel load = 1 gram bread." (76) Leo says that shoveling was hard and it demanded total involvement. His wandering mind sapped his strength at times and sent him into a delirium in which he started fantasizing about food. This shows how the potentate hunger transforms a man into a scavenging animal. Further it suggests the fact that hard work and hunger eroded the mental ability of workers, resulting in deaths by accidents.

The death and the panic of the narrator is an instance of the panic of the people in the camp. Hunger strikes each and every individual to transform them to be more and more selfish. The craving for food makes them partly lunatic in their behavior as Leo points out:

> With open hunger the angel leads me to the garbage pile behind the mess hall. . . Hunger is my direction, assuming it isn't his. The angel lets me pass. He isn't turning shy; he just doesn't want to be seen with me. . . . My craving is raw, my hands are wild. They are definitely my hands: the angel does not touch garbage. I shove the potato peelings into my mouth and close both eyes, that way I can taste them better, the frozen peels are sweet and glassy. (78)

Leo recalls a sleepless night, due to hunger and the torturing lice. Whatever Leo finds to pacify his hunger, he tries his hands at all of them. He consumes the grass, flowers and even frozen ice to quieten the hunger angel, which is his constant and noisy companion.The internees found an outlet for their compulsion to eat, in their dreams; but it was a torment too, as they had to wake up to the miserable reality. The golden rule among the internees in the camp was not to talk about the immeasurable hunger, when they were hungry.

Even though people lead a life of utter desperation, their urge to pacify the ravenous hunger stays higher with them. Leo's "skin-and-bones time" indicates the hard times in the camp during which they go on searching for any edible item. The section "The case of the stolen bread", describes Fenya, who doled out a ration of bread for all in the camp. Leo says: "She was the bread, the mistress from whose hands we ate, like dogs, day after day" (97). She was agonizingly disciplined and immaculately ugly, was the mistress of the bread and an accomplice of the hunger angel.

The deadly combination of insufficient supply of food and extraction of utmost labor from the people in the camp became a routine. The ration supply of food for one day will not be sufficient for the internees as this supply differs from people to people in the same camp according to their state of work. Fenya knew exactly who should get how much ration. Leo belonged to the 800gm. group – the normal ration. 600gm. was for light work inside the camp and 1000gm./1kg. was the exceptional ration for the heaviest labour. The bread was very heavy and a single slice as thick as the length of one's thumb weighed 800gms.

Leo's first decision of the day was not to eat his entire portion at breakfast with his cabbage soup and keep aside a bit for the evening. There was no meal at midday, as they were at work. Leo recalls what happened on a day when one of the internees, Karli Halmen, had the day off. He stole the other internee Albert Gion's saved bread. On finding this out, Albert punched him on the mouth, dragged him to the water bucket and choked him. The others in the barrack joined him in pissing him on his face. Once the business with the bread was over, everyone acted the same as always. The bread is the true cause of their fight and their hunger.

Further, the author describes how the internees took various measures to assuage the gutbiting hunger – by discussing the different recipes of various dishes, and about the reminiscences of their childhood days in their home town, when their hunger was at its peak. Leo, the narrator says: "Everyone gets caught in the bread trap" (110) – the trap of being steadfast at breakfast, the trap of swapping bread at supper and the trap of the saved bread under the pillow at night. Everyone felt cheated, after the swapping of bread. Utterly alone inside the pack, each person tried to make his soup go further. By doing so, they want to feel the presence of the camouflaged hunger angel in them.

Hunger isolates the people and brings out the worst in them. Leo says that before someone died of hunger, a 'white hare' appeared on his face and the bread from such a person is called "cheek-bread" (111). No one was allowed to take Kati Sentry's cheek bread. Once the

accordion player Konrad Fonn swapped bread with Kati. She gave him her bread but handed her a rectangular piece of wood. When she bit into it, he laughed at her. Karli intervened and got back her bread. Everyone stood up for her and she proved to be their conscience. Leo says that they had learned in the camp to clear away the dead without shuddering. Their clothes were taken off before they turned stiff, as they were needed to prevent those who were alive from freezing to death and their saved bread was eaten.

Leo speaks about the omnipresence of the hunger in the camp and describes the haunting hunger to be a palpable object. He personifies hunger as a man and a deceiver. Once when Leo went to the market, he found a 10 ruble note on the ground and purchased food items for all the 10 rubles and ate them greedily. When he was nearing the camp, he felt sick and threw up everything he had gorged; he cried even as he threw up, feeling bad about wasting all the expensive food. He entered the camp with an empty pillowcase, empty stomach and a bitter emptiness inside him.

The struggle for bread continues till the end of camp life. The exchange of bread prolongs:

> In the evening, over cabbage soup, bread gets swapped, because your own bread always appears smaller than the other person's. And this holds true for everyone. Before the swap you feel light-headed, right after the swap you feel doubt. After swapping, the bread I traded seems bigger in the other person's hand than it did in mine. And the bread I got in return has shrunk . . . I better swap again. (110)

The exchange of bread in the camp takes place until the hunger catches the reader and intensifies the search for it in their own self. The author throughout the novel portrayed the various faces of the disguised hunger attacking the insane people at various angles. Even though these people lead a life of utter desperation, their urge to pacify the ravenous and the potentate hunger stays higher with them even after so many years of their freedom.

Work Cited

Boehm, Philip, translator. *The Hunger Angel.* By Herta Müller, Metropolitan Books, 2012.

Works Consulted

Applebaum, A. *Gulag: A History of the Soviet Camps.* Penguin, 2004.
Haines, B. editor. *Herta Müller.* University of Wales Press, 1998.
---. "'Lebenwirim Detail':Herta Müller's Micro-Politics of Resistance." *Herta Müller*, edited byB. Haines, University of Wales Press, 1998.
amp.dw.com/en/herta-müller

Dr. S. Punitha, Assistant Professor of English
PG & Research Department of English, Vellalar College for Women (Autonomous), Thindal, Erode – 638012 punithasundaram1@gmail.com

---

IJELLH

Crossref

2321 7065

Special Issue

Anthropology and Literature

English

College of Arts and Science

Nadu, India.

Volume 6, Issue I November 2018

www.ijellh.com

Dr. P. Sudhalakshmi

Assistant Professor, PG & Research Department of English,

Vellalar College for Women,

Erode, Tamil Nadu, India.

sudhalakshmienglish@gmail.com

Unconventional Sita in *Sita, Warrior of Mithila*

Abstract:

Indian myth has its own place in depicting the rich tradition, culture and social status of Indian ancestors. Ramayana, one of the greatest epics of india, has portrayed the story of Rama, an incarnation of vishnu. Though there are interpretations on the different versions of Ramayana, it has been brought to us as folk tale that Rama is the saviour of people and Sita is humble and docile in following her husband in all walks of life. Amish Tripati, contemporary indian fiction writer is being celebrated for his portrayal of Gods in human forms. Like his Shiva trilogy, Amish is in process of writing Ramchandra serious, in which the second book *Sita, Warrior of Mithila*, he tells the story of Sita, an abandoned child. This bildungsroman novel depicts, unlike Sita in *Ramayana*, Sita as great vishnu.

Amish has given a knock off to the present Indian patriarchal society where women are still suppressed and oppressed in various scenario. With the modern sensibility Amish has portrayed Sita as a young trained warrior who is bold, fearless and a great intellect to rule her country. These great qualities of Sita makes her the saviour of mother India. The present paper analyses the character of unconventional vibrating Sita like whom every Indian woman wanted to be.

Keywords: Myth, Tradition, Unconventional, Warrior, Women.

From time immemorial, every culture has folk tales to tell about the human existence to the next generation. Myth has become a popular genre of telling stories that keeps that alive for centuries. Greek myths play significant role both in life and literature. Like the classical myth, Indian myth has its own place in depicting the rich tradition, culture and social status of Indian ancestors. *Ramayana* is one of the greatest epics of India, portrays the story of Rama, an incarnation of Vishnu. Though there are interpretations on the different versions of *Ramayana*, it has been brought to us as folk tale that Rama is the saviour of people, whereas Sita, is humble and docile in following her husband in all walks of life.

Amish Tripathi, in *Sita, Warrior of Mithila* (2017), has broken the image of submissive Sita and portrayed an energetic young Princess who is ready to rule the great India. Amish Tripathi, one of the famous contemporary writers, is being celebrated for the series of Shiva Trilogy in which he has depicted Lord Shiva in the human guise. In the next series, he intends to voice out the similar story of Ramayana but in different form. In the first book he deals the story of Ram, where the second, *Sita, Warrior of Mithila* portrays the story of Sita from the time of her salvation in her infancy till the abduction by demon Raavan. The book is both criticized and appreciated for Sita is depicted as a real warrior who is not heard by an ordinary Indian.

Through the protagonist Sita, Amish has made an attempt to knock off the view of Indian woman in the present patriarchal Indian society, where she is expected to be a dutiful wife and a humble human being. Sita, *Warrior of Mithila* begins with the story of Sita in Dandakaranya where she has gone out with Makrant, a Malayaputra for collecting banana leaf for lunch. The above information puts the readers in the place to see conscientious Sita. But to the readers' surprise, she is introduced as Vishnu.

When Khara, the Lankan Captain tortures Jatayu, the captain of Malayaputras to disclose the whereabouts of the Ram, Sita and Lakshman, he refuses. But along with Jatayu, readers are also shocked to hear Khara's words, "Where is Vishnu… Where is she?" (6). Amish's unveiling the greatness and secret about Sita in the very beginning creates an inquisitiveness among the readers to know about Sita as a warrior. Then the story of the infant Sita commences. Thirty Eight years ago, Sita, the abandoned child is rescued and taken by Mithila's royal king Janak and Sunaina as their own child.

Initially Sita is neither strong nor week but she is portrayed as a normal girl child who is unable to save herself from the critical situations. She is kept very protective by Sunaina by restricting Sita to go out to slum where she is once attacked by young boys. Understanding the curious nature of Sita, Sunaina directs her for proper education. Everything in Sita's life has been changed when she is sent to Shvetaketu's gurukul, where she learns the skills that a princess has to possess. Being a bildungsroman fiction, *Sita, Warrior of Mithila* genuinely projects every stage of growing Sita in a skillful manner.

The basic purpose of education is streamlining the thoughts of a person through the "acquisition of knowledge, skills and attitudes"(NCERT 2). Sita learns to be dynamic in various aspects. The observation of outer and inner space of Sita guides her to comprehend life. In the gurukul, the courageous and talented Sita is forecasted as a matured girl when Kaaml, a fellow classmate teases her as adopted child. He says, "You can come back here [Gurukul] and teach all day when you got thrown out of your home!" (46). Amish, instead of making emotional upheaval of Sita, the young girl, portrays wrath in her that targets Kaaml. Inspite of reacting violently Sita with a very little efforts scares him. A way of frightening him, "Sita took one more threatening step dangerously close to Kaaml. Her toe was now touching the boy's. The tip of her nose was less than a centimeter from his face. Her eyes flashed fire … Sita suddenly screamed loudly; an ear-splitting sound right in Kaaml's face.

A forceful strong, high-pitched bellow. A startled Kaaml fell back, flat on the ground and burst into tears" (46). Amish has portrayed the outstanding courageous quality of Sita that makes not only Kaaml but every other fellow pupil to be in limits. Sita's courageous attitude and her learning skills are well-portrayed in various situations. She is excellent in stick-fighting and her flaw-less grip in holding spear is exceptional which fascinates Vishwamitra.

Sita is very clear about her ideas and conceptions of life. Even though she is well known about her story of adoption, Sita never gives up her relationship with her mother Sunaina. Inspite of third person narration, Amish clearly expresses Sita's vantage point about her parentage and her love for her mother. Staying away from her family in her growing age makes her to think of her birth mother but at the same time never makes her think negative about her mother Sunaina, who is a strong impact on Sita's life. Being the Queen of Mithila, Sunaina realizes her daughter's responsibilities after her period. When she is in deathbed, Sunaina teaches her that welfare of her nation depends on Sita, the upcoming protector and instills her responsibilities as well. Creating trust on her mother helps her to build a strong self-image and self-confidence. She knows well that before entering into the mainstream of her life, she needs to strengthen herself in every aspect.

The life in the Ashram not only proves her as a real warrior but also a good leader. The frequent visit of Vishwamitra allows him to watch Sita as a saviour of the mother land. Recognizing the Vishnu, Vishwamitra declares this decision to Sita by giving her the silver knife with the symbol of fish with crown which is considered as the knife of Lord Parashu Ram, the previous Vishnu: "if the fish symbol had a crown on top, it meant that you were the Vishnu… 'this Knife is yours, Sita' said Vishwamitra softly" (86).

Creating an individual to rule the entire nation is an exemplary issue. Vishwamitra, a person of knowledge and wisdom has selected a highly intelligent girl who will protect India under her shadow. Sita, the bold girl readily accepts the Himalayan task that has been given

for her by the great sage. Though she is aware of the difficulties in getting trained for proving herself as Vishnu, she is prepared to undergo the hardships. Meantime, Sunaina also insists her responsibilities as a daughter of Mithila. But at the same time Sunaina is aware of her daughter's talents and skills that are not to be kept with Mithila's boundaries. She says, "I want my name redeemed, Sita. And I want you to do it. I want you to bring back prosperity to Mithila… and once you have done that … you have my permission to leave Mithila… you are meant for greater thigs. You need a bigger stage. Perhaps, a stage as big as India. Or, may be history itself…" (103). Not only Vishwamitra and Sunaina who have identified Sita's valour, but also the readers identify who identify Sita as Vishnu acknowledge her greatness.

After Sunaina's demise, Sita takes her charge of Mithila as her father Janak completely surrenders himself in the philosophical world. The rule of Sita is entrusted by Mithilans for their life style has been improved after she takes up her position into the political and social issues. "… mithilians became self-reliant in terms of food, medicines and other essentials" (113). However, Sita is never carried away by the world of power around her. Once she humbly states Radhika that, "All I do is police a small kingdom, collect taxes and redevelop slum" (120). It is generally stated that women are so pride about their positions. Amish has knocked off this notion by Sita's words. Rather, she acts as a guiding force for her subjects in developing their potentials. Her short visit to Aghastiyakootam envisions her future responsibilities. The image of *Ramayana's* Sita is totally destroyed by Amish. The journey undertaken by Sita to Aghastiyakootam qualifies her from a normal princess to that of a queen.

The future responsibilities of Sita urgé her to work for nation, so that she could protect the entire nation. Moreover, Sita being an administrator is never attracted to the crown and she perpetually desires to be a good human being. When she comes to know that

Vashista, the chief of Vayuputra is convinced with Ram a Vishnu, Sita does not withdraw. It is not because of the aspirations for Vishnuhood title but because she does not tend to create chaotic dispute between Malayaputras and Vayuputras. The significance of the character is revealed through her clever decision to marry Ram for having partnership in Vishnuhood and the efforts she has taken for her Swayamvar are thunderstruck. Readers are told, "Sita had other plans. Plans to work with Ram in partnership as the Vishnu" (186). To a great extent, Amish sketches Sita not only as ingenious but also gallant to have a private visit to Ram before Swayamvar for ensuring her decision.

The chaos that has been created by Raavan in Mithila favours Vishwamitra for plotting against Ram. For the counter attack of Raavan, Ram uses daivi astra as per Vishwamitra's instruction to save Mithilians. Sita could study the great sage's intention behind his advice because Malayaputras "want him[Ram] out of the reckoning as a potential Vishnu; and under their control" (217-18). Amidst these confusions, Sita's wise choice of marrying Ram proves her strong will. Discerning the critical circumstances, Sita firmly decides to work together with Ram in Vishnuhood. Meantime, she feels proud of Ram's righteousness while he chooses the life of a refugee as a punishment of using daivi astra which is against the law of Lord Rudra. Soon after the marriage, she goes into an exile with Ram for fourteen long years. She assures Ram that she will always be with him in all his endeavors. Royal Sita's sacrificing wealthy life for the sake of her affectionate husband exhibits her deep love for her better half.

Exploring wild life is challenging for every person that too for Sita, a royal princess. Though Sita's willing partnership of vishnuhood initiates her wedding with Ram, she cheerfully takes his partnership throughout their life as affectionate couple. She realizes adoration is the best way to keep the life happy and she proves it best to Ram. Sita is a keen

observer of life and fellow beings that makes her reveal the truth of her vishnuhood to Ram even long time after their marriage.

In the early-Vedic period, women enjoyed a respectable position in the society. Many remarkable positions were taken by women regarding public activities and rule. Girls were educated equally like that of the boys. From medieval days, "… a set of personal qualities…were demanded both of men and woman, but, whereas learning, decision and authority were male prerogatives, modesty, grace, deference, self-restraint, delicacy and virtue were some of the 'feminine' qualities, expected of every woman both before and after marriages" (Vasconcelos, 319). These gender concepts are still prevailed in India, where women are ill-treated in many ways. Amish tends to extirpate the conceptions of the contemporary Indian society in which women are still suppressed and oppressed in various scenario.

In *Kambaramayanam* and other versions of Ramayana, Sita is characterized as docile and passive. Even in the modern scenario, conventional Sita personifies love, patience, and sacrifice as a submissive wife of Ram. Amish as a responsible Indian writer has not just referred one version of *Ramayana* but went through the descriptions of Sita in various versions. As per depiction of *Adbhut Ramayana,* Amish attempts to renew Sita not only as a bold and fearless warrior but also a knowledgeable, brave, clever woman and a perfect ruler. She is self-reliant and efficient in her decision making that marks her the saviour of India. Through this Sita as a warrior, Amish Tripathi expects not only every woman but also every man to change their outlook of treating women in Indian society.

Works Cited

Basic in Education. NCERT. www.ncert.nic.in>basic_in_education. 2014.

Tripathi, Amish. *Sita, Warrior of Mithila*. New Delhi: Westland Publications ltd. 2017.

Vasconcelos, Sandra Guardini, T. "Literature and Cinema: Image of Feminity in Pride and Prejudice". *Ilho do Desterro*. April 2008. http://doi.org/10.5007/%25x.

(ISBN: 978-81-945892-4-6)

WOMEN EMPOWERMENT THROUGH ICT

Dr. K.K. SARADHA
Assistant Professor & Head, Vellalar College For Women (Autonomous), Erode

Key Words: Women Empowerment, ICT, Skill development, Economic Development.

INTRODUCTION

Information and communication technologies (ICT) can be powerful tools for advancing economic and social development through the formation of new sorts of economic activity, employment openings, improvements in health-care delivery and other services, and the augmentation of networking, participation and advocacy within society.

While the potential of ICT for encouraging economic growth, socio-economic development and effective governance is well recognized, the paybacks of ICT have been unevenly disseminated within and between countries. Poverty, illiteracy, lack of computer literacy and language barriers are among the factors impeding access to ICT infrastructure, especially in developing countries. Another hindrance pertains to ICT is lack of its access to women.

The digital revolution has changed the way we work, access information and connect with each other. It offers opportunities to those who can use the new technologies, but also presents new challenges for those who are left behind.

Often referred to collectively as Information and Communications Technologies or ICTs, these technologies are any method of electronically sharing or storing data: telephones, mobile broadband, the internet, broadcasting, sensor networks, data storage and analytics, and more. ICTs improve the lives of small farmers in a myriad of ways, from monitoring crops to tracking market prices and from spreading good practices to facilitating access to banking services. The list goes on.

POSITION OF WOMAN IN INDIA

In Indian society there occurs a great disparity in the matter of economic resourcefulness between a man and a woman. Our society is male subjugated both economically and socially and women are always dispensed with dependant role. A nation that does not esteem its women cannot be designated as a civilised nation at all. Such a nation cannot grow and develop. Thus, the national consensus should focus on betterment of women by befittingly empowering them.

Empowerment is a multi-dimensional social process that aids people gain control over their lives. Women empowerment commonly refers to the process by which women augments their power to take control over decisions that shape their lives, including in relation to access to resources, partaking in decision making and control over distribution of benefits.

Women's empowerment has five components: women's sense of self-worth; their right to have and to decide choices; their right to have access to chances and resources; their right to have the power to control their own lives, both within and outside the home; and their aptitude to influence the direction of social conversion to create a more just social and economic order, nationally and universally. Though empowerment is a central approach taken

Vision for an Inclusive Society: A Feminist Perspective

Edited by:
Dr. Sudeshna Mukherjee

Centre for Women's Studies
Bangalore University,
Bangalore

Sub-Theme 2: Vision of a Violence Free Society

Gender Inequalities Faced by Women and Vision for their Future

Dr.N.Kavitha

Assistant Professor of History, Vellalar College for Women(Autonomous) Thindal, TamilNadu,

Definition of sex and gender

"Sex refers to the biological and physiological characteristics that define men and women.""Gender" refers to the socially constructed roles, behaviors, activities and attributes that a given society considers appropriate for men and women. Gender refers to the socially constructed roles and responsibilities of women and men in a given culture and location. [1] (NPTEL)

The distinction between sex and gender, like the distinction between biology and culture, is not a perfect one, but it emphasizes that gender is a cultural, not a biological category. Social expectations pattern male and female behavior and often, what men and women expect of themselves. In addition, because social institution are organized around gender inequality, the system of gender relations also patterns one's life chances and directs men's and women's social, economic, and political experiences. The societal system of gender relations affects us on different levels, including individual subjectivity, social interaction, and institutional structures. [2]

At the level of individual subjectivity, gender expectations can influence our sell definition, including our sense of competency, our self-esteem, and our emotional state of mind. For example, women who internalize traditional expectations of femininity may become dependent on men for their sense of self-worth. It is important to note, however, that not all persons, men or women, internalize sex-typed expectations to the same extent. In fact, rejection of gender expectations can be a source of resistance to the oppressive limitations imposed by traditional gender expectations. At the second level of societal experience, that of social interaction, gender relations are easy to observe. Gender structures the social interaction of groups. [3]

Challenge of Gender Inequality

Women are also more likely than men to believe that women will face discrimination, suggesting the presence of a gender gap in men's and women's perceptions of sex discrimination. Women's perceptions seem accurate since despite the increased likelihood for women to be employed inequities remain in men's and women's wages, job opportunities, and the conditions women face in the labour market. What is the current status of employed women and how can we explain the continuing inequality between women and men? Sociologists define gender stratification as the hierarchical distribution by gender of economic and social resources in a society. [4]

ISSN : 2319-3808

TAMIL NADU HISTORY CONGRESS PROCEEDINGS

Proceedings of the Twenty Fourth Session

6th – 8th October, 2017

KARAIKUDI – 2017

Trade and Commerce in the Sangam Age

N. Kavitha*

Introduction

Tamil literature of the Sangam period is full of details regarding the trade and commercial activities of the people the beginning of the Sangam Age. The main sources of economic prosperity were flourishing trade. Trade in the Sangam age was both internal and external. The barter system of trade was followed during the Sangam age. Barter trade was the standard transactions inside the Country and gold was exchanged for pepper and other spices as value for foreign trade [1]. Ancient Tamils were active traders in various commodities, both locally and outside Tamil country. Salt was an important commodity of trade. In the Sangam age markets and bazaars were developed a monetary economy. Markets and bazaars were called *Angadi* in bigger town. *Pattupattu* gives a detailed about the bazaars and streets of the city of Madurai.

Important Port Cities for Trade and Commerce

Tamil country comprised of many cities and towns during the Sangam period served as busy centers of trade and commerce. Ptolemy, listed six coastal places in Tamilnadu to which he appends the word 'emporium'. Three of these Musiri, Korkai, Kaveripum pattinam are the chief ports of the three early kingdoms[2]. Uraiyur, Vanji, Madurai, Kanchi had also been centers of trade during the sangam period.

Musuri

Musuri was an important place of the chera country. The Greek writer Pliny has given an account of what he saw in Musiri. He says, ships anchored at a great distance from the shore and the cargoes[1] were landed and shipped by employing boat[3].

Korkai

Korkai was a seaport and the second capital of pandiyan kingdom. Periplus says" From Comarin towards the south of this region extends to Colchi; where the pearl fisheries belong to the pandiyan kingdom[4]" **Marco Polo,** the Venetian traveller of the 13th century, visited **Kayai** twice (1288 AD and 1292 A.D).

Kaveripumpattinam

Kaveripumpattinam or Pumpuhar celebrated port city of the Early Cholas. The city was called by various names in ancient times, Pumpuhar, Kaveripattinam, 'Kakanti, Champapati, Cholapattinam and Khaberls Emporium.

Exports and Imports in the Sangam Age

The people of ancient Tamil country engaged in overseas trade with Rome, Greece, China and other farthest countries in the East. Thamilaham had certain commodities which were in great demand in foreign markets. Those were pepper, ginger, rice, cardamom, cinnamon, tumaric, ivory, pearls. Madurai and Uraiyur were important centers for the textile industry and Korkai was the center of the most precious product of pearl. Yuan Chwang knew that the hand of **Malakuta** was a depot for sea-pearls[6]. The people of Egypt, Arabia, Persia, Greece and Rome had special preference for Pandya pearls[7]. The Chiruttai (Panthar) tohai (peacock), and the monkey were favorite animals exported.

The whole of Peninsular India were full of dense forests consisting of valuable woods like teak, sandalwood, rosewood, ayil, almug, and various other valuable and rare medicinal herbs were exported[8]

Imported items from the Sangam age: horses, varieties of liquor, camphor, rose scent (panneer), saffron (kunguma poo), silver, oil lamps and ammunition[9]. Of these, the kings of the Pandya Country gave importance to the import of horses[10].

Trade with Greece and Rome

Roman gold coins excavated in Pudukottai of Tamil Nadu

*Assistant Professor of History, Vellalar College for Women, Erode

SOCIAL AND ECONOMIC HISTORY ADDRESS OF THE SECTIONAL PRESIDENT

Social Structure of the Medieval Kongu Region

P. Karthika*

Esteemed President, General Secretary, Office bearers of the Tamil Nadu History Congress, distinguished Chief Guest, dignitaries and fellow delegates. At the outset, I would like to express my profound sense of gratitude and thanks to the Executive Committee and General Body of the Tamil Nadu History Congress for having elected me as the President of the Social and Economic History Section of the Forty Fifth Annual Session organized under the auspices of the Department of Indian History, University of Madras, Chennai. It is a great pleasure for me to preside over the Social and Economic History Section of the 25th Silver Jubilee Session of the Tamil Nadu History Congress.

I take this opportunity to share some of my views on the topic 'Social Structure of the Medieval Kongu Region'. Many Inscriptions, Copper Plates, Literature of the time reveals the chief aspects of the Kongu society during the medieval period. Kongu Country is one of the territorial divisions of Tamil Nadu right from Sangam Period. The boundaries of Kongu in the North are Talamalai and Perumbalai, Vaikavur or Palani in the South, Kulithalai in the East and Vellimalai in the West. It shows Talaimalai as constituting a dividing line between Kongu region and Karnataka proper in the north. Gajalatti pass in the south of the Talaimalai hills formed the passage between Karnataka and Kongu and also served as an important trade route.[2] Perumbalai is north of Lappai hills in Omalur Taluk in Salem District. Lappai pass is historically important as it is an entrance into the North into Kongu. Palani otherwise called Thiruvavinankudi and Varahagiri are the Southern landmark of Kongu. The Annamalai Ranges, west of Varahagiri is the western border of Kongu Nadu. Palghat Pass in this area has been a famous trade route through the ages. The heights of Vellingiri and the Nilgris represented the western fringes of Kongu Nadu. Though the literary sources fixed Kulithalai as the eastern boundaries of Kongu, the eastern border is featured by hills known as Servarayan Malai, Kalrayan Malai, Pachamalai and Kollimalai.[3] Kongu Nadu surrounded by hills and mountains on the three sides except the Kaveri river flowing plateau in the south east. During the Medieval Period, seemed to have undergone a delimitation resulting from the identification of sub regions like *Then Kongu* and *Vada Kongu*.[4]

The original inhabitants of the region were tribal people. There is no evidence for assessing the exact dates of the settlement of various tribes in Kongu. Kongar, Andar, Aaviyar, Mazhavar were considered as the inhabitants of Kongu. Some of these tribal societies were controlled by the chiefs. The geographical appellations like Kongar Nadu and Kongu found in Sangam literature were derived from the name of Kongar, the main occupants of the region. Kurumbas and Vedars were became prominent at the time of Ganga rulers. Some medieval inscriptions from Kongu refer to Kurumbas and Kuruppu Nadu.[5] The Ingur Inscription mentioned about a sect called Kurupellar.[6]

There was a significant change in the Kongu society during the medieval period. Society was divided into various groups. The people divided by different caste and distinctions. Caste started playing an important role and clear cut distinctions were prevailed in society. Each caste had its sub castes and the communities were based on heredity for protection of their social and economic interests. During the period of Cholas, many tribes who lived in the forest and hill areas were merged with the society, particularly Pooluvar, Kurumbar, Malaiyar, Vettuvar, and

Assistant Professor & Head, Post Graduate & Research Department of History, Vellalar College for Women (A), Erode.

The Geography of Kongunadu-A Study

N. Kavitha*

From the early period, in 1800 years ago a Tamil Nadu or Tamil land was divided into six main territorial divisions and these were named Thuluva nadu, Chera Nadu, Chola Nadu, Pandya Nadu, Aruva Nadu and Kongu Nadu. Kongu nadu situated at the centre of tamilnadu without Neithal land. Kongu Nadu as a separate division mentioned by Purananuru but Tolkappiyam point out the three divisions of the Kongu Nadu as Cheetham, Panri, and Malanadu .These sources confirm that the Kongu Nadu had flourished as a separate entity for several centuries. The Two kongu mandala sathaga poem was point out the boundaries of early kongu. It was surrounded by the Western Ghats and the hilly regions south of Mysore and included modern districts of Coimbatore, Erode and Salem,some parts of Karur, Kulittalai taluk of Trichy district and Madurai, Dindugal district. the area, which lies on the western side, was called kuda kongu and that of eastern side mala kongu. The Bhavani raises valuvanadu taluk of Malabar district and its travel 165 miles of the taluk of sathyamangalam and Bhavani. The Geology of Coimbatore district, all rocks belongs to gneissic series. Bauxite occurs in servorayan hills. Generally Coimbatore district is exceptionally dry and its rainfall is scanty. Geographical history has an importance once, particularly in a vast region like Kongu country with its numerous wealth and traditions.

programme concentrate on conservation besides being uplifting people dwelling in hilly areas.

nature, India can boast of diversity of species. They are full rich are certainly the lifeline of peninsular innumerable varieties of flora and of which are close to extinction. Even disappeared long ago from the face of the developing hybrid varieties of cultivatable medicinal value, the immense potential it as a storm of bio-diversity, the ghats is a coveted whose worth is immeasurable. It is indeed house of the region. Most commercial crops cashew, rubber, and tea are grown here. are the pride of this belt. It is also rich in deposits. This has resulted in the ghats being exploited to quench the needs of national and domestic markets.

Western Ghats Development Programme aiming conservation and economic development is sure to of the Greens back to the Western Ghats, and will maintaining the status of Ghats as the 'Mother of Forest Species'

Notes and References

1. Robinson, H., "*A Geography of Tourism*", Mac Donald and Evans Ltd., Plymouth, 1976, p.28.
2. Romila Chawla, (ed) *Tourism in Mountain Areas*, Sonali Publication, New Delhi, 2005, p.145.
3. Velmani, K.S.K., *Gazetteers of India, Tamil Nadu*, Tirunelveli District, Vol.1, 2002, p.12.
4. Kailash Hariharan Iyer, *Tourism Development in India*, Vista International Publishing House, 2000, p.79.
5. Report of Gopalan and A.N.Henry, *Botanical Survey of India*, Coimbatore, 19th Century, 1993, p.125.
6. Velmani, K.S.K., *op.cit.*, p.15.
7. Anand Ballabh, "*Towards Sustainable Tourism*", Akansha Publishing House, New Delhi, 2007, p.234.
8. Velmani, K.S.K., *op.cit.*, p.11.
9. Gopalakrishnan.M (ed) *Gazetteers of Tamil Nadu State*, Government Publication 1993, p.187.
10. Sarma K.V.S. *Environmental Geo Scientific Studies of the Desertification in parts of Tirunelveli and V.O.C District, Tamilnadu*, Geological survey of India, Govt of India, 1987, p.10.
11. Report of the Western Ghats Conservation Society, p.5.
12. Kreg Lindberg, Deonal E. Hawkins & David Western, "*Eco-Tourism - A Guide for Planners and Managers*" Natraj Publishers, Dehra Dun, 1999, p.132.
13. Report of the Western Ghats Conservation Society, p.16.

Contribution of Justice Party for the Development of Education in Madras Presidency

P.Thenmozhi*

Introduction

The Justice Party which emerged during the of First World War admirably possessed all the features attributed to a political party by Burke, one of the greatest parliamentarians that has ever produced. The Justice Party was as the fag end of 1916 'to advance safeguard and of non-Brahmin community'. In the hands of Party non-Brahmin acquired an ideology of mass mobilization. Justice Party which formed the government in 1921 under Monford constitution remained in power, first from1921 to 1926 and again from 1930 to1937. During it regime education of all categories-elementary, secondary and collegiate- made rapid strides.

Formation of Justice Party

The Justice Party, officially the South Indian Liberal Federation, was a political party in the Madras

* Assistant Professor, PG & Research Department of History, Vellalar College for Women, Erode.

The Badagas' Relationship to the Megalithic Culture in the Nilgiri District

H.R. Sumathi*

Introduction

The Nilgiris Hills in Tamil Nadu state, South India are noted for their scenic beauty their characteristic primitive tribal communities, and for an unusual archaeological heritage which in more than one respects seems to deserve the attribute unique. This places from North to South, slopes from West to East. It is at the Southern tip of De can and it is the meeting place of the three mountain region, the Shayadir meeting Mukurti Peak the Southern Ghats across the Palghat gap in the Southwest and the Eastern Ghats in the North Eastern corners. It is the meeting place of two three Indian States, Tamil Nadu, Kerala and Karnataka or it lies where the three Indian language Kanarese, Malayalam and Tamil meet. The highland is the special home of the three Communities – the Badagas, the Todas and the Kotas and the Badagas whose ancestors have been associated with antiquities.

Megaliths of the Nilgiris

Throughout the Nilgiri Hills abundant Megalithic tombs of three[1] distinct categories are identified, viz., (i) Cairns/Cairn Circles / Non-piled Stone Circles, (ii) Draw Well Cairns/ Piled Stone Circles/Walled Circles, and (iii) Dolmens. Of these three types, the Cairns/Cairn Circles/Non-piled Stone Circles and the Dolmens are not unique to the Nilgiris, as these types of Megalithic structures are also attested in other districts of Tamil Nadu, other states of India, and other parts of the World.

1. **Cairns** - Circular walls of uncemented stones rising above the ground.
2. **Barrows** - Circular heaps of earth surrounded by a ditch which is sometimes enclosed in one or a number of loose single stones.
3. **Funeral circles or Azarams** - Built of touch stones.
4. **Kistvaens** - Box shaped constructions made of six slabs of stone, in one of which is a round aperture about a foot in diameter sunk down to the level of the ground and sometimes surrounded with a circle loose stones or earthern tumulus.
5. **Cromlechs [or dolmens]** - Kistvaens like structures but have one side quite open, stand about the level of the ground and are often sculptured with figures of men and animals.[2] The author who are pioneers to write about the Nilgiris also mention about the existence of these archaeological materials in the district.

Age of the Megalithic Civilization in the Nilgiri

The Megalithic civilization of South India is generally ascribed prior to the Age of Sangam. No archaeologist or historian so far ventured to fix a definite date of the civilization to which the monuments unearthed from the Nilgiris district belonged. Robert Bruce Foot, the noted archaeologist opines that the Paleolithic men lived on the hilly regions like the Nilgiris. The Paleolithic civilization is no doubt prior to the Age of the Sangam and hence according to Bruce Foot, the Megalithic civilization of the district is ascribable to the pre-Sangam age. An inscription found in the district dates back to Saka 1518 (A.D.1596).[3] Paul Hockings from Illinois University Chicago, U.S.A who has done an equally extensive research on the anthropology of the district as had been done by J.W. Breeks in 1870's opines that there was indeed a native population in the Nilgiris and Wynaad in the first Millennium A.D. His opinion is based on the cinerary burial of this period on the hill tops, several of which contained Roman coins.

William Allister Noble, a contemporary author on the studies of Nilgiris, he suggests three positive clues to fix the date of the civilization. They are:-

1. A potsherd discovered in the District bears the letter of Brahmin character, which the government

*Assistant Professor of History, Vellalar College for Women, Erode.

EduSys

A TRACK TO

Crack Aptitudes

Arithmos Association

A Track to Crack Aptitudes

Editors

Dr. K.K.Myithili
Associate Professor & Head
Mrs. P.S. Kayalvizhi
Mrs. G. Logeswari
Mrs. S. Shanmugavadivu
Mrs. P. Dhanalakshmi
Mrs. P. Nithyadevi
Mrs. K. Sakthipriya
Assistant Professors

ARITHMOS ASSOCIATION
Department of Mathematics CA
Vellalar College for Women
(Autonomous)
ERODE

Chennai

ISBN 978-81-937002-1-1

Price : Rs. 275/-

Published :

EDUSYS
Chennai
edusystry@gmail.com

Typeset :

Sarathas Xerox & Computers
Trichy – 620 017
heberlink@yahoo.com

Wrapper Design :

Print & Prints
Coimbatore
impressioncbe12@gmail.com

Prolegomenon of (m, n)-polar Intuitionistic Fuzzy Hypergraph

Dr. K.K. Myithili[1] and S. Nandhini[2]

Department of Mathematics. Vellalar College for Women. Erode-638 012. Tamilnadu. India.

E-mail: [1]mathsmyth@gmail.com and [2]mandhini051@gmail.com

Abstract

An m-polar intuitionistic fuzzy graphs ($m \geq 2$) are very useful when analyzing real world situation involving multipolar attributes with membership values and non-membership values. In this paper an attempt has been made to define an (m, n)-polar intuitionistic fuzzy graph and hypergraph. Also an application of (m, n)-polar intuitionistic fuzzy hypergraph for marketability of books have been analysed.

Keywords: Intuitionistic fuzzy set. intuitionistic fuzzy relation. intuitionistic fuzzy graph and intuitionistic fuzzy hypergraph of (m, n)-polar. marketing.

1 Introduction

In the 18^{th} century. the Swiss Mathematician Leonhard Euler invented graph theory. In graph theory. the term graph does not refer to data charts. such as line graphs or bar graphs. it refers to a set of vertices and edges that connect the vertices. Graph theory has interesting applications in different fields of real life problems to deal with the pairwise relations among the objects. Hypergraphs are the generalization of graphs. in which a hypergraph may have more than two vertices. The hypergraphs are used to represent the complex relationships among the objects. Hypergraphs do have many applications in different fields including

ISSN : 2278-2311

H-Dominant Transversals of Intuitionistic Fuzzy Directed Hypergraphs

K.K. Myithili

Department of Mathematics, Vellalar College for Women, Erode - 638 012, Tamilnadu, India.

E-mail: myth_maths@rediffmail.com

Abstract

A hypergraph is a set V of vertices and a set E edges, of non-empty subsets of V, called hyperedges. Directed hypergraphs are similar as directed graphs. A transversal is a line that intersects two lines, whereas in intuitionistic fuzzy directed hypergraph(IFDHG), the transversal is a hyperedge that intersects two or more hyperedges. Transversal itself is a dominating set in graph as well as in hypergraph. Also, colors are used to distinguish the classes. Coloring a hypergraph H must assign atleast two different colors to the vertices of every hyperedge. The chromatic number is minimum color used to color the vertices in hyperedge. In this paper, H-dominant, H-dominant transversal, essentially ordered were defined. Further, a few properties of dominant transversal of intuitionistic fuzzy directed hypergraph are discussed. Also, it has been proved that the chromatic number of IFDHG is two if and only if there is a H-dominant intuitionistic fuzzy transversal of H which does not contain an edge of H.

Keywords: Intuitionistic fuzzy directed hypergraph, H-dominant transversals of IFDHG, properties.

1 Introduction

K.T.Atanassov introduced the concept of intuitionistic fuzzy sets (IFSs) in 1999 [1] as an extension of fuzzy sets introduced by L.Zadeh in 1965 [14] which are generalization of crisp

ONE DAY NATIONAL SEMINAR
ON
PROSPECTS IN MATERIAL SCIENCE
26th Feb - 2019

Organized by
PG Department of Physics
Vellalar College for Women (Autonomous)
Erode - 12, Tamil Nadu

NSPMS2019
ABSTRACTS

One Day
National Seminar
on
Prospects in Material Science

26th Feb - 2019

NSPMS2019

Organized by

PG DEPARTMENT OF PHYSICS
Vellalar College for Women (Autonomous)
Erode-12
Tamilnadu

PATRON

Thiru. S. D. Chandrasekar

Secretary & Correspondent

CHAIRMAN

Dr. N. Maragatham

Principal

CONVENOR

Dr. N. Dhachanamoorthi

Assistant Professor & Head

EXECUTIVE MEMBERS

Mrs.F.Shahida Shireen

Dr. P. Anitha

Dr. M. Yogeswari

Dr. C. Deepa

Mrs. R. Bhuvaneswari

Mrs. P. Sri Devi

Dr. A. P. Sudha

Mrs. A. Jegadeeswari

Mrs. K. Sujatha

Mrs. M. Muthulakshmi

Dr. M. Jothi

Mrs. R. Gowthami

Mrs. D. Hemalatha

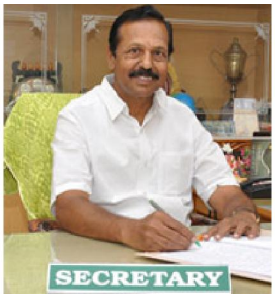
Dr. S. P. Keerthana

Mrs. N. Gowri Manohari

Mrs. D. Anbumalar

Mrs. K. G. Aarthe

Thiru. S.D. Chandrasekar
Secretary & Correspondent
Vellalar College for Women
Erode – 638 012



Message

It gives me an immense pleasure in writing this foreward for the Proceedings of the 'One Day National Seminar on Prospects in Material Science', being organized by the PG Department of Physics on February 26, 2019. I am pleased to note that researchers from various Institutes/Universities from different parts of the country are presenting their research papers on the current aspects of Nanotechnology and Material Science.

This event is targeted towards researchers, professionals, educators and students to share innovative ideas, issues, recent trends and future directions in the field of Nanotechnology and Material Science. Seminars like these provide an ideal platform for the confluence of learned minds when knowledge is shared for the benefit of everybody. I am sure that all the delegates would be greatly benefited by the deliberations.

I wish all the participants and delegates a great success in their mission!!

SECRETARY
VELLALAR COLLEGE FOR WOMEN
(AUTONOMOUS)
ERODE - 12.

Dr.N.Maragatham
Principal
Vellalar College for Women
Erode – 638 012

Message

I am extremely happy that PG Department of Physics has organized a 'One Day National Seminar on Prospects in Material Science' on 26th February 2019. This seminar will focus on the recent advances in the field of Nanotechnology and Material Science. Advancement in understanding of a material type is often the forerunner to the stepwise progression of a technology. Hope, a number of delegates from across the country will gather to deliver the invited talks and to present their research papers.

I am confident that, this seminar will definitely provide an interactive platform where scholars, students from various Institutions, Research Laboratories and Industries can meet, discuss and project a road map for materials science research towards novel applications in various fields.

I hereby congratulate the organizing committee members for their efforts to organize a National Seminar. I strongly believe that this endeavour will prosper now and in the years to come.

I take this opportunity to wish a grand success of this National Seminar.

PRINCIPAL
VELLALAR COLLEGE FOR WOMEN
(AUTONOMOUS)
ERODE - 12.

Dr. N. DHACHANAMOORTHI M.Sc., M.Phil, Ph.D.
Assistant Professor & Head
PG Department of Physics
Vellalar College for Women
Erode – 638 012
dhachu83@gmail.com
9171823357, 8778134822

Message

I am glad to invite all the delegates to a 'One Day National Seminar on Prospects in Material Science' organized by the PG Department of Physics on February 26, 2019. The objective of this conference is to bring the students, researchers and scientists from across the nation on a common platform to share and access the recent trends in the field of Nanotechnology and Material Science and to discuss ways to promote promising societal applications. This seminar is aimed to bring up substantial discussion on major sectors of material processing, characterization and device fabrication to meet the rapid advances in engineering and technology, the globalization and the changing social needs.

60 papers have been selected after peer review by covering wide areas of research in Nanotechnology and Material Science which have been included in the proceedings. I hope this conference would also provide young researchers, engineers, scientists and students an opportunity for interaction and benefiting from each other's wisdom and experience.

I encourage the delegates to take full advantage of the program and tackle the challenges in their respective areas of research.

I thank our Institution wholeheartedly for supporting this seminar.

I look forward all the delegates for their active participation.

Yours sincerely,

(N.Dhachanamoorthi)

Dr.N.DHACHANAMOORTHI, M.Sc. M.Phil. Ph.D.
Head & Assistant Professor,
Staff Incharge (Central Research Laboratory),
P.G.Department of Physics,
Vellalar College for Women (Autonomous),
Thindal, Erode - 638 012.

NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI – 620 015
TAMILNADU, INDIA

Dr. J. HEMALATHA
Professor & Head
Department of Physics
Tel: 91-0431-2503608
Email: hemalatha@nitt.edu

22.02.2019

Message

I am glad to note that One Day **National Seminar on Prospects in Material Science** (NSPMS-2019) is organized by the PG Department of Physics, **Vellalar college for women** on February, 26th, 2019.

The advancements of new technologies are largely based on the development of new materials with unprecedented properties. A seminar on the prospects in materials science will undoubtedly be of current interest and benefit the student community at large.

I am certain that NSPMS-2019 will provide a vibrant platform for productive discussions and will motivate the young minds to forge ahead in the developments of advanced materials. I congratulate the organizers for their commendable efforts and wish the conference a grand success.

22/2/2019

Dr. J. HEMALATHA
Professor & Head, Department of Physics
National Institute of Technology
Tiruchirappalli-620 015.
Tamilnadu, INDIA.

Dr. R. K. Biju
Assistant Professor & Research Guide
Department of Physics
Pazhassi Raja NSS College,
Mattanur, Kerala
Email:- bijurkn@gmail.com
Mobile: 9447484615

Date: 19. 02. 2019

MESSAGE

I am quite happy to know that the Department of Physics of Vellalar College for Women, Erode is conducting One Day National Seminar on Prospects in Material Science on 26th Feb-2019. I hope that there will be deliberations enough to highlight the major thrust areas in the field.

With best wishes

Dr. R. K. Biju

POWERING THE YOUTH
EMPOWERING THE NATION

SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Approved by AICTE, New Delhi, Affiliated to Anna University

Sri Shakthi Nagar, L & T, By-Pass, Coimbatore - 641 062.
Phone : 0422 - 6450891 / 6450892 / 6450893

TÜVRheinland® CERT ISO 9001

Dr. A. David Stephen. M.Sc., Ph.D
Assistant Professor (S)
Department of Physics
Sri Sakthi Institute of technology
Coimbatore – 641 062

Welcome to the One Day National Seminar on Prospects in Material Science (NSPMS 2019), which takes place in Vellalar College for Women, Erode on February 26, 2019. It has been a real honour and privilege to serve as the resource person of the seminar.

The goal of this event is to bring together the technologies and researchers who share interest in *Material Science*. Its purpose is to promote discussions of research and relevant activities in the design of new materials. Also, this seminar aims at increasing the synergy between academic and industry professionals working in this area.

Ultimately, the NSPMS 2019 program provides international forums for scientists and scholars from academia and industry to exchange and share their experiences, research results, and new ideas on hot and emerging topics on this field.

Yours sincerely,

Dr. A. DAVID STEPHEN, M.Sc,Ph.D
Assistant Professor,
Department of Physics,
Sri Shakthi Institute of Engineering & Technology,
Chinniyampalayam Coimbatore-641062.

Dr. P. MATHESWARAN M.Sc., Ph.D.
Assistant Professor
Department of Physics
Kongunadu Arts and Science College
Coimbatore – 641 029
mathesemail@gmail.com
9095019456

The research areas chosen for the seminar is of great value in the present contest. I am sure that it would be unique opportunity for the budding scientist to learn the novel ideas on potential areas of Physics and Technology.

This inciative step will encourage the students to choose their future perspective and so I extend my warm greetings to the organizers.

With my best wishes and personal regards,

Yours sincerely,

(Matheswaran)

Nuclear Shell and Structure Studies via Cluster Radioactivity in the SHE

Dr. R. K. Biju*
Department of Physics, Pazhassi Raja NSS College, Mattannur, Kerala, India-670702
Email: bijurkn@gmail.com

Abstract

Super heavy elements are produced by bombarding a target of sufficiently high atomic number with the beam of heavy ions. Successful synthesis of super heavy elements up to 118 has already done by many researchers. Elements with Z>118 is not quite evident, still the attempt to produce Z=120 are reported. The main experimental difficulty for the synthesis of new super heavy element is its reduced probability of formation and separation of compound nuclei from the very high beam of incident projectile nuclei.

The phenomenon of spontaneous emission of particles heavier than the alpha particle by radioactive nuclei is known as cluster radioactivity; it is not an isolated phenomenon and must be related to other processes such as cold fission and cold fusion. This process can be treated as a case of strong asymmetric fission or a decay process of cluster formation and tunneling through the barrier making many assaults on it similar to alpha decay. This phenomenon was experimentally confirmed in 1984 by Rose and Jones and a few months later, Alexandrov et al confirmed this phenomenon in the radioactive decay of ^{14}C from ^{223}Ra.

In the present paper we would like to present the nuclear shell and structure studies through alpha and cluster decay in the super heavy region. The existence of long lived super heavy nuclei is mainly controlled by spontaneous fission and alpha decay process. But many of the elements in super heavy region can be identified via the alpha decay chain. Alpha decay in super heavy nuclei is possible if the shell effects supplies the extra binding energy and increases the barrier height of fission. So the study of the alpha decay from various super heavy elements helps to identify the stability of the parent nuclei.

Cluster radioactivity is also a dominant mode of decay in the super heavy region. In many of our papers, we examined the possibility of cluster emission from nuclei in the super heavy region using Coulomb and Proximity Potential Model (CPPM) as interacting barrier to find the next neutron and proton shell closures in this region and it was found that next neutron shell

closures occur at N= 162,172, 184and 192 and the proton shell closures are at Z=114,120 and 126 which was in confirmation with the other studies.

Beta decay is another decay mode for the nuclei lie beyond the beta stability line. Beta decay process is slow and less favored because it proceeds via weak interaction. For beta decay process the energy released is less compared to alpha decay and spontaneous fission. We have also investigated the single and double beta decay process by producing empirical relations. Finally we presume that the above mentioned works will be guidance to the future experiments.

****

Topological and electrostatic properties of diclofenac molecule as a non-steroidal anti-inflammatory drug: an experimental and theoretical study

A. David Stephen[*1], Niranjana Devi Rajendran[2] and PV. Nidhin[1]

[1]Department of Physics, Sri Shakthi Institute of Engineering and Technology

[2]Department of Physics, Fatima College, Madurai, Tamil Nadu, India

Abstract

Diclofenac is the Non-Steroidal Anti-Inflammatory Drug (NSAIDs), which highly inhibits the lipoxygenase pathways and reduces the formation of leukotriene lipids.In this work, we report on measurements and calculations of the electron density of Diclofenac, obtained from high resolution experimental X-ray diffraction data at 100K and theoretical calculations. The structural investigation confirms that the intermolecular interactions of diclofenac molecule present in the unit cell were found to dimer. The analysis of the molecular electron density (by means of quantum theory of atoms in molecules), the electrostatic potential, the crystal packing and intermolecular interactions (through Hirshfeld surface analysis) enables gaining more insight into the nature of the molecule and its ability to interact with other molecules. Furthermore, the topological properties of the dimer interactions are more stable in the crystal phase and the same carboxyl group is forming strong interactions in the human transthyretin enzyme. The electrostatic potential map shows that the high electronegative regions are appeared around the carboxyl group of the diclofenac molecule in the both crystal and protein environment. This study is complemented by a molecular dynamics simulation of the interaction of diclofenac with transthyretin protein, which enables to test the hypothesis made with the charge density analysis.

Keywords: ExperimentalCharge density, Hirshfeld surface analysis, topological properties, electrostatic interaction, Molecular Dynamics

An Overview on Ion Beams in Material Processing

Dr. P. Matheswaran[1], Dr. N. Dhachanamoorthi[2]

[1]Assistant Professor, Department of Physics, Kongunadu Arts and Science College, Coimbatore-29
[2]Assistant Professor & Head, PG Department of Physics, Vellalar College for Women, Erode-12

Abstract

Ion beams plays a wide role to synthesis and modify the properties of dielectrics, semiconductors, metals, ceramics and biomaterials. The flight of ions may tailor the structure, composition, surface topography, optical activity, magnetic and electrical property and so on. Ion beam mixing (IBM) and Ion implantation (II) are the added advantage in tailoring the material in a controlled manner. Thermally immiscible systems can be made as a compound by ion beam mixing. Doping in semiconductors (with controlled dose and depth to achieve the required extrinsic semiconductors) can be done by low energy ion implantation. This technique has and will rule the semiconductor market now and future. The nature of interaction can be understood as follows; the accelerated ions may losses its energy via elastic and inelastic manner when it interacts a target. Different theories (Columbicexplosion model, Thermal spike model, Visco-elastic model and lateral mass transport) were proposed to explain the phenomena responsible for modifications. In mechanical industry the parameters like wear, friction and corrosion can be precisely altered by ion beam techniques. It may open a wide scope on medical industry, food processing and aircraft manufacturing and so on.

Keynotes: IBM, Semiconductor, medical industry, food processing, aircraft

Corresponding Author Name:Dr. P. Matheswaran

E Mail:mathesphy@gmail.com

CONTENT

MS10	Effect of Sodium Nitrate on the Growth, Optical, Thermal, Nonlinear Optical and Antimicrobial Properties of γ-glycine Single Crystal	V.Vijayalakshmi, P.Dhanasekaran	10
MS11	Effect of $MnSO_4$ on the Growth, Optical, Structural, Biological Properties of β-L - Glutamic Acid Crystals	J.Aarthi, P. Dhanasekaran	11
MS12	Synthesis and Characterization of Ni -doped MnO_2 Nanoparticles by Co - precipitation Technique	P.Kowsalya, M.Thenmolzhi, K.Vidhya	12
MS13	Synthesis and Characterization of Fe – doped CdO Nanoparticles by Precipitation Method	P.Kiruthika, M.Thenmolzhi, K.Vidhya	13
MS14	Synthesis and Characterization of Ni doped CdO Nanoparticles by Co- Precipitation method	A.Deepika, K.Vidhya, M.Thenmolzhi	14
MS15	Synthesis and characterization of calcium oxide nano particles by Co-precipitation method	S.R. Gaaviyaa, V. Radhika	15
MS16	Growth And Characterization of Triglycinesulphate (TGS) Single Cyrstal Doped With $NiSO_4$	R. Dharini, V. Radhika	16
MS17	Classification and Testing of Soil types from Various Places	D.S.Soniya, V. Radhika	17
MS18	Synthesis and characterisation of Cupric oxide (CuO) Thin Films by Chemical Bath Deposition Method	P.Methunavathani, V. Radhika	18
MS19	Effects of Low Temperature Plasma Treatment on the Bamboo Fabric/TiO_2	I. Jasmine, R. Deepa	19
MS20	Growth and characterization of Hydantoin-5-Acetic Acid Single Crystal	C. Sridevi and R. Priyanka	20
MS21	Synthesis, Growth and Optical Properties of an Efficient Nonlinear Optical Single Crystal: 5- Chloro 1-Methyl -4-Nitroimidazolonium Salt of Malic Acid	C. Sridevi and S. Mohanapriya	21
MS22	Synthesis of Copper Oxide Nanoparticles Using Co- Precipitation Method	K. Nishitha, V. Radhika	22
MS23	Green Synthesis of Cu/HPA-PANI Nanocomposites and Characterization for their Conductivity and Biological Applications	K. Vanitha Bharathi, S. Deepika Priyadharshini	23
MS24	Optical, Cyclic Voltammetry and Antioxidant Studies of Cobalt Doped /HPW-PANI Nanocomposites Grown by Chemical and Electropolymerisation	S. Deepika Priyadharshini, K. Vanitha Bharathi	24
MS25	Synthesis, Characterization and Application of Nano carbon Composite	V.Priya, S.K. Krishna	25
MS26	Studies on the Influence of Parameters on Photocatalytic Activity of Polymer Nanocomposites- An Overview	M. Mubarak Ali, D. John Williams	26

MS27	Cost Effective Green Method for the Synthesis of Silver Nanoparticles	J. Indira and V. Sreeja	27
MS28	Degradation of Reactive Yellow Dye Effluent	V. Sreeja and J. Indira	28
MS29	Biosynthesis, Characterization and Antibacterial Studies of Copper Oxide Nanoparticles using Coffee Seed Extracts	M. Muthulakshmi, S. Janani, M. Jothi	29
MS30	Exploring the Characterization of Copper Oxide Nanoparticles Using Eichhornia Crassipes Leaves Extract Via Bio-Synthesis Method	M. Jothi, K. Divya priya, M. Muthulakshmi	30
MS31	Conducting Properties of New Poly (m-toluidine-co-4-fluoroaniline) Nanocomposites with Silver Nanoparticles	J. Vivekanandan, A. Mahudeswaran, K.S. Usha, P.S.Vijayanand	31
MS32	Green Synthesis of Zinc Oxide Nanoparticles using Gloriosa Superba Flower Extract and their Characterization	U. Chaithra, C. Deepa	32
MS33	Preparation and Characterization of POT-Sb_2O_3 Nanocomposites by "Mechanical Mixing Method"	N.Dhachanamoorthi, M.Nandhini	33
MS34	PVP – Surfactant – Mediated Synthesis & Characterization of WO_3 Nanoparticles	T. Thilagavathi, D. Venugopal	34
MS35	Electron transport Performance of CeO_2 Doped TiO_2 Nanoparticles in Dye Sensitized Solar Cells	S. Ranjitha, V. Aroulmoji, M. Sridharan	35
MS36	Study of Geometrical, Electronic Structure, Spectral and NLO Properties of Red Prickly PearSensitizer for Solar Cell Applications	S. Ranjitha, N. Sumathi, N. Dhachamoorthi	36
MS37	Synthesisand Characterization of Poly(Aniline-O-Toluidine) Copper Oxide Nanocomposites for Biomedical Applications	S.R. Dharani, N. Dhachamoorthi	37
MS38	X-Ray Diffraction Study of Tungsten Oxide Nanoparticles Synthesized by Wet Chemical Technique	K. Gogulavalli, N. Haritha, T. Thilagavathi	38
MS39	Synthesis and Structural Morphology With Antibacterial Activity of Zn/Ag Capped Hydroxyapatite by Wet Precipitation Method	P. Sri Devi, S. Suwathi	39
MS40	Synthesis and Characterization of Ti/Ag Capped Hydroxyapatite by Sol-Gel Method	P. Sri Devi, S. Suwathi	40
MS41	Preparation and Characterization of Polypyrrole-Zinc Oxide Core-Shell Hybrid Polymer Nanocomposites	N. Dhachanamoorthi, S. Tamilselvan,	41
MS42	Preparation and Characterization of Novel Hybrid Organic-Inorganic (Poly-O-Toluidine-CdO) Polymer Nanocomposites	S. Tamilselvan, R.Thiyagarajan, N. Dhachanamoorthi	42
MS43	Structural, Morphological and Optical Properties of Sn Doped ZnO Thin Films	S. Dharanya, A. Priyadharshini	43
MS44	Synthesis Characterization and Anti Bacterial Investigation of Pure Zinc Oxide and Copper Doped Zinc Oxide	P. Sri Devi, D. Anbumalar	44

MS45	Green Synthesis of Chromium Oxide Nanoparticles by Cucurbita Maxima Extract and their Antibacterial Activities	M.Jothi, S. Priyanka, M. Muthulakshmi	45
MS46	Theoretical Studies on Structural Properties of Dehydroxyascorbic Acid and 5-1RD4T	Ambika , K. Sadasivam, R. Praveena, Rajeswari	46
MS47	Theoretical Studies on Electron Localization and Structural Parameters of Dexpanthanol and Pantothenic acid	Sivaranjani , K. Sadasivam, R. Praveena, Rajeswari	47
MS48	Antibacterial effect of Ag doped ZnO nanoparicles by Sol-gel method	V. Kaviya, D. Hemalatha	48
MS49	Synthesis and Characterization with Antibacterial Activity of Cu-Doped ZnO Nanoparticles by Co-Precipitation Method	A.Kiruthika, A.Jegadeeswari	49
MS50	Nano crystalline Structure of Magnesium dioxide (MgO_2) using Sol–gel Method	E.S.Hema, A. Jegadeeswari	50
MS51	Sol-gel Synthesis and Characterization of Cu Doped TiO_2 Nanoparticles with Enhanced Optical and Structural Properties	A. Pramela, R. Rajeswari, D. Venugopal	51
MS52	Role of Metal-Ions In Wild-Type Like and Metal-Binding Region Mutants of Cu-Zn Superoxide Dismutase	S.P.Keerthana, P.Kolandaivel	52
MS53	Effect of Kinetic Energy over Structural Properties of Pectin and Quinnic Acid– A DFT Study	Mohanadevi , Sadasivam K, Praveena R , Rajeswari	53
MS54	Preparation of Polyaniline Zirconium Dioxide (Pani-ZrO_2) Nanocomposite Material By In-Situ Method	S. Preethi Ponmozhi, N.Dhachanamoorthi	54
MS55	Investigating the Interaction of Metal Cations with DNA base-pairs – A Quantum Chemical Approach	S.P. Keerthana, R. Kathiraesan, V.Gayathri	55
MS56	A Quantum Chemical Study on the Interaction of Aliphatic Amino Acids with Metal Cation	S.P.Keerthana, R.Kathiraesan, M.Mythili	56
MS57	Synthesis and Characterisation of ZnO, CuO and their Composites by Precipitation Method	P. Sri Devi, N. Gowri Manohari	57
MS58	Green Synthesis of Magnesium Oxide Nanoparticle using Orange Peel Extract	P.Deepa, D.Anbumalar	58
MS59	Synthesis, Characterization and Antimicrobial Studies of Nickel Oxide Nanoparticles by Co-Precipitation Method	R.Gowthami, S.Indhu	59

MS60	Preparation of Polyaniline Nibonium Pentoxide (PANI-Nb_2O_5) Nanocomposite Material by In-Situ Method	V.Lavanya, N.Dhachanamoorthi	60
MS61	Effect of Surfactant on Cadmium Sulfide Nanoparticles Prepared by Precipitation Method	J.Vijayalakshmi, A.P.Sudha	61
MS62	Activated Carbon Prepared from Tea Waste Via Chemical Activation Method	G. Kalaivani, A.P. Sudha	62
MS63	Biosynthesis, Characterization and Antibacterial Studies of Copper Nanoparticles using Eclipta Prostrata Leaves Extracts	R.Gowthami, D.Vinitha	63
MS64	Synthesis and Characterisation of Surfactant (SDS) Assisted Cadmium Oxide Nanoparticles via Co- Precipitation Method	K. Sujatha, S. Sharmila	64
MS65	Synthesis and Characterization of Mg Doped TiO_2 Nanoparticles by Sol -Gel Method	G.Anandhakumari, D.Venugopal, R. Rajeswari	65
MS66	Structural and Optical Properties of 4-(6-Methyl-4-phenyl-2-quinazolinyl)-1-pentylpiperazin-1-ium dyes	R. Lavanya Dhevi, K.A. Vijayalakshmi, S. Ranjitha	66
MS67	DFT and Experimental studies of natual dyes extracted from medicinal plants Ocimum tenuiflorum and Piper nigrum for dye sensitized solar cell applications	S. Ranjitha, K. M. Prabu, V. Aroulmoji and N.Sumathi	67
MS68	Preparation and Characterization of ZnO Nanopowders by Precipitation Method using Aqueous Extract from Natural Leaves and Flowers	R.Sowmi, C.Deepa	68
MS69	Effect of Surfactant Aided Barium Hydroxide Nanoparticles by Chemical Co-Precipitation Method	M.Kokila And K. Sujatha	69
MS70	Synthesis and Characterization of Eu:$CaTio_3$ N NanoPowder using Sol-gel Method	S. Anjelin Ursula Portia, K. Ramamoorthy	70
MS71	Exploring the Structure and Charge density Studies of Organic Superconducting Tetrathiafulvalene (TTF) and 7,7,8,8-Tetracyanoquinodimethane (TCNQ) molecule : A DFT and AIM analysis	P. Gnanamozhi, V. Pandiyan, P. Srinivasan	71
MS72	Thermo chemical, Charge density and Energetic properties of high energetic TNP derivatives via DFT and AIM analysis	P. Srinivasan, A. David Stephen	72
MS73	Quantum chemical and charge density studies on Gold substituted 8a,9,10,10a-tetrahydro-2,6-Bis-(2-phenylethynyl) anthracene based Nano-molecular Wire	B. Amudhavalli, P. Srinivasan, M. Prasath	73

MS74	Synthesis and Characterization of ZnO Nanoparticles by Precipitation method	S.Devadharsini, D. Hemalatha	74
MS75	TiO_2 photocatalysis: Design and applications	S.Malathi , N.Krishnaveni	75
MS76	Preparation of Mo-Cu doped photocatalysts,their photocatalytic and antimicrobial properties	P.Maheswari , N.Krishnaveni	76
MS77	The Anodization of Aluminium Metal matrix for Corrosion Protection: An Overview	M. Mubarak Ali, S.Sathiya	77
MS78	Synthesis and Characterisation of Pure Zinc Oxide Nano Particles and Nickel doped Zinc Oxide Nano Particles	K.G.Aarthe	78
MS79	Unusual Rheological behavior of Silica-Ionic liquid Nanocomposites as a function of Temperature	K.Saravanakumar, N.Dhachanamoorthi	79

MS1 ISBN NO:9-789388-413282

Enhancing the EDLC Properties of MnO_2/Graphene Nanostructured electrodes for energy storage applications

M. Jayashree, M. Parthibavarman,

PG and Research Department of Physics, Chikkaiah Naicker College, Erode

Abstract

Pristine MnO_2 and MnO_2/Graphene nanocomposite has been prepared through a facile hydrothermal method under mild condition, and their structure and electrochemical performance are characterized by X-ray diffraction (XRD), transmission electron microscopy (TEM), Brunauer-Emmet-Teller (BET), X-ray photoelectron spectroscopy(XPS), Thermogravimetric analysis (TGA). XRD reveals the average diameter of 41-55nm. TEM images show spherical morphology for pure MnO_2 and layered structure for MnO_2/Graphene. Capacitive behavior of the synthesized composite electrodes were evaluated using Cyclic voltammetry (CV), Galvanostatic charge-discharge(GCD) and Electrochemical impedance spectroscopy (EIS) by a three electrode system consisting of carbon glassy electrode as reference electrode, platinum wire as a counter electrode and active material used as working electrode. Aqueous 1M Na_2SO_4 solution was used as electrolyte. At a scan rate of $5mVs^{-1.}$ We have achieved maximum specific capacitance of 518 Fg^{-1} was obtained. Steadiness of MnO_2/Graphene nanocomposite was studied up to 5000 cycles.

Keywords: Hydrothermal, Graphene, Transmission electron microscope, X-ray photoelectron spectroscopy, Supercapacitor

Corresponding Author Name: M. Parthibavarman

E Mail: varmanphysics85@gmail.com

MS2 ISBN NO:9-789388-413282

A Study on Comparison the efficiency of Solar Panel with using Vegetables and Flowers Dyes

S. Divya Bharathi, M. Thenmozhi, V. Balasubramaniyan, R. Hemamalini

Department of Physics, Sri Sarada College for Women (Autonomous),Salem, Tamil Nadu, India

Abstract

Pristine MnO_2 and MnO_2/Graphene nanocomposite has been prepared through a facile hydrothermal method under mild condition, and their structure and electrochemical performance are characterized by X-ray diffraction (XRD), transmission electron microscopy (TEM), Brunauer-Emmet-Teller (BET), X-ray photoelectron spectroscopy (XPS), Thermogravimetric analysis (TGA). XRD reveals the average diameter of 41-55nm. TEM images show spherical morphology for pure MnO_2 and layered structure for MnO_2/Graphene. Capacitive behavior of the synthesized composite electrodes were evaluated using Cyclic voltammetry (CV), Galvanostatic charge-discharge(GCD) and Electrochemical impedance spectroscopy (EIS) by a three electrode system consisting of carbon glassy electrode as reference electrode, platinum wire as a counter electrode and active material used as working electrode. Aqueous 1M Na_2SO_4 solution was used as electrolyte. At a scan rate of $5mVs^{-1.}$ We have achieved maximum specific capacitance of 518 Fg^{-1} was obtained. Steadiness of MnO_2/Graphene nanocomposite was studied up to 5000 cycles.

Keywords: Hydrothermal, Graphene, Transmission electron microscope, X-ray photoelectron spectroscopy, Supercapacitor

Corresponding Author Name: S. Divya Bharathi

E Mail: divyabharathi7496@gmail.com

MS3 ISBN NO:9-789388-413282

Experimental Comparison of Solar Still using Normal Method and Black Paint Coated Method

T. N. Priyadharsini, P. Abirami, S. Krishnapriya

Department of Physics, P. K. R. Arts College for Women, Gobichettipalayam

Abstract

Two different methods of solar still has been designed to improve thermal performance of the solar still. We have committed to analyze the some of the still parameters. Thermometers were used to measure the temperatures of the two solar stills at different parts of the stills. Based on the input and output energy the two solar stills were compared on their efficiency. Practical comparison was conducted to choose which still was the best in efficiency with the same working environment. These techniques are used to compute the solar still maximum thermal performance at black paint coated still. Tungsten oxide (WO_3) sample was prepared using Sodium tungstate solution after 400° C calcinations by Wet chemical method. The optical absorption analysis of samples was performed in UV–Vis range 400–600 nm. Ultraviolet – Visible spectral analysis was used to find its optical transparency. The optical band gap value of the sample is calculated for tungsten oxide nanoparticle as 2.61 eV which is well with the reported band gap energy value.

Keyword: UV–Vis, Sodium tungstate, Thermometers

Corresponding Author Name: T. N. Priyadharsini

E Mail: abipalanisamy123@gmail.com, priyaseenivasan30@gmail.com

MS4 ISBN NO:9-789388-413282

Green Synthesis and Characterization of MgO nanoparticles using Aloe Vera Extract by Solution Combustion Method

J. Sheeba Veronica J, N. Subatra

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

Nanotechnology is the most promising technique which can be exploited in many useful ways. It is also referred to as manipulating materials at nano size. Metal oxide nano particles have a wide range of applications in various fields. These can be fabricated in an environment friendly and non toxic manner by Green Synthesis method using plant or leaf extract. Here it is focused on the green synthesis magnesium oxide (MgO) nano particles by solution combustion method using Aloe vera plant extract as a fuel. The synthesized nano particles were characterized by powdered X-RAY diffraction (XRD), Fourier Transform Infrared (FTIR), Energy Dispersive X-ray Spectroscopy (EDAX) and Ultra Violet (UV) analysis. XRD analysis revealed the formation of cubical structure of MgO nano particles with average particle size of 33nm. EDAX profile confirmed the signal characteristic of Magnesium. The functional groups and compounds responsible for nano particle formation and stabilization were studied by Fourier transform infrared (FT-IR) spectroscopy. The absorption patterns were analyzed by UV-visible spectroscopy.

Keyword: Green Synthesis, Aloe Vera extract, MgO Nano particles

Corresponding Author Name: J. Sheeba Veronica

E Mail: sheebavero23@gmail.com

MS5 ISBN NO:9-789388-413282

Green Synthesis and Characterization of Ni doped MgO Nanoparticles by Solution Combustion method using Aloe Vera extract

P. Saranya, N. Subatra

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

The green synthesis of metal oxide nano particles through plant extract is simple, eco-friendly, cost effective, and less time consuming. Plant extracts helps in reducing metal ions in the synthesis of nano particles. The present study deals with the green synthesis of Ni doped MgO nano particles by solution combustion method using Aloe Vera plant extract as a fuel. The structural and compositional analyses were done by powder X-ray diffraction (XRD), Energy Dispersive X-ray Spectroscopy (EDAX) respectively. XRD analysis revealed the formation of cubical structure of Ni doped MgO nano particles with average particle size of 31nm. EDAX profile confirmed the signal characteristic of Magnesium and nickel. The functional groups and compounds responsible for nano particle formation and stabilization were studied by Fourier transform infrared (FT-IR) spectroscopy. The absorption patterns were analyzed by UV-visible spectroscopy.

Keyword: Green Synthesis, Aloe Vera extract, Ni doped MgO nanoparticles

Corresponding Author Name: P. Saranya

E Mail: psaranya25697@gmail.com

MS6 ISBN NO:9-789388-413282

Green Synthesis of Silver Nanoparticles using the Leaf Extract of Kalanchoe Pinnata

T. Priyanka, K. Shreema, G.K. Vanathi Nachiyar, R. Mathammal, V.Kalaiselvi

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

The green synthesis of nanoparticles (AgNPs) has more advantages because they are safe to handle and of their easy availability. In this paper, we have described the green synthesis of Silver nanoparticles using the leaf extract of KALANCHOE PINNATA. The synthesized Silver nanoparticles were characterized by x-ray diffraction (XRD), UV-VIS spectrometer, FTIR, SEM with EDAX and PL. kalanchoe species have been used to treat ailments such as infections, rheumatism and inflammation. This method has greater advantage than physical and chemical methods.

Keyword: Silver nitrate, Kalanchoe Pinnata, XRD, UV-Vis, FTIR, SEM

Corresponding Author Name: T. Priyanka

E Mail: priyankabsc.008@gmail.com

MS7 ISBN NO:9-789388-413282

Synthesis of SnO_2 Nanoparticles by Hydrothermal method and Study of their Properties

G.Gayathri, R.Ramesh, K.Suguna

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

In the present work, SnO_2 nanoparticles were synthesized by hydrothermal method and annealed at 400˚C and 800 ˚C in air. Synthesized samples were characterized by powder X-ray diffraction; UV-DRS absorbance spectroscopy and Fourier transform spectroscopy (FTIR) techniques. The crystalline sizes were calculated from X-ray diffraction pattern using Scherrer's formula and it was found that the crystalline size was increased by increasing annealing temperature. Optical bandgap was calculated as 3.4, 3.6 and 3.9 eV as synthesized, annealed at 400˚C and 800 ^{o}C respectively. Surface functional group of synthesized nanoparticles was analyzed by using Fourier transform spectroscopy (FTIR).

Keyword: Optical bandgap, Scherrer's formula, UV-DRS absorbance spectroscopy

Corresponding Author Name: G. Gayathri

E Mail: gayathrigokul95@gmail.com

MS8 ISBN NO:9-789388-413282

Preparation and Characterization of Pure and Lithium doped ZnO Nanoparticles

S. Manjula, R. Hemamalini

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

In this present work, the synthesis of pure and Li doped zinc oxide nanoparticles by hydrothermal method using zinc nitrate and sodium hydroxide synthesized and has been reported. CTAB added in nanoparticles preparation, where CTAB used as the size reducing reagent, is one of the most essential properties for the nano particles preparation and its characterization. The synthesized zinc oxide nanoparticles were characterized by X-ray diffraction (XRD), Fourier Transform Infrared (FTIR) Spectroscopy and UV Visible Spectroscopy.

Keyword: Pure and Li doped ZnO NPs, Hydrothermal method, XRD, FTIR, UV-Vis spectroscopy

Corresponding Author Name: S. Manjula

E Mail: manjula@gmail.com

MS9 ISBN NO:9-789388-413282

Hibiscus rosa sinensis assisted green synthesis of Cadmium oxide nanoparticels

N. Priyadharsini, S. Gayathiri

Department of Physics, P.K.R Arts college for women, Gobichettipalayam

Abstract

Preparation of metal nanoparticles has been done through the physical and chemical methods. But the new method of green synthesis of nanoparticles through the plant extract is rapidly studied and developed due to the ease in formation of nanoparticles through environment friendly method. This process minimizes harsh and toxic nature of nanoparticles could be reduced. These natural nano factories open up a faster and large scale production of nanoparticles. In this paper Hibiscus flower petals are taken to prepare cdo nanoparticles. X-ray diffraction was accomplished to study the formation of cadmium oxide nanoparticles. UV visible spectrum was carried out to monitor obtained nanoparticles. Also the functional groups present in the prepared nanoparticles were identified. Thus cdo nanoparticles were synthesized inexpensively.

Keyword: Nano-particles, Nano-factories, toxic, Eco-friendly

Corresponding Author Name: N. Priyadharsini

E Mail: priyaprince5454@gmail.com

MS10 ISBN NO:9-789388-413282

Effect of Sodium Nitrate on the Growth, Optical, Thermal, Nonlinear Optical and Antimicrobial Properties of Γ-Glycine Single Crystal

V.Vijayalakshmi[1], P.Dhanasekaran[2]

[1] Crystal Growth Laboratory, Department of Physics, Erode Sengunthar Engineering College, Erode

[2]Department of Physics, Bharathiar University Arts and Science College, Modakurichi

Abstract

In this paper, we report the successful growth of sodium nitrate added glycine single crystals by the slow evaporation method. Powder X-ray diffraction analysis confirms the grown γ-glycine crystallizes into a hexagonal structure with a space group of $P3_1/n$. The percentage of transmittance of the crystal was recorded using UV–Vis Spectrophotometer and the optical band gap Eg was estimated for γ-glycine single crystal. Differential scanning calorimetry technique was employed to determine the phase transition, thermal stability and melting point of the grown crystal. The antibacterial activities of the title compound were performed by agar disk diffusion method against the standard bacteria's such as proteus, Staphylococcus aures, Streptococcus aures, Klebsiella and shigella.

Keyword: agar disk diffusion method, Differential scanning calorimetry, γ-glycine single crystal

Corresponding Author Name: P.Dhanasekaran

E Mail: dhanasekaranp1@gmail.com

MS11 ISBN NO:9-789388-413282

Effect of $MnSO_4$ on the Growth, Optical, Structural, Biological Properties of B-L -Glutamic Acid Crystals

J.Aarthi[1], P. Dhanasekaran[2]

[1] Crystal Growth Laboratory, Department of Physics, Erode Sengunthar Engineering College, Erode

[2] Department of Physics, Bharathiar University Arts and Science College, Modakurichi, Erode

Abstract

In this paper, we report the successful growth of $MnSO_4$-added β-glutamic acid single crystals by the slow evaporation method. Structural confirmation of the grown polymorph was carried out by powder x-ray diffraction study. UV–Vis-NIR spectral analysis the optical transparency of grown crystals. Differential scanning calorimetry technique was employed to determine the thermal stability and melting point of the grown crystal. The in vitro antimicrobial activity of grown crystals was analyzed against gram positive and gram negative bacteria's carried out by disk diffusion method and found that the crystal shows good inhibition efficiency against various bacteria's strains. DPPH radical scavenging study, exhibit good antioxidant activity and calculated the IC_{50} value of grown crystals, this value comparable with standard Vitamin C. The superior antibacterial activity of L-glutamic acid polymorphs affects against pathogens, having good cell viability against breast cancer cell lines and it can be used in pharmaceutical field for medical applications.

Keyword: UV–Vis-NIR spectral analysis, optical transparency, disk diffusion method

Corresponding Author Name: P.Dhanasekaran

E Mail: dhanasekaranp1@gmail.com

MS12 ISBN NO:9-789388-413282

Synthesis and Characterization of Ni -doped MnO_2 Nanoparticles by Co - Precipitation Technique

P.Kowsalya, M.Thenmolzhi, K.Vidhya

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

The thrust to develop eco - friendly production of nanoparticles arises from the extremely recent nanotechnology research, which gives considerable importance to expand their application. Nickel doped MnO_2 nanoparticles were prepared by co- precipitation method. The Crystalline size of prepared samples was determined by X- ray diffraction. The optical properties of the nanoparticles were analysed using UV-Vis spectroscopy. The surface morphology of the synthesised Ni - doped MnO_2 nanoparticles were analyzed using SEM. MnO_2 nanoparticles thus synthesised have large number of potential applications in the field of pharmaceutical industries, sensors, piezoelectric crystals, fuel cell electrodes and catalysis.

Keyword: X- ray diffraction, UV-Vis spectroscopy, Nickel, MnO_2 nanoparticles

Corresponding Author Name: K.Vidhya

E Mail: pkowsalya1991@gmail.com

MS13 ISBN NO:9-789388-413282

Synthesis and Characterization of Fe – doped CdO Nanoparticles by Precipitation Method

P.Kiruthika, M.Thenmolzhi, K.Vidhya

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

In the present study, iron doped CdO nanoparticles were prepared by chemical precipitation method. The synthesized products were characterized by XRD, UV- Vis, SEM. The grain size of cadmium oxide nanoparticles were analysed using XRD.The absorption spectra was recorded in the UV- visible region and analysed. The surface Morphology of the Synthesized nanoparticlesconformed from SEM. Pure CdO reveals ferromagnetic behaviour while antiferromagnetism is observed for all iron doped samples. The synthesized CdO nanoparticles have the great potential application on various industrial and medical field of research.

Keyword: cadmium oxide, SEM, Antiferromagnetism

Corresponding Author Name: K.Vidhya

E Mail: kiruthika13796@gmail.com

MS14 ISBN NO:9-789388-413282

Synthesis and Characterization of Ni doped CdO Nanoparticles by Co Precipitation method

A.Deepika, K.Vidhya, M.Thenmolzhi

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

In the present study, the nano structure Ni-doped CdO films have been prepared by chemical precipitation method. The prepared sample were characterized by XRD, UV and SEM .The structural, optical and surface morphology have been confirmed from SEM. The optical band gap values of Ni-doped CdO films were determined by optical absorption method. The particle size of the crystalline determined in Ni-doped of CdO were studied in XRD method. The synthesized CdO nanoparticle has the great studies in various techniques.

Keyword: CdO films, Chemical Precipitation Method

Corresponding Author Name: K.Vidhya

E Mail: adeepi1995@gmail.com

MS15 ISBN NO:9-789388-413282

Synthesis and characterization of calcium oxide nano particles by Co-precipitation method

S.R. Gaaviyaa, V. Radhika

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

Preparation of calcium oxide (CaO) Nano particles is carried out by co-precipitation method. Calciumoxide(CaO) Nano particles is synthesized by using calcium nitrate as a initializing agent and Triethanolamine(TEA) is added which acts as a complexing agent with 0.1M of hydrazine hydrate. The characterization techniques, including XRD and TEM and UVanalysis are taken for the prepared Nano particles.

Keyword: CaO, Tea complexing agent, Co-Precipitation

Corresponding Author Name: V. Radhika

E Mail: radhikaviswanath@gmail.com

MS16 ISBN NO:9-789388-413282

Growth And Characterisation Of Triglycinesulphate (TGS) Single Cyrstal Doped With $NiSO_4$

R. Dharini, V. Radhika

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

Synthesis of TGS crystal is done using slow evaporation method.

Glycine is dissolved with Sulphuric acid in distilled water and the solution is doped with $NiSO_4$.Now the required crystal is grown.XRD analysis is done for the grown crystal for structural characterization along with optical analysis.

Keyword: TGS crystal, slow evaporation method, Glycine

Corresponding Author Name: V. Radhika

E Mail: radhikaviswanath@gmail.com

MS17 ISBN NO:9-789388-413282

Classification and Testing of soil types from various places

D.S.Soniya, V. Radhika

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

Soil which is the most important natural resources on earth, is made up of air, water, minerals and organic materials. Soil has an important role in agriculture, filtering and purifying water. Different areas are chosen in Erode district which are Anthiyur, Bhavanisagar, Bungalowpudur, Nambiyur, Kodivery and Koravampalayam.Soil is collected from these places and tested for its fertility. The analysis may be helpful for agriculture, which remains the backbone of our country.

Keyword: Soil, types, Nutrients, Minerals, Resources

Corresponding Author Name: V. Radhika

E Mail: radhikaviswanath@gmail.com

MS18 ISBN NO:9-789388-413282

Synthesis and characterisation of Cupric oxide(CuO) Thin Films by Chemical bath deposition method

P.Methunavathani, V. Radhika

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

Thin films of Cupric Oxide(CuO) are synthesized on the glass slides by chemical bath deposition method. The precursor is prepared by usingCopper Nitrate salt and small amount of Polyvinyl Pyrrolidone and Sodium Hydroxidesolution. Then the glass slides are coated with this precursor by the chemical bath deposition method, which are then analyzed by various techniques like XRD, UVand FTIR.

Keyword: Cupric oxide thin films, chemical bath deposition

Corresponding Author Name: V. Radhika

E Mail: radhikaviswanath@gmail.com

MS19 ISBN NO:9-789388-413282

Effects Of Low Temperature Plasma Treatment On The Bamboo Fabric/Tio_2

I. Jasmine, R. Deepa

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

This paper investigates the influence of low temperature plasma, on Tio_2 coated with bamboo fabric. Low temperature plasma treatment can modify the surface of Tio_2coated with bamboo fabric and change the substrate characteristics and more importantly, the process is an environmental friendly finishing. The Tio_2 coated with bamboo fabric composites were characterized by several techniques including scanning electron microscopy (SEM), Fourier Transform Infrared Spectroscopy (FTIR), UV-VIS spectrophotometer, X-Ray Diffraction (XRD) which confirmed the existence of Tio_2 in the composites. The study conclude that was a desirable change in the absorption, transmission, band gap, surface energy and surface morphology.

Keyword: Low temperature plasma, TiO_2, bamboo fabric, substrate characteristics

Corresponding Author Name: R. Deepa

E Mail: kumardeepa00@gmail.com

MS20 ISBN NO:9-789388-413282

Growth and characterization of Hydantoin-5-acetic acid single crystal

C. Sridevi and R. Priyanka

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

Good quality crystals of Hydantoin-5-acetic acid (HYAA) were grown from aqueous solution at room temperature by slow evaporation method. The crystal structure, spectral, optical and thermal properties have been studied by FTIR, UV-vis spectrum, fluorescence and TGA analyses. The 5-hydantoin acetic acid crystal belongs to the orthorhombic crystallographic system with space group $P2_12_12_1$ [1]. The presence of functional groups in the grown crystal was confirmed by FTIR spectral analysis. The UV-visible spectrum indicates that the crystal is transparent in the entire visible region with a cut-off wavelength of 273.7 nm [2]. The wide optical band gap energy and improved transparency make this crystal suitable for optical devices. TGA study confirmed the thermal stability of the grown crystal.

Keyword: Hydantoin-5-acetic acid, Slow evaporation method, FTIR, UV-Vis spectrum, TGA

Corresponding Author Name: C. Sridevi

E Mail: sriphysics1@gmail.com

MS21 ISBN NO:9-789388-413282

Synthesis, growth and optical properties of an efficient non linear optical single crystal: 5- chloro 1-methyl -4-nitroimidazolonium salt of malic acid

C. Sridevi and S. Mohanapriya

Department of Physics, Sri Sarada College for Women (Autonomous), Salem

Abstract

In this paper, we report the synthesis, growth and characterization of new organic NLO crystal of 5-chloro-1-methyl-4-nitroimidazolonium salt of malic acid (CMNIMA). The title compound is synthesized and crystal was grown by the slow evaporation solution growth technique at constant temperature. The grown crystals have been characterized by power XRD, FT-IR, UV-Vis, Fluorescence, SHG, Dielectric and thermal analysis. The crystalline nature of the grown crystal was confirmed using power X-ray diffraction technique. Presence of various functional groups of the CMNIMA crystal was characterized by Fourier transform infra-red spectrum (FT-IR) and Non -linear optical property is examined by Kurtz powder technique. Hence it may be useful for the Second Harmonic generation (SHG) applications. The optical behavior was analyzed by UV-Vis spectrum and found that the crystal is transparent in the region between the 200-1100nm. The Fluorescence emission spectrum of the title crystal shows violet emission. The Dielectric studies show that the Dielectric constant and Dielectric loss decrease exponentially with frequency at different temperatures. The crystal was thermally stable up to 250°c as determined by DSC-TGA studies.

Keyword: Slow evaporation method, FTIR, UV-vis spectrum; TGA; Second Harmonic generation

Corresponding Author Name: C. Sridevi

E Mail: sriphysics1@gmail.com

MS22 ISBN NO:9-789388-413282

Synthesis of copper oxide nanoparticles using co- precipitation method

K. Nishitha, V. Radhika

Department of Physics, P.K.R. Arts College for Women, Gobichettipalayam

Abstract

Metal and metal oxide particles are intensively pursued because of their prominence in different field application in science and technology.

In this copper oxide nano particle are synthesized by co-precipitationmethod in which copper nitrate is mixed with polyvinyl pyrrolidone to yield copper oxide nano powder, It is characterized by using XRD, FTIR, and particle analyser.

Keyword: Copper nitrate, polyvinylpyyrolidone, co-precipitation

Corresponding Author Name: V. Radhika

E Mail: radhikaviswanath@gmail.com

MS23 ISBN NO:9-789388-413282

Green Synthesis of Cu/HPA-PANI Nanocomposites and Characterization for their Conductivity and Biological Applications

K. Vanitha Bharathi, S. Deepika Priyadharshini

Abstract

Conducting polymer composites has immense fascinating applications owing to their physical properties. Metal nanoparticles with conductive polymers can result in composite materials having unique physical and chemical properties that can have wide application potential in diverse areas. The present work comprises with the green synthesis of Cu NPs from *Albizia procera* bark extracts. Copper nanoparticles were fabricated in polyaniline (PANI), by *in situ* polymerization method under the action of Heteropolyacid. The synthesized nanocomposites were studied for Optical absorption in the UV-visible region of these suspensions was measured in the range of 200-500 nm and FTIR analysis. Morphology and structure of the composites were characterized by field emission scanning electron microscopy (FESEM), X-ray diffraction (XRD) and Fourier-transform infrared spectra (FTIR). Pure copper nanoparticles were uniformly dispersed into the polymer matrix. Thermal stability of the composites was characterized by thermogravimetric analysis (TGA). Electrical conductivity measurements indicated that the conductivity of the composites was significantly modified than that of pure polyaniline. Also, few *in vitro* antioxidant studies were carried out on these composites through DPPH, H_2O_2, Superoxide radical- scavenging assays, which revealed the biological potential of the composites.

Keyword: Cu NPS, Polyaniline, Thermal Stability, Nanocomposites

Corresponding Author Name: K. Vanitha Bharathi

E Mail: vanithabharathi1980@gmail.com

MS24 ISBN NO:9-789388-413282

Optical, Cyclic voltammetry and antioxidant studies of Cobalt doped /HPW-PANI Nanocomposites grown by Chemical and Electropolymerisation

S. Deepika Priyadharshini, K. Vanitha Bharathi

Abstract

Transition metal ion doped Heteropolyacid (HPW)- Poly-chloroaniline (PCA) composites was successfully prepared by *in-situ* oxidative polymerization of aniline monomer for electrochemical application. Cobalt nanoparticles were green synthesized from *Albizia amara* bark extract by precipitation method. The Co NPs were doped with HPW/PCA to synthesize composites which showed improved electrical properties compared to virgin PCA. All the materials were characterized by Fourier transform infrared spectroscopy (FT-IR), UV spectroscopy, field emission scanning electron microscopy (FESEM), XRD studies. The electrochemical capacitive performance of the composites was tested by cyclic voltammetry (CV). The synthesized nanocomposites showed good adherent behavior on electrode surface at pH 1.0, which stamped the presence of oxidation peaks at 0.271 V and 0.623 V and reduction peaks at 0.832 V and 0.493 V. Further, these composites were submitted for antioxidant studies which projected its fine inhibitions through DPPH, H_2O_2, Superoxide radical- scavenging assays.

Keyword: Cobalt nanoparticles, FESEM, cyclic voltammetry

Corresponding Author Name: S. Deepika Priyadharshini

E Mail:chemdeepika@gmail.com

MS25 ISBN NO:9-789388-413282

Synthesis, Characterization and Application of Nano carbon Composite

V.Priya[1], S.K. Krishna[2]

[1]Department of Chemistry, Vellalar College for Women, Erode

[2]Department of Chemistry, Chikkaiah Naicker College, Erode

Abstract

Nano Carbon Composite was prepared from the stems of *AlternantheraSessilis*using green procedure. Nano carbon particle (NCP) was prepared from the stems using waste engine oil as precursor, LPG fuel mixed with air and combustion chamber. The Y and Fe co-doped TiO_2photocatalyst was prepared by sol-gel process using ($Ti(OBu)_4$), ethanol, acetic acid, 0.1M $Fe(NO)_3$ and 0.1M $Y(NO)_3.6H_2O$. $Y/Fe/TiO_2$ co-doped nano carbon composite was prepared by stirring 0.5g of NCP using a magnetic stirrer for about half an hour, then transparent sol containing $Y/Fe/TiO_2$ was slowly added with constant stirring. The solid composite was obtained after stirring, drying and calcined for 3 h at a temperature of 450°C under constant flow of N_2 gas. The powdered composite christened as Nano Carbon Sphere (NCS) is used for the photocatalytic degradation of various dyesand the composite catalyst is capable of degrading more dye molecules under visible light.

Keyword: Nano carbon composite, AlternantheraSessilis, Photocatalyst, Visible light

Corresponding Author Name: V. Priya

E Mail: priyavelusamy.m.sc@gmail.com

MS26 ISBN NO:9-789388-413282

Studies on the influence of parameters on photocatalytic activity of polymer nanocomposites- An Overview

M. Mubarak Ali, D. John Williams

Department of Chemistry, Chikkaiah Naicker College, Erode

Abstract

Dyes present in the industrial waste water enter the water bodies such as rivers, lakes and pollute the environment. This contaminated water contains highly hazardous and colored pigments which deplete the dissolved oxygen in water and affects the aquatic life and human beings. In order to maintain the quality of the water, several methods were used such as adsorption, electro coagulation, ultrasonic decomposition, etc., to treat the waste water. These conventional techniques were not effective because it leaves the secondary waste which cannot be treated or dumped into the ground due to its carcinogenic nature. Hence an ecofriendly and simple technique called advanced oxidation process (AOP) which uses the hydroxyl radical to degrade the wide range of dyestuff were effective in treating the dye effluents. Among the advanced oxidation process the photo catalysis has been gaining interest from the academic and industries. Inspite of its potential to treat the dye effluents, there are number of factors responsible for the photo catalytic system. These are the parameters govern the photo degradation of the dyes. A number of studies have been reported on the significance of these operational parameters. Some of the factors influence the photo catalysis is the amount of photo catalyst, pH of the solution, temperature of the reaction medium, light irradiation time, the intensity of light, surface area of the photo catalyst, nature of the photo catalyst, dissolved oxygen in the reaction medium, nature of the substrate, doping of metals and non-metals and the structure of the photo catalyst. A number of literatures reported on the operational parameters govern the photo catalytic activity of the polymer nanocomposites. Hence this review is focused on the factors responsible for the effective photo catalytic activity of polymer nanocomposites in the past and also the recent advances in this field for the degradation of dyes.

Keyword: Hazardous, Photo Degradation Photo Catalyst, Adsorption

Corresponding Author Name: M. Mubarak Ali

E Mail: mubarakscience@gmail.com

MS27 ISBN NO:9-789388-413282

Cost Effective Green Method For The Synthesis Of Silver Nanoparticles

J. Indira and V. Sreeja

Department of Chemistry, Vellalar College for Women (Autonomous), Thindal, Erode

Abstract

The use of Silver nanoparticles (AgNPs) has been greatly enhanced in biomedical field due to its excellent antimicrobial activity against several pathogenic bacteria. It is used as coatings in dressings, medicinal devices, nanogels in cosmetics and lotions. The physical and chemical synthetic processes involve high temperatures/pressure and the use of hazardous chemicals for the reaction. The recent research involves the synthesis of silver nanoparticles by ecofriendly green methods. Plants flower extract are considered cost-effective and environment friendly for the synthesis of silver nanoparticles. The present study deals with the synthesis of silver nanoparticles using the flower extracts of Aerva Lanata and Gomphrena globosa. The as-formed silver nanoparticles were characterized by UV-Visible spectrophotometer, Fourier Transform Infrared spectroscopy (FTIR), Scanning Electron Microscopy (SEM). The antibacterial activity of the as-synthesized silver nanoparticles was also investigated.

Keywords: Silver Nanoparticles, UV, FTIR, SEM, Antimicrobial activity

Corresponding Author Name: J. Indira

E Mail: jayabal.indira@gmail.com

MS28 ISBN NO:9-789388-413282

Degradation of Reactive Yellow Dye Effluent

V. Sreeja, J. Indira

Department of Chemistry, Vellalar College for Women (Autonomous), Thindal, Erode

Abstract

One of important contaminant that can create health hazard in water bodies is the dye effluents. Many important technologies are currently available for treating wastewater from the textile industry like biological treatment, chemical precipitation, ultrafiltration, carbon adsorption, and oxidation with ozone. But they generally lack the broad scope treatment efficiency required to reduce all the diverse pollutants present in textile wastewater. Electrochemical technology has shown that many of the major chemical components in textile industry wastewater can be effectively and economically removed. The target may be the reduction of COD, requiring the complete oxidation of dyes to carbon dioxide or the removal of colour. In the present study, synthetic dye effluent containing 500 ppm reactive yellow 107 was electrolysed under galvanostatic condition using APLAB model (SPECTRA LAB) wherein the current was controlled with a precision of ± 1%. Electrolyses were carried out using graphite anodes at various pH from 1.0 to 13.0 and NaCl was used as supporting electrolyte. The current density, pH were optimized. To ascertain the removal of dye during electrolysis, UV-VIS were carried out. The dye solution showed absorption at 235 and 387 nm. The first absorption is sharp, arising due to π-π^* absorptions of benzene rings. The second absorption is broad and it may be assigned for the through resonance possible in the molecule. The complete decolourisation of the effluent and the absence of absorption peaks were noticed which suggest complete destruction of the dye and this does not produce any smaller organic units.

Keyword: Electrolysis, Destruction of dye, COD reduction, Effluent treatment, Electrochemical treatment

Corresponding Author Name: V. Sreeja

E Mail: sreeja@vcw.ac.in

MS29 ISBN NO:9-789388-413282

Biosynthesis, Characterization and Antibacterial Studies of Copper Oxide Nanoparticles using Coffee Seed Extracts

M. Muthulakshmi, S. Janani, M. Jothi

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

The copper oxide nanoparticles (CuO NPs) were synthesized using coffee seed extracts as a reducing agent and copper nitrate as a precursor by adopting eco-friendly method. The synthesized CuO NPs were characterized by X-ray diffraction, UV-visible spectroscopy, Scanning electron microscope, Fourier transform infrared spectroscopy and Particle size analyzer. Further, the antibacterial activity of synthesized CuO NPs was tested against both gram positive and gram negative cultures. Thus, from the above studies, the presence of CuO NPs were confirmed and the synthesized CuO NPs found to exhibit significant antibacterial action which can be employed for various therapeutic applications.

Keyword: CuO NPs, coffee seeds, Fourier transform infrared spectroscopy, X-ray diffraction

Corresponding Author Name: M. Muthulakshmi

E Mail: muthulakshmi.m@vcw.ac.in

MS30 ISBN NO:9-789388-413282

Exploring the Characterization of Copper Oxide Nanoparticles using Eichhornia Crassipes Leaves extract via Bio-Synthesis Method

M. Jothi, K. Divya priya, M. Muthulakshmi

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Bio-synthesis of metal oxide nanoparticles are receiving great attention due to their unique physical and mechanical properties and also gaining promising application in various fields particularly medicine, electric, magnetic field and so on. In this work, copper oxide nanoparticles (CuO) were synthesized using Eichhornia crassipes leaf extract using NaOH by adopting simple, cost effective and eco-friendly method. The synthesized nanomaterials were characterized by Ultraviolet-visible spectroscopy, Antibacterial activity, Fourier transform infrared spectroscopy, X-ray diffraction, Scanning electron microscopeand Particle size analyzer. Thus, the presence of copper oxide nanoparticles has been confirmed from the studies and utilized for various bio-medical activities.

Keyword: Eichhornia crassipes, Fourier transform infrared spectroscopy, Particle Size analyzer, Antibacterial activity

Corresponding Author Name: M. Jothi

E Mail: jothi.m@vcw.ac.in

MS31 ISBN NO:9-789388-413282

Conducting properties of new Poly (m-toluidine-co-4-fluoroaniline) nanocomposites with silver nanoparticles

J. Vivekanandan[1], A. Mahudeswaran[1], K.S. Usha[2], P.S.Vijayanand[2]

[1]Department of Physics, Bannari Amman Institute of Technology, Sathyamangalam, Erode

[2]Department of Chemistry, Bannari Amman Institute of Technology, Sathyamangalam, Erode

Abstract

A new series of silver nanoparticles embedded in poly (m-toluidine-co-4-fluoroaniline) copolymer nanocomposites was synthesized by chemical oxidative *in-situ* polymerization method. The characterization of these nanocomposites was carried out by using FTIR, UV-visible spectroscopy, X-ray diffraction (XRD) and Scanning Electron Microscopy (SEM). The synthesized conducting copolymer shows good solubility in common organic solvents such as DMF and DMSO. X-ray diffraction (XRD) pattern reveals the crystalline nature of the copolymer. The scanning electron microscopic study shows the nanotubular sea coral like granular particles that are agglomerated in nature. The increase in conductivity is also due to the interfacial interaction of Ag nanoparticles with poly (m-toluidine-co-4-fluoroaniline) matrix. The electrical conductivity of the compressed pellet of these polymers was measured by the four probe method.

Keyword: m-toluidine, 4-fluoroaniline, DBSA, Ag nanoparticles, conductivity

Corresponding Author Name: Dr.P.S.Vijayanand

E Mail: vijayps6@yahoo.co.in, vijayanandps@bitsathy.ac.in

MS32 ISBN NO:9-789388-413282

Green synthesis of zinc oxide nanoparticles using G*loriosa superba flower* extract and their characterization

U. Chaithra, C. Deepa

Department of Physics, Vellalar College For Women, Erode

Abstract

Green synthesis of zinc oxide nanoparticles using green plants is a very cost effective, safe, nontoxic, eco-friendly route of synthesis which can be used for the manufacture at a large scale and promising alternative to traditional method of chemical synthesis. In the present work, we report the synthesis of zinc oxide nanoparticles by biological method. The aqueous flower extract of Gloriosa Superba acts as a solvent with manifold roles as promoter, stabilizer and template for the synthesis of nanoparticle. The formed nanoparticles were characterized byX-ray Diffraction (XRD), Fourier Transform Infrared Spectroscopy (FTIR),Scanning Electron Microscopy (SEM), Energy Dispersive X-ray spectroscopy (EDAX) and Ultraviolet visible spectroscopy (UV-vis).*Invitro*antibacterial activity of the synthesised nanoparticles were studied using pathogenic bacteria such as *E.coli*and*StaphylococcusAureaus*. The study was further initiated and reported that Zinc oxide nanoparticle can be used as an inexpensive and effective adsorbent for the removal of arsenic ions from aqueous solution. This approach offers environmentally beneficial alternatives to more hazardous chemicals and processes and promotes pollution prevention by the production of nanoparticle in their natural environs.

Keyword: Nanoparticles, Green synthesis, Zinc acetate, Sodium hydroxide, Gloriosa Superba

Corresponding Author Name: C. Deepa

E Mail: chinnasamydeepa@gmail.com

MS33 ISBN NO:9-789388-413282

Facile preparation of polymer metal oxide nanocomposites by "mechanical mixing approach"

N. Dhachanamoorthi, M. Nandhini

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

In the last few decades the development of polymer nanocomposites has been drastically increased because of its wide range of applications in many fields. Polymer nanocomposites have both natural and synthetic types that play an essential role in everyday life. Polymer nanocomposites offer significant development in advanced materials. Here, we use Poly-Ortho-Toluidine (POT) an organic polymer when combined with antimony oxide (Sb_2O_3) an inorganic material, these polymer nanocomposites properties are improved and hence it has lot of applications and have high electrical, thermal and mechanical properties. POT-Sb_2O_3 nanocomposites are prepared by mechanical mixing method. The resultant polymer nanocomposites are characterized by using FTIR, UV-vis, XRD and SEM&EDAX. FTIR is used to investigate the stretching vibrations and functional groups of POT- Sb_2O_3 nanocomposites. The optical properties and interaction between POT and Sb_2O_3 has been studied using UV-visible spectroscopy. XRD analysis proves the prepared sample have high crystalline nature with compared to pure POT. SEM analysis shows the morphology of the sample, the prepared sample have hexagonal structure. EDAX analysis identifies the chemical composition of the sample. The result shows the POT and Sb_2O_3 have strong interaction between them.

Keyword: Poly-Ortho-Toluidine (POT), antimony oxide (Sb_2O_3), nano composites

Corresponding Author Name: M.Nandhini

E Mail: nandhini020995@gmail.com

MS34 ISBN NO:9-789388-413282

PVP – Surfactant – mediated Synthesis & Characterization of WO_3 Nanoparticles

T. Thilagavathi, D. Venugopal

PG & Research Department of Physics, Gobi Arts & Science College, Gobichettipalayam

Abstract

In the present work, Tungsten Oxide (WO_3) powder was synthesized by Wet chemical method in presence of capping agent namely polyvinyl pyrrolidone (PVP). Here, Sodium tungstate dihydrate dissolved in deionised water act as precursor solution. The synthesized powder was characterized by X-ray powder diffraction (XRD), Scanning Electron Microscopy (SEM), Fourier transform infrared spectroscopy (FT-IR) and UV-visible absorption (UV–Vis) studies. These results showed that the crystallinity, functional groups and the optical property of WO_3 nanoparticles.

Keyword: WO_3, PVP, band gap energy

Corresponding Author Name: T. Thilagavathi

E Mail: thilagavathi01@gmail.com

MS35 ISBN NO:9-789388-413282

Electron transport Performance of CeO_2 Doped TiO_2 nanoparticles in Dye Sensitized Solar Cells

S. Ranjitha[1], V. Aroulmoji[2], M.Sridharan[3]

[1]Department of Physics, Velalar College of Engineering and Technology, Erode
[2]Center for Research and Development, Mahendra Educational Institutions, Namakkal
[3]Department of Chemistry, SRM Institute of Science & Technology, Chennai

Abstract

The sol-gel synthesis is promising a new material fabrication method for nanoscale materials and nanotechnology. Mesoporous high surface area and high crystallinity MO2 (M = Ti, Ce, nanopowders were synthesized by a modified sol-gel method using metal alkoxide and acetylacetone. The prepared powders had crystalline size of about 5-10µm, Mesoporous $CeO_2$and CeO_2nanopowders responding to visible wavelength were also obtained by using the same process. A small addition (5 mol %) of CeO2 did not affect anatase phase. However, further addition of CeO_2 increased while anatase TiO_2 decreased. These synthesis methods provide simple route to fabricate nanostructured materials under mild conditions. The synthesized nanoparticles were characterized using X-ray diffraction, field-emission scanning electron microscopy, UV-visible spectrophotometry,Photoluminescence and electrochemical impedance spectroscopy. The results indicated that the adsorption of anthraquinone dyes through the CeO_2 doped TiO_2 was increased along with enhancing the short-circuit photocurrent and open-circuit voltage of the cell. An optimal power conversion efficiency of 3% was obtained in a dye-sensitized solar cell (DSSC) containing the CeO_2doped TiO_2 film. This material combination is a highly promising agent for the enhancement of the conversion efficiency for the fabrication of high efficient, low cost and high stable DSSCs

Keyword: N3 and N719 dye, CeO_2, TiO_2,DSSC .,EIS and SEM

Corresponding Author Name: S. Ranjitha

E Mail: ranjilotus31@gmail.com

MS36 ISBN NO:9-789388-413282

Study of Geometrical, Electronic Structure, Spectral and NLO Properties of Red Prickly PearSensitizer for Solar Cell Applications

S. Ranjitha[1], N. Sumathi[2]
[1]Department of Physics, Velalar College of Engineering and Technology, Erode
[2]Department of Physics, Nandha Arts and Sceince College, Erode

Abstract

The geometries, electronic structures, polarizabilities, and hyperpolarizabilities of organic dye sensitizer red prickly pearwere studied based on HF and Density Functional Theory (DFT) using the hybrid functional B3LYP. Ultraviolet-Visible (UV-Vis) spectrum was investigated by Time Dependent DFT TD-DFT Features of the electronic absorption spectrum in the visible and near-UV regions were assigned based on TD-DFT calculations. The absorption bands are assigned to $\pi \rightarrow \pi^*$ transitions. Calculated results suggest that the three excited states with the lowest excited energies in red prickly pearis due to photo induced electron transfer processes. The interfacial electron transfer between semiconductor TiO_2 electrode and dye sensitized prickly pear is due to an electron injection process from excited dye to the semiconductor's conduction band. The role of anthroquinonegroup in red prickly peargeometries, electronic structures, and spectral properties were analyzed.

Keyword: DFT, red prickly pear, DSSC, Band Gap

Corresponding Author Name: S. Ranjitha

E Mail: ranjilotus31@gmail.com

MS37 ISBN NO:9-789388-413282

Synthesisand Characterization Of Poly(Aniline-O-Toluidine) Copper Oxide Nanocomposites For Biomedical Applications

S.R. Dharani[1], N. Dhachamoorthi[2]

[1]Govt Arts college, Edapadi

[2]PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Synthesized P(ANI-OT) CuOnanocomposites is used to polyaniline, poly-o-toluidine, CuO by emulsion polymerization method. In this method potassium dichromate as an oxidant in aqueous sulfuric acid under constantstirring at 60°C in presence of Nitrogen gas atmosphere.The different weight percentages of CuO (25%, 50% and 75%) are added during the polymerization.The synthesized composite were characterized byvarious analytical techniques such as, FTIR, XRD, UV, SEMand EDAX. Also the antibacterial activity analyses are carried out.Thefunctional groups are conformed by FTIR analysis. The XRD pattern is nature of the composite and UV-Vis analysis is the find the optical properties and band gap energy. Surface morphology is studied using Scanning Electron Microscopy (SEM) with EDAX analysis is confirmed by the chemical composition of composite. Antibacterial activity analysis is the good resistivity towards the bacterial growth.

Keyword: Poly(aniline-O-Toluidine), CuO Nanocomposites, SEM, Antibacterial activity.

Corresponding Author Name: N. Dhachamoorthi

E Mail:dhachu83@gmail.com

MS38 ISBN NO:9-789388-413282

X – Ray Diffraction Study of Tungsten oxide Nanoparticles synthesized by Wet Chemical Technique

K. Gogulavalli, N. Haritha, T. Thilagavathi

PG & Research Department of Physics, Gobi Arts & Science College, Gobichettipalayam

Abstract

Tungsten oxide (WO_3) sample was prepared by Wet chemical method using sodium tungstate solution as precursor. Nanocrystalline WO_3 powder was obtained after 400° C calcinations. The physical property of the synthesized Tungsten oxide material was characterized by X-Ray Diffraction. The predominant peaks obtained in X-ray diffraction pattern reveal the crystalline nature of the sample and the structure belongs to Monoclinic WO_3. XRD assessed result indicates the crystalline improvement along (020) orientation and maximum crystallite size of the plane (020) was found to be 32 nm.

Keyword: XRD, monoclinic crystalline

Corresponding Author Name: T. Thilagavathi

E Mail: thilagavathi01@gmail.com

MS39 ISBN NO:9-789388-413282

Synthesis and Structural morphology with Antibacterial activity of Zn/Ag capped Hydroxyapatite by Wet Precipitation Method

P. Sri Devi, S. Suwathi

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Due to effective biocompatibility and bioactivity of Hydroxyapatite, it plays an essential role in medicinal field in particular as bone substitute and coating for implants. The main aim of this study is to incorporate two divalent cations (Silver and Zinc) in HAp as capping agents by wet precipitation method. FTIR, XRD, EDAX and SEM are used for its characterization to analyze functional group, phase composition, crystalline size, elemental composition and the surface morphology. The antibacterial activity of the synthesized nanoparticles is tested against two gram positive and two gram negative bacteria.

Keyword: Hap, biocompatibility, FTIR, XRD, EDAX

Corresponding Author Name: P. Sri Devi

E Mail: karthisridevi@gmail.com

MS40 ISBN NO:9-789388-413282

Synthesis and Characterization of Ti/Ag capped Hydroxyapatite by Sol-Gel method

P. Sri Devi, D. Nandhini

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

HAp is effectively used as bio implant material because it closely resembles bone apatite and exhibits good bio-compatibility. This paper explains the synthesis of Ti/Ag capped HAp by sol-gel method. The HAp nanoparticles were characterized by XRD to study the crystalline size and Phase composition, SEM for surface morphology, FTIR for Functional group and EDAX for elemental composition. The antibacterial activity of the synthesized (Ti/Ag) capped hydroxyapatite was studied against both two gram positive and two gram negative bacteria.

Keywords: HAp, Bio-compatibility, FTIR, XRD, SEM

Corresponding Author Name: P. Sri Devi

E Mail: karthisridevi@gmail.com

MS41 ISBN NO:9-789388-413282

Synthesis And Characterization Of Polypyrrole-Zinc Oxide Core-Shell Hybrid Polymer Nanocomposites

N. Dhachanamoorthi[1], S. Tamilselvan[2], P. Suresh[3], L.Chandra[4]

[1]PG & Research Department of Physics, Vellalar College for Women, Erode
[2]Research Scholar, PG & Research Department of Physics, Chikkaiah Naicker College, Erode
[3]Assistant Professor, Department of Physics, Erode Arts & Science College, Erode
[4]Assistant Professor, Department of Physics, Chikkaiah Naicker College, Erode

Abstract

Synthesis of hybrid functional nanocomposites (PPy-ZnO) was employed with ZnO by mechanical mixing method, this system, the observed FT-IR result ensured the presence of PPy in the composite and also pronounces the characteristic absorption peaks of ZnO around 591 and 438 cm^{-1}. The observed strong vibration in the low wave number region around 591cm^{-1} is corresponds to antisymmetric vibrations of Zn-O-Zn bond of Zinc oxide. This ensured the presence of ZnO incorporated in the PPy nanoparticles. UV-Vis absorption spectra of PPy-ZnO nanocomposites helps to explore the optical behavior of incorporated nanoparticles into PPy matrix and hence, the integrated ZnO nanoparticles gives rise to the red shift of π–π* transition of polypyrrole. SEM images reveal that ZnO nanoparticles is deposited on the PPy surface which have a nucleus effect on the polymerization of PPy. It also ensures, the degree of deposition on the surface of PPy increases with ZnO content. SEM images indicated that the zinc particles are embedded in the PPy matrix forming the core-shell structure. ZnO nanoparticles exist as agglomerates due to high surface area and magneto dipole-dipole interactions between the particles. In SEM images, the black core is zinc particles with the diameter range of 50-150 nm and the light colored shell is attributed to PPy in the nanocomposites, which is due to the different electron penetrability. The EDAX results of PPy-ZnO reveals that an elements like Carbon (44.23 wt.%) and Sulfur (3.18 wt.%) molecules decreases and Zinc (23.47 wt.%), Oxygen(29.12 wt.%) molecules increases, while increasing concentration of ZnO nano metal oxide content.

Keyword: PPy-ZnO, EDAX, π–π* transition, SEM

Corresponding Author Name: N. Dhachanamoorthi

E Mail: dhachu83@gmail.com

MS42 ISBN NO:9-789388-413282

Preparation and characterization of novel hybrid organic-inorganic (Poly-O-Toluidine-CdO) polymer nanocomposites

S. Tamilselvan[1], R.Thiyagarajan[2], N. Dhachanamoorthi [3]

[1]Research Scholar, PG & Research Department of Physics, Chikkaiah Naicker College, Erode
[2]Assistant Professor, PG & Research Department of Physics, Chikkaiah Naicker College, Erode
[3]Assistant Professor & Head, PG Department of Physics, Vellalar College for Women, Erode

Abstract

An organic-inorganic hybrid Poly-o-toluidine-CdO (POT-CdO) nanocomposite has been synthesized by Insitu chemical oxidative polymerization method. The prepared pure POT and POT-CdO (50%) polymer nanocomposite are characterized by using FTIR, UV-Vis, XRD, SEM, EDAX and antimicrobial activities. In FTIR spectra reveals the information of functional groups (N-H, C-H, C-C, C=C) in pure POT and POT-CdO (50%) nanocomposites also confirm interaction between POT and CdO nanoparticle, The optical absorbance of pure POT and POT-CdO was measured in the range of 250-1000 nm. This absorption spectrum shows two absorption bands centered at 316, 622 nm (pure POT) and the optical band gap energy is (3.93 eV, 1.99 eV) and 314, 613 nm are observed in POT-CdO (50%) nanocomposite and the optical band gap energy is (3.95 eV, 2.02 eV). The XRD pattern of pure POT shows the amorphous nature and the XRD pattern of POT-CdO nanocomposites reveals high crystalline material. The SEM micrograph of POT has porous and irregular structure and POT-CdO nanocomposites are highly agglomerated and form cluster spherical shaped morphology due to Vander Waals force of attraction, the morphology of the material has been confirmed with the formation of organic-inorganic nanocomposite material. The EDAX spectrum of pure POT and POT-CdO nanocomposites C, S, O and Cd elements are present in different weight percentage. The antibacterial activity of pure POT and POT-CdO nanocomposites against gram positive and gram negative were observed using agar well diffusion method. It was also found that POT-CdO has enhanced antibacterial activity compared to pure POT.

Keyword: Poly-O-toluidine (POT), Cadmium oxide (CdO), Nanocomposites, Antibacterial activity

Corresponding Author Name: S. Tamilselvan

E Mail: tamilpriyan001@gmail.com

MS43 ISBN NO:9-789388-413282

Structural, Morphological and Optical properties of Sn doped ZnO thin films

S. Dharanya, A. Priyadharshini

PG & Research Department of Physics, Gobi arts & science college, Gobichettipalayam

Abstract

Pure and Sn doped Zinc Oxide thin films were prepared by using chemical bath deposition process. Structural, Morphological and optical properties of the samples were characterized by using XRD, SEM and UV-Visible studies. XRD result showed that decrease in grain size from pure sample due to the incorporation of Sn ions. Bandgap energy values calculated from UV-Visible studies showed that these samples were suitable for optoelectronic applications.

Keyword: ZnO thin film, CBD, XRD, SEM

Corresponding Author Name: S. Dharanya

E Mail: ddharan082@gmail.com

MS44 ISBN NO:9-789388-413282

Synthesis Characterization And Anti Bacterial Investigation Of Pure Zinc Oxide And Copper Doped Zinc Oxide

P. Sri Devi, D. Anbumalar

Assistant Professor, PG Department of Physics, Vellalar College for Women, Erode

Abstract

Undoped and Copper doped Zinc Oxide nanoparticles (NPs) have been successfully synthesised by chemical precipitation method. The synthesized NPs have been characterized by number of techniques such as X-Ray diffraction (XRD), Scanning Electron Microscopy (SEM) and EDAX. The antibacterial investigation was done for undoped and Copper doped Zinc Oxide. The XRD analysis reveals that the synthesised samples were crystalline in nature with hexagonal wurzite structure. The grain size decreases with the addition dopants. EDAX spectrum confirms the presence of elemental particles such as Cu, Zn and O. The antibacterial investigation shows that the Copper doped Zinc oxide exhibits greater zone of inhibition than pure Zinc oxide nanoparticles.

Keyword: ZnO nanoparticles, XRD, SEM, EDAX

Corresponding Author Name: P. Sri Devi

E Mail: karthisridevi@gmail.com

MS45 ISBN NO:9-789388-413282

Green Synthesis Of Chromium Oxide Nanoparticles By Cucurbita Maxima Extract And Their Antibacterial Activities

M.Jothi, S. Priyanka, M. Muthulakshmi

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Chromium Oxide nanoparticles have been synthesized using Potassium dichromate as a precursor and Cucurbita maxima leaves as a reducing agent by adopting green synthesis method. The synthesized samples were characterized by FTIR, UV-Vis spectroscopy, X-ray diffraction (XRD), Scanning electron microscopy (SEM) and Antibacterial activity. The particle size of the obtained sample has been calculated by Debye-Scherrer formula and calculated value is 8.065 nm. Thus, Chromium Oxide nanoparticles which shows greater effect for fungal culture and utilized for stroppingknives, glasses, inks, paints and precursor to themagnetic pigment. Further, UV-Visible absorption and IR Spectroscopy confirms the formation of nanosized Cr_2O_3.

Keyword: Chromium Oxide, Debye-Scherrer formula, SEM, UV-Vis Spectroscopy

Corresponding Author Name: Dr. M. Jothi

E Mail: jothi.m@vcw.ac.in

MS46 ISBN NO:9-789388-413282

Theoretical studies on structural properties of dehydroxyascorbic acid and 5-1RD4T

Ambika[1,4] , K. Sadasivam[1,2], R. Praveena[1,2], Rajeswari[4]

[1]Quantum Computing and Phytochemistry Research Laboratory, Bannari Amman Institute of Technology, Sathyamangalam,
[2]Department of Physics, Bannari Amman Institute of Technology, Sathyamangalam
[3]Department of Chemistry, Bannari Amman Institute of Technology, Sathyamangalam
[4]Department of Physics, Gobi Arts and Science College, Karattadipalayam

Abstract

Ascorbic acid (vitamin C) is used to prevent or treat low levels of vitamin C in people who do not get enough of the vitamin from their diets. Most people who eat a normal diet do not need extra ascorbic acid. Low levels of vitamin C can result in a condition called scurvy. Scurvy may cause symptoms such as rash, muscle weakness, joint pain, tiredness, or tooth loss. Vitamin C plays an important role in the body. It is needed to maintain the health of skin, cartilage, teeth, bone, and blood vessels. It is also used to protect your body's cells from damage. It is known as an antioxidant. In the present investigation structural parameters and binding energies of well known antioxidant dehydroxyascorbic acid(DHA) is compared with its similar structural conformer 51RD4T. Density functional theory, a useful concept derived from quantum mechanics mainly focuses over the electronic density around the molecules is used in the present investigation. The geometry of the two vegetable acids are been optimized with the help of Beckes three parameters along with the functions of Lee-Yang and Parr using the triple zeta valence basis set 6-311G(d,p). Thermochemical calculations (frequency) is carried out under room temperature with 1 atmospheric pressure. In order to understand the occupied orbital levels frontier molecular orbital analysis(FMO) is done and corresponding energy gap E gap between the energy levels is found to be 3.23eV for DHA acid and 3.25eV for 51RD4T. Electron donating capability and accepting capability of two flavonoids are been investigated with the help of molecul ar electrostatic potential (MEP).

Keyword: Density functional theory, Vitamin C, molecular properties

Corresponding Author Name: Rajeswari

E Mail: rajicute165@gmail.com

MS47 ISBN NO:9-789388-413282

Theoretical studies on electron localization and structural parameters of dexpanthanol and pantothenic acid

Sivaranjani[1,4] , Sadasivam K[1,2], Praveena R[1,2] , Rajeswari[4]

[1]Quantum Computing and Phytochemistry Research Laboratory, Bannari Amman Institute of Technology, Sathyamangalam

[2]Department of Physics, Bannari Amman Institute of Technology,Sathyamangalam

[3]Department of Chemistry, Bannari Amman Institute of Technology, Sathyamangalam

[4] Department of Physics, Gobi Arts and Science College, Karattadipalayam

Abstract

Organic acids are one of the major phytochemicals in vegetables and responsible for food taste and odor. Different organic acids are analyzed in fruits and cereals, but least in vegetables and spices. Organic acids has been analyzed because of their high importance in the formation of other phytochemical and increased antioxidant activity. The aim of the present study is to investigate the structural parameters(geometry, ground state energy, electron donating and accepting capability, electronegativity etc.,). Density functional theory – a useful concept derived from quantum mechanics mainly focuses over the electronic density around the molecules is used in the present investigation. The geometry of the two vegetable acids are been optimized with the help of Beckes three parameters along with the functions of Lee-Yang and Parr using the triple zeta valence basis set 6-311G(d,p). Thermochemical calculations (frequency) is carried out under room temperature with 1 atmospheric pressure. In order to understand the occupied orbital levels frontier molecular orbital analysis(FMO) is done and corresponding energy gap (E_{gap}) between the energy levels is found. Electron donating capability and accepting capability of two flavonoids are been investigated with the help of molecular electrostatic potential (MEP). Based on the electron localization function visualization it is observed that the investigated smiliar parental conformations dexpanthanol and pantothenic acid are well stabilized and are capable of donating electron(good behavior to be an antioxidant) rather than accepting electron.

Keyword: Organic acids, Density functional theory, Molecular properties

Corresponding Author Name: Rajeswari

E Mail: rajicute165@gmail.com

MS48 ISBN NO:9-789388-413282

Antibacterial effect of Ag doped ZnO nanoparicles by Sol-gel method

V. Kaviya, D. Hemalatha

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Silver-doped Zinc oxide nanoparticles were synthesized by Sol-gel method. The synthesized Ag -ZnO nanoparticles were analyzed by XRD, FTIR, SEM and Antibacterial activity. The X-ray diffraction pattern clearly showed that the hexagonal wurtzite structure and crystalline Ag-ZnO particles. The crystalline size is in 15 to 31nm. The Fourier Transform Infrared gives the molecular band present in the sample. The Scanning Electron Microscopy images showed that the presence of spherical nanoparticles. The Antibacterial activity of silver doped ZnO nanoparticles were studied using agar well diffusion method.

Keyword: SEM, XRD, FTIR, Antibacterial activity

Corresponding Author Name: D. Hemalatha

E Mail: hemalathaharshan@gmail.com

MS49 ISBN NO:9-789388-413282

Synthesis and characterization with antibacterial activity of Cu-doped ZnO Nanoparticles by Co-Precipitation Method

A.Kiruthika, A.Jegadeeswari

PG Department of Physics, Vellalar college for women, Erode

Abstract

ZnO nanoparticles plays a dominant role in medicinal and industrial applications whereas it contains high antibacterial activities. In this synthesis, Cu-doped ZnO nanoparticles are prepared through chemical-precipitation method by using nitrates of metallic precursors. The synthesized samples were characterized by Fourier Transform Infrared Spectroscopy(FTIR), X-Ray Diffraction(XRD), Scanning Electron Microscope(SEM) and Antibacterial activity. The presence of functional groups and chemical bonding are revealed by FTIR spectrum. In X-Ray Diffraction the sharp peaks reveals that the nanoparticles has a different microstructure whereas the hexagonal wurtzite structure will not be changed. The rod-like structure is obtained in SEM micrographs reveals that the substitution of Cu^{2+} ions into the ZnO lattice. In antibacterial activity the synthesized nanoparticles were tested for gram positive and gram negative micro-organisms by using well diffusion method.

Keyword: Crystalline structure, Morphology, Functional group, Antibacterial activity

Corresponding Author Name: A. Kiruthika

E Mail:kiruthikavk@yahoo.com

MS50 ISBN NO:9-789388-413282

Nano crystalline structure of Magnesium dioxide (MgO_2) using Sol–gel method

E.S.Hema, A. Jegadeeswari

PG Department of Physics, Vellalar college for women, Erode

Abstract

Optical property of Magnesium dioxide (MgO_2) by using sol-gel method. Magnesium dioxide (MgO_2) is odourless, fine dioxide which releases oxygen when reacts with water. Magnesium acetate and oxalic acid have been dissolved in ethanol and formed a Magnesium malonate before calcinated at 600˚c for 2 hr to produce Magnesium dioxide (MgO_2) nanoparticles. The crystal structure, morphology, constituent element and optical property of the products using this method were investigated by X-ray diffraction (XRD), Scanning Electron Microscopy (SEM), Fourier Transform Infrared (FTIR) and Ultraviolet- visible spectroscopy (UV- vis). In our study, we can conclude that the morphology, crystalline size, band gap and molecular structure of particles.

Keyword: Crystalline structure, Morphology, Molecular structure, band gap

Corresponding Author Name: E.S.HEMA

E Mail: hemaes07@gmail.com

MS51 ISBN NO:9-789388-413282

Sol-gel synthesis and characterization of Cu doped TiO_2 nanoparticles with enhanced optical and Structural properties

A. Pramela, R. Rajeswari, D. Venugopal

Department of Physics, Gobi Arts & Science College, Gobichettipalayam

Abstract

The pure TiO_2 and Cu doped TiO_2 Nanoparticles at different mole ratios (1%, 2% and 5%) were prepared by using sol-gel method. The prepared nanoparticles were calcinated at 450°C for 2 hours and the nanoparticles were characterized by X-Ray Diffraction (XRD), Field Emission Scanning electron microscopy (FESEM), Energy Dispersive X-Ray Spectroscopy (EDX), UV-Visible spectroscopy (UV-Vis). XRD analysis confirms the formation of anatase titanium dioxide Nanoparticles and the crystalline sizes were increases with increasing the Cu content. FESEM images revealed that the spherical shape with slight agglomeration. EDX analysis confirms the presence of Cu, Ti, O elements. UV-VIS analysis revealed band gap energy of pure and Cu doped TiO_2 Nanoparticles were 2.63, 1.99, 1.88 and 1.45 eV, which improves the photoactive process in the material.

Keyword: TiO_2, Cu doped TiO_2, Nanoparticles, Sol-gel method.

Corresponding Author Name: A. Pramela

E Mail: pramelphysics@gmail.com

MS52 ISBN NO:9-789388-413282

Role Of Metal-Ions in Wild-Type like and Metal-Binding region mutants of Cu-Zn Superoxide Dismutase 1

S.P.Keerthana[1], P.Kolandaivel[2]

[1]Department of Physics, Vellalar College for Women, Erode – 638 012.

[2]Periyar University, Salem – 636 011

Abstract

About half of all known proteins at present are found to contain metal as one of the cofactors. The interaction studies of metal ions with amino acid help to understand the biological process. The gene corresponding to Cu-Zn SOD1 protein leads to familial form of amyotrophic lateral sclerosis [ALS] due to dominant mutations in the above protein. The mutations in the metal binding region play an important role in ALS pathology, by affecting the protein stability and catalytic activity. The metal-binding region in native state of SOD1 protein and wild-type like mutants and metal-binding region mutants of the same protein are selected to understand the role of divalent metal cations in maintaining the stability and activity of the protein through its interaction with their respective coordinating residues. In the present work, our aim is to examine the strength of cation-π interaction of the above systems by performing quantum chemical calculations using density functional theory. The interaction energies, metal-ion affinity, polarization and dipole moment for the metal-ion binding region in native and mutated states of SOD1 protein have been calculated. The topological properties of the intermolecular hydrogen bond formed between the first and second co-ordination sphere residues leading to interaction of second co-ordination residues with the divalent metal cations in native and mutated states of SOD1 protein have been studied. The NMR chemical shift and spin-spin coupling constants of the intermolecular hydrogen bond were also calculated for native and mutated SOD1 protein.

Keyword: Cu-Zn superoxide dismutase, cation-π interaction, wild-type like mutants, metal-binding region mutants, NMR, spin-spin coupling constants, split valence basis set

Corresponding Author Name: P.Kolandaivel

E-mail: ponkvel@gmail.com

MS53 ISBN NO:9-789388-413282

Effect of kinetic energy over structural properties of pectin and quinnic acid– A DFT study

Mohanadevi[1,4], K. Sadasivam[1,2], R. Praveena[1,2] , Rajeswari[4]

[1]Quantum Computing and Phytochemistry Research Laboratory, Bannari Amman Institute of Technology, Sathyamangalam
[2]Department of Physics, Bannari Amman Institute of Technology,Sathyamangalam
[3]Department of Chemistry, Bannari Amman Institute of Technology, Sathyamangalam
[4] Department of Physics, Gobi Arts and Science College, Karattadipalayam

Abstract

Fruits and vegetables are universally promoted as healthy. The Dietary Guidelines for Americans 2010 recommend you make one- half of your plate fruits and vegetables. Myplate.gov also supports that one-half the plate should be fruits and vegetables. Fruits and vegetables include a diverse group of plant foods that vary greatly in content of energy and nutrients. Additionally, fruits and vegetables supply dietary fiber, and fiber intake is linked to lower incidence of cardiovascular disease and obesity. Fruits and vegetables also supply vitamins and minerals to the diet and are sources of phytochemicals that function as antioxidants, phytoestrogens, and antiinflammatory agents and through other protective mechanisms. In the present investigation pectin and quinnic acid two well known vegetable acids are been investigated for structural properties of kinetic energy distribution. Density functional theory – a useful concept derived from quantum mechanics mainly focuses over the electronic density around the molecules is used in the present investigation. The geometry of the two vegetable acids are been optimized with the help of Beckes three parameters along with the functions of Lee-Yang and Parr using the triple zeta valence basis set 6-311G(d,p). Thermochemical calculations (frequency) is carried out under room temperature with 1 atmospheric pressure. In order to understand the occupied orbital levels frontier molecular orbital analysis(FMO) is done and corresponding energy gap E_{gap} between the energy levels is found. Electron donating capability and accepting capability of two flavonoids are been investigated with the help of molecular electrostatic potential (MEP). Based on the kinetic energy distribution it is evident that the observed results are in line with the observations made for MEP, FMO and molecular descriptor analysis where hydroxyl and carboxyl units posses much electronic movement and are highly unstable making them to easily donate electron.

Keyword: MEP, FMO, Thermochemical calculations

Corresponding Author Name: R. Praveena

E Mail: praveethang@gmail.com

MS54 ISBN NO:9-789388-413282

Preparation Of Polyaniline Zirconium Dioxide (Pani-Zro_2) Nanocomposite Material By In-Situ Method

S. Preethi ponmozhi, N. Dhachanamoorthi

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

"In-situ" deposition technique has been employed for the synthesis of conducting pure aniline(PANI) and polyaniline zirconiumdioxide (PANI/ZrO_2) composites in various concentration of(25% and 50%) in the presence of sulphuric acid(H_2S0_4)as dopant by adding fine grade powder of ZrO_2 in polymerization reaction mixture of aniline. Since PANI is the most stable conducting polymer , it is used in the industry along with thermoplastic. The composites obtained were characteristics by FTIR spectroscopy and particle size analyser. The presence of functional groups (C-C,C-H,N-H) has been studied by Fourier transformer infrared spectroscopy.The particle size analyser is used to find the mean size of the particle.

Keyword: In-situ, FTIR, Partical size analyser

Corresponding Author Name: S.Preethi ponmozhi

E Mail: preethiponmozhi94@gmail.com

MS55 ISBN NO:9-789388-413282

Investigating the interaction of metal cations with dna base-pairs – A Quantum chemical approach

S.P. Keerthana, R.Kathiraesan, V.Gayathri

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

The interaction between nucleic acids and metal cations is the most promising topic at scientific and technological implications. TheMetal cations are found to interact at the various sites of nucleic acids. The interaction of metal-cations with nucleic acids results in significant changes in the stability and the electronic properties of nucleic acids. Herethe interaction of DNA base pairs Adenine-Thymine and Guanine-Cytosine (A-T &G-C) with the metal cations (Na^{2+}, Cu^{2+}, $Mg2^{+}$, Zn^{2+}) were investigated using quantum chemical method. The interaction energy for the base pair and metal cation complexes were obtained. The electron density and molecular bonding pattern of individual electrons and electron pairs were investigated using Natural Bond Orbital (NBO) method. The charge transformation between DNA base pairs and metal cations were studied using HOMO-LOMO calculations.The disturbance of electron density in base pairs after interacting with the metal-cations is obtained from polarization analysis.

Keyword: DNA, base pairs, quantum chemistry, DFT, NBO

Corresponding Author Name: S.P. Keerthana

E Mail: keerthanasp33@yahoo.com

MS56 ISBN NO:9-789388-413282

A Quantum Chemical Study On The Interaction Of Aliphatic Amino Acids With Metal Cation

S.P.Keerthana, R.Kathiraesan, M.Mythili

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Amino acids are the basic unit of protein. All proteins are enzymes but all enzymes are not protein. Binding of inorganic element especially metal-ions is one of the major functions of protein. In this work the quantum chemical method have been applied to study the interaction of aliphatic amino acids Alanine, Proline, Leusine, Isoleusine and Valine and metal ions ($Ni^{2+,}$ Mn^{2+}, Fe^{2+}). The minimum energy of amino acids before and after interaction with metal ions was predicted. The interaction energy has been calculated for the aliphatic amino acids with different metal-ions. HOMO-LUMO calculation has been performed to explain the charge transfer interactions within the amino acid metal-ion complexes. We carried out NBO analysis, to study the hyper-conjugative interaction and electron density transfer. Polarizability of the amino-acid metal-ion complexes was calculated to study the electronic properties.

(a) (b)

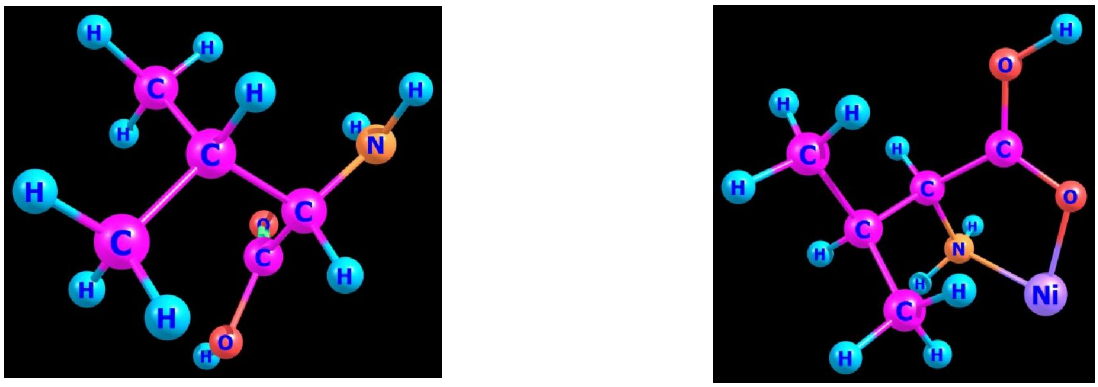


Fig (a) represents the optimized geometry of Vanline before interaction. Fig (b) represents the optimized geometry of Valine after interacting with Nickel cation (Ni^{2+}).

Keyword: amino acid, aliphatic, quantum chemistry, DFT, NBO

Corresponding Author Name: S.P. Keerthana

E Mail: keerthanasp33@yahoo.com

MS57 ISBN NO:9-789388-413282

Synthesis and Characterisation of Zno, CuO and their Composites by Precipitation Method

P. Sri Devi, N. Gowri Manohari

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

ZnO, CuO nanoparticles and their composites were prepared by precipitation method. Nano metaloxides have wide range of application in many fields like electronics, fuel cells, batteries, agriculture, medicines etc. The nano powders thus prepared were characterized by UV-Visible spectroscopy, FTIR, XRD, PL, SEM and EDX techniques. UV-visible spectroscopy and PL were carried out for the optical characterization of nano particles. XRD study reveals that the synthesized ZnO, CuO and their composites were crystalline in nature with the average crystalline size range between 32-34 nm. The surface morphology of ZnO exhibits hexagonal shape, CuO exhibits sphere shape with surface porous flower shape and ZnO – CuO composites exhibits flake shape. FTIR confirms the presence of functional groups present in the synthesized samples.

Keyword: SEM, UV-visible, FTIR, XRD, PL, EDX

Corresponding Author Name: P. Sri Devi

E Mail: karthisridevi@gmail.com

MS58 ISBN NO:9-789388-413282

Green Synthesis Of Magnesium Oxide Nanoparticle using Orange Peel Extract

P.Deepa, D.Anbumalar

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Synthesis of magnesium oxide (Mgo) was employed with orange peel extract due to its very good bio reductant property by green synthesis method. The Mgo particle is helpful to remove the effluent from textile and dying industries. Since the orange fruit contain citric acid, the Mgo act as a reducing agent also it act as antioxidant property. The prepared magnesium oxide was characterized by fourier transform infrared spectroscopy (FTIR), X-Ray diffraction (XRD), scanning electron microscopy(SEM), and antibacterial activity. The functional group has been analyzed using FTIR. The morphological study was confirmed using SEM. The pure monoclinic crystalline structure was resulted from XRD. Also the antibacterial activity was performed against set gram positive and gram negative bacteria.

Keyword: Magnesium oxide, orange peel, FTIR, SEM, XRD, Antibacterial

Corresponding Author Name: D.Anbumalar

E Mail: p.murugesan1983@gmail.com

MS59 ISBN NO:9-789388-413282

Synthesis, Characterization and Antimicrobial studies of Nickel Oxide Nanoparticles by Co-Precipitation Method

R.Gowthami, S.Indhu

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Synthesis of metal oxide nanoparticles are focussed on great attention because of their prominence in different field of application in science and technology. In this work, Nickel oxide nanoparticles (NiO) were synthesized by Co-Precipitation Method using Nickel (II) Chloride Hexahydrate (NiCl2.6H2O) and sodium hydroxide (NaOH) as starting material. The synthesized nanomaterials were characterized by Ultraviolet-visible spectroscopy, Antimicrobial activity, Fourier transform infrared spectroscopy, X-ray diffraction, Scanning electron microscope. Thus, the presence of Nickel oxide nanoparticles has been confirmed from the studies and utilized for various potential applications in the field of pharmaceutical industries, sensors, piezoelectric crystals, fuel cell electrodes and catalysis.

Keyword: Nickel Oxide Nanoparticles, UV, FTIR, SEM, Antimicrobial activity

Corresponding Author Name: R.Gowthami

E Mail: gowthami.r@vcw.ac.in

MS60 ISBN NO:9-789388-413282

Preparation Of Polyaniline Nibonium Pentoxide(Pani- Nb_2o_5) Nanocomposite Material by In-Situ Method

V.Lavanya, N.Dhachanamoorthi

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

The Pure Polyaniline (PURE-PANI) and the PolyanilineNiboniumPentoxide(PANI-Nb_2O_5) at various weight concentration of 25% and 50% has been employed by the "In-situ" method in the presence of sulphuric acid as the dopant.PURE-PANI is highly used in the industry due to their stable conducting property.Thenanocomposite material was resulted and characterised by Fourier Transformer Infrared Spectroscopy(FTIR) and particle size analyser.The presence of functional group (C-H,C-C,N-H,C-N)was examined by the FTIR. The particle size analyser is used to find the mean size of the nanocomposite.

Keyword: FTIR , Particle size analyser, In-situ method

Corresponding Author Name: V. Lavanya

E Mail: lavanyalegant6@gmail.com

MS61 ISBN NO:9-789388-413282

Effect Of Surfactant On Cadmium Sulfidenanoparticles Prepaed By Precipitation Method

J.Vijayalakshmi, A.P.Sudha

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

Semiconductor nanoparticle and their synthesis have attracted more in the research field more than hundreds of years because of their optical properties.Cadmium sulfide (CdS) nanoparticle is widely used semiconductor because of its wide band gap energy.In the present study, the effect of surfactant on the structural, surface morphological, optical and photocatalytic activity were analyzed. Cds nanoparticles and anionic surfactant SDS (sodium dodecyl sulphate) assisted CdS nanoparticles were synthesized by chemical precipitation method using cadmium chloride (cdcl2), sodiumsulfide (Na2s), SDSand water as a solvent by fixed temperature 80 degree Celsius.The synthesized nanoparticles were characterized by X-Ray Diffraction, Scanning Electron Microscopy, and Fourier Transform Infrared Spectroscopy, UV-Visible Spectroscopy.

Keyword: Chemical precipitation, SDS, Nanoparticles, XRD, Optical property, SEM

Corresponding Author Name: A.P.Sudha

E Mail: sudhadheena2005@gmail.com

MS62 ISBN NO:9-789388-413282

Activated carbon prepared from tea waste via chemical activation method

G. Kalaivani, A.P. Sudha

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

In the recent field of research, the researchers have great interest in preparing activated carbon from different organic precursor materials. In the present work, activated carbon sample was prepared from waste cooked tea. Among many organic materials such as turmeric waste, coconut shell, corn cob, rice husk, waste cooked tea is cheap and easily available. TheActivation process was done using dilute sulphuric acid as activating agent.Activated carbon most widely used,because they have large absorptive capacity. The structural and surface morphological of the synthesised sample were analysed using different spectroscopic techniques. XRD, FTIR and SEM were used to characterize the activated carbon prepared from the waste cooked tea. Activating agent with their spectroscopic results suggested that the prepared activated carbon representing an economically promising material with wide spectrum of applications. The important factors affecting the Activated carbon production, the possible applications of Activated Carbon and their future prospects were also discussed.**Keywords**: Waste tea, Sulphuric acid, Activated Carbon, SEM.

Keyword: Waste tea, Sulphuric acid, Activated Carbon, SEM.

Corresponding Author Name: A.P.Sudha

E Mail: sudhadheena2005@gmail.com

MS63 ISBN NO:9-789388-413282

Biosynthesis, Characterization And Antibacterial Studies Of Copper Nanoparticles Using Eclipta Prostrata Leaves Extracts

R.Gowthami, D.Vinitha

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

The thrust to develop eco-friendly production of nanoparticles arises from the extremely recent nanotechnology research, which gives considerable importance to expand their application. The copper nanoparticles (CuNPs) were synthesized using Eclipta Prostrata Leaves extracts as a reducing agent and copper acetate as a precursor by adopting green options method. The synthesized Cu NPs were characterized by X-ray diffraction, UV-visible spectroscopy, Scanning electron microscope, Fourier transform infrared spectroscopy. Further, the antibacterial activity of synthesized CuNPs were tested against both gram positive and gram negative cultures. Thus, from the above studies, the presence of CuNPs were confirmed and the synthesized Cu NPs found to exhibit significant antibacterial action which can be employed for various therapeutic applications.

Keyword: Cu NPs, Eclipta Prostrata, Fourier transform infrared spectroscopy, X-ray diffraction.

Corresponding Author Name: R.Gowthami

E Mail: gowthami.r@vcw.ac.in

MS64 ISBN NO:9-789388-413282

Synthesis and characterisation of surfactant (SDS) assisted cadmium oxide nanoparticles via co- precipitation method

K. Sujatha, S. Sharmila

PG Department of Physics, Vellalar College for Women, Thindal, Erode

Abstract

In recent years, nanomaterials have received a great attention due to its physical and chemical properties. Now a days, many attempts to control the shape and size of nanoparticles. Surfactant assisted Cadmium Oxide nanoparticles were prepared by co- precipitation method using cadmium acetate, SDS (sodium dodecyl sulphate) as surfactant, ammonia solution and deionised water (solvent) and the prepared samples were used to maintain the pH value as 8. The Crystallite size of the surfactant (SDS) assisted CdO nanoparticles were calculated using X-ray diffraction (XRD), and the presence of functional groups were analysed by Fourier transform infrared spectroscopy (FTIR). The morphology of surfactant assisted CdO nanoparticles were shown in scanning electron microscopy (SEM) image and the optical band gap was determined by Ultra-violet visible spectroscopy (UV). Thus, the surfactant assisted CdO nanoparticles have various applications in pharmaceutical and food products as well as industrial and commercial cleaning.

Keyword: CdO , surfactant SDS(Sodium dodecyl sulphate), XRD,FTIR,SEM, UV.

Corresponding Author Name: K. Sujatha

E Mail: drsujiols@gmail.com

MS65 ISBN NO:9-789388-413282

Synthesis And Characterization Of Mg Doped TiO_2 nanoparticles by Sol -Gel Method

G.Anandhakumari, D.Venugopal, R. Rajeswari

Department of Physics , Gobi Arts & Science College (Autonomous), Gobi

Abstract

Magnesium doped titanium dioxide (Mg- TiO_2) Nanoparticles has been synthesized by sol-gel method and characterized by Fourier Transform Infrared Spectroscopy (FTIR), UV-Visible spectroscopy and Particle size analyzer. FT-IR spectral study along with Mg doped TiO_2 nanoparticles different vibrational modes is calculated. UV-Visible spectroscopy reveals the absorption edge of Mg doped TiO_2 nanoparticles blue shifed longer wavelength and optical band gap was calculated by using Tauc plot for pure TiO_2 (E_g = 3.2 eV) and Mg-doped TiO_2 nanoparticles is lower.Particle size analyzer is used to measure the particle size median values from pure TiO_2, 1% and 0.5% Mg doped TiO_2 nanoparticles are 3.06μm, 0.047μm, and 32.2μm.

Keyword: Magnesium, Titania, sol-gel method, FTIR, UV-Visible and Particle size analyzer.

Corresponding Author Name: G.Anandhakumari

E Mail:gascphy01@gmail.com

MS66 ISBN NO:9-789388-413282

Structural and Optical Properties of 4-(6-Methyl-4-phenyl-2-quinazolinyl)-1-pentylpiperazin-1-ium dyes

R. Lavanya Dhevi[1], K.A. Vijayalakshmi[2], S. Ranjitha[3]

[1]Research Scholar, Research and Development Centre, Bharathiar University, Coimbatore
[2]Department of Physics, Sri Vasavi College, Erode
[3]Velalar College of Engineering and Technology, Erode

Abstract

The experimental and theoretical study on the molecular structure and the vibrational analysis of carbocyanine dye is presented. The FT-IR and FT-Raman spectra were recorded in gas state. Optimized geometry, vibrational frequencies and thermodynamic properties of the title compound were calculated using DFT methods and in good agreement with experimental values. The detailed interpretation of FT-IR and FT-Raman spectra of the compound were reported. The HOM0-LUMO analysis was used to determine the charge transfer within the molecule. In addition to these Mullikan's atomic charges were also reported. Mullikan's atomic charges show charge stability relations. The Electronic transitions measured experimentally by UV-Visible spectrum. According to DTA analysis the substance shows an exothermic peak at 384°C. The Natural Bond Orbital analysis has been carried out in order to study the intra-molecular interaction among the bonds.

Keyword: Mullikan's atomic charge, HOMO-LUMO, Vibrational analysis, Carbocyanine dye, NBO analysis

Corresponding Author Name: Lavanya Dhevi.R

E Mail: lavanyadhevis@gmail.com

MS67 ISBN NO:9-789388-413282

DFT and Experimental studies of natual dyes extracted from medicinal plants O*cimum tenuiflorum* and P*iper nigrum* for dye sensitized solar cell applications

S. Ranjitha[1], k. M. Prabu[2], V. Aroulmoji[3] and N.Sumathi [4]

[1] **Department of Physics, Velalar College of Engineering and Technology, Erode**
[2]**PG and Research Department of Physics, Sri Vidhya Mandir Arts & Science College, Katteri – Uthangarai**
[3]**Mahendra Educational Institutions, Mallasamudram**
[4, 2]**PG and Research Department of Physics,Nandha Arts and Sceince, Erode**

Abstract

The steady increase in 5% global energy requirement per year has necessitated the exploration of alternative sources of renewable energy, which has become a top challenge. The photovoltaic technology has become the most promising technology in terms of harvesting solar energy and converting the same into electrical energy. Due to the limitations of toxicity and high cost possessed by the single crystalline silicon solar cells, the use of dye sensitized solar cells (DSSCs) has gained immense attention towards solar energy harvesting. In particular, the use of natural dyes has become a viable alternative to expensive and precious Ruthenium dyes because of their low-cost, easy attainability, abundance in supply of raw materials and eco-friendly. In this paper, we investigate the performance of DSSCs based on natural dyes extracted from selected Indian medicinal plants. Herein, cubebin and betalain pigments are extracted from fresh *Ocimum tenuifloru* and *Piper nigrum*. FT-IR spectroscopy, FT-Raman spectroscopy, photoluminescence spectroscopy and UV–Vis absorption spectroscopy are used to characterize the extracted dyes. The dyes are further adopted for Gaussian 09 analysis. The dyes are employed as photosensitizer for titanium dioxide photo-anode based DSSC. The photovoltaic performance of the DSSCs are evaluated under simulated solar light intensity of 100 mW/cm. The solar to electrical energy conversion efficiency of cubebin and betalain pigments and their combination based solar cells are estimated as 0.39 and 0.38%, respectively, which could be attributed to the absorption of natural photosenstizers in wider range of solar spectrum.

Keyword: Dye-sensitized solar cell, Betalain, Cubecin, Photovoltaic performance, Ocimum tenuiflorum, Piper nigrum

Corresponding Author Name:

E Mail: ranjilotus31@gmail.com

MS68 ISBN NO:9-789388-413282

Preparation And Characterization Of Zno Nanopowders By Precipitation Method Using Aqueous Extract From Natural Leaves And Flowers

R.Sowmi, C.Deepa

Department of Physics, Vellalar College For Women, Erode

Abstract

ZnO nanoparticles have been synthesized by Co-precipitation method from Zinc nitrate using Ethanolic leaf extracts of *Bauhinia variegata*and*Nyctanthes arbor-tristis*which acts as a capping agent. The capping agent acts as a solvent and roles as stabilizer for the synthesis of nano particle. The powder was characterized by X- ray Diffraction (XRD), Scanning Electron Microscopy (SEM), Energy Dispersive X-ray Spectroscopy (EDAX), Photoluminescence Spectroscopy (PL), Fourier Transform Infrared Spectroscopy (FTIR) and UV-Visible (UV-Vis) Spectroscopy. XRD patterns showed that ZnO nanoparticles have Flake-shaped cell structure. SEM pictures reveal the morphology and particle size of prepared ZnO nanoparticles. The compositional analysis of EDAX confirms that prepared ZnO samples are around the nominal composition due to the presence of ZnO. The UV-vis absorption spectrum shows an absorption band at 283 nm due to ZnO nanoparticles which lie much below the bandgap wavelength of 375 nm indicates the monodispersed nature of the nanoparticle distribution. The photoluminescence spectrum exhibits emission peak at 510 nmwhich shows a stronger and green broader visible emission band attributed to the presence of singly ionized oxygen vacancies. FTIR spectrum of the prepared ZnO sample confirms the presence of functional groups and the stretching vibrations of the ZnO nanoparticles. The synthesis method has potential for application in manufacturing units due to ease processing and more economical reagents.

Keyword: Zincnitrate, NaOH, *Bauhinia variegata*and*Nyctanthes arbor-tristis*, ethanol, zinc oxide

Corresponding Author Name: C.Deepa

E Mail: chinnasamydeepa@gmail.com

MS69 ISBN NO:9-789388-413282

Effect of surfactant aided barium hydroxide nanoparticles by chemical co-precipitation method

M. Kokila, K. Sujatha

PG Department of Physics, Vellalar College for Women, Erode

Abstract

In recent researches, the semiconducting materials have created a great impact due to their physical and chemical properties depending upon their shape and size and also their applications in various fields. Here, the fine powder of surfactant (SDS) aided Barium hydroxide nanoparticles were prepared by chemical co-precipitation method using Barium nitrate, Sodium DeodecylSulphate (SDS) as surfactant, sodium hydroxide pellets and deionised water (solvent). The crystallite size of surfactant aided Barium hydroxide nanoparticles are analyzed using X-Ray Diffraction (XRD) spectrum. The functional groups are identifiedin Fourier Transform Infrared Spectroscopy (FTIR). The surface morphology of the surfactant aided Barium hydroxide nanoparticles is found from scanning electron microscopy (SEM). The optical properties are determined by using UV-visible spectroscopy. Surfactant aidedBarium hydroxide nanoparticlesare extensively used in refining oils and sugar.

Keyword: Barium hydroxide , SDS(Sodium dodecyl sulphate), XRD, FTIR, SEM, UV

Corresponding Author Name: K. Sujatha

E Mail: drsujiols@gmail.com

MS70 ISBN NO:9-789388-413282

Synthesis and Characterization of Eu:$CaTio_3$ NanoPowder Using Sol-gel Method

S. Anjelin Ursula Portia[a], and Dr.K. Ramamoorthy[b,*]

[a]Research and Development Centre, Bharathiar University, Coimbatore – 641 046, India

[b]Department of Physics, Govt. Arts & science College, Komarapalayam - 638183, India.

Abstract

The objective is to prepare perovskite type Eu:$CaTio_3$ nanopowder using Sol-gel method. The nanopowder was obtained by low temperature calcinations. The sample was characterized by various advanced techniques. The structural analysis of nanopowder was studied using X-ray diffraction (XRD), while optical absorbance behavior was studied using UV–vis spectrophotometer (UV-Vis),while the composition was studied using Energy dispersive electron spectroscopy (EDS), and the surface morphology was studied using Scanning electron microscopy (SEM). This method is novel, convenient, easy, simple, low cost and effective in comparison to the known methods of the synthesis of nanopowder.

Keyword: Eu:$CaTio_3$, nanopowder, Sol-gel method

Corresponding Author Name: S. Anjelin Ursula Portia

E Mail: anjelin1980@gmail.com

MS71 ISBN NO:9-789388-413282

Exploring the structure and Charge density studies of Organic Superconducting Tetrathiafulvalene (TTF) and 7,7,8,8-Tetracyanoquinodimethane (TCNQ) molecule : A DFT and AIM analysis

P. Gnanamozhi[1], V. Pandiyan[1] and P. Srinivasan[2]

[1] PG & Research Department of Physics, Nehru memorial College, Puthanampatti
[2] PG & Research Department of Physics, Chikkaiah Naicker College, Erode

Abstract

The bond topological and electrostatic properties of the energetic TTF and TCNQ molecule were carefully evaluated by *ab initio* (HF) and density functional theory (B3LYP) calculations. The optimized (HF/6-311G** and B3LYP/6-311G**) geometric parameters are in excellent agreement with the similar type experimental data. For both levels of calculation, the C–S and C≡N bonds have low charge accumulation at the bond critical point, which indicates that the charges of the bonds are highly depleted compared with all other bonds in the molecule. The bond topological analysis based on the AIM theory shows the difference of charge distribution in all bonds. The molecular conductive properties are solely related to the ESP of the entire system as expected to a little ESP across the system compared with electrode as it has large ESP. For, a good conducting molecule the ESP's are expected to see little along the molecule. The ionization potential gives the very good information of conductivity. These observations give an insight on this kind of super conducting material, which are useful to design navel electronic devices.

Keyword: TTF, TCNQ, *ab initio* (HF) and Density functional theory, AIM

Corresponding Author Name: P. Srinivasan

E Mail: sriniscience@gmail.com

MS72 ISBN NO:9-789388-413282

Thermo chemical, Charge density and Energetic properties of high energetic TNP derivatives via DFT and AIM analysis

P. Srinivasan[1], A. David Stephen[2]

[1]PG & Research Department of Physics, Chikkaiah Naicker College, Erode

[2]Department of Physics, Sri Shakthi Institute of Engineering and Technology, Coimbatore

Abstract

Thermo chemical and charge density features, such as atomic charges, bond critical points, and electrostatic potential and explosive properties of TNP [1] derivatives described and compared with reported molecules. The bond topological and explosive properties of the highly energetic tri and tetranitrohexahydro pyrimidine derivatives were carefully evaluated by HF and density functional theory (B3LYP) calculations using Bader's AIM analysis [2]. In this derivatives, the ring adopts a chair conformation, in which the C(1)–N(1)–C(2)–C(3) and C(4)–N(2)–C(1)–H(1) bonds are twisted to an angle -49.2 and 60.7°, confirms, both bonds are gauche oriented. Interestingly, the electron density studies, predicts the C–NO_2 bonds have a low charge accumulation at the bond critical point, which indicates that the charges of the bonds are highly depleted compared with all other bonds in the molecule. The charge accumulation in Car–Nar and N=O bonds is found to be high compared with the NO_2 group attached to C–N bonds; their corresponding high negative $\nabla^2\rho_{bcp}(r)$ confirms its high solidarity. Furthermore, the thermo chemical and sensitivity calculation based on imbalance parameters predicts that the nitro groups attached to C–N and N–N bonds are more sensitive than the other bonds in the molecule and it confirms the NO_2 group attached to C–N and N–N bonds are very weak bonds in the molecule [4]. These bonds may rupture first and initiate the detonation process when the material is exposed to external stimuli. Importantly, the present study also confirms the fair relation between the charge depletion and the bond sensitivity of the molecule.

Keyword: TNP, Density functional theory, AIM, ESP

Corresponding Author Name: P. Srinivasan

E Mail: sriniscience@gmail.com

MS73 ISBN NO:9-789388-413282

Quantum chemical and charge density studies on Gold substituted 8a,9,10,10a-tetrahydro-2,6-Bis-(2-phenylethynyl) anthracene based Nano-molecular Wire

B. Amudhavalli[1], P. Srinivasan[2] , M. Prasath[1]

[1]Department of Physics, PG Extension Centre, Periyar University, Dharmapuri-636705

[2]PG & Research Department of Physics, Chikkaiah Naicker College, Erode-638004

Abstract

The bond topological and electrostatic properties of the energetic TTF and TCNQ molecule were carefully evaluated by *ab initio* (HF) and density functional theory (B3LYP) calculations. The optimized (HF/6-311G** and B3LYP/6-311G**) geometric parameters are in excellent agreement with the similar type experimental data. For both levels of calculation, the C–S and C≡N bonds have low charge accumulation at the bond critical point, which indicates that the charges of the bonds are highly depleted compared with all other bonds in the molecule. The bond topological analysis based on the AIM theory shows the difference of charge distribution in all bonds. The molecular conductive properties are solely related to the ESP of the entire system as expected to a little ESP across the system compared with electrode as it has large ESP. For, a good conducting molecule the ESP's are expected to see little along the molecule. The ionization potential gives the very good information of conductivity. These observations give an insight on this kind of super conducting material, which are useful to design navel electronic devices.

Keyword: DFT, Electronic structure, Molecular orbital analysis, DOS, DFT, ESP

Corresponding Author Name: P. Srinivasan

E Mail: sriniscience@gmail.com

MS74 ISBN NO:9-789388-413282

Synthesis and Characterization of ZnO Nanoparticles by Precipitation method

S.Devadharsini, D. Hemalatha *

PG Department of Physics, Vellalar College For Women, Erode-638 012

Abstract

ZnO nanoparticles are also known as multi functional nanomaterials are largely synthesized due to its unique physical and chemical properties. In this protocol, Zno nanoparticles are synthesized by the method of precipitation. Since, ZnO nanoparticles have large band gap energy, it is used in semiconductor fabrication. The synthesized samples are characterized using SEM, FTIR, XRD and UV visible spectroscopy studies. The presence of ZnO nanoparticles were confirmed by the FTIR. SEM images show that the surface morphology of Zno nanoparticles are spherical with agglomeration in shape. The crystalline size was analyzed by X-ray diffraction pattern with average size of 22.14 nm and 25.82 nm. The UV analysis shows the calculated band gap energy of Zno nanoparticles are 2.93eV and 4.53 eV.

Keyword: FTIR, SEM, UV, XRD, precipitation method, ZnO Nanoparticles

Corresponding Author Name: D. Hemalatha

E Mail: hemalathaharshan@gmail.com

MS75 ISBN NO:9-789388-413282

TiO_2 photocatalysis: Design and applications

S.Malathi [1], N.Krishnaveni [2]

[1]Department of Chemistry, Erode Sengunthar Engineering College,Perundurai-638057

[2]Department of Chemistry, vellalar college of engineering & Technology-638012

Abstract

TiO_2 photocatalysis is widely used in a variety of applications and products in the environmental and energy fields, including self-cleaning surfaces, air and water purification systems, sterilization, hydrogen evolution, and photo electrochemical conversion. The development of new materials, however, is strongly required to provide enhanced performances with respect to the photocatalytic properties and to find new uses for TiO_2 photocatalysis. In this review, recent developments in the area of TiO_2 photocatalysis research, in terms of new materials from a structural design perspective, have been summarized. The dimensionality associated with the structure of a TiO_2 material can affect its properties and functions, including its photocatalytic performance, and also more specifically its surface area, adsorption, reflectance, adhesion, and carrier transportation properties. We provide a brief introduction to the current situation in TiO_2 photocatalysis, and describe structurally controlled TiO_2 photocatalysts which can be classified into zero-, one-, two-, and three-dimensional structures. Furthermore, novel applications of TiO_2 surfaces for the fabrication of wettability patterns and for printing are discussed.

Keyword: TiO_2, photocatalysis, adsorption, reflectance, adhesion, carrier transportation

Corresponding Author Name: S. Malathi

E Mail: sabari.malathi@gmail.com

MS76 ISBN NO:9-789388-413282

Preparation of Mo-Cu doped photocatalysts,their photocatalytic and antimicrobial properties

P.Maheswari [1], N.Krishnaveni [2]

[1]Department of Chemistry, Erode Sengunthar Engineering College,Perundurai-638057

[2]Department of Chemistry, vellalar college of engineering & Technology-638012

Abstract

Mo-doped and pure TiO_2 nanoparticles were synthesized using a simple sol-gel method. The prepared catalyst was characterized by XRD, UV-Vis.DRS, TEM, XPS, etc. The effect of metal contents on the photocatalytic activity was investigated. The photocatalytic activity of the doped catalysts was ascertained by the photo-oxidation of acid Rhodamine-B in aqueous solution illuminated with low-pressure mercury lamp (~254 nm). The antimicrobial properties of the modified TiO_2 samples were evaluated with *E. coli* ,Bacillus subtillis and Pseudomonas aeruginosa. It was found that Mo-Cu doped TiO_2 showed better antimicrobial activity in low concentrations. It was found that the modified catalyst showed better photocatalytic degradation than pure TiO_2 in visible light.

Keyword: Photocatalysis, Photo-oxidation, Antimicrobial properties, Rhodamine-B

Corresponding Author Name: N.Krishnaveni

E Mail: krishnaveninachimuthu@gmail.com

MS77 ISBN NO:9-789388-413282

The Anodization of Aluminium Metal matrix for Corrosion Protection: An Overview

M. Mubarak Ali[1*], S.Sathiya[2]

[1,2]Department of Chemistry, Chikkaiah Naicker College, Erode-638004

Abstract

Aluminium metal matrix composites are gaining widespread attention for over last two decades in various applications such as automobile, aerospace, agriculture farm machinery and many other industrial applications due to its essential properties such as high strength to density ratio, low coefficient of thermal expansion, stiffness, low density and good wear resistance compared to any other metal.Metal matrix composites plays an important role as the binding the reinforcement phases in place and deforming to distribute the stresses among the constituent reinforcement materials under an applied force. The reinforcement of the metal matrix composite improves the stiffness, specific strength, wear, creep and fatigue properties compared to the conventional engineering materials. The reinforcement particles produced more porous structure of the anodized layer for MMC. The aim involved in designing metal matrix composite materials is to combine the desirable attributes of metals.The excellent mechanical properties of these materials and relatively low production cost make them a very attractive candidate for a variety of applications both from scientific and technological viewpoints. The present study deals with the addition of reinforcements such as graphite, fly ash, silicon carbide, red mud, organic material etc. to the Aluminium matrix in various proportions. Each reinforced material has an individual property which when added improves the properties of the base alloy.A comprehensive knowledge of the properties is provided in order to have an overall study of the composites and the best results can be employed for the further development of the Aluminium reinforced composite. The investigation shows that the Aluminium metal matrix composites can be replaced with other conventional metals for better performance and longer life. Hence this review is focused on the aluminium metal matrix composite for corrosion protection in the recent years.

Keyword: Anodization, corrosion protection, Metal-matrix composites, Reinforcement

Corresponding Author Name: M. Mubarak Ali

E Mail: sreenisakthi87@gmail.com

MS78 ISBN NO:9-789388-413282

Synthesis and Characterisation of Pure Zinc Oxide Nano Particles and Nickel doped Zinc Oxide Nano Particles

K.G.Aarthe

Department of Physics, Vellalar College for Women, Erode -638 012

Abstract

In this paper, Zinc oxide nanoparticles are synthesized by simple wet chemical precipitation method. Zinc nitrate and sodium hydroxide are used as the starting materials. Zinc oxide nanoparticles are formed at a very low temperature of the order of 80°C. Nickel doped zinc oxide nanoparticles are synthesized in two steps. In first step precipitate is obtained by reduction of mixture of zinc nitrate, ferric nitrate and starch by Sodium hydroxide solution while in second step the given precipitate is thermally decomposed at high temperature of the order of 400°C. The crystalline of the synthesized nanoparticles is then confirmed by X Ray diffraction Spectroscopy (XRD). The elemental composition of the Powder is detected by Energy Dispersive X-ray spectroscopy (EDAX). The morphology of the Powder is investigated by Scanning Electron Microscopy (SEM). The functional groups present in the nanoparticles where observed by Fourier Transform Infrared spectroscopy (FTIR). The band gap energy was calculated by using Ultraviolet studies (UV).Zinc oxide is a unique material with direct band gap and because of its exceptional optical and electrical properties it has been extensively used in many technological applications such as thin film transistors, gas sensor, biomedical and piezoelectric applications. The magnetic nature present in Nickel doped zinc oxide nanoparticles were mainly used for spintronic applications.

Keyword: Zinc oxide, XRD, EDAX, SEM, FTIR, UV

Corresponding Author Name: K.G.Aarthe

E Mail: kgaarthe@gmail.com

MS79 ISBN NO:9-789388-413282

Unusual Rheological behavior of Silica-Ionic liquid Nanocomposites as a function of Temperature

K. Saravanakumar, N.Dhachanamoorthi

Department of Physics,Bannari Amman Institute of Technology, Sathyamangalam. 638401

Abstract

Silica-ionic liquid nanocomposite (SINC) has been prepared by dispersing different amounts of silica nanoparticles in Emim TFSI ionic liquid. Dynamic rheological studies on the SINC samples as a function of temperature and concentration (0.5 -5wt %) of silica nanoparticles have been carried out at different temperatures and the elastic modulus of the samples is found to increase upon increasing the temperature. SINC samples with lower concentrations of silica nanoparticles (< 3 wt %) exhibit a weak gel behavior whereas samples with higher concentrations (> 3 wt %) exhibit a strong gel behavior. This transformation is attributed to the formation of more fractal colloidal networks upon increasing the concentration. SINC samples with lower concentrations of silica nanoparticles (< 3 wt %) transform from a weak gel behavior to strong gel behavior upon increasing the temperature. For, samples with higher concentrations of silica nanoparticles (> 3 wt %), gel strength is increased upon increasing the temperature. This behavior of these samples is attributed to the formation more cross-links in fractal colloidal networks upon increasing the temperature.

Keyword: Silica-ionic liquid nanocomposite, Dynamic rheological studies, fractal colloidal networks

Corresponding Author Name: K. Saravanakumar

E Mail:saravanakumark @bitsathy.ac.in

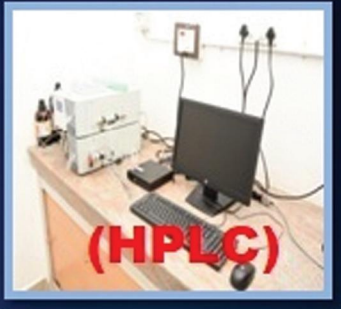
VELLALAR COLLEGE FOR WOMEN (Autonomous)

College with Potential for Excellence
(Re-accredited with 'A' Grade by NAAC & Affiliated to Bharathiar University, Coimbatore – 641 046
Thindal, Erode - 638 012

Central Research Laboratory (CRL)

CRL was established in our institution with centralized sophisticated instrumentation facilities for the benefit of colleges and industrial community in this region. The purpose of establishing this centre is to provide data analysis and report facility from sophisticated analytical equipments for their advanced research with nominal charges.

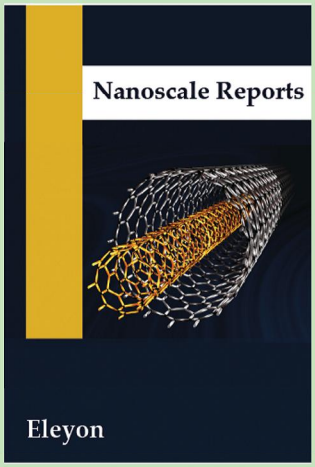
- Atomic Absorption Spectrophotometer (AAS)
- Biochemistry Analyser
- FTIR Spectrophotometer (FTIR)
- High Pressure Liquid Chromatography (HPLC)
- Multiparameter-Water Quality Analyser
- Particle Size Analyser
- UV-Vis Spectrophotometer (UV-Vis)



Contact :
Dr.N.Dhachanamoorthi
Assistant Professor & Head
Department of Physics
Staff Incharge (Central research laboratory)
Vellalar College for Women, Erode-12
Mobile No: +91-9171823357, +91-8778134822
E-mail : vcwcrl2015@gmail.com

ELEYON

Your Research Partner



Nanoscale Reports is an open access interdisciplinary journal, publishing comprehensive articles with high quality and significance in all areas of nanoscience and technology and nanomedicine. Our journal is google scholar and DOI indexed and we publish peer Reviewed Articles without processing Fee.

For more Details Visit :

(www.journals.eleyon.org/index.php/NR)

Royal Book Publishing
Website: www.royalbookpublishing.com
Email:contact@royalbookpublishing.com
9 789388 413282

2018, Ethnomedicinal Plants: A Biodiversity Treasure
Editors: V.R. Mohan, A. Doss, P.S. Tresina and V. Somalakshmi
Published by: ASTRAL INTERNATIONAL PVT. LTD., NEW DELHI
Pages 343–362

Chapter 13

Therapeutic Uses of Medicinal Plants Used by *Palliyar* Tribe in Sirumalai Hills, Tamil Nadu for the Treatment of Gastro-Intestinal Complaints

A. Maruthupandian[1]*, M. Viji[2], C. Chithravadivu[3] and V.R. Mohan[4]

[1]Department of Botany, School of Life Sciences, Periyar University, Salem – 636 011, Tamil Nadu
[2]Department of Botany, Thiagarajar College, Madurai – 625009, Tamil Nadu
[3]PG and Research Department of Botany, Vellalar College for Women, Thindal, Erode – 638 012, Tamil Nadu
[4]Ethnopharmacology Unit, PG and Research Department of Botany, V.O. Chidambaram College, Tuticorin – 628 008, Tamil Nadu

Introduction

More than a few millions of years, primary producers of plants are not only used foods by human as well as they are depended on various ailments. In developing countries, 60 per cent -70 per cent of peoples are residing at nearby agricultural lands and forest areas. Regularly those peoples collect various plant parts such as roots, leaves, flowers, fruits and nuts to exercise their daily necessities of food and other needs (Aryal *et al.*, 2009). In this connection, the plants are not only used foods they are also mostly utilized in various human ailments. Such a plant medicine or herbal medicine has fewer side effects when compared to other system

2018, Ethnomedicinal Plants: A Biodiversity Treasure
Editors: V.R. Mohan, A. Doss, P.S. Tresina and V. Sornalakshmi
Published by: ASTRAL INTERNATIONAL PVT. LTD., NEW DELHI
Pages 389–405

Chapter 16

Hybanthus enneaspermus: A Reliable Herb to Cure different Human Ailments

A. Maruthupandian[1]*, M. Viji[2], B. Perumal[1], S. Velmani[1] and C. Chithravadivu[3]

[1]Department of Botany, School of Life Sciences,
Periyar University, Periyar Palkalai Nagar, Salem- 636 011, Tamil Nadu
[2]Department of Botany, Thiagarajar College,
Madurai – 625009, Tamil Nadu
[3]PG and Research Department of Botany, Vellalar College for Women,
Thindal, Erode – 638 012, Tamil Nadu

ABSTRACT

Hybanthus enneaspermus Linn. belongs to the family violaceae is a perennial herb or small herb found in the warmer parts, from Uttar Pradesh southward to the Deccan Peninsula in India. The whole plant is used in Ayurveda, Siddha and other traditional systems of medicine in India for curing various human diseases and disorders. The different phytochemicals were separated, identified and characterized by many analytical techniques like TLC, HPLC, HPTLC, GC-MS, LC-MS and FTIR. The pharmacological properties of different parts of Hybanthus enneaspermus have been reported from more than two decades different parts of plants can be acts as herbal drug for antioxidant, antidiabetic, anti-arthritic, cardio and neuroprotective activities etc. In this chapter, therapeutic uses, phytochemical, bioactive potential and pharmacological properties of Hybanthus enneaspermus were compiled and emphasized. This information will be helpful to new drug discovery and formulations relating researches on various health care needs.

Introduction

The therapeutically uses and different pharmacological study of medicinal plants have significantly enhanced during last few decades (Al-qura'n, 2005;

HUMAN WELLNESS - A HOLISTIC APPROACH

WELLNESS
— everyday —

Editors

R. Bhuvana Indumathi | R. Bhuvaneswari
K. Rani | K. Gomathi | M. Kanimozhi

First Impression : 2018

HUMAN WELLNESS - A HOLISTIC APPROACH

ISBN : 978-93-80800-87-5

DISCLAIMER

The authors are solely responsible for the contents of the papers complied in this book. T publishers or editors do not take any responsibility for the same in any manner. Errors, if a are purely unintentional and readers are requested to communicate such errors to the edit or publishers to avoid discrepancies in future.

Published by
Q Books
Coimbatore - 18.

Typeset by
Classic Data Lines
Salem - 16.

Printed by
Sri Vari Printers
Coimbatore - 15.

CONTENTS

PHYTOCONSTITUENTS AND ANTI-BACTERIAL ACTIVITY OF OCIMUM SANCTUM L. SEED

Dr.K.Kavitha, Assistant Professor

Dr.S.Ponne, Associate Professor

Department of Foods & Nutrition, Vellalar College for Women, Erode

STRACT

The present research aimed at assessing the nutrients, toxins, phytochemicals and bacterial activity in *O. sanctum* seed. The results showed that *O. sanctum* seed contains protein, ium, iron and is less in fat when compared to *O. sanctum*leaves. The seed is free from heavy als like arsenic, lead, cadmium, mercury and toxins like aflatoxin. Different solvents were used to tify the phytochemicals, among all the six extracts, methanol extract showed the presence of ority of the phytochemicals. The compounds like flavonoids, saponins, phenols, coumarin, cing sugars, tannins, phytosterols, terpenoids, phlobatannins and glycosides are identified in hanolic extract. Quantitative phytochemical analysis revealed that *O. sanctum* seed has more total onoid content. Through HPTLC analysis, the presence of phenols and flavonoids is confirmed. thermore, antibacterial activities of methanol extract of *O. sanctum* seed was also evaluated inst three bacterial strains. It showed maximum zone ofinhibition and MIC against the strains abetic foot ulcer pathogens) in the genera *Staphylococcus* and *Klebsiella sp*. The various tochemicals identified in *O.sanctum* seedmay provoke antidiabetic and antioxidant activity.

rwords : *O. sanctum* seed, Nutrients, Heavy metals, Phytochemicals, *HPTLC* analysis, anti-terial activity analysis.

TRODUCTION

Medicinal plants are used by 80% of the world population as the only available medicine ecially in developing countries. The beneficial medicinal effects of plant materials typically result n the combinations of secondary metabolites present in the plant. Scientific examination of the edies could lead to standardization and quality control of the secondary metabolites to ensure r safety (Wani *et al,* 2013). Considering the high cost of the synthetic drugs and their side effects, e varieties of natural plants can be considered as a vital source for anti-microbial agents. *Ocimum ctum* L. (also known as Tulsi) has been used for thousands of years in Ayurveda for its diverse ling properties. Therefore, the main objective is to evaluate the nutrients, heavy metals, tochemicals and anti-bacterial activity in *O. sanctum* seed.

METHODOLOGY

Collection and Identification of Plant materials

The *O. sanctum* seed were procured from the local market and cleaned for stones and impurities and was used for the current study. The plants were identified and authenticated (No:BSI/ SRC/5/23/2013-14/Tech/1040) by Dr. M. Palanisamy, Scientist 'C'- Incharge, Botanical Survey of India (BSI), Ministry of Environment and Forests, Government of India, Southern Region, Coimbatore.

Estimation of nutrients in *O. sanctum* seed

The physico-chemical constituents like moisture, total ash, fibre and nutrients like energy, carbohydrates, protein, fat, calcium, iron, phosphorus, potassium and sodium were analyzed in *O. sanctum* seed using AOAC International standard method (2006).

Analysis of heavy metals and toxins in *O. sanctum* seed

The presence of the heavy metals were analysed using Inductively Coupled Plasma Mass Spectrometric Method (ICP-MS).Analysis of aflatoxin toxins like B1, B2, G1 and G2 were done by KOBRA cell technique using Afla prep.column in *O. sanctum* seed (AOAC, 2006).

Qualitative phytochemical analysis in *O. sanctum* seed powder with different solvents

The qualitative chemical tests carried out in triplicates for the identification of the natural phyto-chemicals present in *O. sanctum* seed.

a. Successive solvent extraction

The air dried, powdered seed material was extracted in Soxhlet apparatus successively with different solvents in the increasing order of polarity [Acetone (56.5°C),chloroform (61°C), Methanol (64.7°C), Hexane (69°C), Ethanol (78.5°C) and Water (99.98°C)].

b. Plant extract

The seeds of *O. sanctum* (Thulasi) were shade dried, powdered and extracted with solvent methanol in soxhlet apparatus and it was concentrated to dryness under pressure to obtain the dry extracts and stored at 4°C. 100 g of each powdered seeds were placed in conical flask and 100 ml of methanol was added and plugged with cotton. The powder material was extracted with methanol for 24 hours at room temperature with continuous stirring. After 24 hours the supernatant was collected by filtration and the solvent was evaporated to make the crude extract. The residues obtained were stored in airtight bottles in a refrigerator for further use.

ntitative estimation of total phenolic and flavonoid compounds in *O. sanctum* seed

mation of total phenolic content

For the beneficial effect of polyphenols and to identify the presence of phenolics, an stigation was made to quantify the total phenolic content in the *O. sanctum* seed using standard edure.

reparation of standard solution (Rajanadh and Kavitha, 2010)

Gallic acid is used as the standard which represents the phenolic compound in the *O. sanctum* extract. For this purpose, 10mg of Gallic acid monohydrate was dissolved in 100 mL of anol to give a concentration of 100 µg/mL.

reparation of calibration curve

Aliquots of 0.5, 1.0, 1.5, 2.0 and 2.5 mL from the above stock solution were taken in 5 erent 10 mL volumetric flask. To each flask, 2.5 mL of 1N Folin-Ciocalteu reagent and 2 mL of sodium carbonate were added. The mixture was allowed to stand for 15min and the volume was up to mark with water to get a concentration ranging from 2.5-25 µg/mL. The absorbance of esulting solutions was measured at 765nm against reagent blank. A standard calibration curve prepared by plotting absorbance Vs concentration and it was found to be linear over this entration range.

reparation of sample solution

About 10mg of *O. sanctum* seed extract was dissolved in 10 mL of methanol to get 1 mg/mL ion. Suitable volume of the above solution was transferred into a 10 mL standard flask and color elopment was carried out as that for standard. Absorbance of the test solution was measured at m against blank. The concentration of total phenol in the test sample was determined by polation from the calibration graph. The total phenol content in the extract was expressed as mL.

mation of total flavonoid content

reparation of standard solutions

Rutin is used as the standard for estimation of total flavonoids in the *O. sanctum* seed.About g of rutin was dissolved in 10 mL of methanol to get 1000 µg/mL solution.

reparation of calibration curve

Aliquots of 20, 40, 60, 80 and 100 mL from the above stock solution were taken in 5 different mL volumetric flask. To each flask 1.5 mL of methanol, 0.1 mL of 10% aluminum chloride, 0.1 of 1N potassium acetate and 2.8 mL of distilled water was added. The reaction mixture was kept **e at room temperature for 30min and the volume was made up with water. The absorbance of the** lting solutions was measured at 415nm against reagent blank. The calibration curve was prepared

by plotting absorbance *Vs* concentration and it was found to be linear over this concentration range of 10-100µg/mL.

c. Preparation of test solution

About 10mg of extract was dissolved in 10 mL of methanol to get 1mg/mL solution. Required volume of the above solution was transferred into a 10 mL standard flask and color development was carried out as that for standard. Absorbance of the test solution was measured at 415nm against blank. The concentration of total flavonoids in the test sample was determined by extrapolation from the calibration curve. The total flavonoids content in the extract was expressed as µg/mL.

HPTLC analysis of methanolic extract of *O. sanctum* seed

The present study was extended to confirm the presence of phytoconstituents in methanolic extract of *O. sanctum* seed; a chromatographic analysis was carried out using HPTLC (Harborne, 1998; Wagner and Baldt, 1996), where, Phenolic standard / Flavonoid were considered as reference markers.

Anti-bacterial activity of *O. sanctum* seed

The anti-bacterial activity of the *O. sanctum* seed extract was evaluated by standard agar well diffusion method. Sterile nutrient agar plates were prepared by pouring 20mL of media into sterile petriplates. The plates were allowed to solidify for 5min and wells of 6mm were punctured using a well borer. About 0.1% inoculum suspension of *Staphylococcus aureus* (ATCC 6538) and *Escherichia coli* (ATCC 8739) were swabbed uniformly over the surface of the agar. Each herbal extract containing 100 µL was loaded into the well and the plates were kept for incubation at 37°C for 24hrs. The anti-bacterial activity was evaluated in terms of zone of inhibition. The zones were measured and recorded in millimetres.

Determination of minimum inhibitory concentration (MIC)and minimum bactericidal concentration (MBC)

The *O. sanctum* seed extract rich in anti-microbial agent as tested to determine the MIC and MBC values for each strain of diabetic foot ulcer pathogens. MIC was determined using broth dilution method by Kaur and Mondal, (2014). In this method, the extracts were diluted to give the final concentrations of 5, 10, 15, 20, 25, 30, 35mg/mL. About 100 µl of 10^5 CFU/mL of the test cultures (Diabetic foot ulcer pathogens) was inoculated in tubes with equal volume of nutrient broth and *O. sanctum* seed extract. The tubes were incubated at 37°C for 24hrs. Three control tubes were maintained for each strain (media control, organism control and extract control). The dilutions that showed no turbidity were incubated further for 24hrs. at 37°C. The lowest concentration that produced no visible turbidity after a total incubation period of 48h was regarded as final MIC. MBC

was determined by sub culturing the test dilution (which showed no visible turbidity) onto prepared Nutrient agar media. The plates were incubated further for 24 to 48hrs. at 37°C. The dilution that yielded no single bacterial colony on the nutrient agar plates was taken as MBC and Mondal, 2014).

LTS

nts and Toxins in *O. sanctum* seed

The *O. sanctum* seed contains 6.36 ± 1.73 g of moisture and 6.5 ± 2.65 g of total ash per The nutrients present in 100g of *O. sanctum* seed are 350.67 ± 1.67 K.cal of energy, 70.13 ± of carbohydrate, 17.41 ± 2.65 g of protein, 3.56 ± 1.73 g of crude fibre, 580 ± 65.57 mg of , 374.8 ± 5.29 mg of potassium, 109.2 ± 3.61 mg of sodium and 7.3 ± 1.70 g of iron. The fat present was very less (0.06g).The studies carried out to identify the presence of toxins in *O.* seed revealed the presence of aflatoxin group of B1, B2 and G1, G2 in below detectable The concentrations of all the heavy metals like arsenic, lead, cadmium and mercury analysed found to be below detectable limit.

chemical analysis of the *O. sanctum*seed in different solvents

The seeds of *O. sanctum* were extracted with different solvents such as acetone, chloroform, methanol, hexane and water. The phytochemical compounds such as alkaloids, phenols, coumarin, terpenoids, phlobatannins and glycosides were present in hexane extract of *O.* seed whereas flavonoids, saponins, tannins, phytosterols, anthroquionone and cyanidines were absent. Likewise, the compounds like alkaloids, protein, tannins, terpenoids, tannins and glycosides were present in ethanol extract of *O. sanctum* seed whereas flavonoids, ins, phenol, coumarin, phytosterols, anthroquionone and anthrocyanidines were absent in the extract. Some compounds like phytosterols, anthroquionone, anthrocyanidines were absent in cetone and chloroform extracts and tannins was absent in acetone and present in chloroform Majority of compounds like alkaloids, flavonoids, phenol, protein, coumarin, reducing sugar, noids, phlobatannins and glucosides were present in water extract. The presence of these chemicals implicates antibacterial and antidiabetic potential in the seed.

ntitative estimation of selected species of *O. sanctum*seed

ntification of phytochemicals

The quantitative analysis of phytochemicals such as total phenolics and flavonoids in the nolic extracts of the investigated seed are given in Table 1.

Table 1:Quantitative Estimation of Phytochemicals in Methanolic

Phytochemicals	Concentration (µg/mL)	Absorbance*
Phenolic concentration of standard Gallic acid (µg/mL)	5 10 15 20 25	0.041±0.002 0.062±0.003 0.082±0.006 0.103±0.005 0.123±0.002
Sample *O. sanctum* seed	**13**	**0.076±0.008**
Flavonoid concentration of standard Rutin (µg/mL)	20 40 60 80 100	0.018±0.007 0.028±0.004 0.037±0.006 0.047±0.005 0.057±0.003
Sample *O. sanctum* seed	**70**	**0.042±0.001**

*Mean ± S.D of three replicates

The quantitative analysis of phytochemicals such as total phenolics and flavonoids in the methanolic extracts of *O. sanctum* seed exhibited the highest total phenolics content (13µg/mL) and the absorbance was 0.076. The amount of total flavonoid compounds present in the methanolic extracts of the *O. sanctum* seed was estimated as 70µg/mL by visible-spectroscopy and its absorbance being 0.042. The total flavonoid content was more in methanolic seed extract.

HPTLC analysis of methanolic extract of *O. sanctum*seed

The HPTLC profiles at visible light, UV 366nm and 254 nm were recorded in Plate 4, and their densitogram, Rf values, peak areas and type of phytochemical in *O. sanctum*seed are summarized in Table 2 and Table 3.

Table 2: RF values, peak areas and type of phenolic compounds assigned in *O. Sanctum* seed

Track	Peak	Rf	Height (cm)	Area (%)	Assigned substance
STD	1	0.63	218.4	6008.5	Phenolic standard
Sample A	1	0.06	73.8	1130.1	Unknown
Sample A	2	0.12	36.3	863.2	Unknown
Sample A	3	0.17	16.3	317.4	Unknown
Sample A	4	0.26	13.4	353.8	Phenolic 1
Sample A	5	0.32	38.1	1059.3	Unknown
Sample A	6	0.61	45.8	2503.3	Phenolic 2
Sample A	7	0.78	35.3	1631.2	Unknown
Sample A	8	0.84	30.8	579.7	Unknown

HPTLC fingerprinting phenolic profile of methanolic extract of *O. sanctum*seed recorded 8 Among these, peak 4 and peak 6 were found as known phenolic1 and phenolic 2 respectively. nd Brown coloured zones were detected in visible light after derivatization in the togram which shows the presence of phenols. The extract was run along with standard ic compound gallic acid.

Table 3: RF Values, Peak Areas and Type of Flavonoid Compounds Assigned In *O. sanctum* Seed

Track	Peak	Rf	Height (cm)	Area %)	Assigned substance
Sample A	1	0.01	17.2	180.6	Unknown
Sample A	2	0.04	17.0	132.1	Unknown
Sample A	3	0.07	59.9	1202.4	Flavonoid 1
Sample A	4	0.34	23.0	1030.6	Flavonoid 2
Sample A	5	0.64	19.2	401.3	Flavonoid 3
Sample A	6	0.66	18.9	351.1	Unknown
Sample A	7	0.95	149.3	3173.1	Unknown
STD	1	0.30	355.5	10577.7	Flavonoid standard

Sample A – *O. sanctum*seed STD (standard) - Rutin

HPTLC fingerprinting flavonoid profile of methanolic extract of *O. sanctum* seed showed 7 s. Among these, peaks 3, 4 and 5 were found to have known flavonoids. Yellow and yellowish coloured fluorescent zone were detected in UV 366nm after derivatization in the chromatogram h confirmed the presence of flavonoids. The extracts were run along with standard flavonoid pound Rutin.

Through HPTLC investigation the presence of phenols and flavonoids in the extracts of *O. tum* seed was confirmed and ultimately, its usefulness and efficacy in treating different ailments its antioxidant, antibacterial and antidiabetic activity was provoked.

mation of antibacterial activity of *O. sanctum*seed

The antibacterial activities of methanol extract of *O. sanctum* seed against the roorganisms examined in the present study and their potency were quantitatively assessed by the ence or absence of inhibition zones and the results are given in Table 4 and Plate 1.

Table 4
Antibacterial Activity of *O. sanctum* seed by well diffusion method

S.No.	Organisms	Zone of Inhibition against *O. sanctum* seed(mm)*
1	*Klebsiella sp*	12 ± 1.73
2	***Staphylococcus epidermidis***	**14 ± 2.64**
3	*Staphylococcus aureus*	16 ± 0.58

*Mean ± S.D of three replicates

The results showed that methanol extract of *O. sanctum* seed had antibacterial effect against the strains(Diabetic foot ulcer pathogens) genera *Staphylococcus* and *Klebsiella sp*. The maximal inhibition zone for the *Staphylococcus aureus* was16 ± 0.58 mm and for other strains *Staphylococcus epidermidis* and *Klebsiella sp*. were 14 ± 2.64 and 12 ± 1.73 mm respectively. The methanol extract in the present investigation has a stronger antibacterial activity and the solvent extracts showed resistance against the growth of microorganisms.

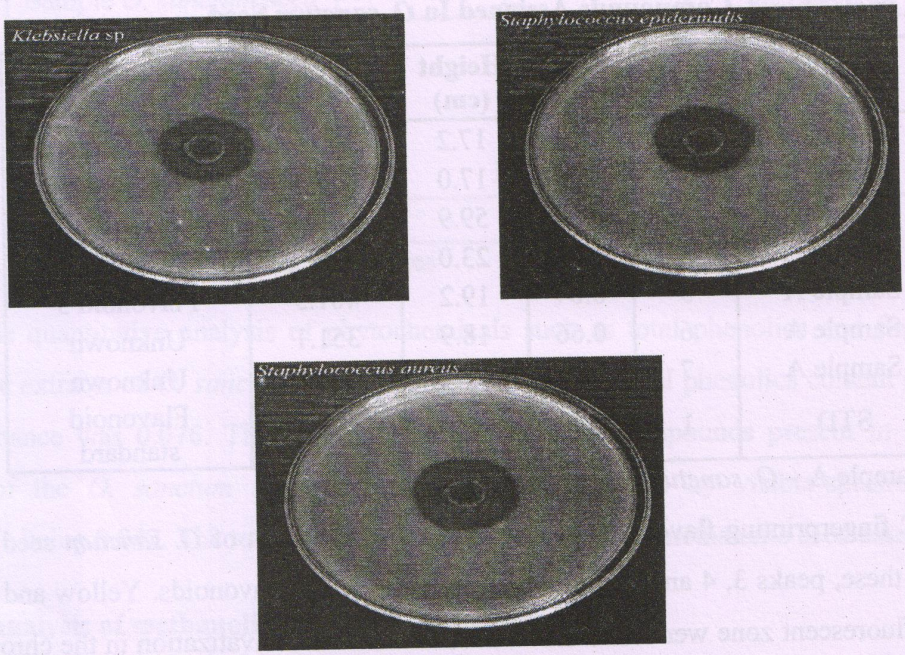


Plate 1 Antibacterial activity of *O. sanctum*seed

Determination of Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) of *O. sanctum*seed against foot ulcer pathogens

The Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) of *O. sanctum*seed against foot ulcer pathogens is represented in Table

Table 5

MIC and MBC values of *O. sanctum* seed against foot ulcer pathogens

S.No.	Organisms	MIC and MBC values (mg/mL) of *O. sanctum* Seed		
		Initial MIC [mg/mL]	Final MIC [mg/mL]	MBC [mg/mL]
1	*Klebsiella sp*	25±3.04	35±6.24	25±7.01
2	*Staphylococcus epidermidis*	20±3.02	35±8.01	20±8.04
3	*Staphylococcus aureus*	15±4.58	35±1.02	15±1.09

*Mean ± S.D of three replicates

The results of MIC showed that *O. sanctum* seed extract had lower MIC against the diabetic pathogens like *Staphylococcus aureus, Staphylococcus epidermidis,* and *Klbsiella sp.* The growth was observed after using *O. sanctum* seed extract at concentration of 5 mg/mL to 35 . The initial inhibited growth of *Staphylococcus aureus* was found at concentration of mg/mL and final at 35 ± 1.02 mg/mL. The initial MIC value of *O. sanctum* seed extract the growth of *Staphylococcus epidermidis* was 20 ± 3.02 mg/mL and the final MIC value was mg/mL. At the same time, the initial inhibited growth of foot ulcer pathogen *Klbsiella sp.* ± 3.04 mg/mL and final inhibitory concentration was 35 ± 6.24 mg/mL. The lowest ration produced visible turbidity after a total incubation period of 48 hrs was regarded as IC. In the present study, minimum bactericidal concentration(MBC) value of methanolic f *O. sanctum* seed against *Staphylococcus aureus, Staphylococcus epidermidis* and *Klbsiella* teria was exactly similar to its MIC value i.e. 15 ± 1.09, 20 ±8.04 and 25 ± 7.01 mg/mL tively.

LUSION

The results of the study conclude that the growth of pathogens were inhibited by the terial activity of *O. sanctum*seed extract which may be attributed due to the presence of one or tive compounds of phenols, flavonoids and antioxidants.

RENCES

Wani Minal, Aparna Sharma, Jyoti Deshpande, Siji Mathew, and MB Khetmalas, Qualitative Phytochemical Screening of Three Indigenous Medicinal Plants, Research Journal of Pharmaceutical, Biological and Chemical Sciences, 2013, Volume 4, Issue 1, Page - 287

Wagner H and Baldt S , Plant drug analysis; *Berlin: Springer*; 1996:1, 63-76.

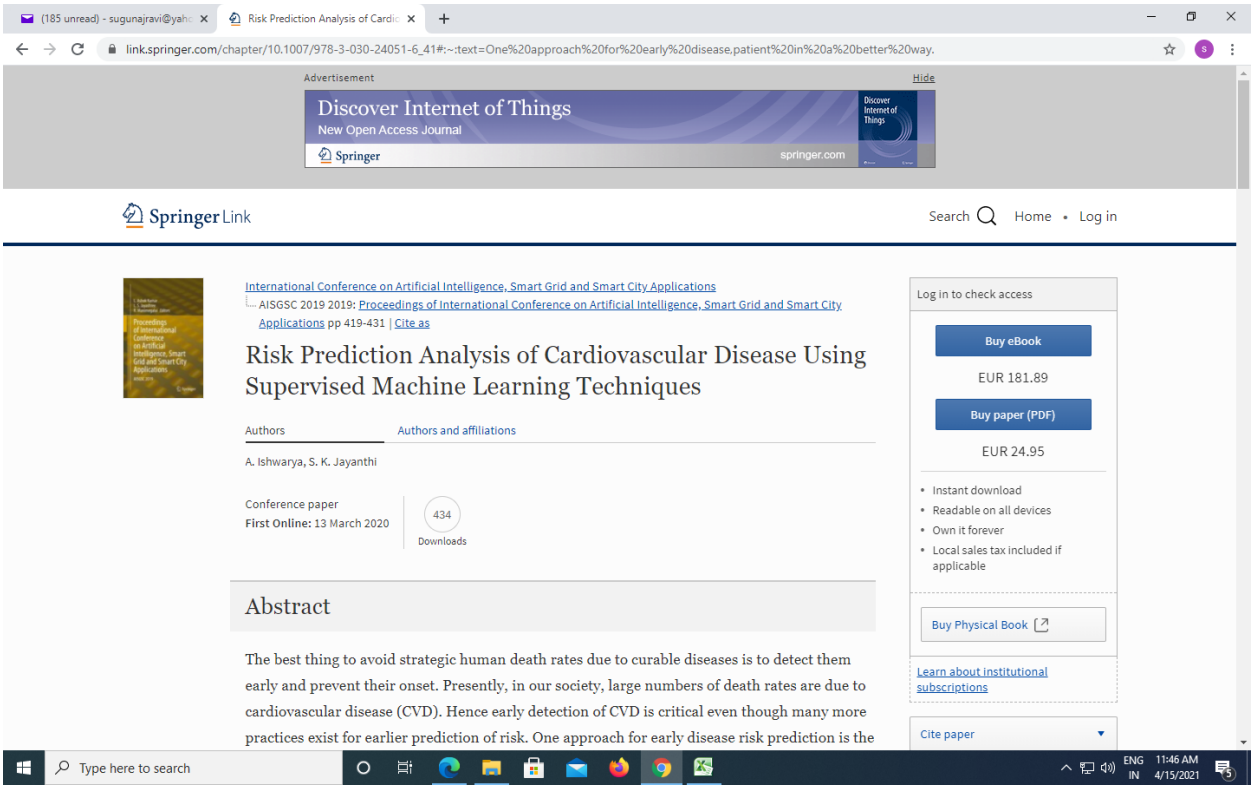
Harborne JB , Phytochemical methods; 3rd edition, London: Chapman and Hall; 1998.

Kaur S and Mondal P: Study of total phenolic and flavonoid content, antioxidant activity and antimicrobial properties of medicinal plants. *Journal of Microbiology & Experimentation.* 2014; 1(1): 00005.

AOAC,*Official method of analysis of AOAC International*. 18th Edn, The Association of Analytical Chemists, (2006), Arlington.

Rajanandh MG and Kavitha J, Quantitative Estimation of β-Sitosterol, Total Phenolic and Flavonoid Compounds in the Leaves of Moringa Oleifera, *International Journal of PharmTech Research*, 2010,Vol.2, No.2, pp 1409-1414.

S.NO: 58, Online Proceeding



S.NO: 60, Offline Proceeding

Paper ID: 111

A Survey on Secure Beamforming in MIMO-NOMA Based Cognitive Radio Network

Hyils Sharon Magdalene[1] and Thulasimani Lakshmanan[2]
[1,2] PSG College of Technology, Coimbatore, Tamil Nadu, India
hyils12star@gmail.com

Abstract - Cognitive radio network (CRN) and non-orthogonal multiple-access (NOMA) brings a significant contribution in fifth generation (5G) wireless communication system. However, in securing MIMO NOMA beamforming is yet an exclusive way. This paper provides a latest survey of the security of MIMO NOMA in 5G engineering, which includes: securing by cascaded transmitting downlink zero-forcing-beamforming (ZFBF) technique, general power allocation scheme, applying the NOMA protocol in large-scale networks, and applying new bi-directional ZFBF mechanism, cooperative NOMA in both amplify-and-forward (AF) and decode-and-forward (DF) protocols, and an efficient majorization-minimization (MM) method-based semi closed form secrecy rate optimization algorithm are studied in this paper.

Keywords *: Cognitive radio network (CRN), non-orthogonal multiple-access (NOMA), zero-forcing-beamforming (ZFBF), AF and DF protocols, majorization-minimization (MM) method.*

Paper ID:115

Comparative Analysis of Heart and Diabetic Disease Prediction Using Machine Learning Algorithms

P. Kalaiyarasi [1] and Dr. J. Suguna [2]
[1]Research scholar (PhD) in Computer science, Vellalar College for Women, Erode, Tamilnadu, India. kalaipavi6@gmail.com
[2]Associate professor in Computer science, Vellalar College for Women, Erode, Tamilnadu, India. sugunajravi@yahoo.com

Abstract - Data mining is the non -trivial method of identifying valid, novel, potentially useful and understandable patterns in data. It is an integral part of Knowledge Discovery in Databases, which is the overall process of converting raw data into useful information. In health care analysis data mining playan important role in disease predictions. Today's society is facing a large amount of death that relates to heart and diabetic disease. The mortality rate of the patients in heart and diabetic disease has been increased in every year. Researchers are dealing with various big data approaches, which help for health care professionals to diagnose the disease. The classification mechanisms are applied to predict the disease. This work focuses on heart and diabetic disease prediction by means of machine learning algorithms namely Decision Tree, K Nearest Neighbor and Support Vector Machine. The input of dataset has been gathered from UCI repository. The Classification algorithms are applied on both dataset. The predictions of these diseases are denoted by means of accuracy and performance measures have been calculated as in the terms of precision, recall and F-measure.

Keywords *: Big Data, Healthcare, Heart Disease, Diabetic disease.*

S.NO: 61, Offline Proceeding

International Conference on Innovations in Engineering, Technology and Sciences (ICIETS)

NIE Institute of Technology 42

Multimode Authentication based Electronic Voting Kiosk using Raspberry Pi

M G Gurubasavanna and Saleem Ulla Shariff

Abstract: India being the fastest developing country and the largest democracy in the world has replaced the trivial paper based ballot system with EVMs in the voting process. The technical advancement in the field of voting process by introduction of electronic voting machines or EVMs has changed the way how voting is done all over the world along with the raise of security concerns and issues like hacking or tampering of EVMs. The Proposed paper discusses about the steps to mitigate the security issues and how the turn out in voting can be increased by introducing the voter to have the facility to vote from any constituency even if he belongs to some other constituency from the designated authorized voting centers. The voting process can be made more secure by involving finger print or bio metric based authentication in the design along with face and iris recognition features. The paper discusses how raspberry pi can be utilized to build the prototype.

A Review on Various Kinds of Attacks and Security with Different Routing Protocols

Lavanya N L and Dr. Puttamadappa C.

Abstract: Mobile Ad-hoc networks (MANETs) is an infrastructure-less network where numerous wireless nodes without any centralized controller sends and receives the data packets. For making network to be safer for communication there involves various levels of routing protocols with protective measures. For securing data packets in the MANETs, dissimilar types of crypto-graphic algorithm are analyzed with proper limitations for safeguarding the networks.

Chaotic Image Encryption with ANM Compression

P.Sridevi and Dr.J.Suguna

Abstract: Computer networks and communications use digital images which are most searched, uploaded and shared. Compression is a technique used to reduce the storage space of images which is transmitted over different networks. Encryption technique is used to provide security for images. This paper proposes an image Encryption-then-Compression (ETC) system. A chaotic encryption technique is used to encrypt the images and Asymmetric Numeral Method (ANM) is used to compress the encrypted images. The performance results are carried out for various image sizes and compared with Arithmetic and Huffman compression techniques and it shows that the proposed system is better in terms of security, compression ratio and computation time.

Strategies and Challenges in Big Data: A Short Review

Santhosh Kumar D. K. and Demian Antony D'Mello

Abstract: The Big Data is the new trending technology in the field of research in recent years and is not only big in size, but also generated at brisk rate and variety, which endeavors the research upsurge in multidisciplinary fields like Government, Healthcare and business performance applications. Due to the key features (Volume, Velocity, and Variety) of Big Data it's difficult to store and analyse with conventional tools and techniques. It acquaints unique challenges in scalability, storage, computational

S.NO: 62, Online proceeding

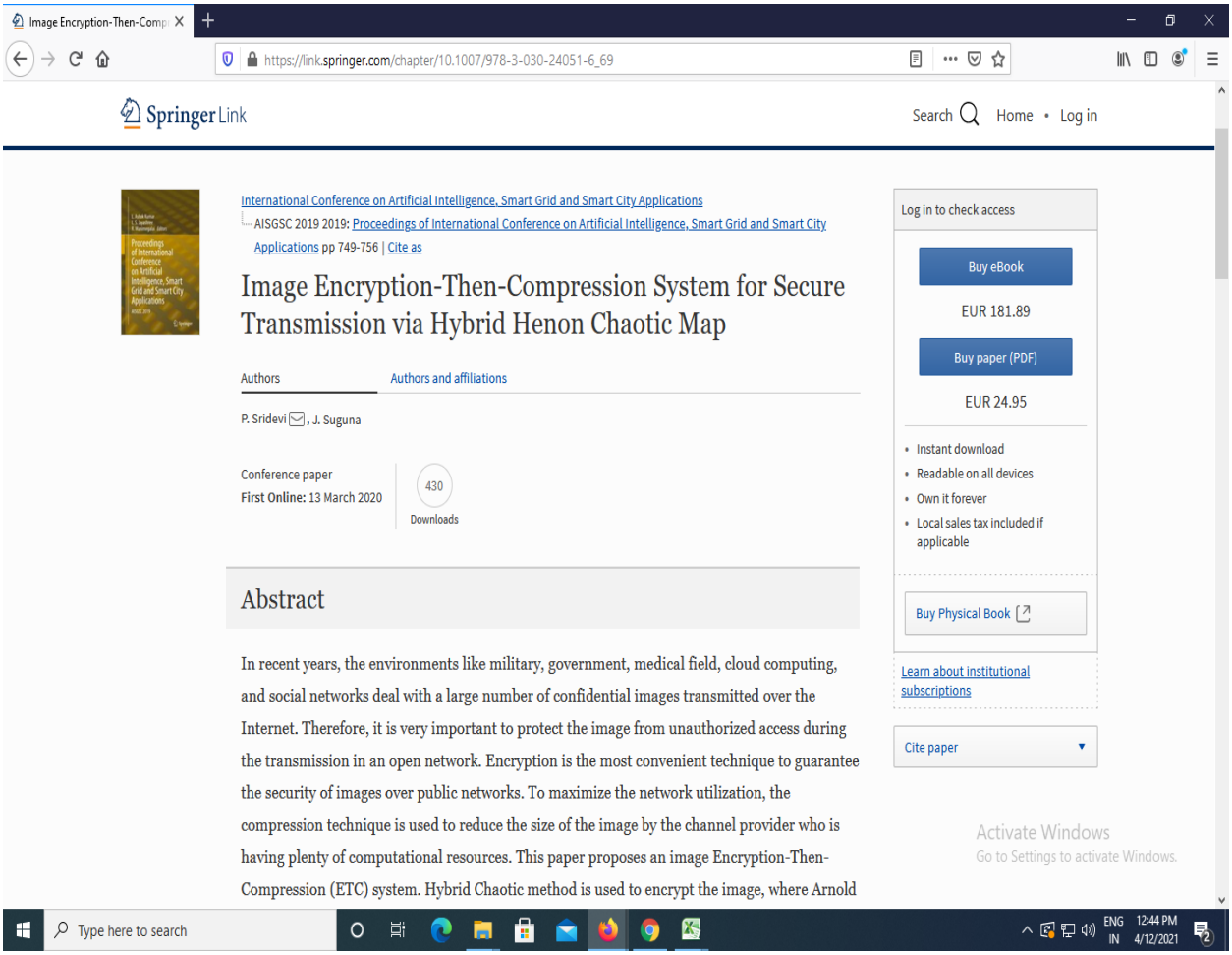


Image Encryption-Then-Comp

https://link.springer.com/chapter/10.1007/978-3-030-24051-6_69

Springer Link

Search Home • Log in

International Conference on Artificial Intelligence, Smart Grid and Smart City Applications

AISGSC 2019 2019: Proceedings of International Conference on Artificial Intelligence, Smart Grid and Smart City Applications pp 749-756 | Cite as

Image Encryption-Then-Compression System for Secure Transmission via Hybrid Henon Chaotic Map

Authors Authors and affiliations

P. Sridevi, J. Suguna

Conference paper
First Online: 13 March 2020

430 Downloads

Log in to check access

Buy eBook

EUR 181.89

Buy paper (PDF)

EUR 24.95

- Instant download
- Readable on all devices
- Own it forever
- Local sales tax included if applicable

Buy Physical Book

Learn about institutional subscriptions

Cite paper

Abstract

In recent years, the environments like military, government, medical field, cloud computing, and social networks deal with a large number of confidential images transmitted over the Internet. Therefore, it is very important to protect the image from unauthorized access during the transmission in an open network. Encryption is the most convenient technique to guarantee the security of images over public networks. To maximize the network utilization, the compression technique is used to reduce the size of the image by the channel provider who is having plenty of computational resources. This paper proposes an image Encryption-Then-Compression (ETC) system. Hybrid Chaotic method is used to encrypt the image, where Arnold

Activate Windows
Go to Settings to activate Windows.

Type here to search

ENG IN 12:44 PM 4/12/2021

A Survey on Crop Yield Prediction Using Data Mining Techniques

B.Devika, *M.Phil., Research Scholar, Department of Computer Science, Vellalar College for Women (Autonomous), Erode, Email: devikacs11@gmail.com.*

Dr.B.Ananthi, *Head Department of Computer Science, Vellalar College for Women (Autonomous), Erode.*

Abstract

India is generally an agricultural country. Agriculture is the single most important contributor to the Indian economy. Agriculture crop production depends on the season, biological, and economic cause. The prognosticating of agricultural yield is a challenging and desirable task for every nation. Nowadays, Farmers are struggling to produce the yield because of unpredictable climatic changes and drastically reduce in water resource so; we are creating an agriculture data. This data could be gathered, stored and analyzed for useful information. It is used to promote new advanced methods and approaches such as data mining that can give the information of the previous results to the crop yield estimation. In this paper, we have demonstrated to estimate the crop yield, choose the most excellent crop, thereby improves the value and gain of the farming area using data mining techniques.

***Keywords*:** crop yield prediction, models, accuracy and Recommendation, accuracy and Recommendation.

requirement.

Chaotic Image Encryption then Compression

P.Sridevi, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode. Email: lecturerpsd@gmail.com.*

Abstract

In recent years the environments like military, government, medical fields, cloud computing deals with a large number of confidential images and transmitted over the internet. Therefore it's very important to protect the image from unauthorized access and also make the image to be secured during the transmission in an open

A Survey on Data Mining: Tools, Techniques, Applications, Trends and Issues

E.Saveetha, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode.*
M.Revathi, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email: revathivcw@gmail.com.*

Abstract

Data mining is a process which finds useful patterns from large amount of data. It is a powerful new technology with great potential to help companies focus on the most important information in their data warehouses. It uses machine learning, statistical and visualization techniques to discovery and present knowledge in a form which is easily comprehensible to humans. This review of literature focuses on data mining techniques, trends, issues, tools, crucial concepts and applications. In this paper we have focused a variety of techniques, approaches and different areas of the research which are helpful and marked as the important field of data mining Technologies. This paper imparts more number of applications of the data mining and also focuses on trends in the data mining which will helpful in the further research.

Keywords: Data Mining (DM), Tools. Techniques, Applications, Research Issues, classification, clustering, decision tress.

A Survey of OCR in the Area of Image Processing

M.Karthiyayini, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email: karthichawbi@gmail.com.*

R.Mythili, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email: kekumm80@gmail.com.*

Abstract

This paper describes the basic technological aspects of Digital Image Processing with special reference to Character Recognition in the area of Image processing. Character Recognition (CR) is major remarkable and difficult research domain in the area of Image processing. Image processing can be defined as, the processing or altering an existing image in a desired manner. Image processing in its general form pertains to the alteration and analysis of pictorial information. Recognition of characters is a novel problem, digital image processing algorithms and implementations that are able to detect characters from images, selection of an appropriate technique to diverse types of images, that are very specific or complex is very important. Character recognition in pictures could be an analysis space that makes an attempt to develop a computing system with the power to mechanically scan the text from pictures.

Keywords: Optical Character Recognition (OCR), Introduction, Applications, Major Phases of OCR.

A Review on Support Vector Machine in Data Mining Task

K.Pavya, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Bharathiar University, India, Email: pavyavcw@gmail.com.*

Dr.B.Srinivasan, *Associate Professor, Department of Computer Science, Gobi Arts & Science College. Bharathiar University, India, Email: srinivasan_gasc@yahoo.com.*

Abstract

Data mining based classification is one of the important role in the field of healthcare. The medical data having a huge amount of data set these data set classifications are highly challenging task. Diagnosis of health conditions is very essential and difficult task in field of medical science. There are various types of diseases are diagnosis in medical science. We are living in data-rich times and each day, more data are collected and stored in databases.

The increased use of data toward answering and understating important questions has driven research towards the development of data mining techniques. The purpose of these techniques is to find information within the large collection of data. Although data mining is a new field of study of medical informatics, the application of analytical techniques to discover patterns has a rich history. In this paper we present a review on support vector machine in data mining.

Keywords: data mining, SVM, ...

network. In Conventional firewall everyone on the protected side is trusted. To remove the shortcomings of traditional firewalls, the concept of a "distributed firewall" has been proposed. In which security policy is still centrally defined, but implementation is at individual endpoints. In Distributed Firewall systems, The conventional firewall is not only placed at the entry point of one network or between the two networks the role of conventional firewall is distributed among the all devices connected in the network under the control of centralized system which is also used to define the policy granted by the distributed firewall system which is going to apply at each end devices.

***Keywords*:** Network Security, Distributed Firewall.

Improving Link Stability and Energy Aware Routing by the Identification of Self Node in Wireless Networks

C.Shanmugavadivu, *Research Scholar, Department of Computer Science, Vellalar College for Women, Erode, Email: shanmugavadivuc@gmail.com.*

Abstract

A MANET is a peer-to-peer multi hop mobile wireless network that has neither a fixed infrastructure nor a central server. MOBILE ad hoc networks (MANETs) have attracted a lot of attention due to the popularity of mobile devices and the advances in wireless communication technologies. Each node in a MANET acts as a router, and communicates with each other. A scalable routing protocol called LAER, based on the joint metric of link stability and energy drain rate, has been proposed. It is based on the local topology knowledge and it makes use of a greedy technique based on a joint metric and a

critical decisions. This may trap a vehicle taking wrong decision with dire consequences and authenticated vehicles or malicious vehicles may also broadcast wrong messages. This necessitates those messages of vehicles to be trusted after authentication process of vehicles, especially in the absence of centralized authority. In this paper, token based trust computation based on network connectivity duration of vehicles in VANET is proposed. The proposed technique is based on travelling time association among vehicles or network connectivity of vehicle at the time of driving on the road. We present simulations of the proposed technique that verify its correctness and reliability in the presence of infrastructure and absence of infrastructure. Results show that the efficacy of the proposed scheme and makes it viable for secure and lightweight trusted communication in a VANET.

Keywords: VANET, Trust computation, Tokens and RSU.

Performance Evaluation of Sequence Pattern Mining Algorithms

S.Deepa, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email:deepasamiappan @gmail.com.*

K.Abinaya, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email: abinayakarthikeyan @gmail.com.*

Abstract

Sequential pattern mining is one of the data mining domains used for identifying patterns from the data in the large data sets and the patterns are delivered in the form of a sequence. Sequential pattern mining addressed numerous conventional computational problems

Enhancing the Lifetime of Wireless Sensor Network by Using Sleep Wakeup Scheduling Protocol

K.Abinaya, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email: abinayakarthikeyan @gmail.com.*

S.Deepa, *Assistant Professor, Department of Computer Science, Vellalar College for Women, Erode, Email: deepasamiappan @gmail.com.*

Abstract

Wireless Sensor Networks (WSNs) have gained worldwide attention in recent years. A sensor network is applied in various application fields such as wild environment monitoring, industrial machine measurement, military-purpose measurement and also in daily application fields such as fire monitoring and pollution monitoring. One of the major issues in wireless sensor networks is developing an energy-efficient routing protocol to improve the overall lifetime of the network. A polynomial-time distributed algorithm was designed for maximizing the lifetime of the network and proves that its lifetime is almost a factor lower than the maximum possible lifetime.

The coverage maintenance protocols are often designed based on simplistic sensing models that do not capture the stochastic nature of distributed sensing. An alternative coverage maintenance protocol is designed based on the distributed sensing model to provide required sensing coverage over a geographic region by activating a subset of nodes. To conserve energy, sleep wakeup scheduling protocol (SWSP) is introduced to achieve desired coverage by activating only a subset of nodes, while allowing the remaining nodes to sleep. When compare to the existing results, the main advantage here is that the SWS

A RESEARCH BOOK ON EMERGING TRENDS IN INFORMATION TECHNOLOGY

PG & Research Department of Computer Science

Bharathidasan College of Arts & Science

(Affiliated to Bharathiar University)

Erode - 638 116, Tamil Nadu, India.

A Survey on Image Analysis Techniques in Predicting Yield of Fruit and Flowers

K.Gowsalya, *M.Phil., Research Scholar, Department of Computer Science, Vellalar College for Women (Autonomous), Erode, Email: gowsideepika95@gmail.com.*

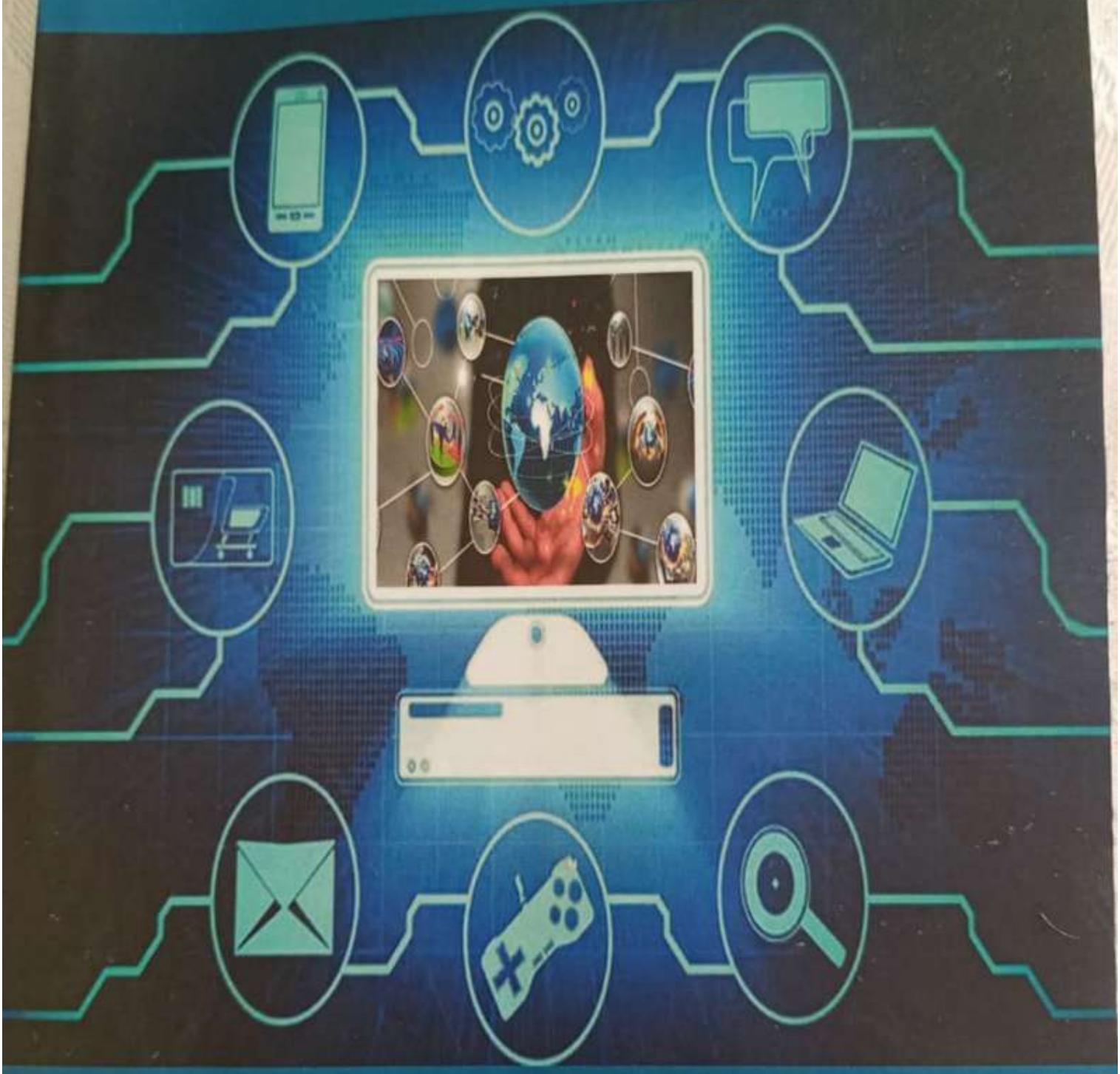
P.Sridevi, *Assistant Professor, Department of Computer Applications, Vellalar College for Women (Autonomous), Erode.*

Abstract

In agriculture the counting of the number of fruits and flowers play an important role to estimate the amount of harvest. The manual counting of fruit and flowers in a farm is a very tiresome job, it needs plenty of time to complete the task, involves high cost and has low accuracy. Image processing techniques can help to accurately count the harvest of the field/orchard. Thus, automated fruit and flower counting is introduced in the agriculture field by using digital image analysis to count the total number of fruit/flowers and hence predict or estimate the yield of the produce. In this paper a review of previous studies and systems to count the number of fruits and flowers on trees and their yield estimation is performed. The various computer vision and optimization techniques are presented to automate the process of counting fruits. Further the main features and drawbacks of the previous systems in this area are summarized in this paper.

Keywords: Automated Counting, Flower and Fruit Localization, Segmentation, Color and Shape Analysis, Yield Prediction.

A RESEARCH BOOK ON EMERGING TRENDS IN INFORMATION TECHNOLOGY



PG & Research Department of Computer Science

Bharathidasan College of Arts & Science

(Affiliated to Bharathiar University)

Erode - 638 116, Tamil Nadu, India.

A Survey on Multi-View Missing Data Completion

T.Bhavadharani, *M.Phil., Research Scholar, Department of Computer Applications, Vellalar College for Women (Autonomous), Erode, Email:bhavadharanictech95@gmail.com.*

P.Laura Juliet, *Assistant Professor, Department of Computer Applications, Vellalar College for Women (Autonomous), Erode.*

Abstract

A growing number of multi-view data arises naturally in many scenarios, including medical diagnosis, webpage classification, and multimedia analysis. A challenge in learning from multi-view data is that not all instances are fully represented in all views, resulting in missing view data. In this paper, we focus on feature-level completion for missing view of multi-view data. Aiming at capturing both semantic complementarily and identical distribution among different views, an Isomorphic Linear Correlation Analysis (ILCA) method is proposed to linearly map multi-view data to a feature-isomorphic subspace through learning a set of excellent isomorphic features, thereby unfolding the shared information from different views. Meanwhile, we assume that missing view obeys normal distribution. Then the missing view data matrix can be modelled as a low-rank component plus a sparse contribution. Thus, to accomplish missing view completion, an Identical Distribution Pursuit Completion (IDPC) model based on the learned features is proposed, in which the identical distribution constraint of missing view to the other available one in the feature-isomorphic subspace is fully exploited. Comprehensive experiments on several multi-view datasets demonstrate that our proposed framework yields promising results.

Keywords: identical, isomorphic subspace, missing view, multi-view data, semantic.

Souvenir

6th International Conference on
Innovations in
Computer Science & Engineering

ICICSE-2018

August 17th & 18th, 2018

In collaboration with

Technically Supported by

Springer

DRDO

Editor-in-Chief

Dr. H. S. Saini

Organized by

GURU NANAK INSTITUTIONS

• Engineering • BDS • MDS • Pharmacy • MBA • PGDM

www.gniindia.org

Track 2 : Network Security / Image Processing

QoS Aware Congestion Control for Maximizing Reliability considering Fault Tolerance Routing in MANET

S.S. Kokila[1], Dr. C.L. Brindha Devi[2]

Fault tolerance in Mobile Ad-hoc Network is very difficult task. Clustering in Mobile ad hoc network is one of the control scheme used to make MANET global topology less dynamic. The network topology changes normally due to mobility, disconnections, errors of nodes and network partitioning. Fault tolerance is used to improve system consistency. In this paper, an energy efficient fault-tolerant routing algorithm is designed, called the QoS aware Improved Fault Tolerant Routing (QOS-IFTR) Algorithm, which is competent of considerably lowering the packet overhead, while guaranteeing to improve a packet delivery rate. Without a method that tolerates routing fault due to malfunctioning nodes while making routing decision, the performance of mobile ad hoc network protocols will unavoidably be poor, and the routing decisions made by those protocols would be flawed. Proposed QOS-IFTR algorithm improves the energy effficiency while compared to DSR Multipath Routing protocol and AODV routing protocol and reduces the overhead ratio.

[1] Assistant Professor, Department of Computer Applications, Vellalar College for Women, Erode
[2] Assistant Professor, Department of Computer Science, Queen Mary's College, Chennai
Email: kokilaganeshmoorthy@gmail.com[1], clbrindhadevi@gmail.com[2]

Enhanced Trust based Cluster Head Selection in Wireless Sensor Networks

B Deena Narayan[1], P Vineetha[2], BKSP KumarRaju Alluri[3]

Advancement in Wireless Sensor Networks (WSN) in recent years led to many new protocols. Wireless sensor networks are formed by the sensor nodes, that are used very often in various fields. As a result, security is the most crucial task to be accomplished. Since, the wireless sensor networks are distributed in nature, the sensor nodes are easily prone to security attacks. To address this problem we avoid the election of a malicious or compromised node as a cluster head. We proposed an approach to elect a trustworthy cluster head. This approach also reduces the overhead in the calculation of trust for cluster head election using overhearing trust mechanism. Simulations results obtained from our approach are effective.

[1,2,3] Department of CSE, NIT, Andhra Pradesh, India
Email: deenaboddapati@gmail.com[1], vineethapuritipati@gmail.com[2], pavan0712@gmail.com[3]

GURU NANAK INSTITUTIONS

ICICSE-2018 Supported By:

Microsoft

GURU NANAK INSTITUTIONS TECHNICAL CAMPUS
&
GURU NANAK INSTITUTE OF TECHNOLOGY

6th International Conference on
Innovations in Computer Science & Engineering
(ICICSE - 2018)

17th - 18th August, 2018

Certificate

This is to certify that Prof / Dr / Mr / Ms S. S. kokila

has presented/submitted a Paper Titled Qos Aware congestion control for maximizing reliability considering fault tolerance routing in MANETs

Technical Session (TS): Network Security / Image processing of the 6th International Conference on Innovations in Computer Science & Engineering (ICICSE - 2018), held during 17th-18th August, 2018.

Convener

Dr. Rishi Sayal
Conference Co-Chair

Dr. M. Kamalinga Reddy
Conference Co-Chair

Dr. H. S. Saini
Conference Chair

GURU NANAK INSTITUTIONS

GURU NANAK INSTITUTIONS TECHNICAL CAMPUS

Other Group Institutions

Dengue Fever Prediction Using Hybrid Sequential Minimal Optimization

R.Sanjudevi, *M.Phil., Research Scholar, Department of Computer Science, Vellalar College for Women (Autonomous), Erode, Email: sanjudevics@gmail.com*

D.Savitha, *Assistant Professor, Department of Computer Applications, Vellalar College for Women (Autonomous), Erode.*

Abstract

Data Mining is the process of non-trivial extraction of implicit, previously unknown and potentially useful information from data. The aim of this work is to investigate the performance of different classification techniques. The dengue disease accounts to be the leading cause of death worldwide. It is difficult for medical practitioners to predict the dengue disease as it is a complex task that requires experience and knowledge. The health sector today contains hidden information that can be important in making decisions. Sequential minimal optimization applied in this research for predicting dengue prediction. The research result of SMO shows prediction accuracy than existing system. Data mining enable the health sector to predict patterns in the dataset based on this study apply best techniques to improve the classification performance.

Keywords: Dengue, Data mining, Medical Documents, Clustering Techniques, SMO Algorithms.

18-19
(10)

INTERNATIONAL CONFERENCE ON EMERGING TRENDS AND CHALLENGES IN COMMERCE

Vol - II

Dr. R. SEENI SYED IBRAHIM

NPR ARTS & SCIENCE COLLEGE
NATHAM, DINDIGUL DISTRICT

INTERNATIONAL CONFERENCE ON
EMERGING TRENDS AND CHALLENGES IN COMMERCE

First Edition: 2019

ISBN: 978-81-909344-8-0

Printed at
SHANLAX PUBLICATIONS
61, 66 T.P.K. Main Road
Vasantha Nagar
Madurai – 625003
Tamil Nadu, India

Ph: 0452-4208765
Mobile: 7639303383
email: shanlaxpublications@gmail.com
web:www.shanlaxpublications.com

been l
mandat
with a
researc

confere
opportu
Prof.D
Speake
Kanchi
from V
Tamiln
meanin
contribu
conferei
innovati

pertainii
conferei

Chief I
Institutic
Convenc
Science
and Scie
support

A STUDY ON THE IMPACT OF GST IN GLOBAL BUSINESS

Dr. R. Thirumoorthy
Associate Professor of Commerce, PARK'S College, Chinnakkarai, Tirupur

Ms. R. Nivekha
Vellalar College for Women(Autonomous),Erode

Abstract

GST is considered as an indirect tax for the whole nation that would make India one unified common market. It is a tax which is imposed on the sale, manufacturing and the usage of the goods and services. It is a single tax that is imposed on the supply of the goods and services, right from the manufacturer to the customer. The credits of the input taxes that are paid at each stage will be available in the subsequent stage of value addition which makes GST essentially a tax only on the value addition on each stage. The final consumers will bear only the tax charged by the last dealer in the supply chain with the set of benefits that are at all the previous stages.

It is charged at the national and state level at similar rates for the same products and it also replaces almost all the current indirect taxes that are imposed separately by the Centre and the States. Goods & Services Tax is a destination based tax which means that the tax is paid at the place of supply. This paper is an analysis of the impacts and implications of GST on business sectors.

Keywords: *GST, Indirect Taxes, VAT, GDP,*

Introduction

One year of implementing the GST structure in India has amassed both positive and negative responses from the individuals and the customers. GST (Goods and Services Tax) is a significant step intended towards simplifying the giant tax structure to support stakeholder benefits. Prior to GST implementation, there were more many indirect taxes and cess that were applicable depending on the business segment. There were mixed views and opinions prevailing in the public domain about the pros and cons of GST implementation, the gamut of how the solution is implemented and weighing the scales of implementation efficacy. The impact of GST has a direct weight on two key segments. One, to the businesses and the other to the end customers those bearing the tax costs on the goods purchased and services availed. It is imperative from the number of amendments that are taking place regularly from the GST committee meetings that the process is still evolving and is yet to settle.

Review of Literature

(i) **Sony Pandey, Tax Researcher at H & R Bolck India (December 24, 2017)** The new tax regime has made the market go up in the shortest time by boosting the FMCG Industry and bringing in different benefits to the economy. All the major players in the Industry have welcomed GST with open arms. However, few firms in the sector are diversely affected by the tax rate charged on their products.

(ii) **Radhika Merwin, The Hindu Editor, (June 25, 2017)** For most segments within the FMCG space, GST bring good tidings on the back of lower tax incidence when compared to the total tax paid pre-GST – In particular, house hold/ personal care segment is likely to gain the most, with lose to 5-7 percentage point reduction in indirect taxation with GST rates on each of these products fixed at a lower 18percent, companies with this space are likely to gain.

(iii) **Sanket Dhanorkar, Economic Times Bureau,(May 29.2017)** Impact of GST on FMCG firs will depend on their product mix, given that the tax rules have gone up for some products and have fallen for others. The FMCG companies, whose tax incidence has come down under the GST regime, are likely to pass it on to the consumers in the form of lower prices. Manufactures will have to pass on the higher tax incidence of some products placed under highest tax slab of 28%, to consumer in the form of higher prices of these goods.

Purpose of GST

- One country - one tax
- Consumption based tax instead of manufacturing
- Uniform GST registration, payment
- To eliminate cascading effect of indirect taxes/ doubling tax/ tax on tax
- Subsume all indirect taxes at centre and state level
- Reduce tax evasion and corruption • Increase productivity
- Increase Tax to GDP and revenue surplus

Benefits of GST

1. Eliminating the cascading effects of taxes
2. Tax rates would be comparatively lower
3. Reduce tax evasion and increase the revenue and GDP by widening the tax base
4. There would be seamless flow of the input tax credit
5. Price of the goods and the services would fall
6. There would efficient supply chain management
7. It would promote the shift from unorganized sector to organized sector
8. It would eliminate 17 indirect taxes and therefore the compliance cost would fall

Import & Export

In the case of exports, the exports would be treated as zero-rated supply. So, no tax is payable on the exports but Input Tax Credit benefits would be allowed. And In the case of imports, the imports would be treated as inter-state supplies. Hence, Integrated Goods and Service Tax (IGST) would be applicable in addition to the customs duties. In case you are confused about GST as a business owner, feel free to consult the GST experts at Legal Rasta. You can get comprehensive assistance on GST Registration and GST Return Filing. You can also use our GST Software for doing end-to-end GST compliance.

Impact of GST on Indian Economy

GST is a game-changing reform for the Indian Economy, as it will bring the net appropriate price of the goods and services. The various factors that have impacted Indian economy are:

1. **Increases Competitiveness**
   The retail price of the manufactured goods and services in India reveals that the total tax component is around 25-30% of the cost of the product. After implementation of GST, the prices have gone down, as the burden of paying taxes has been reduced to the final consumer of such goods and services. There is a scope to increase production, hence, competition increases.
2. **Simple Tax Structure**
   Calculation of taxes under GST is simpler. Instead of multiple taxation under different stages of supply chain, CST is a one single tax. This saves money and time.
3. **Economic Union of India**
   There is freedom of transportation of goods and services from one state to another after GST. Goods can be easily transported all over the country, which is a benefit to all businesses. This encourages increase in production and for businesses to focus on PAN-India operations.
4. **Uniform Tax Regime**
   GST being a single tax, it has made it easier for the taxpayer to pay taxes uniformly. Previously, there used to be multiple taxes at every stage of supply chain, where the taxpayer would get confused, which a disadvantage.
5. **Greater Tax Revenues**
   A simpler tax structure can bring about greater compliance, this increases the number of tax payers and in turn the tax revenues collected for the government. By simplifying structures, GST would encourage compliance, which is also expected to widen the tax base.
6. **Increase in Exports**
   There has been a fall in the cost of production in the domestic market after the introduction of GST, which is a positive influence to increase the competitiveness towards the international market.

Business

GST has affected life of small & medium business houses. Too many tax compliances, monthly three tax returns, transaction wise control over sales and purchases are the examples of hardship faced by small & medium business houses. However, some relief have been given by government by setting up higher threshold limit of annual turnover of Rs. 20 lakhs (threshold limit is Rs.10 lakhs for special category states). Tax payers those who were registered under VAT & Service Tax having annual sales turnover less than Rs. 20 lakhs may enjoy exemption under GST. The simplicity of doing business, less dependency on Govt. officials, Online return and grievance filing, removal of cascading effect (double taxation), reduced tax burden on businesses houses, improved logistics and

faster delivery of services are some of the positive attributes of the newly implemented Goods and Services Tax.

The real estate is vital sectors which had played the major role in generating employment in India. Under the GST, all under construction properties have been imposed with 12 per cent GST on property value (excluding stamp duty and registration charges). It must be noted that 12 per cent tax rate will not be applicable to ready-to-move-in houses and completed projects, as sale of readyto-move-in houses are not covered under definition of goods and services and hence no GST is applicable on such transactions.

There are 3 million Small and Medium-Sized Enterprises (SME) in India contributing almost 50 percent of the industrial output and 42 percent of India's total export. The SMEs have emerged as the leading employment generating sector and has provided balanced expansion across sectors. Hardships faced by SMEs under earlier tax laws are about to vanish under GST. Online registration process under GST will ensure timely receipt of certificate of registration and minimal bureaucracy interface. The electronic payment compliance has brought transparency and has also reduced the compliance cost. Cash, input tax credits and tax liabilities are required to be maintained in the form of electronic ledger with the tax department, it may bring transparency under tax compliances. The fast track electronic refund process, online applications for provisional assessments and advance ruling are added advantages and may serve SMEs in a better way.

The refunds can be claimed only after filing of relevant returns. Also it depends on the compliances done by the supplier. All returns are necessary to be filed electronically and input tax credit and tax liability adjustment has to happen automatically on the basis of these returns. The taxpayer is required to file minimum 37 returns during a financial year. Thus SMEs has to arrange additional resources and eventual cost of compliance has increased.

Implication Strategy

India achieved VAT system to accomplish the goal of economic development. GST, a modified version of existing VAT can make functional. The major setback existing GST for implementation is that it have to be approved by every state existing in India, else the total exertion on GST will be a disaster. A well formulated one point and one type of taxation for goods and service are required in India, moreover, the formulated taxation has to be exercised by the Central, State and Interstate where lies the complexity.

In order to bring uniformity, it is necessary to bring Dual GST system like Dual VAT system followed recently in India. The major beneficial of dual GST is that; Uniform taxation can be practiced, low charges comparable to VAT, better taxable system, better tax return and registration system. To put GST into practice, PAN (Permanent Account Number) should be allotted to every individual citizen of India. The impact of GST on economic growth can be well recognized, provided few goods and service have to be exempted from the GST like agricultural goods, health, education and financial services, this is because it would hit the poor people in India to attain basic amenities higher cost. Export is zero rated under GST, this would direct to economic success such as India as

more than 25% GDP lays on export. GST is exercised on the import of goods and services also high rate is charged for the same. The dealer in the importing state has to declare every import made monthly and its return within prescribed time. This brings dealers purchasing within and from outside the state pay same tax.

Conclusion

The Goods and Services Tax Law aims at streamlining the indirect taxation regime. As mentioned above, GST include all indirect taxes levied on goods and service, including State and Central level taxes. The GST mechanism is an advancement on the VAT system, the idea being that a unified GST Law will create a seamless nationwide market It is also expected that Goods and Services Tax will improve the collection of taxes as well as boost the development of Indian economy by removing the indirect tax barriers between states and integrating the country through a uniform tax rate.

References

- Ms. Shebazbano Khan, Dr. Rashmi Soni (2018), "Impact of GST on Textile Hub of Mumbai (Bhiwandi, Dist. Thane)" Account and Financial Management Journal, Vol.3 (02) February-2018, pp.1318-1322
- Dr. S. Nagaraju (2018), "A Empirical Study On People Perception On GST (Goods And Service Tax) In Suryapet District (T.S)" International Journal Of Advanced In Management, Technology And Engineering Sciences, Vol. 8 (1), pp.328-339
- Dr. Banamali Nath (2017), "Goods and services tax: A milestone in Indian economy", International Journal of Applied Research, Vol.3 (3), pp.699-702.
- Gurveen Kaur, (2017), "GST in India - A significant Tax Amendment", International Journal of Management, Vol. 8 (3), pp. 53-62.

An Empirical Study on the Impact of Sales Promotion at Big Bazaar in Tirupur City

[1]E.Thenmozhi
[1]Assistant Professor, Department of Commerce (PA) ,
Vellalar College for Women (Autonomous), Thindal, Erode.
[2]S.Logeshkumar,
[2]Assistant Professor (Sl.Gr), Department of Management Studies,
Velalar College of Engineering and Technology (Autonomous), Thindal, Erode.

***Abstract*:** India has one of the largest numbers of retail outlets in the world. Of the 12million retail outlets present in the country, nearly 5 million sell food and related products. Though the market has been dominated by unorganized players, the entry of domestic and international organized players is set to change the scenario. Organized retail segment has been growing at a blistering pace, exceeding all previous estimates. Retail industry in India is expected to rise 25% yearly being driven by strong income growth, changing lifestyles, and favorable demographic patterns. It is expected that by 2020 modern retail industry in India will be worth US$175- 200 billion. Indian retail industry is one of the fastest growing industries with revenue expected in 2008 to amount US$ 350 billion and is increasing at a rate of 5% yearly. A further increase of 7-8% is expected in the industry of retail in India by growth in consumerism in urban areas, rising incomes, and a steep rise in rural consumption. It has further been predicted that the retailing industry in India will amount to US$ 1.1 trillion by 2020 from the current size of US$ 21.5 billion. Shopping in India has witnessed a revolution with the change in the consumer buying behavior and the whole format of shopping also altering. Industry of retail in India which has become modern can be seen from the fact that there are multi- stored malls, huge shopping centers, and sprawling complexes which offer food, shopping, and entertainment all under the same roof. India retail industry is expanding itself most aggressively; as a result a greater and for real estate is being created. Indian retailers preferred means of expansion is to expand to other regions and to increase the number of their outlets in a city. India retail industry is progressing well and for this to continue retailers as well as the Indian government will have to make a combined effort.

Keywords: growth, sales promotion, buying behaviour

INTRODUCTION

The first decade of modern retail in India has been characterized by shift from traditional Kirana stores to new formats including department stores, speciality stores, hypermarkets and supermarkets and across a range of categories. Modern retail formats have mushroomed in metros and mini-metros. In the small cities exposing residents to shopping options like never before some of these stores are branded stores exclusive showrooms either owned or franchised out by a speciality stores (creates choice to consumer, comparison between brands is possible), department stores/supermarkets (one stop shop catering to varied consumer needs) hyper-mart (low prices, vast choice available including services such as categories), shopping malls (variety of shop available to each other).

STATEMENT OF THE PROBLEM

Retail sectors now a day's do all the activities to attract the customers and increase their share in the market by providing Gift offers, discounts, after sales service etc., are some of the techniques adopted to retain the existing customer base. It attracts people the way in which products are visible not only to buy, also spend sometimes in the cafeteria and to enjoy the atmosphere, the consumer's takes a look to choose the product and understand the Inferential as well as external factors. This is done in a clean unpolluted atmosphere. It is a matter for study as to why people come and buy from a retail store. In this scenario, the following questions arise:

1 .What is the current status of big bazaar?

2. What is the level of satisfaction towards the sales promotional activities carried by big bazaar?

3. What are the factors influencing to buy the product in big bazaar?

SCOPE OF THE STUDY

The present study is an attempt to analyse the impact of sales promotion at big bazaar.

OBJECTIVE OF THE STUDY

- To know the level of satisfaction towards the sales promotional activities carried by big bazaar.
- To identify the factors influencing to buy the product in big bazaar.
- To give the suggestions to improve the sales promotion in competitive market.

RESEARCH METHODOLOGY

Research methodology is to systematically solve the research problems. It includes the overall research design, the sampling procedure, data collection method and analysis procedure.

SAMPLE DESIGN

The research is done through a questionnaire to obtain the required data from the respondents. The data collected through questionnaire were transferred to the table from which various table are prepared for further analysis. The present study is descriptive research design it includes survey of different kinds its major purpose is description of the state of affairs exists at present.

SAMPLING METHODS

It refers to the technique or procedure the researcher would adopt in selecting some sampling unit from which inference about the population are drawn. The sampling method adopted for this study is non-probability convenience sampling.

SOURCES OF DATA

Both primary and secondary data is used for the study.

Primary data

In this study, the primary data was collected through structured questionnaire.

Secondary data

Secondary datas were collected from books, leading journals, newspapers and magazines, textbooks related to study and from the internet sources have been referred for this purpose.

Area of the study

The area of study refers to Tirupur city.

Sample size and population

In the study, samples of 100 respondents were selected from the Tirupur city using convenient sampling method.

STATISTICAL TOOLS USED FOR ANALYSIS

Data collected through questionnaire were presented in a master table. From the master table, sub tables were prepared. In order to analyze and interpret the data, the following tools were applied.

- Simple percentage analysis has been done for the profile of the respondents.
- Chi square test has been applied to establish the relationship between their opinion level and independent factor.
- Weighted average score ranking technique is used to determine the factors influencing the customer's to use the big bazaar services.

LIMITATIONS OF THE STUDY

- The samples are drawn on convenience; the results are based on the data.
- As the study is based on Questionnaire, the results vary according to the opinion of the customer.
- Due to lack of time, the study has been restricted to 100 respondents only.
- The study is carried out in Tirupur city only, so the findings of the study may not be appropriate to this area.

HYPOTHESIS

There is no significant relationship between gender, age , educational qualification, occupation, monthly income, marital status and level of satisfaction of respondents.

Findings of the study

Table-1 Profile of the Respondents

Factor	Factors	Percentage
Frequency of Visit	Occasionally Once in a weak During special offers As and when Required	15 28 48 9
Factors considered while purchasing a product	Ambience Quality Company image Price	5 61 21 13
Attraction of sales promotional Activity	Offer Discount Gifts on Purchase Price Off	18 28 41 13
Offers at big bazaar	Pay back offer Monthly saving offer Gift voucher Big Day Offer	10 50 28 12
Preferred department to buy products	Food Apparels Electronics Crockery/Utensils/Plastic Toys/Sports/Stationary Home Fashion	24 6 20 13 17 20
Suitable media for Promotional Scheme	Radio TV Newspaper Boarding Others	6 39 32 7 16
Promotional activities needs better improvement	Offer Discount Gift Price Others	23 25 33 17 2
Reason to choose big bazaar	Nearby home town Customer service Company image Low price	22 39 20 19
Average billing range	Below Rs.500 Rs.501-1000 Rs.1000-3000 Rs.3001-5000 Above Rs.5000	14 33 38 12 3

- A higher percentage (48%) of the respondents visits big bazaar during special offers.
- A higher percentage (61%) of the respondents considers quality while purchasing a product.
- 41% of the respondents are attracted towards Gifts on purchase.
- 50% of the respondents are satisfied through monthly saving offer.
- 24% of the respondents prefer to purchase a food product.

- 39% of the respondents choose TV as suitable media to promote various promotional schemes.
- 33% of the respondents felt that the promotional activity needs to better improvement is providing gifts.
- 39% of the respondents choose big bazaar for a customer service.
- 38% of respondents billing range is between Rs.1000-3000.

CHI-SQUARE TEST

Table 2: Association between Level of Satisfaction and Demographic Variables

Factor	Calculated Value	Degrees of Freedom	p- Value	Result
Age	3.849	6	12.592	Insignificant
Gender	6.850	2	5.991	Significant
Occupation	4.711	6	12.592	Insignificant
Educational Qualification	5.187	6	12.592	Insignificant
Monthly Income	2.887	4	9.488	Insignificant
Marital Status	1.403	2	5.991	Insignificant

The calculated value of chi-square is less than the table value the null hypothesis is accepted. Hence it is inferred that, the respondents' level of Satisfaction is not influenced by age, occupation, educational qualification, monthly income and marital status expect gender.

TABLE : 3 REASONS FOR THE PURCHASE IN BIG BAZAAR

WEIGHTED SCORE POINTS(W)		**5**	**4**	**3**	**2**	**1**	**TOTAL SCORE (∑WX)**	**WEIGHTED AVERAGE SCORE (*XW*)**	**RANK**
RANK / FACTORS		**I**	**II**	**III**	**IV**	**V**			
PRICE	X	26	31	20	9	14	346	23.067	I
	WX	130	124	60	18	14			
SPECIAL OFFER	X	21	30	22	20	7	338	22.53	II
	WX	105	120	66	40	7			
GIFT	X	30	17	19	22	12	331	22.067	III
	WX	150	68	57	44	12			
DISCOUNT CODES	X	9	13	21	27	30	244	16.267	IV
	WX	45	52	63	54	30			
MONTHLY SAVING OFFERS	X	14	9	18	22	37	241	16.067	V
	WX	70	36	54	44	37			
TOTAL		**100**	**100**	**100**	**100**	**100**			

From the above table 3, it is observed that the most important reason for purchasing a product in big bazaar is price with weighted average score of (23.067) followed by Gift (22.067), Special offer (22.53), Discount offers (16.267), Monthly saving offers (16.067).

SUGGESTIONS

- Advertising is the basic and most prominent tool to increase the awareness of product. So, Big Bazaar may use this tool to increase their share in the market.
- Retail business is successful only when they have a good customer services. So they may provide adequate training to their employees.
- They shall go for a weekly coupon system as it holds more of the loyal customers.
- They can increase the range of other company products, especially in apparels and Food items.

CONCLUSION

The consumer preferences are changing and they are moving from traditional kirana stores to modern retail outlet. It's the main challenge to the modern retail outlets to attract the customers from the competitors. To attract more customers companies have to carry out the rigorous promotional activities in an unique way.

REFERENCES

BOOKS

S.P.Gupta "Statistical Methods" Sultan Chand Sons, New Delhi-2000.

C.K.Kothari"Research Methodology" VishwaPrakasham,
New Delhi-2000.
Philip Kotler "Marketing Management**"** Prentice hall of India
Private Ltd.,
Memoria, C.B. and Joshi. R.C. "Principles and practice of Marketing
in India".Allagabad, KitabMahal HOUSE,1984.

WEBSITE

www.futuregroup.in

www.en.wikipedia.org/wiki/Big_Bazaar

www.economictimes.indiatimes.com

ROLE OF LIBRARIES IN CREATING A KNOWLEDGE SOCIETY

Editors
Dr. S. Thanuskodi
Dr. R. Jeyshankar
Dr. L. Radha
Dr. T. Raja

Published by

Department of Library and Information Science

ALAGAPPA UNIVERSITY

(A State University Accredited with A+ Grade by NAAC (CGPA: 3.64)
in the Third Cycle and Graded as Category I University by MHRD-UGC)
Karaikudi – 630 003

and

Society for the Advancement of Library and Information Science

SALIS 2018

Role of Libraries in Creating a Knowledge Society

Price: Rs.1000/-

ISBN : 978-93-85469-05-3

Published by:

Department of Library and Information Science
Alagappa University,
Karaikudi - 630 003, India.

&

Society for the Advancement of Library and Information Science (SALIS)
Plot No. 32, 2nd Main Road,
Sabari Nagar Extension, Mugalivakkam
Chennai 600 125, Tamilnadu, India

Knowledge Sharing through News Channel: An Opinion Study from Residence of Tirupur

[1]T. Stephen, [2]D. Mercy Lydia and [3]K. Krishnaveni

[1]*HOD,DLIS, Vellalar College for Women,* [2]*Asst. Professor, DLIS, Vellalar College for Women,* [3]*MLISc, Vellalar College for Women*

Abstract :

"There is no wealth like knowledge and no poverty like ignorance"

*Human evolution starts from information. Information is a raw material to sustainable development of individual as a society. Information is the collection of processed data. The collection of information create a path for formation of knowledge, which is a way to achieve knowledgeable society. In day to day life individual consume plenty of information through various print and imprint resources available in society. Among imprint resources the television plays prior role in disseminating intellect material to the people of different community. Formerly TV which share illusion of society but now it give away real action of society through 24*7 News Channels. In this paper the researcher compare News channel with library, to bring out effective result on producing knowledgeable society.*

Keywords: News channel,Library, Knowledgeable society.

Introduction:

Information explosion is a reason to create demand for information. Information scattered throughout the world. These are mobilized and organised in the form of books in library and in form of documentary in News channels. News channel includes factors like presentation, visual impact, interactivity, coverage and duration on distributing message or information to promote knowledge. Library carries accuracy, completeness, consistency, uniqueness and timeliness on dissemination of information. To create knowledgeable society there is need of ability, awareness, education, expertise, intelligence, learning and observation. On realizing trust, passion, enthusiasm and compassionateamong individual, the value of medium will increase on creating knowledgeable society. To examine it, this study is undertaken.

News Channel:

NEWS-North East West South. News is a report of a current event. News define as a development that has happened in the past 24 hours which was not known outside and which is of wide interest to the people and that which generates curiosity among listeners. Through various forms of programmes like chat shows, docudrama, live shows, newscast, road shows, Telethon, Weather cast the current knowledge get distributed in News channel. It's aim to provide right information to right time and to create a positive impact on society. "Knowledge is key factor of motivation" this news channels, a digital media plays major role in creating knowledgeable society.

Objective of Study:

1. To examine utilization of information from news channel among general public.
2. To evaluate viewer's satisfaction on intellectual gained in news channel.
3. To identify people's perception towards knowledge scattered through news channel.
4. To examine thefulfilmentof viewers need and demand of information through News Channel.

Need for the Study:

Due to transformation of information resources makes the "information" into economy. This transmission make new innovation in television to disseminate information. NEWS is the platform to gain knowledge. An advent of 24*7 news channel influencedin social and economic factors of people. This helps to gain international information as knowledge at our door step. So it's necessary to figure out, whether news channel hand over right information at right time for right person then information consumed are authentic, authorized and clarity to produce knowledgeable society. Tamil News channels includes PuthiyaThalaimurai, Thanthi TV, NEWS 18, Lotus News, Sathiyam TV, Polimer News, Raj News, News 7, Sun News were taken to survey for the research study.

Methodology:

The primary data was collected from viewers of news channel. A structured closed ended questionnaire were distributed to 220 viewers of news channel in TirupurDist, around that 200 questionnaire were collected and analysed. The statistical tool (SPSS) were used to analyse, tabulate and interpret the collected data and presented in the forms of tables. ANOVA analysis used to find out hypothesis result. Friedman Ranking Technique also used to rank the variables.

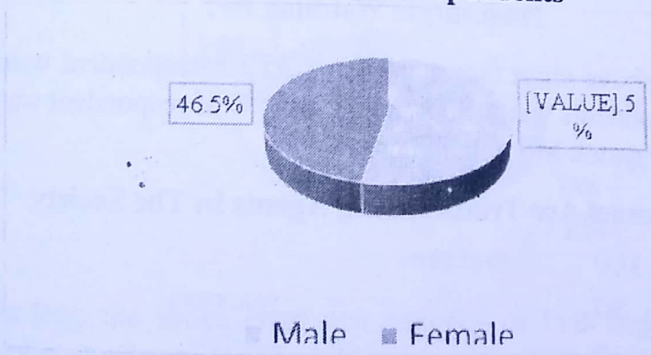
Data Analysis:

Age of Respondents

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	10yrs-25yrs	65	32.5
2	26yrs-40yrs	74	37
3	41yrs-60yrs	44	22
4	above 61yrs	17	8.5
		200	100

It is stated from the above table that majority of 37% of respondent are in age of 26yrs-40yrs, 32.5 % of respondents are in age of 10yrs-25yrs, 22% of respondents are in age of 41yrs-60yrs and minimum of 8.5% respondent are in age of above 61yrs.

Gender of the Respondents



It is stated from the above chart that majority of 53.5% respondent are Male and minimum of 46.5% respondent are Female.

Marital Status of the Respondents

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	Married	130	65
2	Unmarried	70	35
		200	100

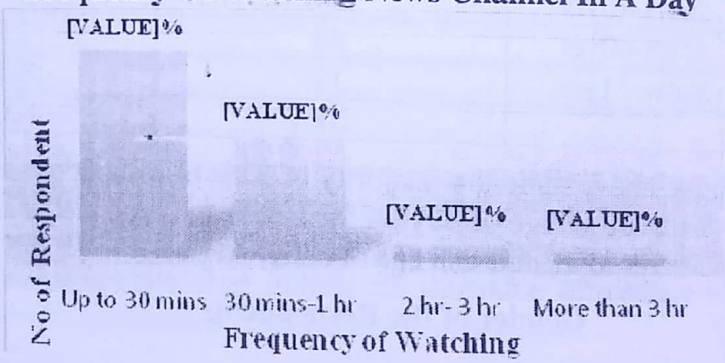
It is stated from the above table that majority of 65% respondent are married and minimum of 35% respondent are unmarried.

Purpose of Watching News Channel

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	For Updating Knowledge	65	32.5
2	For Decision Making	12	6
3	To Know Current Scenario	107	53.5
4	For Professional Development	10	5
5	For Promoting Business	6	3
		200	100

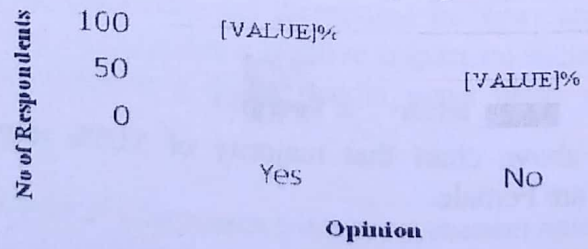
It is stated from the above table that majority of 53.5% watch news channel to Known Current Scenario, 32.5% of respondent for Updating Knowledge, 6% of respondent for Updating Knowledge, 5% of respondent for Decision Making and minimum 5% of respondent for Professional Development.

Frequency Of Watching News Channel In A Day



It is stated from the above chart that majority of 55.5% respondent watch News channel Up to 30 mins, 32.5% of respondents watch 30 mins-1 hr, 6.5% of respondent watch 2 hr- 3 hr and minimum of 5.5% respondent watch More than 3 hr.

News Channel Are Transforming Agents In The Society



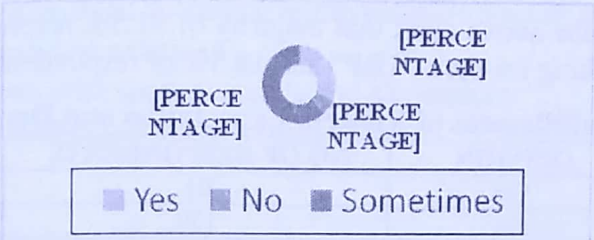
It is stated from the above chart that majority of 74% respondent said Yes and minimum of 26% of respondent said No.It is concluded from the analysis that majority (74%) said Yes, that News Channel are transforming agent in the society.

Type of News Interested of the Respondents

S. No.	Type of News	Mean Rank	DF	Table Value	χ^2 Value	'p' value
1	Social issues	2.80	5	15.086	125.206	0.000*
2	Political news	2.68				
3	Financial news	3.84				
4	Stock market	4.32				
5	Science and technology	3.98				
6	Sports	3.39				

It is stated from the above table that Stock Market stands first, Science and Technology stands second, Financial news stands third, Sports stands fourth, Social issues stands fifth and Political news stands sixth.

Partiality Of News Telecasted



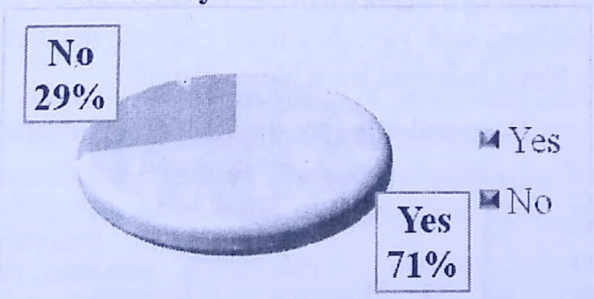
It is stated from the above chart that majority of 62% respondent said Sometimes News partial, 32% of respondents said Yes and minimum of 6% respondent said No.

Reliability of News

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	Yes	133	66.5
2	No	67	33.5
		200	100

It is stated from the above table that majority of 66.5% respondent said there is reliability on News and minimum of 33.5% respondent said there is no reliability on News telecasted.

Sensibility of Flash News



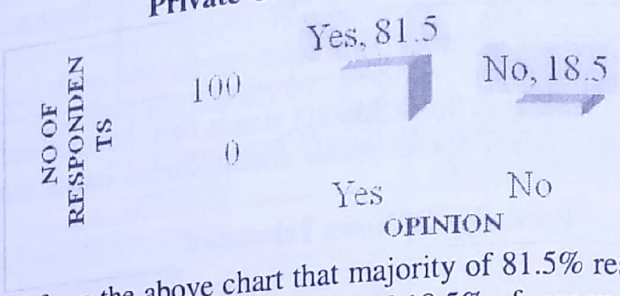
It is stated from the above chart that majority of 71% respondents said Flash News is Sensible and 29% of respondents said Flash News is not sensible.

News Channel Having Social Concern

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	Yes	93	46.5
2	No	107	53.5
		200	100

It is stated from the above table that majority of 53.5% respondents said News channels doesn't have social concern on telecasting News and 46.5% of respondents said Yes , they telecasting News with social concern.

Private Channel Working For "Trp"



It is stated from the above chart that majority of 81.5% respondents said Yes, the private News channels were working for their "TRP" and 18.5% of respondents said No.

Fulfillement of Viewers Expectation and Demand

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	Yes	61	30.5
2	No	139	69.5
		200	100

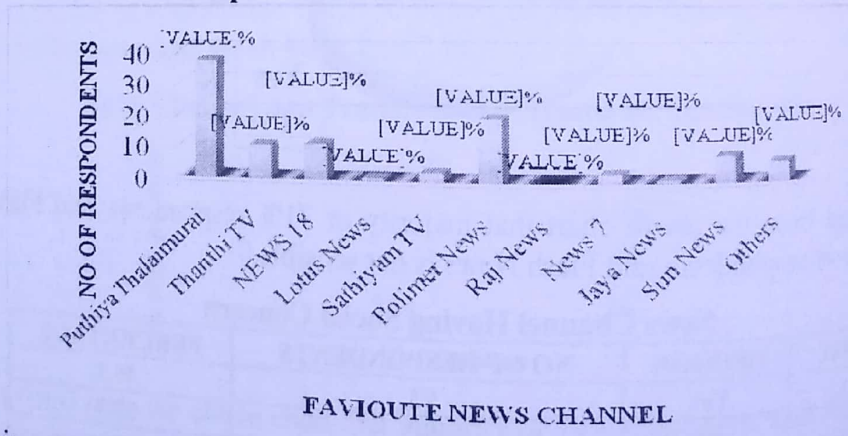
It is stated from the above table that majority of 69.5% respondents said News channels are fulfilling their demands and expectation and 30.5% of respondents said Yes, it fulfil their demands and expectation.

Evaluation of News Received by Viewer

S.NO	OPINION	NO OF RESPONDENTS	PERCENTAGE
1	Yes	61	30.5
2	No	34	17
3	Sometimes	105	52.5
		200	100

It is stated from the above table that majority of 52.5% respondents said Sometimes, they evaluate the News, 30.5% of respondents said Yes, they must evaluate the News and minimum of 17% said they will not evaluate the News received from News channel.

Respondents Faviourite News Cahnnel



It is stated from the above chart that majority of 37% respondents said PuthiyaThalaimurai, 19.5% of respondents said Thanthi TV, 11% of respondents said NEWS

10.5% of respondents said Thanthi TV, 8% of respondents said Sun News, 6% of respondents said Other news channel rather then this list, 3% of respondents said both SathiyamTv and News 7 respectively, 1% of respondents said both Lotus News and Jaya News respectively.

Suggestion:

Suggestion to Media:

- News channels should try to broaden the coverage of the contents such as current affairs, education, sports, business, cinema, health care and social security. so that media can satisfy the needs.
- It is appropriate to give more coverage to the developments and success stories in the field of science and technology.
- The programs need to be scheduled according to the viewer's convenience.
- The news presentation should be unbiased.
- To deliver the relevant news with more accuracy and authenticity.
- News programs should telecasted to make viewers to think.

Suggestion to Public:

- Need to grade the News Channel for Watching.
- Evaluate the News received from News Channel.
- As a rational man, its required to interpret the information gained from News Channel and make use it.
- Notify and observe the creative programs, which give productive of knowledge.

Conclusion :

The News channel are unavoidable medium for utilization of News.We strongly believe that these media can change a society and act as a change agents. It is unfortunate that News channels are working for TRP rather than peoples benefit and deals with controversy matter without society concern. The authenticity of news is again question mark, because same news broadcasted differently in each News channels. Then it result is unbiased. So, it concluded News channel is not perfect medium to create knowledgeable society. As library is a place of truth and original documents which spread accurate and reliable news to people, sure it guide people to make knowledgeable society than the other medium of communication. Its responsibility of library and library professional to educate media professional to provide diversification of information to the people about all the sector and to educate people to know the value of News received and its effects, for that this study will act as support agent to guide knowledgeable society.

Bibliography :

1. Fisher, C. (2016). The Trouble with "Trust" in News Media. Communication Research and Practice.
2. Ninikala.K.(2016). Precption Towards watching National English News channels with Special reference to Malabar Region of Kerala. Asian Journal of Management Research.