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CRITERION III

RESEARCH, INNOVATIONS AND EXTENSION

3.4.3 Details of research papers per teacher in CARE Journals notified on UGC website during the year 2022-2023

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THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)



Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	Visible Light Photocatalyst and Antibacterial Activity of BFO (Bismuth Ferrite) Nanoparticles from Honey	Water



Article

Visible Light Photocatalyst and Antibacterial Activity of BFO (Bismuth Ferrite) Nanoparticles from Honey

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Abstract: Visible light-driven photocatalyst BiFeO₃ (BFO) nanoparticles were synthesised by the auto-combustion method. The honey was used to fuel the auto combustion method to synthesise the BFO nanoparticles. The structural, optical and morphological activities of the bismuth loaded BFO nanoparticles were characterised by X-ray diffraction (XRD), FTIR, UV, photoluminescence (PL) and SEM analysis, respectively. The bismuth content modifies the lattice parameters of XRD and reduce the bandgap energy. The observed crystallite size varies from 19 to 27 nm and the bandgap region is 2.07 to 2.21 eV. The photo-charge carriers increased upon the BFO nanoparticles and their emission a 587 nm in the visible region of the PL spectrum. The 2% bismuth loaded BFO nanoparticles showed better morphology than 0% and 5% bismuth loaded BFO nanoparticles. The oxidation state of BFO nanoparticles and their binding energies were characterised by X-ray Photoelectron Spectroscopy (XPS) analysis. The methylene blue dye (MB) degradation against 2% BFO nanoparticles showed enhanced catalytic activity (81%) than the remaining samples of BFO nanoparticles. The bacteria activity of BFO nanoparticles was assessed against Gram-positive and Gram-negative bacteria including *S. aureus* and *E. coli*. 2% Excess bismuth BFO nanoparticles exhibit better antibacterial activity. Comparatively, 2% Excess bismuth BFO nanoparticles derived an outstanding crystallinity charge separation, and reduced bandgap activities. Based on these findings, BFO nanoparticles may be applicable in drug delivery and water remediation applications.

Keywords: BFO; visible light; honey; green synthesis and photocatalysis

1. Introduction

Magnetic nanoparticles possess multiple applications due to their large number of oxides with reasonable magnetic properties. Their applications are sensors, solar energy devices and data storage. These applications are very basic applications of ferrites [1]. Various numbers of metal ferrite oxides are available; they are NFO (Nickel Ferrite), ZFC

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	Crystal growth, structure, surface, optical, thermal, mechanical, magnetic, electrical investigations on cesium sulphate-doped 4-methoxyaniline: a single crystal for NLO and antimicrobial applications	Journal of Material Science: Materials in Electronics

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Crystal growth, structure, surface, optical, thermal, mechanical, magnetic, electrical investigations on cesium sulphate-doped 4-methoxyaniline: a single crystal for NLO and antimicrobial applications

Published: 02 August 2022

Volume 33, pages 19420–19433, (2022) [Cite this article](#)

K. Thilaga, P. Selvarajan & S. M. Abdul Kader

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Abstract

A new single crystal of cesium sulphate-doped 4-methoxyaniline (CS-4MOA) was obtained by the solvent evaporation approach. XRD manifests that the CS-4MOA crystallizes in orthorhombic crystal structure. The existence of several functional groups in the CS-4MOA crystal is affirmed by FTIR analysis. SEM-EDAX analysis was performed to examine the surface morphology and the composition of CS-4MOA sample. Ultraviolet-visible spectral study validates the transparency of CS-4MOA in the region of 330–1100 nm. The thermal steadiness of the CS-4MOA crystal was examined using TG/DTA, which revealed that it was stable up to 88 °C. The mechanical stability of CS-4MOA crystal was assessed through Vickers microhardness analysis. VSM analysis was used to evaluate the magnetic behaviour of the CS-4MOA crystal. The electrical characteristics of the CS-4MOA were investigated by impedance study for various temperatures. The NLO parameters of CS-4MOA were computed by Z-scan technique. The existence of second order nonlinear optical susceptibility in CS-4MOA was confirmed by the SHG investigation. Additionally, antimicrobial activity of CS-4MOA was performed against bacterial strains and fungal pathogen for medicinal applications.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	Crystal growth and physicochemical characterization of urea doped 4-methoxyaniline (U-4MOA) single crystals for NLO and antimicrobial applications	Journal of Molecular Structure



Crystal growth and physicochemical characterization of urea doped 4-methoxyaniline (U-4MOA) single crystals for NLO and antimicrobial applications

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Highlights

- Urea doped 4-methoxyaniline (U-4MOA) single crystal was grown in ethanol and water solution.
- XRD study reveals that the crystal structure of the host crystal has not been altered by adding urea as the dopant.
- Results from spectral, thermal, second-order NLO, third-order NLO and impedance studies of the title crystal have been analyzed.
- Hirshfeld surface analysis was carried out for the grown crystal.
- Antimicrobial activity study reveals that U-4MOA crystal has the remarkable antimicrobial efficacy against some of the pathogens.

Abstract

The single crystals of 4-methoxyaniline doped with urea (U-4MOA) were grown by slow

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	Investigation the structural, optical electrochemical performance of bismuth ferrite nanoparticles toward photocatalytic activity: as an effect of reducing agent	J Mater Sci: Mater Electron

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Investigating the structural, optical and electrochemical performance of bismuth ferrite (BiFeO₃) nanoparticles toward photocatalytic activity: as an effect of reducing agent

Published: 11 February 2023

Volume 34, article number 486, (2023) [Cite this article](#)

[R. M. Muthukrishnan](#), [D. Renuka Devesi](#), [P. Mohammed Yusuf Ansari](#), [T. Sivanesan](#) & [S. M. Abdul Kader](#)



369 Accesses 4 Citations [Explore all metrics](#) →

Abstract

Multifunctional bismuth ferrite (BFO) nanoparticles were successfully synthesized using the co-precipitation technique. pH being a key factor in co-precipitation technique was used to optimize the phase pure synthesis of BFO. The undergone structural changes were examined using XRD. The XRD result shows the distortion in rhombohedral structure of the synthesized sample. Under Ultraviolet-visible spectroscopy, the occurrence of d-d transition and C-T transition taking place in BFO sample was investigated. In addition, the band gap values of BFO1, BFO2 and BFO3 were determined using Tauc's plot and the values are 2.18 eV, 2.18 eV and 2.12eV, respectively. The suppression of modes of vibration in BFO explains the structural distortion caused by reducing agent; these results are consistent with the XRD results. Finally, through electrochemical analysis the redox behavior and the electron hole transport of the samples were analyzed to identify the suitable sample for photocatalytic performance. EIS spectra were carried out to understand the charge transfer resistance of the samples. The electrostatic interaction of catalyst with Fenton reagent and target material was performed at different ranges of pH 3 to 10 which shows enhanced

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	Analysing the super exchange interaction of on multiferroic structured nanocomposite	Physical B:Condensed Matter



Physica B: Condensed Matter

Volume 665, 15 September 2023, 415030



Analysing the super exchange interaction of $\text{Fe}^{3+}-\text{O}^{2-}-\text{Cr}^{3+}$ on multiferroic structured $\text{BiFeO}_3/\text{LaCrO}_3$ nanocomposite

R.M. Muthukrishnan, P. Mohammed Yusuf Ansari, S.M. Abdul Kader

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<https://doi.org/10.1016/j.physb.2023.415030>

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Abstract

Herein, we report a successful attempt to synthesise a material based on the theory proposed by Goodenough and Kanamori et al. This report details the super-exchange magnetic interaction of $\text{Fe}^{3+}-\text{O}^{2-}-\text{Cr}^{3+}$ taking place between $\text{BiFeO}_3/\text{LaCrO}_3$ nanocomposite. The tilt in FeO_6 's octahedral sites cancels out the tilt in the CrO_6 site, making it an ideal perovskite explained through nearest neighbouring interaction (NN), with the next nearest neighbour interaction (NNN) pointing the way to possible ferromagnetic exchange in $\text{Fe}^{3+}-\text{O}^{2-}-\text{Cr}^{3+}$. The significant enhancement of retentivity (residual magnetism) in $\text{BiFeO}_3/\text{LaCrO}_3$ nanocomposite is three times that of the pristine material. The material's high coercive nature (351.350e) makes it suitable for hard

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	Engineering and analyzing the super exchange interaction of on novel multiferroic nano composite	Journal of Solid State Chemistry

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Journal of Solid State Chemistry

Volume 326, October 2023, 124224



Engineering and analysing the super exchange interaction of Fe^{3+} - O^{2-} - V^{5+} on novel multiferroic $\text{BiFeO}_3/\text{BiVO}_4$ nanocomposite

R.M. MuthuKrishnan, P. Mohammed Yusuf Ansari, S.M. Abdul Kader

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<https://doi.org/10.1016/j.jssc.2023.124224>

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Highlights

- A promising Fe^{3+} - O^{2-} - V^{5+} interaction was engineered using $\text{BiFeO}_3/\text{BiVO}_4$ nanocomposite.
- The structural distortions in the octahedral environment ($\text{Fe}/\text{V}-\text{O}_6$) were analysed using Rietveld refinement software.
- The occurrence of multiple magnetic domains in $\text{BiFeO}_3/\text{BiVO}_4$ nanocomposite was analyzed through VSM.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. M. Abdul kader	Principal	A novel biogenic method to synthesis a ternary (Zno-Ag)/g-nanocomposite with an enhanced photocatalytic and antibacterial activities	Inorganic Chemistry Communications



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Inorganic Chemistry Communications

Volume 154, August 2023, 110877



Short communication

A novel biogenic method to synthesis a ternary (ZnO-Ag)/g-C₃N₄ nanocomposite with an enhanced photocatalytic and antibacterial activities

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<https://doi.org/10.1016/j.inoche.2023.110877>

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Highlights

- A Ternary (ZnO-Ag)/g-C₃N₄ nanocomposite was successfully synthesized via green route.
- XRD and XPS analysis confirms the phase purity of the synthesized samples.
- PL spectra explain the recombination rate in the nanocomposite and the

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Mohamed Haneef	English	The Diasporic Experience of the Elderly Immigrants in Chitra Banerjee Divakaruni's <i>The Mistress of Spices</i> and <i>Before We Visit the Goddess</i>	International Journal of Early Childhood Special Education (INT-JECSE)

International Journal of Early Childhood Special Education (INT-JECSE)
 DOI:10.48047/intjecse/V14I8.306 ISSN: 1308-5581 Vol 14, Issue 08 2022

The Diasporic Experiences of the Elderly Immigrants in Chitra Banerjee Divakaruni's *The Mistress of Spices* and *Before We Visit the Goddess*

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ABSTRACT

Displacement put the people in psychological, physical and cultural snags. Though the effect of displacement affects immigrants, its wavelength varies with age and experience. Most of the expatriates who move to America from India encounter opposing cultures and a feeling of alienation. They attempt to adjust, to adapt and to assimilate the alien culture. The degree of this adoption differs from generation to generation. Chitra Banerjee Divakaruni being an expert in displaying the hitches of the immigrants felt among the different age groups. In the novels such as *The Mistress of Spices*, *Queen of Dreams*, *Vine of Desire*, *Oleander Girl* and *Before We Visit the Goddess*, the theme of the dynamics of life in the alien land for the elderly immigrants who have been in widowhood or due to family situation living with the help of their children is dealt within the subplot.

Keywords: Immigration, displacement, loneliness, nostalgia.

The journey of life passes through five levels: non-age, childhood, juvenile stage, adulthood and old age. Among them, longevity is full of challenges. The people who are above the age of sixty are described as old-age people, senior citizens, aged people or elderly people. The biological ageing process is termed as senescence. Senescence is the fate of all organisms. At this point, cells automatically lose their potential and growth. It leads to a physical downturn. Older people usually undergo a lot of physiological, psychological and emotional changes and problems. At this moment, the feelings of insecurity, loneliness, weakness, dependency and anxiety will fill their hearts like a smog. The apathetic behaviour of the family members would aggravate their feeling of negligence. Their social relationships are also narrowed due to the deaths of their friends, relatives, health issues and migration. As the social relationship gradually declines for the old folks, family becomes their centre. The loss of his/her spouse increases the sense of solitude. The supposition of being dependent on others for financial support increases their emotional pain. Dejection, dependence, disappointment, deterioration, and disease diminish the peace of senior citizens.

In India, the joint family culture prevailed in the past to take care of the elders in the home. But nowadays, due to the nuclear family system, they are subjected to alienation and segregation. They suffer due to the lack of love and care within their families. Displacement is the hardest thing people have to undergo in their lives. Displacement, especially in the twilight years, is an awful experience. It forces displaced people to face the hardship of separation. People who have been displaced from their place have to lose their relatives, friends and neighborhood. It distances the people from their native place, culture, traditions and practices.

Chitra Banerjee Divakaruni being an expert in displaying the hitches of immigrants, portrays the experiences of immigration felt among the different age groups. **Shil** presents the aberrations and oddities of the immigrant experience in a realistic way. Devika writes:

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Mohamed Haneef	English	Wings of Fire by A.P.J Abdul Kalam: An Essential Teaching Tool for Reforming Students' Psychological and cognitive Evolvement in classroom	International Journal of Early Childhood Special Education(INT-JECSE)

International Journal of Early Childhood Special Education (INT-JECSE)
DOI:10.48047/intjecse/V14I8.289 ISSN: 1308-5581 Vol 14, Issue 08 2022

***Wings of Fire* by A.P.J. Abdul Kalam: An Essential Teaching Tool for Reforming Students' Psychological and Cognitive Evolvement in Classroom**

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Abstract

The article examines how the autobiography *Wings of Fire* by A.P.J. Abdul Kalam could be used in the classroom to enhance language skills. Also the paper discusses the importance of Indian history and culture. The book's themes and lessons such as persistence, leadership and innovation are dealt with to teach students how they may apply them in their lives. The article also suggests several activities and dialogues that may help students understand the subject matter and apply the lessons they learned to their life. There are also case studies of educators who have effectively utilized the book in the classroom. In the summation, the main ideas are summarized, the significance of employing *Wings of Fire* as a tool for enhancement of students' psychological and cognitive growth in the classroom is emphasized, and more study and investigation in this area is suggested. It emphasizes the advantages of utilizing literature for students' academic and personal development.

Keywords: autobiography, psychological development, cognitive development, classroom teaching, perseverance, leadership, innovation, Indian culture, literature, personal growth, academic growth.

The autobiography of A.P.J. Abdul Kalam, *Wings of Fire* has received much praise for its motivational themes and insights into the life of one of India's most notable personalities. *Wings of Fire* has been utilized as a teaching tool in schools all around the globe in addition to being a gripping story, especially in India, where it is often included in the school curriculum. This article explores the effects of utilizing *Wings of Fire* in the classroom as a teaching resource, emphasizing how it could alter students' psychological and cognitive development.

To start, it is critical to comprehend the historical and cultural backdrop of India and the setting in which *Wings of Fire* was written. A.P.J. Abdul Kalam, a Scientist, Engineer, and Politician known as the 'People's President' who presided over India from 2002 to 2007. Kalam's life, which began in a tiny Tamil Nadu hamlet, proves the value of education, diligence, and tenacity. In *Wings of Fire* Kalam recounts his life's events, including his upbringing in Rameswaram, his career as a scientist at the Indian Space Research Organization (ISRO) and the Defense Research and Development Organization (DRDO), and his ultimate transition into politics.

Wings of Fire is fundamentally the tale of a guy who overcame difficult circumstances and rose to a tremendous achievement. The book also examines the status of Indian society and its problems, such as corruption, illiteracy, and poverty. Kalam cites examples from his life to motivate people to strive toward his vision of growth, innovation, and inclusion for India.

The value of tenacity is one of the major topics that *Wings of Fire* explores. Kalam overcame several challenges throughout his life, from his poverty upbringing to his difficulties developing a productive missile program at DRDO. He persisted nevertheless, and his unshakable tenacity ultimately brought about his victory. Students may learn a lot from Kalam's narratives by using it as inspiration to keep going when things become tough and never give up on their goals.

The theme of Leadership figures prominently in *Wings of Fire* as well. From his position as a scientist at ISRO to his subsequent job as a politician, Kalam was a leader in various settings. He consistently showed a dedication to moral leadership, putting the needs of the nation and its citizens

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Mohamed Haneef	English	Bengali Cuisine in chitra Banerjee Divakaruni's queen of dreams and before we visit the goddess	IJFANS International journal of food and nutritional Sciences

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

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Research paper

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Bengali Cuisine in Chitra Banerjee Divakaruni 's *Queen of Dreams* and *Before We Visit the Goddess*

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Abstract:

Chitra Banerjee Divakaruni is a remarkable diasporic writer who settled in America. She is from Bengal, India. She honours her Indian roots through her writings. Food items of Bengal is an intrinsic part of the Bengal's indigenous culture. In her narrative, culinary elements hold a significant role. In her novels she gives enough references to the Bengali dishes which show her love for the flavours of Bengal. The presence of the authentic Bengal recipes is profusely seen in the corpus of her novels such as *Queen of Dreams* and *Before We Visit the Goddess*. She mentions specific dishes and ingredients to evoke the flavours, aromas and textures associated with Bengali cuisine.

Keywords: Bengali Cuisine, authentic dishes, memory, Bengali identity,

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Mohamed Haneef	English	An Eco-Critical Reading of the select poems of mamang dai and temsula ao	IJFANS International journal of food and nutritional Sciences

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AN ECO-CRITICAL READING OF THE SELECT POEMS OF MAMANG DAI AND TEMSULA AO

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The study analyzes and contrasts the eco-critical strategies used in the poetry of the two contemporary Indian poets, Mamang Dai and Temsula Ao who belong to the Northeast Region in India. It examines how the poets describe the natural environment and the connection via language, images and ideas. The paper contends that although their poems are eco-critical, their methods vary in scope, diction and cultural setting. It also highlights how these two poets showcase environment in their lasting pieces through a comparative analysis and emphasizes on the value of eco-literature in addressing environmental concerns. The article contributes to eco-criticism by examining the connection between literature and the environment and highlights how literature can influence people's views on environment to promote ecological consciousness. It also offers insights into how modern Indian poets use their works to raise awareness on ecological problems and address environmental issues.

Keywords: eco-literature, eco-criticism, human-nature relationship, environmental issues, cultural context, environmental degradation.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Mohamed Haneef	English	The English Language: A Ubiquitous force for global Empowerment	IJFANS International journal of food and nutritional Sciences

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

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Research paper

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The English Language: A Ubiquitous Force for Global Empowerment

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Abstract

The English language has become a worldwide phenomenon, a pervasive force in emancipation worldwide. The effects of knowing English and its function in bridging cultural gaps are discussed in the paper. Knowing English well increases job prospects in today's global market. Native English speakers have an edge in breaking into the global labor market, working with multinational corporations, and engaging in international commerce. The language provides a springboard for upward economic and social mobility, allowing people and communities to raise their standard of living. The ability to communicate and learn in English is equally crucial. Since English is widely used in the academic and scientific

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. K. Hema	English	Representation of Abandonment and Reconciliation in Maya Angelou's Mom and Me and Mom	International journal of Early Childhood Special Education(INT-JECSE)

International Journal of Early Childhood Special Education (INT-JECSE)
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Representation of Abandonment and Reconciliation in Maya Angelou's *Mom and Me and Mom*

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Abstract

African American literature, in its broadest sense, refers to works written by Americans of African origin. It has a wide range. African American literature has typically concentrated on African Americans' place in American culture as a whole and what it means to be an American. Some well-known African American female writers who rose to fame through their writings include Audre Lorde, Toni Morrison, Zora Neale Hurston, Octavia Butler, Dana L. Davis, Rosane Gay, Ibi Zoboi, Angie Thomas, Torii Adleyerni and Maya Angelou. Famous African American author, poet and social activist Maya Angelou is credited with being the first to write autofictions in a chronological order. She came to represent the silent African American women who face prejudice on the basis of their gender, class, race and nationality. Maya Angelou has recorded the highlights of her exceptional life in several of her best-selling autobiographies. But in her last autofiction *Mom and Me and Mom*, the renowned novelist opens up about her connection with her mother, which is the most intimate personal story she has ever told. For the first time, Angelou discusses her experiences growing up as the daughter of Vivian Baxter, a strong woman whose diminutive stature belied her larger-than-life presence and who was largely absent from Maya Angelou's early life. Marguerite, three and her elder brother were taken from their California home and forced to live with their grandmother Annie Henderson in Stamps, Arkansas, as Vivian's marriage started to fall apart. Although Marguerite struggled for years with the accompanying sentiments of abandonment, their reconnection ten years later marked the start of an untold tale.

Key Words: African American, chronological order, autofiction, abandonment, reconcile and sentiment.

African American literature is the body of literature produced in the United States by writers of African descent. African American literature tends to focus on themes of particular interest to Black people, for example, the role of African Americans within the larger American society and issues such as African American culture, racism, religion, slavery, freedom, and equality. Many African American female writers like Audre Lorde, Toni Morrison, Zora Neale Hurston, Octavia Butler, Dana L. Davis, Rosane Gay, Ibi Zoboi, Angie Thomas, Torii Adleyerni and Maya Angelou have emerged as with their writings. Marguerite Johnson, better known as Maya Angelou, was a celebrated American poet, storyteller, activist, and author. She was born in St. Louis, Missouri. She had a varied career encompassing work as a singer, dancer, actress, composer and the first Black woman to direct in Hollywood, but she is best known for her work as a writer, editor, copyist, playwright and poet. She served as a civil rights activist for Malcolm X and Dr. Martin Luther King Jr. As the Reynolds professor of American Studies at Wake Forest University, she was also a teacher. President Bill Clinton awarded her with the *National Medal of Arts* in 2000. President Barack Obama honoured her with the *Presidential Medal of Freedom* in 2010, the nation's highest civilian honour. Before she passed away, Maya Angelou received more than 50 honorary degrees. She has published three collections of poems and seven autofictions in the chronological sequence like *I Know Why the Caged Bird Sings* (1969), *Gather Together in My Name* (1974), *Singing and Swingin' and Gettin' Merry Like Christmas* (1976), *The Heart of a Woman* (1981), *All God's*

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Dr. K. Hema	English	Issues in Translating Instrument of War from Tamil into English with Special Reference to Aiyandar's The Pura-Porul Venba-Malai	International journal of Early Childhood Special Education(INT-JECSE)

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Issues in Translating Instruments of War from Tamil into English with Special Reference to Aiyandar's *The Pura-Porul Venba-Malai*

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Abstract

Translation like any other linguistic act is a communicative activity. It not only involves the transfer of meaning from one language into another language, but also involves a whole set of linguistic and cultural criteria. To translate a work is to dignify it. It is amazing that G. U. Pope who was a foreigner to Tamil language and Tamil culture had taken efforts to learn this language and had transformed the treasures of Tamil literature into English. Thus *The Pura-Porul Venba-Malai* had been translated by Pope from Tamil into English. In translating old classics in poetic composition the translator faces certain unique problems while translating the instruments of war from Tamil into English. Thus it is proposed to identify the problems involved, study the principles and procedures adopted, highlight successful and unsuccessful areas in the translator's work and suggest techniques for bettering the quality of translation.

Keywords: Translation, translator, source language, weapon, equivalent

Introduction

Translation is the comprehension of the meaning of a text and the subsequent production of an equivalent text that communicates the same message in another language. The text that is translated is called the source text (ST), and the language that it is translated into is called the target language (TL). As observed by Frenz, translation plays a vital role in opening "new lanes in the literary-world traffic" (103). It enables literary exchanges between countries. A sharing of the literary wealth between countries enables the sharing of literary experiences and emotions. This promotes better human understanding. It is in this light Pushkin defined the translator as "the courier of human spirit" (Kalyani 14). Translating a poem has its unique problems. When translating from one language to another, it is necessary not only to adjust to quite a different system, but also to reckon with the special restrictions which may exist within such a system. With regard to poetry, total fidelity to the original is impossible and the translator can at best try to attain approximation.

The Pura-Porul Venba-Malai

A study has been undertaken in this paper to analyse the issues a translator faces and the strategies he employs while translating the instruments of war in *The Pura-Porul Venba-Malai*. *The Pura-Porul Venba-Malai* is a very ancient work, professing to be founded upon a still older composition called *The Twelve Chapters, paṅṅirupapalam* by one of the twelve disciples of Agasthiyar, one of the seven most revered rishis in the Vedic texts. He is one of the Tamil Siddhars 'those who have achieved a high degree of physical as well as spiritual perfection' in Shaivism. He invented an early grammar of the Tamil language, *Agastiyam*. His name is Aiyandar and he is said to have been a descendant of the old Chera kings, and the compiler of *Pura-Porul Venba-Malai* which can hardly be less than ten centuries old. *Malai* means 'garland' and *veuba* is the name of the metre. It is a derivative work, probably an abridgment of the lost treatise *Paṅṅirupapalam, The Book of Twelve Chapters*.

A noticeable development during the early medieval period (circa A.D. 1000-1250) was the writing of specialized and often enlarged books on the subjects treated in the *Tolkappiyam*. The three sections of bardic grammar - namely letters, words, and poetic themes came to be considered under five heads: letters, words, poetic themes, prosody, and rhetoric. The last two were included in the book on

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
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Research paper

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Portrayal of Existential Crisis in Maya Angelou's *I Know Why the Caged Bird Sings*

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Abstract

Maya Angelou is one of the prominent African American writers. She always writes on the themes like family, motherhood, race, displacement and journey very seriously and works to get free from the constraints of the so-called canonized versions of human ideals. She also looks to discover a world where she can establish her own unique viewpoints and the freedom of humanity. The underlying concepts of the existential crisis have played a significant role in how people have approached their work in various spheres of human experience. A lot of authors with African American ancestry have addressed these issues. *I Know Why a Caged Bird Sings* by Maya Angelou is filled with indications of estrangement and dissatisfaction. Maya Angelou's in-depth examination of *I Know Why the Caged Bird Sings*, incorporated in this research is an attempt to represent and explain the concept of alienation. These writings' poignant narratives call into question the crises of identity, gender and consciousness. The research concludes by demonstrating the struggles for acceptance and self-awareness and how they helped the character to grow into a stronger woman, driven by her sense of alienation.

Key Words: Existential crisis, portrayal, self-awareness, poignant narrative and alienation.

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Dr. K. Hema	English	Issue in Translating Flora and Fauna	IJFANS International journal of food and nutritional Sciences



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RESISTANCE IN MECHANISMS OF MYCO-BACTERIUM TUBERCULOSIS: INTRODUCING NEW CLASS OF THERAPEUTICS

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DEVELOPMENT AND QUALITY EVALUATION OF NOODLES FROM DEAF MILLET FERMENTED FLOUR

Issues in Translating Flora and Fauna

PDF

M. Jebamalar Freeda, Dr. K. Hema

Keywords:

Translation, Translator, Language, Cultures, Semantics, Procedures, Transliteration

Abstract

A language is developed through its interaction with culture on the planes of time and space. Every human society has culture. Culture is conditioned by the land, the climate, the social customs, the laws, the religions, the language and other factors associated with them in their daily life. All cultures serve to meet the basic needs shared by human beings. Every culture has methods of obtaining food and shelter. Translation, a branch of study, aims at bringing together the nuances of two different cultures and languages, encountering socio-cultural and linguistic codes. The flora and fauna of a particular region is characterized by the climatic conditions; what the species consumes for energy; what predators it has the amounts of heat, light or moisture it needs; and the conditions under which it reproduces. Since the flora and fauna vary from region to region not all languages have the right equivalent for a particular animal or plant. Therefore translation encounters problem while translating a text from one language into another. To take a concrete case, few verses from The Naladiyar written by the Jains in Tamil and their translation in English by G. U Pope have been analysed elaborately. As such, a study has been undertaken in this paper to analyse the issues a translator faces and the strategies he employs while translating a text from Tamil into English that are linguistically and culturally far apart.

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Dr. K. Hema	English	Issues in Translating poetry from Tamil into English with special Reference to Aiyararithan's <i>The pura-porul venba-malai</i>	Rabindra baharatoo journal of philosophy

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Issues in Translating Instruments of War from Tamil into English with Special Reference to Aiyararithan's *The Pura-Porul Venba-Malai*

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Abstract

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Dr. Kanna Muthiah	English	Ayesha jamal- an existentialist from essentialist in shama futehally's reaching Bombay central	Rabindra bahrati journal of philosophy

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**AYESHA JAMAL - AN EXISTENTIALIST FROM ESSENTIALIST IN SHAMA
FUTEHALLY'S REACHING BOMBAY CENTRAL**

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Dr. Kanna Muthiah, Assistant Professor and Research Head, Research Department of English, Sadakathullah Appa College, Tirunelveli.

Abstract

The present paper portrays the ideologies of a Muslim woman's longing for freedom of action. In *Reaching Bombay Central*, through the character, Ayesha Jamal, the protagonist, the novelist presents how her journey towards Bombay, experiences, made her life alive. Ayesha's longing, to reach the unreached Muslim woman who falls into the trap of communal politics, emerges as an existentialist from essentialist in the contemporary India to protect her husband, a Government employee who was trapped in corruption.

Key Words: Communal Politics, Essentialist, Existentialist, Freedom of Action, Gender Politics

In *Introducing Feminism*, according to the great historian and army general Thucydides, 'Essentialist thinking had repercussions on women's private and public lives. In private, essentialist ideas were translated into rules of conduct for the woman as wife, mother and daughter. In public, it was believed that women's participation should be limited and strictly controlled by a masculine representative of authority such as husband, father, the clergy, the law' (*Introducing Feminism* 6). In *Reaching Bombay Central*, Ayesha, the mother of a daughter and a son, wife of a Government employee, an educated and sensible woman who do not observe purdah, existing the life of a traditional Muslim family of India. She is inhabiting love, comfort and security. But there comes a trauma in her life. The novelist has portrayed the excruciating distress of Ayesha Jamal whose husband Mr. Jamal has been suspended for unduly favouring a fellow Muslim. The novel portrays the means of existence she receives from the fellow travellers in the train. Ayesha Jamal is on a train to Bombay from Lucknow, to meet her uncle, to resolve an unpleasant suspension in her husband's professional life that threatens to destroy the cocooned, secured, ease essential life. she tries to overcome her difficulties in domestic life with a mixture of helpless anger and desperate hope by responding to the passing world around her to the realities of present day India. One should adjust with the environment and with their surroundings to lead her essential life though she is from well to do traditional family.

Communal Politics is based on the idea that religion is the principal basis of social community. It is threat to national integrity. The novel is set in troubled times- a right wing party is in power and minorities are very conscious of their position and thus insecure. There is a hesitant from Ayesha Jamal when the politician asked 'Your good name, Madam?' (RBC 5). At one instance Arif says 'May be the only way out,' would be to change my name' (RBC 64)

The novel exposes the social system where gender politics play at home. Though Ayesha Jamal is an educated woman, her life seems purposeless without intelligent and independent role at home. Marriage, motherhood and family responsibilities are the facets. She cannot question or to take decisions but to exist to fulfil her submissive role. With her husband's concern she travels to her "mamoo", the police officer's house to revert the suspension order. She is hesitant to tell the truth as she is a woman and does not want to break the smooth relationship or friendliness which she did not receive at home from the co passengers

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. Kanna Muthiah	English	Reminiscences : A solace to laila's claustrophobia through identity crises created by place in sunlight on a broken column	Journal of fundamental & Comparative Research

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**REMINISCENCES : A SOLACE TO LAILA'S CLAUSTROPHOBIA THROUGH
IDENTITY CRISES CREATED BY PLACE IN *SUNLIGHT ON A BROKEN COLUMN***

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Dr. Kanna Muthiah, Research Supervisor, Assistant Professor and Research Head, Research Department of English, Sadakathullah Appa College, Tirunelveli

Abstract:

Sunlight on a Broken Column recounts the story of an orphaned girl, Laila, who is the narrator of the novel. She belongs to a rich Muslim Taluqdar family, and has been brought up by her grandfather Baba Jan and, later, by her uncle Hamid. Though brought up in a conservative Muslim family, she has the privilege of a western education. The novel, is set in the period of partition. It is written in the form of a bildungsroman, so the growth of the protagonist—mentally, physically and emotionally—is portrayed as the story unfolds. After the death of Baba Jan, Laila lives with her uncle Hamid and attends college. Her Quest lies in how she is different from her cousin Zahra and the rest of the women of the household. She is torn between the western idea of personal freedom and the tradition of her community, as part of which women are taught to observe purdah. She chooses to be a rebellious by nature. Only when she has lost everything, does she realise how her identity was shaped by where she lived and belonged. The novel captures how although time and again she tries to run away from her conservative society, in the end she is a product of it. Even her rebellious nature is moulded by the place she has inhabited.

Key words: Nostalgia, Reminiscences, Claustrophobia, Identity Crises, Faith, Quest

This novel is written by a Muslim woman writer. As mentioned earlier, the purpose of this paper is to deal with the notion of identity through place. *Sunlight on a Broken Column* deals with the issues of nation and the sense of belongingness as the narrator rewrites the narrative of the nostalgic events of the partition. The novel is set in Lucknow. Laila revisits her childhood home Ashiana and sieves through her memories tied to it. The narrative is subjective and personal, yet Laila does not fail to record how the partition had national impact. Much of what happened before and after the partition can be deduced from her narrative. The novel foregrounds the reality of a particular community—the Muslim community, to be precise—anticipating a change. The whole nation is undergoing a sea of change; identities of the citizens are compromised and demarcated based on religious grounds. It was during the time of communal riots that identity based on community emerged and two nations are formed. The Quest arises on the condition of women during the partition who are often made to inhabit the private space, and the decision-making task is always taken by men in conventional households. *Sunlight on a Broken Column* by Attia Hossain is significant because, it attempts to mirror the partition from a woman's point of view. She not only quotes her experience of the partition but also lends her voice to the unheard women both from her family and outside. Laila, the narrator and the protagonist is both, an observer and a participant, an insider and also an outsider at the same time. She ventures to make or rather fix her identity. Laila's world is affected by Independence and partition. It is during this intense time that the protagonist tries to find herself and her identity. The Quest (who she is and where she stands) often arises in her mind. The narrative also unfolds the old and the new traditional clash among the people.

Laila, the first person narrator, is totally artless. The narration is purely autobiographical, and the author does not make any effort to maintain a distance between herself and the narrator. Written in a recollective manner, her novel deals with Laila's personal set against the larger historical background of the Independence movement of India. Laila is an observer. She is contrasted herself to her cousin Zahra in physical attributes and thought processes. She is a pretty girl but with 'large inquiring troubled eyes' which points to her mental set of mind.

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Mrs. S. O. Katheeya Fazeela	English	Theoretical Conceptions in Aravind Adiga's <i>Between the assassinations</i>	IJFANS

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Research Paper

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Theoretical Conceptions in Aravind Adiga's *Between The Assassinations*

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Abstract

Short story had been an ancient art form and even today it has an effectiveness of its own stand. Aravind Adiga's *Between The Assassinations* is a short story collection which is a landmark of Postcolonial formulations along with the inception of Feminism and Marxism.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Fastina Leo	English	Comparing Marital Struggles and Domestic Harmony in the Select Novels of R.K. Narayan and Shashi Deshpande	International Journal of Early Childhood Special Education (INT-JECSE)

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Comparing Marital Struggles and Domestic Harmony in the Select Novels of R.K. Narayan and Shashi Deshpande

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ABSTRACT

This comparative analysis examines the themes of marital struggles and domestic harmony in two renowned Indian novels, R.K.Narayan's *The Dark Room* and Shashi Deshpande's *That Long Silence*. The study delves into the portrayal of female characters, their roles within the household, and the challenges they face in maintaining harmony in their marriages and explore the impact of male dominance, societal conventions and the sacrifices made by women to preserve domestic harmony. Through a comparative analysis of these novels, this study aims to explore the different approaches taken by these writers in depicting marital struggles and domestic harmony. The findings of this analysis contribute to the existing body of literature on Indian fiction specifically highlighting the nuances of marital relationships and the challenges faced by women in maintaining domestic harmony. The study emphasizes the importance of individual agency, societal pressures and the complexities of gender dynamics within the context of Indian society.

KEYWORDS: societal expectations, female-centric, escapism, humiliations, tradition, loss of identity

“In family life, love is the oil that eases friction, the cement that binds closer together, and the music that brings harmony.”

- Harmony Friedrich Nietzsche, Philosopher

Marital struggles and domestic harmony are two contrasting aspects that often shape the dynamics within relationships and households. Marriages and partnerships are not immune to challenges and conflicts, and navigating these difficulties can be a significant test of a couple's bond and resilience. Marital struggles encompass a range of issues, including communication problems, financial stress, and differences in values of goals, infidelity, and power imbalances. These challenges can strain the relationships, leading to the emotional turmoil, resentment, and even the breakdown of marriage.

On the other hand, domestic harmony represents a state of tranquillity, understanding, and mutual support within the household. It involves open and effective communication, shared responsibilities, emotional intimacy, and the ability to navigate conflicts in a healthy manner. Domestic harmony promotes a nurturing environment where the individuals feel valued, respected, and loved, fostering a sense of belonging and security.

Balancing marital struggles and achieving domestic harmony requires effort, compromise, and commitment to understanding and addressing the underlying issues. It involves acknowledging and working through conflicts, seeking professional help when necessary, and cultivating a culture of empathy, trust, and shared responsibility. Ultimately, the pursuit of domestic harmony within a marriage or partnership contributes to the overall well-being of individuals, the stability of the family unit, and the creation of a supportive and fulfilling home environment. In this connection many writers have become the voice of the voiceless to represent the suffering in this parochial society.

Indian English fiction has experienced significant growth since the beginning of the 20th century, largely due to the efforts of influential authors such as R.K.Narayan, Mulk Anand and Raja Rao who have championed the traditional writing style. Furthermore, contemporary writers like Salman Rushdie, Amitav Ghosh, and Vikram Seth have played a crucial role in highlighting and endorsing the emerging modern voice of India. Additionally, a significant number of post-colonial authors, including Rushdie, Arundhati Roy, Meena Alexander, Anita Nair, Shashi Deshpande, and Jhumpa

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Issues in Translating Instruments of War from Tamil into English with Special Reference to Aiyandarithan's *The Pura-Porul Venba-Malai*

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Abstract

Translation like any other linguistic act is a communicative activity. It not only involves the transfer of meaning from one language into another language, but also involves a whole set of linguistic and cultural criteria. To translate a work is to dignify it. It is amazing that G. U. Pope who was a foreigner to Tamil language and Tamil culture had taken efforts to learn this language and had transformed the treasures of Tamil literature into English. Thus *The Pura-Porul Venba-Malai* had been translated by Pope from Tamil into English. In translating old classics in poetic composition the translator faces certain unique problems while translating the instruments of war from Tamil into English. Thus it is proposed to identify the problems involved, study the principles and procedures adopted, highlight successful and unsuccessful areas in the translator's work and suggest techniques for bettering the quality of translation.

Keywords: Translation, translator, source language, weapon, equivalent

Introduction

Translation is the comprehension of the meaning of a text and the subsequent production of an equivalent text that communicates the same message in another language. The text that is translated is called the source text (ST), and the language that it is translated into is called the target language (TL). As observed by Frenz, translation plays a vital role in opening "new lanes in the literary-world traffic" (103). It enables literary exchanges between countries. A sharing of the literary wealth between countries enables the sharing of literary experiences and emotions. This promotes better human understanding. It is in this light Pushkin defined the translator as "the courier of human spirit" (Kalyani 14). Translating a poem has its unique problems. When translating from one language to another, it is necessary not only to adjust to quite a different system, but also to reckon with the special restrictions which may exist within such a system. With regard to poetry, total fidelity to the original is impossible and the translator can at best try to attain approximation.

The Pura-Porul Venba-Malai

A study has been undertaken in this paper to analyse the issues a translator faces and the strategies he employs while translating the instruments of war in *The Pura-Porul Venba-Malai*. *The Pura-Porul Venba-Malai* is a very ancient work, professing to be founded upon a still older composition called *The Twelve Chapters, pannirupatalam* by one of the twelve disciples of Agasthiyar, one of the seven most revered rishis in the Vedic texts. He is one of the Tamil *Siddhars* 'those who have achieved a high degree of physical as well as spiritual perfection' in Shaivism. He invented an early grammar of the Tamil language, *Agattiyam*. His name is Aiyandarithan and he is said to have been a descendant of the old Chera kings, and the compiler of *Pura-Porul Venba-Malai* which can hardly be less than ten centuries

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. A. Mohamed Kurzith Khan	English	The Development of English phonetics through the use of ADEPT for visually impaired students	The Development of English phonetics through the use of ADEPT for visually impaired students

The Development of English Phonetics through the use of ADEPT for visually impaired students

Section A-Research paper



The Development of English Phonetics through the use of ADEPT for visually impaired students

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Abstract

Through the development of Adaptive English Phonetic Tools (ADEPT), this paper aims to enhance the inclusiveness of language learning and teaching courses by giving blind and low vision students and teachers of India as a second or foreign language better access to the International Phonetic Alphabet (IPA) symbols and the sounds they stand for. Based on the efficacy of multimodal training protocols, this strategy entailed the integration of auditory and tactual information to aid the development of phonological literacy.

Keywords: Pronunciation, phonetics, braille, visually impaired

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Introduction

Braille usage is also an indication to the visually impaired community that sighted society cares about their rights and needs. Presenting information and working on the widespread use of Braille helps the community feel that her values as a human are respected. Braille is personal like all language is. Having information in Braille ensures more protection for private lives. It's personal when reading an email on a refreshable Braille display. It's personal when one grabs the right credit card because it's labeled, or when fishing around in the refrigerator reading labels. It's personal when a letter arrives typed in Braille. It is personal in the simple act of reading a book. Even for children, reading on their own is a special pleasure that shouldn't be denied to them. Literacy helps stimulate children's learning abilities, their imaginations and creative skills, and helps them communicate in the language they'd use in their everyday lives.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mrs. M. Benazir Nuzrath	English	The Themes of Grief and Mourning in Mahasweta Devi's <i>Rudali</i> and <i>Bitter Soul</i>	International journal of Early Childhood Special Education (INT-JECSE)

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THE THEMES OF GRIEF AND MOURNING IN MAHASWETA DEVI'S *RUDALI AND BITTER SOIL*

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ABSTRACT

The article analyzes the works of Mahasweta Devi and focuses on the themes of loss and grieving death with in the books *Rudali* and *Bitter Soil*. The study takes a qualitative approach by conducting in-depth textual analysis to how various expressions of loss and grieving are utilized to question the status quo. The paper also examines how sorrow and loss relate to economic difficulty, gender inequality, and social injustice. The study shows that grieving and grief function as a form of defiance against the repressive social system in Devi's works. These feelings are used against the institutionalized racism and sexism that maintain societal inequalities. The study also shows that disadvantaged groups' experiences of sorrow and mourning are intertwined with those of poverty and gender. The outcomes have important ramifications for current social challenges and it confirms how literature fosters for social transformation. Devi's works deal with loss and sorrow that helps reader comprehend better the nuances of societal inequity and oppression.

Keywords: grieving, mourning, resistance, oppression, social inequality, poverty, gender.

The Bengali writer Mahasweta Devi is famous for her searing depictions of the plight of the underprivileged. Poverty, injustice and the disparity of the sexes are the recurrent themes dealt with in her writings. Devi disrupts the established social order in her tales and shows the truth about life. Grief and loss are the central themes in two of her most influential pieces, *Rudali* and *Bitter Soil*. The protagonist of *Rudali* is a lady of low social status who is paid to cry at the burial of the son of a rich landowner. The novel delves into the nuanced emotional experience of grieving and how it may function as a defiance against an oppressive societal system. In a similar vein, *Bitter Soil* tells the story of a tribal group who is driven from their homeland and into the city. The story's central idea is loss and mourning as the uprooted community tries to accept its new reality. In the narrative, Mahasweta Devi describes the earth as "our mother" and we need her desperately and we are her offspring.

Several critics have examined how Mahasweta Devi deals with loss and grieving in her writings. In her work "Death of a Discipline," Gayatri Chakravorty Spivak analyzes the idea of grief in "Rudali" and how it functions as a kind of resistance against the repressive social system. According to Spivak, "The mourning woman is a site of resistance, a figure of the underclass who speaks truth to power" (Spivak, 2003, p. 92). Gayatri Chakravorty Spivak's "The Mourners of 'Rudali'" brings out the exploited and oppressed female body as a site of resistance and cultural intervention."

In the paper "The Politics of Grief in Mahasweta Devi's *Rudali*," Subhendu Mund examines how grieving and sadness are utilized to challenge established authority. Mund claims that "grief becomes a language of resistance and subversion that expresses the unspeakable and the unrepresentable" (Mund, 2014, p. 86). In the titled work work "Contemporary Postcolonial Theory: A Reader," Padmini Mongia investigates how gender and loss play a role in the story of "Rudali."

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Mrs. M. Jebamalar Freeda	English	Issue in Translating Flora and Fauna	IJFANS International journal of food and nutritional Sciences



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DEVELOPMENT AND QUALITY EVALUATION OF NOODLES FROM DEAD RICE FERMENTED FLOUR

Issues in Translating Flora and Fauna

PDF

M. Jebamalar Freeda, Dr. K. Hema

Keywords:

Translation, Translator, Language, Cultures, Semantics, Procedures, Transliteration

Abstract

A language is developed through its interaction with culture on the planes of time and space. Every human society has culture. Culture is conditioned by the land, the climate, the social customs, the laws, the religions, the language and other factors associated with them in their daily life. All cultures serve to meet the basic needs shared by human beings. Every culture has methods of obtaining food and shelter. Translation, a branch of study, aims at bringing together the nuances of two different cultures and languages, encountering socio-cultural and linguistic codes. The flora and fauna of a particular region is characterized by the climatic conditions; what the species consumes for energy; what predators it has the amounts of heat, light or moisture it needs; and the conditions under which it reproduces. Since the flora and fauna vary from region to region not all languages have the right equivalent for a particular animal or plant. Therefore translation encounters problem while translating a text from one language into another. To take a concrete case, few verses from The Naladiyar written by the Jains in Tamil and their translation in English by G. U Pope have been analysed elaborately. As such, a study has been undertaken in this paper to analyse the issues a translator faces and the strategies he employs while translating a text from Tamil into English that are linguistically and culturally far apart.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	Treatment of Immigration in selected short stories of Edwidge Danticat's <i>Everything Inside</i>	Rabindra Bharati journal of Philosophy

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ISSN: 0973-0087

**TREATMENT OF IMMIGRATION IN SELECTED SHORT STORIES OF
EDWIDGE DANTICAT'S *EVERYTHING INSIDE***

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Abstract:

Everything is refer to all the objects, actions, activities or facts in a particular situation. Edwidge Danticat's stories : *Everything inside* stands out Every Situations or actions of domestic life. It has eight short stories deals with break-ups, death, love, loss, betrayal, immigration, shame and poverty. Forgiveness and grief are also present in these short stories. That unimaginable losses endured by Haitians. In the selected short stories there are many richly eccentric characters and torturous intimacy scenes. The researcher has attempted to bring out the pains and sufferings of the Haitian diaspora by analyzing the domestic life in Edwidge Danticat's *Everything inside*. In this collection of short stories, the researcher has examine psychology theories of Immigration and grief can result in the loss of one's place of origin, and the exposure to a new physical environment, distress are common components in *Everything Inside*.

KEY WORDS: Immigration, grief , love, poverty and Shame.

Everything Inside is a 2019 short stories , by the Haitian - American novelist and short story writer Edwidge Danticat. She claims that her own experience as an immigrant is reflected in the novel. When she was a senior in high school and babysat for two daughters who had been adopted from Haiti, she became interested in the country and its people. She visited a cultural weekend in Haiti with their family and learned more about the losses experienced by the diaspora. Haiti, the country where Edwidge Danticat was born, appears almost mythically. It is a world that lives in both the past and the present, a land where a life can be altered. Apart from the country and people of Haiti, which have dominated a large portion of this writer's career, what unites them is Danticat's precise yet emotionally charged style and the way she has curated this short collection, bringing its pieces together to form a pleasing whole.

Many of these stories are connected by heart's fallibility. This book's first story " *Dosas* " Elsie was with Gaspard, her live-in renal failure patient, when her ex-husband called to tell her that his girlfriend, Olivia, had been abducted in Port-au-Prince. When we learn of the profound betrayals these two have committed against the hard-working and barely surviving women they have harmed, whatever sympathy we might have for the kidnapped woman or her boyfriend (Elsie's ex-husband Blaise) vanishes. Elsie appears to be optimistic despite being made aware of their treachery. The remnants of a former tenant's warning to any potential invaders on the front of her little rental are "Nothing Inside Is Worth Dying For," but the statement on the interior of the door is "Everything Inside Is Worth Dying For," (*Dosas*, 33) and despite her sadness, we pray that she may find peace.

In " *The Old Days*," a young woman takes a flight from New York to Miami to visit her father, whom she has never met, while he lies dying. Her mother refused to let her father go back to Haiti, so they separated before she was even born. When the narrator first arrives in Miami, she visits a house full of strangers and encounters her father on his deathbed; she tries

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	Conflicts in Families in the novel 'we were liars' by E.Lockhart	International Journal of All Research Education and Scientific methods(IJARESM)



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Conflicts in Families In The Novel “We Were Liars” By E. Lockhart

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ABSTRACT

This paper discusses the family conflicts covered in the story. In his book "We Were Liars," Lockhart's Conflict has many causes. The family experienced a setback in the book. They differ in terms of their social structures, personalities, and needs. A technique for analysis the methodology of qualitative research is the subject of this essay. This analysis of the several sources of conflict is based on Wirawan. The alternative social system is the root cause. This issue is related to many of the racial and social statuses discussed in the book. The personality of the second is distinct. Gluttony, selfishness, and rage are the causes of this problem. These personalities may be seen in some of the novel's characters. The third is necessary after that. In the narrative, conflicts in the family are caused by demands for treasure and inheritance. Consequently, it can be concluded that the three primary factors contributing to the family disputes in the novel are the novel's dissimilar social systems, its disparate personalities, and its disparate needs.

Keywords: conflict, causes of conflict, social system, personality, needs

INTRODUCTION

The central theme of "We Were Liars" is the effects of one's errors. The wealthy, seemingly ideal Sinclair family is at the core of everything; they spend each summer together on a private island. The four "Liars" (Cadence, Johnny, Gat, and Mirren) reappear two years after an incident involving Cadence during the summer of her fifteenth year, causing Cadence to recall the event. However, not every summer is the same. Families may experience conflicts as a result of opposing behaviors or disagreements among members. Conflict in families is frequently contrasted with conflict in other social contexts. This might be because we spend more time together inside than outside. Conflict is less frequent when the connection is of a higher caliber, which is a reflection of the relationship's quality. The way a person frames a conflict situation varies according to the strength of their relationships. Conflict, in general, is a major dispute about beliefs, values, passions, or expectations. It is typical for people to experience issues in their daily lives. If there is no method to resolve this issue, there may be a disagreement. People's disagreements with one another over a variety of issues are the main cause of conflict between and among them. No matter how wealthy or poor a person is, conflicts can happen to them anytime, anywhere.

CAUSES OF CONFLICT

Limitedness Sources

People are continually aware of the scarcity of the resources they require to survive. Humans compete with one another for scarce resources, which usually results in conflict in this situation.

Different Goals

According to Hocker and Wilmot (1978), a conflict arises when the persons involved have divergent objectives. Conflicts can also arise when the parties involved share the same objectives but choose different strategies for achieving them.

Different Social System

Because of the wide variety of tribes, faiths, and philosophies among Indonesian society's citizens, disputes regularly arise. The traits are typically followed by an exclusive manner of life that frequently results in confrontations among people.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	The Issues in Translating jeyamohan's selected short stories	Rabindra Bharati journal of Philosophy

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THE ISSUES IN TRANSLATING JEYAMOHAN'S SELECTED SHORT STORIES

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ABSTRACT

An indispensable activity that unites people and societies and facilitates communication and debate between them is translation. It has existed since the beginning of human history. Due to this inter-communal communication has increasingly increased over history and translation. The process has evolved and turned into a scientific discipline. Based on translation science. When establishing a wide historical process, numerous variables need to be mentioned.

Key Words: Translation, Theories, and Issues.

Translation :

Translation theory, in the words of Anton Popovic (1987), is a discipline that examines translation and systems analysis. It has to organize the text and translation process. Peter Newmark (1981) defines translation-like theory as a collection of knowledge about the translation process.

The prevailing belief by the second half of the 20th century was that it is important to pay close attention to a text's morphological qualities and creative written materials may not always fully influence the intended recipient.

Correctness was prioritized; hence source text-focused language strategies were used. The source text serves as the criteria for this method. With this knowledge, the translator creates.

The translation is based on the original text, which implies based solely on the words without consulting the main content. Target culture is considered in source text-oriented translation. Not as much influence on the reader is anticipated as the reader of the source culture. Depending on the source text, the translator handles the text inside the linguistic resources in his native tongue or has the option to present the content in a different format.

Target language-oriented approaches took the place of oriented approaches. That is a new strategy. The overall text is more significant than the individual words. The objective is to interpret the words while retaining the basic idea of the source text language to the intended audience. In a strategy focused on the target language, the target culture. Readers are anticipated to become as influenced by the book as the reader from the source culture.

The research conducted so far looks at several facets of the translation process. A large number of respectable researchers in this field note that translation is a highly challenging process method with practical and communicative components. We will attempt to summarize quickly

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	Death as a post apocalyptic element in cormac mccarthy's the road	Journal of the Asiatic Society of Mumbai

**DEATH AS A POST-APOCALYPTIC ELEMENT IN CORMAC MCCARTHY'S
*THE ROAD***

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ABSTRACT

Cormac McCarthy's *The Road* was published in 2006 and won the Pulitzer Prize in 2009 and James Tait Black Memorial Prize for Fiction in 2006. The book was adapted into a film of the same name in 2009, directed by John Hillcoat. This novel is a subtle and post-apocalyptic science fiction, which describes the circumstances that arise when Earth is subjected to a massive disaster. If the catastrophe occurs on a planet where destruction and havoc are widely distributed, the worst is to be expected. There is nothing that can compare to losing one's humanity, which is the gravest of all the bad! Destroying humanity! To defy the instincts of animals! Eat one another! Death is not as straightforward as most people believe it to be. When you die, you don't just fall into a deep sleep. Your mind and consciousness are transported to another home-like reality, where you continue as if you were still alive, while your body stays the same. In the post-apocalyptic setting of *The Road*, almost all humans, plants, and animals have perished as a result of an unidentified catastrophe. As a result, death is always in the distance: nothing grows on land or sea, nothing grows, and dead bodies are all over the place. This paper will attempt to shed light on the world of death in McCarthy's *The Road*.

KEYWORDS: Post-apocalyptic, death, catastrophe, *The Road*.

The post-apocalyptic novel demonstrates literature's ability to convey messages about humanity and the human experience, even though it appears to be a phenomenon of popular culture. The post-apocalyptic narrative takes place during or after an apocalyptic event, such as a nuclear holocaust, a species-ending plague, a zombie outbreak, or an environmental collapse, and is typically defined by the setting and the plot. The definition of "apocalypse," which means "any revelation or disclosure," emphasizes the significance of this type of narrative. A post-apocalyptic narrative is a story that takes place after a revelation of some kind. The post-apocalyptic novel tells the story of a small group of survivors trying to keep their pre-apocalyptic identities, and it also tells the reader and the characters in the story important truths about humanity.

In Cormac McCarthy's *The Road*, a father, and son travel through a desolate post-apocalyptic United States where civilization has vanished. The father and son do everything in their power to survive as they move along their journey, avoiding the evil cannibals, seeking shelter, and scavenging. Death is depicted in *The Road* as an ashy, gloomy place where the sun goes out less and less each day. The following is one of *The Road's* central questions: What's the point of living if life ends in death? Characters in the novel face not only their imminent deaths but also the end of the human race as a whole.

The catastrophe that has devastated civilization has not spared the majority of plants and other living things. For instance, cows are extinct, and the boy has never seen birds or fish before. "On the hillsides old crops dead and flattened. The barren ridgeline trees raw and black in the rain"

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	Issues in translating kalki krishnamurthi's short story in english	Rabindra Bharati journal of Philosophy

RABINDRA BHARATI JOURNAL OF PHILOSOPHY
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ISSUES IN TRANSLATING KALKI KRISHNAMURTHI'S SHORT STORY IN ENGLISH

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ABSTRACT:

This study seeks to demonstrate the "Translation problems with the selected stories of kalki krishnamurthi is an effect to discover the issues the translator encounters when translating from one language to another.linguistically to another The Latin word *translatum*, which came from the Greek word *translata*, is the source of the English word translation.

originates from the words "a carrying across" and "trans" together, or "a communicating. In other words, it is the business of translating written content from one language (source language) to another, from one person to another, and from one text to another (target language). Between languages as well as within the same language (from one dialect to another or from one form to another). It is ideal.

Key Words: Translation, Theories,and Issues.

Translation:

The goal of Translation is to convey a text's meaning into a new language in the same manner as the original author intended. Translations cannot only mimic or be the original. Translation is the translator's primary task. There is a corpus of information regarding translation that, when used to address translation issues, can aid in a translator's education.every single thing may be translated. There is no such thing as a "correct" "perfect" or "ideal" Translation.

Translation Theory:

A researcher should evaluate the thesis of a Translation against the following Philological ideas, in particular functional correspondence, stylistics, and rhetorical comparisons between native and foreign language structures, are their main focus. The degree to which surface structures or comparable deep structures are emphasised depends on the **linguistic theories** of translation. **Sociolinguistic theory** states that the technique is primarily sociolinguistic when a translation involves languages that are spoken in very diverse historical and cultural contexts, as well as when the text is fairly complicated.

Issues:

There are several linkages and meanings associated with each lexical item. Therefore, the translator must make an effort to replicate each of these words separately, using verbs, prepositions, participles, and pronouns. A simple phrase in the SL thus becomes a predetermined word arrangement or a multi-lexical unit. This approach results in an increase in word count without an increase in the amount of information the message conveys overall.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	The Theme of Distress in the novel extremely loud and incredibly close by jonathan safran foer	Rabindra Bharati journal of Philosophy

Book

THE THEME OF DISTRESS IN THE NOVEL EXTREMELY LOUD AND INCREDIBLY CLOSE

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Abstract

The 9/11 terrorist attack has been approached in the work of a multitude of fiction and nonfiction writers all over the world. Jonathan Safran Foer, a contemporary Jewish American author, is among those who approach the historical significance of these events through fictional emotions and narratives, attempting to understand the effects of traumatic history on both individual and collective identity. Contextualizing Foer's popular novel *Extremely Loud and Incredibly Close*, the following study aims to analyze the theme of the death of a loved one, which affects the mental and physical state of the protagonist and others in the novel, and particularly the death of a loved one, which affects individuals to such extremes that only closure can lead to a peaceful acceptance of the loss. Eventually, the novel's main characters receive the closure they have been seeking throughout the story. *Extremely Loud and Incredibly Close* by Jonathan Safran Foer contains numerous issues, themes, and underlying meanings. The story is told from the perspective of Oskar Schell, a 9-year-old boy who is remarkably perceptive, sensitive, and intelligent. A year after his father is killed in the September 11 attack, Oskar discovers a key in a vase that belonged to him. Following his father's death, Oskar is inspired to search all over New York for information about the key and closure. Everyone is affected by Thomas Schell's death, they seek various solutions to alleviate the pain caused by the death of someone they care about, which is neither right nor wrong. People can deal with the loss of a loved one in a variety of ways; none are more correct than the others, but empathy does not come easily until a person has lost someone. Seeing and experiencing the effects of a loved one's death can greatly enhance one's ability to

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Dr. L. Anita Gnanamuthu	English	The Issues in Translating Ambai's Selected short stories	Rabindra Bharati journal of Philosophy

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THE ISSUES IN TRANSLATING AMBAI'S SELECTED SHORT STORIES

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Abstract:

Translation of short stories as literary works has recently become popular, as the short stories provides readers with both entertainment and education. However, the translation process has become more difficult because translators have to convey a message without changing the purposes of the source language. During the preliminary observation, numerous errors were discovered by the students when translating Tamil short stories into English. As a result, the purpose of this research is to investigate the types and causes of translation errors in translating a short story. In document analysis, the descriptive qualitative approach is used. The data was then classified and analyzed using Mathieu's (*200 Translation Issues' Theory*) (2003). The translation errors were caused by lack of vocabularies, misunderstanding of an idiomatic expressions, figurative languages, and implicit meanings, differences between cultural references and terms, influences of the first language, and the misunderstandings of the English structure rules.

Keywords: Translation, Theories, and Issues.

Translation:

Translation theory is the study of proper translation principles. Translation theory recognizes that different languages encode meaning in different forms, but guides translators to find appropriate ways of preserving meaning while using the most appropriate forms of each language. It is based on a solid foundation of understanding of how languages work. Translation theory encompasses principles for translating figurative language, dealing with lexical mismatches, rhetorical questions, including cohesion markers, and a plethora of other topics essential to good translation.

Essentially, there are two competing translation theories. The primary goal in one is to express as precisely as possible the full force and meaning of every word and turn of phrase in the original, while the primary goal in the other is to produce a result that does not read like a translation at all, but rather moves in its new dress with the same ease as in its native rendering. In the hands of a skilled translator, neither of these approaches can be completely ignored.

Conventionally, translators are expected to meet three important requirements in order to do their job successfully: they should be familiar with: the original language, the intended language, and the subject of discussion.

Based on this premise, the translator discovers the meaning behind the forms in the source language and attempts to produce the same meaning in the target language using the target language's forms and structures. As a result, the form and code are supposed to change, while the meaning and message are supposed to remain unchanged.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	Issues in translating puthumaipithan's selected short stories	187 Journal of the Asiatic Society of Mumbai

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Issues in translating Puthumaipithan's selected short stories

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Abstract

The process of conveying the meaning of a text written in a source language through a text written in a comparable target language is referred to as translation. In contrast to other languages, the English language distinguishes between interpreting oral or signed communication between speakers of different languages and translating the written text. Under this distinction, translation cannot begin until the writing is present.

Keywords: Translation, Theories, Issues

Translation

Inadvertently incorporating grammar, syntax, or words from the source language into the translation into the target language is always a possibility for a translator. However, these "spill-overs" occasionally bring useful calques and loanwords from source languages that have improved target languages. Translators have shaped the languages into which they have translated, including early translators of sacred texts.

Since the 1940s, efforts have been made, with varying degrees of success, to automate translation or mechanically assist the human translator due to the laborious nature of the translation process. The development of the Internet in recent years has made it easier to "language localize" and created a global market for translation services.

The Latin word translation is the source of the English word "translation." Therefore, in this instance, translation is "a bringing across" or "a carrying across" of a text from one language to another.

1. A means of communication is translation;
2. Culture is passed down through translation;
3. Truth is also transmitted through translation.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. L. Anita Gnanamuthu	English	Mishaps and Quest for survival of the holocausts during the world war II in john boyne’s the boy in the striped pyjamas	Journal of the Asiatic Society of Mumbai

MISHAPS AND QUEST FOR SURVIVAL OF THE HOLOCAUSTS DURING THE WORLD WAR II IN JOHN BOYNE’S *THE BOY IN THE STRIPED PYJAMAS*

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ABSTRACT:

The Holocaust is the term used to describe the systematic murder of Jews by Nazi Germany and other complicit nations. Numerous methods, including oral interviews with Holocaust survivors and museum exhibits, have been used to document this tragic time of history. Unlike other works with a similar theme, John Boyne's 2006 novel *The Boy in the Striped Pajamas* stands out because Bruno, a German boy, is the main character and not a Holocaust victim. A Jewish child of his own age named, Shmuel and Bruno become friends. But a tragedy brings their friendship to an end. It is obvious that representations of the holocaust, possibly the most horrible catastrophe in human history, are important. The researcher has attempted to bring out the pains and sufferings of the Holocausts during the World War II by analyzing the history depicted by John Boyne in *The Boy in the Striped Pyjamas*.

Key Words: Holocaust, Nazi, Jews, German, and History.

HISTORIOGRAPHIC METAFICTION:

The term ‘historiographic metafiction’ was coined by Linda Hutcheon in her essay *Beginning to Theorize the Postmodern* in 1987 and then further developed in her seminal study *A Poetics of Postmodernism* (1988) to describe “those well-known and popular novels which are both intensely self-reflexive and yet paradoxically also lay claim to historical events and personages”. Historiographic metafiction thus constitutes a specific form of metafiction, which Patricia Waugh, in an equally influential study, has defined as “fictional writing which self-consciously and systematically draws attention to its status as an artifact in order to pose questions about the relationship between fiction and reality”.

The Boy in the Striped Pyjamas is a 2006 Holocaust novel, by the Irish novelist John Boyne. Much like the process he undertakes when writing most of his novels, Boyne has said that he wrote the

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mrs. M. Benazir Nuzrath	English	An Eco-Critical reading of the select poems of mamang dai and temsulaao	IFJANS International journal of food and nutritional Sciences

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AN ECO-CRITICAL READING OF THE SELECT POEMS OF MAMANG DAI AND TEMSULA AO

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The study analyzes and contrasts the eco-critical strategies used in the poetry of the two contemporary Indian poets, Mamang Dai and Tamsula Ao who belong to the Northeast Region in India. It examines how the poets describe the natural environment and the connection via language, images and ideas. The paper contends that although their poems are eco-critical, their methods vary in scope, diction and cultural setting. It also highlights how these two poets showcase environment in their lasting pieces through a comparative analysis and emphasizes on the value of eco-literature in addressing environmental concerns. The article contributes to eco-criticism by examining the connection between literature and the environment and highlights how literature can influence people's views on environment to promote ecological consciousness. It also offers insights into how modern Indian poets use their works to raise awareness on ecological problems and address environmental issues.

Keywords: eco-literature, eco-criticism, human-nature relationship, environmental issues, cultural context, environmental degradation.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	The Issues of translating C.N. Annadurai Essay into english	Rabindra Bharati journal of Philosophy

RABINDRA BHARATI JOURNAL OF PHILOSOPHY
ISSN: 0973-0087

THE ISSUES OF TRANSLATING C.N.ANNADURAI'S ESSAY INTO ENGLISH

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ABSTRACT:

The research involves conveying the meaning of a source-language text using a target-language text. Bringing together the two languages, civilizations, and linguistic and sociocultural conventions is the goal of the study area known as translation. The translation process used to be simply perceived as a missed opportunity with costs and benefits, and the translated material was only ever seen to be a subpar rendition of the original. However, in recent years, scholars working in a variety of fields have provided important contributions to translation.

Keywords: Translation, Theories and Issues

The term 'translation' refers to the study of the correct translation principle. Translation acknowledges that two languages encode meaning in distinct ways, and this idea is built on the premise of comprehending two languages. It directs the translator to choose the best approaches to maintain meaning. While utilising each language's most suitable phrasing. The Translation is the subject of two opposing hypotheses. The first is that every word and phrase in the original must be expressed with as much accuracy as possible to convey its full force and significance. Another is to create a product that does not appear to be a translation at all, but rather flows naturally in its new attire. These two objectives can never be completely avoided in the hands of a skilled translator.

Many people today believe that anyone with knowledge of multiple languages may become a translator. A professional translator must possess a thorough understanding of translation as well as prior knowledge of both languages and the subject matter. In three different approaches, the principle and practice of translation have been developed and justified.

Three arguments have been made in support of the precept and practice of translation. Sociolinguistic theory, philological theory, and linguistic theory. Philological theories of translation are typically wary of various stylistic elements and rhetorical techniques. The symptomatic levels and other deep structures must have been consulted during this inquiry. The translation list of declarations for translators is built on the philological perspective.

The origin and destination languages are generally similar in linguistic theory, which is a non-literary work. To describe the meaning, linguists have been able to offer several significant intuitions. Machine translation is a branch of programming that is built on in-depth language investigation and narrative. Linguistics is a common theme throughout the writings of Yngre, Tosh, and Oettinger. The language strategy emphasises the expanse structures of reciprocal deep structures. The Sociolinguistic Theory connects languages that are largely removed from time and gives rise to strange cultures. If the text is relatively complex, the sociolinguistic component of the approach is heavily present. Consequently, Such a movement must be a conversation

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	Exemplifies of Retrospect and reminiscence in Julian Barnes the sense of an ending	Journal of the Asiatic Society of Mumbai

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**EXEMPLIFIES OF RETROSPECT AND REMINISCENCE IN JULIAN BARNES
THE SENSE OF AN ENDING**

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ABSTRACT:

As the years go by, experiences accumulate as well. During retirement, a transitional phase from one stage of life to another and, as a result, a time when we, as humans, have a predisposition to reflect on our lives, the revision of such events tends to become more frequent. The main character, a retired man who is happy and content with his current situation, is compelled to look up a period of his life, he is forced to recollect a part of his life that he had forgotten. The main character and narrator of the book poses several queries about the nature and capabilities of memory as one ages as he tells his story. He investigates the memory and wonders to what extent memories are formed from the feelings he recalls immerse him during that period of his life rather than from the actual events as they occurred. On the other hand, the protagonist experiences shame and remorse as a result of revisiting and editing that particular episode because he realizes that his prior deeds were not as honorable as he had formerly believed. Because these deeds were done in the past and cannot be altered, another question that the story possess is how to handle regrettable deeds. And more crucially, how to deal with unpleasant memories as one age.

KEYWORDS: Ageing process, memory, narrative, Meritocratic, anarchistic, ending, thriller, self-deception.

The Sense of an Ending, Julian Barnes' eleventh book, was published on August 4, 2011. In *The Sense of an Ending* by British novelist Julian Barnes, a retired man named Tony Webster tells the story of how he and his friends met Adrian Finn at school and pledged to stay friends forever. Tony considers the course he and his friends have followed as the past catches up with them. Adrian Finn, a friend of his, strikes me as more serious and intelligent. When Adrian abruptly commits suicide, despite their mutual vow to remain friends forever, the pals strive to go on and forget about him. Interestingly, 45 years later, Tony, who has a daughter, a career, and a failed marriage, gets a letter from a lawyer that reveals some surprises. The letter contains a willpower that Tony never expected, sending him on a trek through a past that has suddenly become dangerously ambiguous.

Tony Webster provides a first-person narrator for the novel. The author does a good job of capturing the limited self and reflective self of the protagonist, as well as his fantasy and real worlds. The book's schematic division of two parts has symbolic importance in demonstrating the change of a limited mind into a vastly more reflexive one.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	Issues in Translating pallur D.S. Prabhakaran's collection of short stories in english	Journal of the Asiatic Society of Mumbai

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ISSUES IN TRANSLATING PALLUR D.S. PRABHAKARAN'S COLLECTION OF SHORT STORIES IN ENGLISH

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Abstract

In India, there are 21 modern languages people speak nowadays. Language is a medium of communication through which the thought or idea of one person is conveyed to the other person. It may be in an oral conversation or in a written form. India is home to major 5 languages where 14 writing systems were followed. Translation of literary works from one language to another language enables the readers to know about the works of other languages. That in turn broadened the knowledge of different regions' cultures and customs. Literature knowledge transfers from one person from one region to another person from different areas mainly due to translation work.

On a note translational works that are made from other languages to the English language play a vital role in shaping target language literary works. In general, Art has no language barrier which will be well suited to literary works too. This can be achieved by translating our artful works from a regional language into English and from English to regional languages. In this way, the exotic literary flavors of our regional literary works will reach the global stage with ease. With translational works our culture, tradition, the lifestyle which our society is undertaking, the ground reality that the regional people faces, and most importantly the regional artform will be delivered to the people from different regions. With the motive of delivering regional substance, the researcher has chosen the work of translating the short stories collection "41 Nelmanigal" by the author Pallur T.S Prabhakaran into English.

Translation

Translation can be defined in the most common definition: the transference of a literary work from the source language to the target language. Translation in India was uncommon thing before British intervention. The English language is introduced to India initially by trading and then many literary works are produced. In addition to that our regional language literary texts are translated into English and other languages and other languages texts are translated into our regional languages. After the arrival of the East India Company, they started translating the Indian culture and the details about the land they ruled into English.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	Escalation of Acculturation in chithra banerjee divakaruni's one amazing thing	Journal of the Asiatic Society of Mumbai

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**ESCALATION OF ACCULTURATION IN CHITHRA BANERJEE DIVAKARUNI'S ONE
AMAZING THING**

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ABSTRACT:

Chitra Banerjee Divakaruni is a modern Indian-American author best known for her brilliant exploration of South Asian immigrant experiences. In her work, *One Amazing Thing*, she highlights the crisis faced by South Asian immigrants in the United States. Her stories are primarily set in India and the United States of America. Chitra Banerjee Divakaruni is a Diasporic writer who investigates the conditions of Diasporic realities, such as the phenomena of isolation, alienation, cultural heterogeneity, dialogisms, hybridity in identity, and their relationship with world phenomena. The term diaspora refers to the voluntary or compelled migration of people from their home country to a foreign country to settle down. Members of the immigrant community in the diaspora share a cohesive cultural awareness and have strong ties to their home country. These people enter a foreign country as job seekers, refugees, etc. The native culture of the immigrants clashes with the culture of the settled land, resulting in additional issues such as identification and so on. The literary expressions of such experiences by immigrant writers have given birth to 'Diaspora Literature'. This paper depicts the problem of displacement and alienation faced by people who are separated from their native land and focuses on the harsh experiences of immigrants as a result of dislocation and loneliness and gives the notion that immigration ultimately results in a conflict between tradition and modernity, a cultural crisis, a search for self-identity. The novel teaches readers about the power of our personal stories and how re-examining our past can heal and comfort us when we are stuck in difficult situations.

Key Words: Immigrant, diaspora, alienation, hybridity identity and migration.

A scattered group of people with different geographical origins is known as a diaspora. The term 'diaspora' has historically been used to describe the massive migration of a population from its native land, in this case, the exodus of Jews from the ancient Kingdoms of Israel and Judea. Even though the term "Diasporas" was initially used to refer to certain peoples who were forcefully exiled, it is now typically used to refer to people who had roots in a particular place but now live elsewhere. Scholars have recently distinguished different types of diaspora based on their causes, such as colonialism, trade or labour migrations, or the type of social coherence within the diaspora community and its ties to ancestral lands. Some diaspora communities have strong political ties to their home country. Other characteristics that may be typical of many diasporas include thoughts of return, maintaining ties back home, relationships with other diaspora communities, and a lack of full integration into host countries.

Diasporas frequently maintain ties to the country of their historical origin and exert influence over the policies of the country in which they live. Migration and diaspora have resulted

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	Enhancing English language teaching through code-switching	Journal of the Asiatic Society of Mumbai

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**ENHANCING ENGLISH LANGUAGE TEACHING
THROUGH CODE-SWITCHING**

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ABSTRACT

Mode of using language differs from person to person and context to context. Various situations warrant different kinds of methodologies and techniques. In teaching English, it is no exception. Scholars vary in their opinion in being monolingual and bilingual in classroom teaching of English. Bloomfield defines bilingualism as ‘native-like control of two languages’ and it is competence in using two languages. Code-switching is shifting from one linguistic code (language) to another, depending on the social context or conversational setting. According to Sociolinguists, it is used to shape and maintain a sense of identity and a sense of belonging to a larger community. In linguistics, code-switching or language alternation occurs when a speaker alternates between two or more languages. Teachers use code-switching in classrooms in many ways. They use code-switching to build rapport and improve communication and further for better understanding from the students’ side. Code-switching in the classroom has many iterations and benefits for both teachers and students. Teachers use code-switching to establish a better relationship with the students in order to show the students that they can be trusted and make them comfortable in the classroom environment. Teachers use code-switch to help clarify unknown content or ideas; so as to allow students to build critical background knowledge. Students can code-switch with each other to build relationships as well, both leading to a cooperative and warm classroom environment where students are not embarrassed to express themselves. Students can compensate for language or knowledge gaps by code-switching. This can help them build their confidence to use the classroom dialect or language over time. It also helps to attain congenial and supportive correspondence between students and teachers. Code-switching acts as a bridge between familiar and unfamiliar vocabulary which often helps students get more comfortable conversing spontaneously in the target language.

Keywords: Code Switching, Language, Communication, Linguistic, Knowledge.

THE STUDY OF LANGUAGE

Language is a very important means of communication among human beings. It is a system of spoken or written symbols by means through which one communicates. English Language is, by and large, the most prominent of all the other languages as it crosses cultures, countries and industries. It is often used as a ‘common tongue’ when two persons from different nationalities are involved in a conversation. As English is one of the official languages in many countries across the world, the need and the essentiality is imminent to learn the language beginning from school education.

Henry Sweet, an English phonetician and language scholar, stated that “Language is the expression of ideas by means of speech-sounds combined into words”. Words are combined into sentences and derived at a combination answering to that of ideas into thoughts. It is impossible to separate language from literature, politics, or most of our everyday human interactions. Language is treated almost exclusively from the point of view of linguistics. The importance of language goes far beyond the internal structure.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	Issues in translating indra sounder rajan's collections of short stories in english	Rabindra Bharati journal of Philosophy

RABINDRA BHARATI JOURNAL OF PHILOSOPHY
ISSN: 0973-0087

**ISSUES IN TRANSLATING INDRA SOUNDAR RAJAN'S COLLECTIONS OF
SHORT STORIES IN ENGLISH**

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Abstract:

The primary goal of this research, "Issues in Translating Indra Soundar Rajan's Collections of Short Stories" is to identify the challenges that translators confront when translating between languages. The lingua franca of the world is English, which is the only language spoken by everyone. There is a significant increase in the number of persons acquiring the English language. Language's four fundamental skills—listening, speaking, reading, and writing—must be mastered before one can become fluent in it. Translation is the process of using a target language to convey the meaning of a text written in a source language. It is necessary to consider the limitations of translation, such as factors like the grammatical rules of two languages, writing conventions, and idioms.

Key words: Translation, theories, and issues.

Translation:

The term "Translation Studies" was originally used in the essay "The Name and Nature of TS" by American academic James S. Holmens. In his work "A Linguistics Theory of Translation," J.C. Catford defines translation as "the substitution of Textual content in one language (SL) by equal Textual material in another Language (TL)".

Translation is the process of conveying a text's meaning from its original language into a target language. When two linguistic units are said to be "equivalent," it means that they transmit the same intended meaning regardless of how they are encoded in various linguistic media or in various languages. In its most basic sense, translation is a linguistic activity. A subfield of linguistics called linguistics studies language.

Nowadays, a lot of people believe that anyone who can speak more than one language may work as a translator or interpreter. However, this is untrue because a skilled translator needs to be well versed in both languages and possess subject-matter expertise for the chosen language pair.

Theories:

The researcher's translation of the following hypotheses into their own words should be contrasted with the thesis. This idea is founded on an analysis of the virtues and defects of the original text, as well as those of all earlier translations. If a text is not literary and the source and destination languages are almost equivalent and have the same meanings, then linguistic theory is applicable. Linguistic theories of translation suggest that rather than focusing on

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Alis Sofia	English	Psychological Impacts of the immigrants in amy ruth tan's the Bonesetter's daughter	Journal of the Asiatic Society of Mumbai

160 JOURNAL OF THE ASIATIC SOCIETY OF MUMBAI, ISSN: 0972-0766, Vol. XCVI, No.2, 2023

PSYCHOLOGICAL IMPACTS OF THE IMMIGRANTS IN AMY RUTH TAN'S *THE BONESETTER'S DAUGHTER*

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ABSTRACT:

This study addresses diasporic issues about diaspora experience and diaspora influences. It shows how the phenomenon of migration creates specific experiences and influences migrants. Luling's move to America, encouraged by the war in her country, allowed her to experience her upbringing, the culture shock and alienation, and the psychological effects of her move. The novel uses Luling, a first-generation Chinese female character, to show how immigrants from China live in a country apart from their home country. Ultimately, this research aims to reveal how they know their identity.

Key Words: Migration, Immigrants, Culture shock, Phycology.

The Bonesetter's Daughter is Amy Tan's fourth novel, published in 2001. The novel is condensed with the story of a Chinese immigrant mother and an American-born daughter. The novel has two main stories, the first is about Ruth, a Chinese – American living in San Francisco, and the second is about a letter written to Ruth by her mother LuLing. These letters show the life of her mother in China. Tan collects the stories of her three-generation in her novel *The Bonesetter's Daughter*. Her novels deal with the topic of immigration and Familial relationship, assimilation, and other ethnic communities. The novel contains stories within the stories, so the writer continued with flashbacks techniques for sharing their experience, background, or knowledge. Women characters play an important role in the novel *The Bonesetter's Daughter* and every female character has been suffering from their way socially and psychologically.

Migration occurs as a result of people's departing from or moving separately from one country to another part of the world. It's surprising that the concept of 'Diaspora,' which until a few years ago was unknown even to many academics and certainly unheard of in the public imagination. But as it gained popularity, diasporic writing and literary works from a writer like Amy Ruth Tan, Meena Alexander, and Jhumpa Lahiri began to appear in the literary context. The sentence 'There is nothing permanent, except change' tells the true meaning of life. Every transition in their lives has given people a sweet movement and a bitter experience. When people explain changes in their lives, most of them coins about their happiness. But bitter and painful changes teach them a lot. The word change has various connotations. Migration and cultural changes play an essential role in their lives. There is a lot of pain camouflaged within the word migration. It's a moment to carry them and cherish their close relationships and location.

There have been wars, conflicts, and problems in the past. This made people nervous, and they had to lose their residence and wealth during a war or conflict. They were separated from their families and overwhelmed by suffering and fear. Those conditions make people think of a better situation. They were only thinking in their minds that they had to be safe. This then prompts them to a new country. Conflict, issue, or especially war, makes people yearn to live in a peaceful and restful place with the freedom they want to achieve. The reason people migrate,

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. K. Thalha	English	Interpersonality relationship in Raquel Jaramillo palacio's wonder	Rabindra Bharati journal of Philosophy

RABINDRA BHARATI JOURNAL OF PHILOSOPHY
ISSN: 0973-0087

**INTERPERSONALITY RELATIONSHIP IN RAQUEL JARAMILLO PALACIO'S
*WONDER***

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Abstract:

This research paper seeks to understand how August Pullman, the protagonist of the novel *Wonder*, develops as an individual. This study's goal is to demonstrate how August's social identities, as portrayed in the novel, shaped his personality. The impact of August's social interactions on the construction of his personality is examined using Harry S. Sullivan's theory of interpersonal relationships. According to this study, a person's interpersonal relationships might reveal how their personality is developing. Environment changes, social pressure changes, and self-concept changes are a few things that might cause someone to change the way that person views humanity and the sort of personality theory they will embrace. According to the research, August's personality in the *Wonder* novel can be summarized as a timid, weak child who engages in little social interaction growing into a brave, self-reliant, and independent young person. Due to his unusual appearance, August encountered a lot of rejection upon entering the fifth grade at a real school. However, August has a lot of support from his family. The influence of his family on August's personality development is immense. By the end of the narrative, August is able to transform his personality and strengthen his sense of self. The heartbreaking tale of Auggie Pullman, a 10-year-old boy who was born with twisted facial characteristics — a "craniofacial difference" caused by an anomaly in his DNA — was told in Raquel Jaramillo Palacio's novel *Wonder*, which caused waves to be felt throughout the globe.

Keywords: Self-Concept, Societal Pressure, Personality Development, and Individuality.

Raquel Jaramillo Palacio is an American writer and graphic designer who was born on July 13, 1963. The best-selling *Wonder*, which was made into a 2017 movie starring Julia Roberts and Owen Wilson, is one of her many children's books. R.J started off as an illustrator who created book covers. She created various hundreds of books covers during the course of her career, for both fiction and non-fiction publications. The book won the 2014 Dorothy Canfield Fisher Children's Book Award in Vermont as well as the Maine Student Book Award. *Wonder's* major topic is kindness. It teaches us that we have the power to choose kindness and that even a tiny, uncomplicated act of kindness may have a significant impact.

The ten-year-old August Pullman who has significant facial defects owing to a genetic disorder is the subject of *Wonder*, a genuinely remarkable debut book from a New York graphic designer. August Pullman's tale is told in a witty, honest, touching, and engaging manner. In an effort to shield Auggie from the looks and cruel treatment of the outside world, he has undergone several procedures, battled diseases, and been home-schooled. In the beginning of the novel,

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. K. Thalha	English	Psychological Anxieties and discoveries in mitchalbom's the five people you meet in heaven	Rabindra Bharati journal of Philosophy

RABINDRA BHARATI JOURNAL OF PHILOSOPHY
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PSYCHOLOGICAL ANXIETIES AND DISCOVERIES IN MITCH ALBOM'S *THE FIVE PEOPLE YOU MEET IN HEAVEN*

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ABSTRACT:

This article examines how Eddie is portrayed in the book *The Five People You Meet in Heaven* as having a life filled with psychiatric issues. In this study, Eddie's psychological issues are all examined, and their underlying causes are dissected. The way Eddie resolves all of his issues is thought to be through his voyage to paradise after death, where he encounters five different people. Eddie learns from his interactions with the five people he meets in heaven throughout the book about the unexpected ways that both life and death present chances for atonement. He comes to understand the full amount of his own and others' wrongdoings, and as a result, progresses through anger, regret, and forgiveness on his way to finding peace. This study concentrates on the psychological issues that Eddie's character experiences the most by using Sigmund Freud's psychoanalytic methodology. The narratives and conversations in the story serve as the source for the statistics. To comprehend the causes of Eddie's psychiatric issues, the background chapters in this book are examined. His ascension to heaven is thought to be the solution to all of those issues.

KEYWORDS: Psychoanalysis, Redemption, Forgiveness, Loss, and Psychological issues.

Mitchell David Albom, an American novelist, journalist, and musician, was born on May 23, 1958. Over 40 million copies of his books have been sold worldwide. His early career saw him receive national acclaim for his sports writing, so he turned to creating the inspirational tales and themes that run throughout his books, plays, and films. Albom resides in Detroit with his wife Janine Sabino. In Passaic, New Jersey, on May 23, 1958, Albom was born to a Jewish family. Before moving to Oaklyn, New Jersey, which is near Philadelphia, Pennsylvania, he grew up for a brief time in Buffalo, New York. He grew up in a modest middle-class environment where most people stayed inside almost all the time. According to reports, Albom said that his parents were very sympathetic and regularly recited the words, take care not to believe that this is the end of your life

Albom picked up a passion for journalism while residing in New York. He started writing during the day for the Queens Tribune, a weekly newspaper in Flushing, New York, while still making ends meet by working nights in the music business. As a result of his work there, he was admitted to the Columbia University Graduate School of Journalism. He obtained a job as a babysitter to help pay for his tuition. Albom obtained a part-time position with SPORT magazine in addition to his midnight piano playing. After earning his degree, he covered Olympic sporting events in Europe while working as a freelance reporter for Sports Illustrated, GEO, and The Philadelphia Inquirer. Along with funding his travel expenses and finding work once he arrived. He began working for The Fort Lauderdale News and Sun Sentinel full-time in 1983 as a feature writer before being elevated to the columnist. Albom was appointed as the lead sports columnist

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. K. Thalha	English	Psychological trauma in S.J. Watson's <i>Before i go to sleep</i>	Rabindra Bharati journal of Philosophy

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PSYCHOLOGICAL TRAUMA IN S.J.WATSON'S *BEFORE I GO TO SLEEP*

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ABSTRACT:

The present paper discusses the Psychological Trauma in the novel *Before I Go To Sleep* by an English writer, S.J. Watson. Rowan Joffe also made this novel into a movie in 2014. The study's primary goal is to demonstrate how the novel's protagonist struggles to cope with the traumatic incidents and attempts to find her identity among doubtful characters. The psychological nature of the other characters from the novel is examined. S.J. Watson's writings are mostly filled with crime, mystery, and psychological thrillers. The Traumatic experiences have always had an adverse and sometimes pathological consequence on consciousness and memory, prohibiting the incorporation of the past into present-day experience. In this approach, suffering is emphasized as a result of an external factor that alters the mind on the inside and permanently alters identity. The main character Christine Lucas experiences amnesia in the novel *Before I Go To Sleep*. She uses her journal to try to piece together who she is. The entire novel goes with suspense. Life is full of mysteries. Many people do not take any steps to untangle the hidden mysteries in one's own life. However, Christine Lucas, the main character in the novel *Before I Go To Sleep*, makes efforts to solve the hidden mysteries in her personal life.

KEYWORDS: Psychological Trauma, Amnesia, Identity, Mystery, Struggle, and Memory.

S.J. Watson was born in 1971 in Stourbridge, Worcestershire, which was now called West Midlands. He spent many years working for the National Health Service (NHS) in London. He worked as an audiologist in some hospitals and focused on the diagnosis and care of hospitalized children with hearing loss. On the weekends and in the evenings, he writes fiction. He is an English writer. In 2009, Watson enrolled in the first session of the Faber Academy's 'Writing A Novel' curriculum, which covers every aspect of the novel-writing process. The outcome is *Before I Go To Sleep*, which premiered in 2011. The psychological and literary thriller, mystery, adult fiction, contemporary, and crime categories are where this stand-alone novel is classified. It was also made into a movie, which Ridley Scott's production company, Scott Free, released in 2014 under the direction of Rowan Joffe. The psychological thriller *Before I Go To Sleep* by S.J. Watson is quite a simple novel. A great novel reveals the truth about its hero, but a bad novel reveals the truth about its writer. The dark aspects and sufferings of amnesia patients in their everyday routines are discussed in S.J. Watson's novel *Before I Go To Sleep*. With his talent for producing suspense and mystery in his novels, he is a true entertainer of the twenty-first century. His artistic style of writing challenged his contemporaries with the publication of his debut novel. His novel was written in a straightforward, easy-to-read style. This magical writing has earned plenty of positive impressions all over the world, particularly from youngsters.

The psychological thriller *Before I Go To Sleep* tells the account of Christine Lucas, a Forty-seven years old woman with amnesia that only permits her to retain her memories for a particular day due to a traumatic 'accident' that happened Eighteen years ago. Gradually, she loses all memory of her past. When she goes to sleep, her mind automatically deletes everything. She tries to rebuild her memories by using a journal which she has been keeping a secret. From that journal, she finds that a doctor, Dr. Nash, is treating her and helping her to regain her memory. Every morning, she reacquaints herself with her husband, Ben.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. K. Thalha	English	Imperialism in ngugi wa thiongo's weep not child	Journal of the Asiatic Society of Mumbai

142 JOURNAL OF THE ASIATIC SOCIETY OF MUMBAI, ISSN: 0972-0766, Vol. XCVI, No.2, 2023

IMPERIALISM IN NGUGI WA THIONGO'S *WEEP NOT CHILD*

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ABSTRACT:

The aim of the research paper is on the main character as he tries to kill himself but is prevented by his mother who has come in the midst of the night to look for him. The little boy's expectations are smashed by imperialism in Ngugi wa Thiongo's tale, which is set in rural Kenya. Njoroge, the little boy, wants to do well in school so that he can support his family. Njoroge tries to focus on his studies, but is diverted by his expanding participation in his family and local politics. The struggle against colonial power in Kenya, however, is growing and being violent as the world around him changes. He wants to save himself and his family through education, but also his community and his fellow citizens. He dislikes the white immigrants grows more overt. Even yet, the story also explores colonialism's consequences on Kenyans and the impact of World War II, as well as the repercussions of land confiscation and tensions between Kenyans. Hope, despair, social stratification, self-deception, and self-hatred are all explored via the lens of education.

KEYWORDS: Imperialism, Colonialism, Self-hate and Self-deception.

Ngugi wa Thiongo, commonly known as James Ngugi, is a Kenyan author and professor who wrote in English but now primarily writes in Gikuyu. He was "regarded as East Africa's leading novelist," according to one statement. His writings ranging from literary and social critique to children's literature and include novels, plays, short stories, and essays. The Gikuyu language journal Mtiri was founded by him, and he serves as its editor. One hundred different languages have versions of his short novel *The Upright Revolution: Or Why Humans Walk Upright*. Probably his most well-known books are *A Grain of Wheat* (1967), *Petals of Blood* (1977), and the most recent *Wizard of the Crow* (2004). Ngugi is a writer who frequently draws on history, as evidenced by the first two of these books. His narratives are deeply influenced by and, to a significant extent, dependent upon historical and cultural contexts. Both books cover recent Kenyan history, including the Mau uprising and Kenya's first year as an independent country. It's a little different in the third novel, a satirical fantasy.

James Ngugi chose to adopt a Gikuyu name and devote his writing career to the Gikuyu language instead of using his Christian name and the English language. In line with his political philosophy, this is perfect. However, examining Ngugi's first book, *Weep not, Child*, published by a young university student and released in 1964 before Fanon, will help you see the similarities and differences in his writing. Although it was not his first novel, it was the first to be published, and despite its many flaws, it's a remarkable piece of literature. Furthermore, it exhibits political and social issues that have subsequently become constant topics in Ngugi's work.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr.S. Firthous Fatima	Mathematics	Construction of Minimization of Multiplicative Graphs	Mathematical Statistician and Engineering Application

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Construction of Minimization of Multiplicative Graphs

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Abstract

In this paper, we evince a method to construct minimization of multiplicative graphs and also establish the minimization of multiplicative of the path union of 'n' copies of a cycle to the solution of a system involving equations.

Keywords: path union, minimization of multiplicative labeling, minimization of multiplicative graph

AMS Subject classification MSC (2010) No: 05C78.

1.Introduction

Graphs regarded here are finite, undirected and simple. The symbols $V(G)$ and $E(G)$ denote the vertex set and the edge set of a graph G . Most graph labeling methods are derived from the descendants of by Rosa's [2] findings of the year 1967. A graph labeling is an assignment of integer to the vertices or edges or both subject to certain conditions. Labeled graph has many branch out applications such as coding theory, missile guidance, X-ray, crystallography analysis, communication network addressing systems, astronomy, radar, circuit design, database management etc. Minimization of multiplicative labelings was introduced by Shalini.P et. al.[3]. In this paper, we evince a method to construct minimization of multiplicative graphs and also establish the minimization of multiplicative of the path union of 'n' copies of a cycle to the solution of a system involving equations.

2. Preliminaries

Definition 2.1 [2]: Let $G=(V(G), E(G))$ be a graph G . A graph G is said to be minimization of multiplicative labeling if there exist a bijective function from the vertices of G to the set $\{1,2,3,\dots,p\}$ such that when each edge uv is assigned the label $f(uv)=f(u)*f(v)$, then the resulting edge labels are distinct numbers.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr.S. Syed Ali Fathima	Mathematics	On cover Edge Pebbling Number of Helm Graph, Crown Graph and Pan Graph	Eur.Chem.Bull.2023



On Cover Edge Pebbling Number of Helm Graph, Crown Graph and Pan Graph

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ABSTRACT

Let G be a connected graph. An edge pebbling move on G is the process of removing two pebbles from one edge and placing one pebble on the adjacent edge. The cover edge pebbling number of G , denoted by $CP_E(G)$ is the minimum number of pebbles required to place a pebble on all the edges of G , however might be the initial configuration is. In this paper, we compute the cover edge pebbling number for Helm graph, Crown graph and Pan graph.

KEYWORDS:

Cover edge pebbling number, Helm graph, Crown graph, Pan graph

1 INTRODUCTION

Lagarias and Saks first suggested the game of pebbling. Later by Chung [1], it was introduced into the literature. Removal of two pebbles from one vertex and placement of one pebble on the adjacent vertex is called pebbling move. Given a connected graph G . The pebbling number $P(G)$ of G is the least number of pebbles needed in a graph G so that we can move a pebble to any arbitrary target vertex by a sequence of pebbling move whatever might be the initial configuration is.

The concept of cover pebbling was first introduced by Crull [2]. The cover pebbling number $CP(G)$ is the least number of pebbles needed in a graph G so that we can move one pebble to all the vertices of the graph G .

In [6] a new concept namely edge pebbling number and cover edge pebbling number has been introduced and cover edge pebbling number for certain standard graphs namely path, complete graph, friendship graph and star graph have been determined.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. N. Mohamed Rilwan	Mathematics	Different kinds of cordial labeling on identity graphs	High technology Letter



DIFFERENT KINDS OF CORDIAL LABELING ON IDENTITY GRAPHS

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Abstract

A graph $G = (V, E)$ is said to be *identity graph* if the vertex set $V(G) = \Gamma$ and the edge set $E(G) = \{(x, y) \cup (x, e) | x * y = e, x \neq y \text{ and } x, y \in \Gamma\}$ where Γ is a group and e as an identity element. In this paper, we substantiate some of the results about E-cordial, k -cordial labeling on identity graph associated with some groups.

Keywords: Identity graph, E -cordial, k -cordial, cyclic group, dihedral group.

AMS Mathematics Subject classification: 05C78

1 Introduction:

In this paper, we prefer to work related on graph from algebraic structures which means that there is an inter-relation between groups and graphs. In particular, we focus on identity graph which was first introduced by W. B. Vasantha Kandasamy [5]. In view of [5], "Every finite group can be view in form of graph". Rosa [4] initiated the concept on certain valuations of the vertices of a graph in 1967. Graph labeling investigation started in middle of 1990's. Graph labeling was first introduced by Rosa [4] in 1967. A *graph labeling* is an assignment of integers to the vertices (or) edges (or) both with respect to certain defined conditions. For the past five decades, the researchers and the findings on graph labeling has brought forth a new revelation and its broad range of applications like communication network, coding theory, circuit design etc. In particular, k -cordial labeling for certain classes of graphs were studied in 2009 by M.Z.Youssef [7].

I. Cahit [1] introduced a variation of both graceful and harmonious labeling. In [3], Hovey defined a function g is said to be a *cordial* of G if the number of vertices (edges) labeled with 0 and number of vertices (edges) labeled with 1 differ by at most 1. In 1991, Hovey [3] proposed the idea generalizations of harmonious and cordial labeling. In [7], a graph $G = (V, E)$ is said to

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr.S. Firthous Fatima	Mathematics	Extended Relaxed skolem mean labelling of wheel related graphs	Advances and Applications in Mathematical Sciences



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EXTENDED RELAXED SKOLEM MEAN LABELING OF WHEEL RELATED GRAPHS

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Abstract

In this paper, we evince the existence of an extended relaxed skolem mean labeling of helm graph H_n , closed helm graph CH_n , and flower graph F_n for $n \geq 3$. We also probe the necessary conditions for the extended relaxed skolem mean labeling of helm, closed helm and flower graphs.

1. Introduction

Graphs regarded here are finite, undirected and simple. The symbols $V(G)$ and $E(G)$ denote the vertex set and the edge set of a graph G . A graph

2020 Mathematics Subject Classification: 05C78.

Keywords: relaxed skolem mean labeling, helm graph, closed helm graph, flower graph.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr.S. Firthous Fatima	Mathematics	Connected and anti-frizzly equitable dominating set in anti-fuzzy graphs	Malaya Journal of Matematik



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Semi-complementary connected anti-fuzzy equitable dominating set in anti-fuzzy graphs

S. Firthous Fatima¹ and K. Janofer^{2*}

Abstract

In this paper, the notion of semi-complementary connected anti-fuzzy equitable dominating set in anti-fuzzy graphs is introduced. The semi-complementary anti-fuzzy equitable domination number is obtained. The relation between anti-fuzzy equitable domination number and semi-complementary connected anti-fuzzy equitable domination number are found. Bounds for semi-complementary anti-fuzzy equitable dominating set are also obtained

Keywords

Anti-fuzzy equitable dominating set, semi-complementary anti-fuzzy equitable dominating set, semi-complementary connected anti-fuzzy equitable dominating set.

AMS Subject Classification

05C72, 03E72.

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1. Introduction

M.Akram [1] introduced the concept of anti-fuzzy structures in fuzzy graphs in the year 2012. A.Somasundaram and S. Somasundaram [12] presented several types domination parameters such as independent domination, total domination, connected domination and domination in Cartesian product and composition of fuzzy graphs. R. Muthuraj and A. Sasireka [10] introduced domination in anti-fuzzy graphs. The concept of equitable domination in fuzzy graphs was introduced by Dharmalingam et al. [2]. Some works in complementary nil domination in fuzzy graphs using effective edges can be found

in [5, 6]. Recently, S.Y.Mohamed and A.M. Ali [7-9] introduced interval-valued Pythagorean fuzzy graphs and energy of spherical fuzzy graphs. Firthous Fatima and Janofer [3, 4] introduced anti-fuzzy equitable dominating set and connected anti-fuzzy equitable dominating sets in anti-fuzzy graphs. In this paper, the notion of semi-complementary anti-fuzzy equitable dominating sets in anti-fuzzy graphs is introduced. The semi-complementary connected anti-fuzzy equitable domination number is obtained. Some theorems related to these parameters stated and proved.

2. Preliminaries

Definition 2.1. A fuzzy graph $G = (\sigma, \mu)$ is said to be an anti-fuzzy graph with a pair of functions $\sigma : V \rightarrow [0, 1]$ and $\mu : V \times V \rightarrow [0, 1]$, where for all $u, v \in V$, we have $\mu(u, v) \geq \sigma(u) \vee \sigma(v)$ and it is denoted by $G_{AF}(\sigma, \mu)$.

Definition 2.2. The order p and size q of an anti-fuzzy graph $G = (V, \sigma, \mu)$ are defined to be $p = \sum_{u \in V} \sigma(u)$ and $q = \sum_{uv \in E} \mu(uv)$. It is denoted by $O(G)$ and $S(G)$.

Definition 2.3. Let G be an anti-fuzzy graph and let $u, v \in V$. If $\mu(u, v) = \sigma(u) \vee \sigma(v)$ then u dominates v (or v dominates u) in G . A set $D \subseteq V$ is said to be a dominating set of an

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr.S. Firthous Fatima	Mathematics	Minimal Reinhard Zumkeller divisor cordial graphs	Ratio Mathematics

Minimal Reinhard Zumkeller divisor cordial graphs

A. Ruby Priscilla *

S. Firthous Fatima †

Abstract

In this paper, the notion of minimal Reinhard Zumkeller divisor cordial labeling has been introduced. Let $G = (V, E)$ be a simple graph and $\gamma : V(G) \rightarrow \text{minimum } \{2^i \times 3, 2^{j+1} \times 5, 2^{k+1} \times 7, 2^l \times 3 \times 5, 2^m \times 3 \times 7 \text{ where } i, j, k, l, m \geq 1\}$ be an injection such that the sum of the cardinality of exponent of $\gamma(V(G))$ should be equal to the order of the graph G . For each edge uv , assign the label 1 if $\gamma(u)|\gamma(v)$ or $\gamma(v)|\gamma(u)$ where $\gamma(u)$ and $\gamma(v)$ are Zumkeller numbers and the label 0 if $\gamma(u) \nmid \gamma(v)$ and also if $|e\gamma(0) - e\gamma(1)| \leq 1$ then γ is called minimal Reinhard Zumkeller divisor cordial labeling. This paper elucidates how the Zumkeller number, which is the generalization of the perfect number, goes along with the divisibility concept of the number theory and the cordial labeling technique. It also probes the existence of minimal Reinhard Zumkeller divisor cordial labeling of path, cycle, star $K_{1,s}$, complete bipartite, complete graph K_n for $n < 17$, tadpole graph $T_{n,k}$ for all values of n and k .

Keywords: Zumkeller graph, divisor cordial labeling, Zumkeller divisor cordial graph.

2010 AMS subject classifications: 05C78. ¹

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr.N. Mohamed Rilwan	Mathematics	Totally magic d-lucky number of graphs	Ratio Mathematics

Totally magic d-lucky number of graphs

N. Mohamed Rilwan ^{*}

A. Nilofer [†]

Abstract

In this paper we introduce a new labeling named as, totally magic d-lucky labeling, find the totally magic d-lucky number of some standard graphs like wheel, cycle, bigraph etc. and find the totally magic d-lucky number of some zero divisor graphs. A totally magic d-lucky labeling $t: V \rightarrow \{1, 2, \dots, p\}$ of a graph $G = (V, E)$ is a labeling of vertices and label the graph's edges using the total label of its incident vertices in such a way that for any two different incident vertices u and v , their colors $d_t(u) = \sum_{v \in N(u)} t(v) + dg_u$, $d_t(v) = \sum_{u \in N(v)} t(u) + dg_v$ are distinct and for any different edges in a graph, their weights $t(u) + t(v) + t(uv) \equiv 0 \pmod{2}$ are same Where $d_g(u)$ represents the degree of u in a graph and $N(u)$ represents the open neighbourhood of u in a graph.

Keywords: Totally magic d-lucky labeling, totally magic d-lucky number, zero divisor graphs.

2010 AMS subject classification: 05C78[‡]

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Mohamed Roshan	Physics	Energy variability approach in plasma oscillations modelled by a modified Duffing equation	Int.J.Nonlinear Anal.Appl

Int. J. Nonlinear Anal. Appl. 14 (2023) 5, 37–48
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Energy variability approach in plasma oscillations modelled by a modified Duffing equation

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(Communicated by Haydar Akca)

Abstract

In many nonlinear systems, regular and chaotic behaviours are strongly linked to the energy variability of the system. Energy variability plays a major role in chaotic systems. The Melnikov function provides a measure of the distance between a stable and unstable manifold. If the two manifolds intersect, chaos is possible. The concept of energy variability is introduced in the work through the Melnikov integral. In the paper, we apply the energy variability approach to plasma oscillations modelled by the modified Duffing equation. Due to the energy variability approach, the plasma oscillations show very interesting results during the evolution shown by the works. We observed periodic, quasiperiodic and chaotic oscillations in the system by adjusting the amplitude (f) of the external excitation, energy variability parameter (ϵ), quadratic (β) and cubic (δ) nonlinear parameters. Control of chaos is also observed in some parameter values. The numerical results are demonstrated by a bifurcation diagram, phase plot, Poincaré map and time series graph.

Keywords: Plasma oscillation, Periodic force, Energy variability, Quasiperiodic, Chaos, Melnikov integral
2020 MSC: 34C55,37M20,37G35,74H10,70K30,70K50

1 Introduction

Chaos is a characteristic of a complicated deterministic dynamical system with completely unpredictable behaviour without perfect information. The theories of chaotic dynamical systems are applied to many fields such as sociology [27], economics [30], physics [19], chemistry [14], biology [26] and engineering [28]. Over the past century, chaotic behaviour has become more evident in a variety of active topics. Furthermore, chaos theory is very surprising because chaos is found within almost trivial systems [16]. We have been researching nonlinear systems with constant energy for a long time. But in studying the actual phenomenon, energy is considered a variable. The concept of energy variability in nonlinear dynamics was introduced by Ali [1] and he applied the concept to the Duffing-vander Pol oscillator. Saha et al. [24] studied the energy variability in chaotic dynamical systems and Bharti et al. analyzed the concept of transient chaos and energy variability in double-well Duffing-van der Pol oscillator [7] and Ueda oscillator [8]. Energy variability analysis and methodology are very helpful in understanding the dynamics and evolutionary behavior of nonlinear dynamical systems. Therefore, one can proceed with variable energy to enhance the investigation of various dynamical behaviors in some nonlinear dynamical systems.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Mohamed Roshan	Physics	Anticancer and Antimicrobial activity of Curcumin loaded Chitosan@ BiFe ₄ Nanoparticles	Latin American Journal of Pharmacy



Anticancer and Antimicrobial activity of Curcumin loaded Chitosan@BiFeO₃Nanoparticles

N.Nasrin Farsana, M. Sheik MuhideenBadhusha, J.Shakina, M.Mohamed Roshan

PDF

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Keywords: Bismuth ferrite, chitosan, curcumin nanoparticles, anti microbial and anticancer activities.

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SECTION

Articles

ABSTRACT

Polymer nano-composite plays a vital role in the field of nanotechnology because of its less weight and moderate strength. With an expected annual growth rate of about 25% and fastest demand to be in engineering plastics and elastomers, their potential is so remarkable that they are useful in several areas ranging from packaging to biomedical applications. The present study aims to the synthesis of Curcumin loaded Chitosan@BiFeO₃ nanoparticles and to investigate their structure, morphology, thermal, magnetic properties as well as anti-microbial and anti-cancer activity. The Curcumin loaded Chitosan@BiFeO₃ nanoparticles are synthesized based on

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Nazarath Begum	Physics	Structural, spectral, mechanical and SHG studies of triglycine sulpho malate (TGSM) single crystals	AIP Conference proceedings



AIP Conference Proceedings

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Volume 2747, Issue 1
12 May 2023



INTERNATIONAL CONFERENCE ON MATERIALS ENGINEERING AND MANUFACTURING SYSTEMS: ICMEMS2022
28–30 January 2022
Chennai, India

RESEARCH ARTICLE | MAY 12 2023

Structural, spectral, mechanical and SHG studies of triglycine sulpho malate (TGSM) single crystals

S. Nazarath Begum ; A. Nagamani Prabu; I. Mohamed Abdulla



+ Author & Article Information

AIP Conf. Proc. 2747, 020015 (2023)

<https://doi.org/10.1063/5.0132541>

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An Ferroelectric crystal, Triglycine Sulpho Malate crystal (TGSM) was grown using double distilled water as solvent by solution growth technique. The TGSM crystals observed were transparent. The lattice parameters of the TGSM crystals were obtained by single crystal X-ray diffraction technique. The functional groups in the TGSM crystal lattice were confirmed by using FTIR spectral analysis. EDAX studies were to identify the elements in the TGSM crystal. Other studies like UV-visible spectral studies, photoluminescence studies, SHG studies and microhardness studies are done and correlated results with literature.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Nazarath Begum	Physics	Analysis on computational and ocular criteria of $(\text{NH}_2\text{CH}_2\text{COOH})_3\cdot\text{H}_2\text{SO}_4$ crystal	AIP Conference proceedings



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RESEARCH ARTICLE | SEPTEMBER 28 2022

Analysis on computational and ocular criteria of $(\text{NH}_2\text{CH}_2\text{COOH})_3\cdot\text{H}_2\text{SO}_4$ crystals

S. Nazarath Begum; M. Sivabharathy ; A. Ayeshamariam; M. Sheik Dawood; S. H. Mohamed Ameen

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AIP Conf. Proc. 2518, 020002 (2022)

<https://doi.org/10.1063/5.0103637>

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A third order nonlinear optical single crystals of Triglycine Sulpho Succinate (TGSSu) has been grown by slow cooling method. The grown crystals were characterized using X-ray diffraction analysis technique and its found the grown crystals in monoclinic structures. Thermal analysis of TGSSu crystal were carried out and its compared to TGS crystal. The second harmonic generation efficiency was studied Kurtz-Perry powder technique. The third-order nonlinearities of grown crystals have been investigated by Z-scan method. Nonlinear refractive index (n_2), the nonlinear absorption coefficient (β) and third-order nonlinear susceptibility ($\chi(3)$) were estimated for the sample. The results were discussed in detailed.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. Asweel Ahamed A Jaleel	Physics	Freezing phase transition in hard-core lattice gases on the triangular lattice with exclusion up to seventh next-nearest neighbor	Physical Review E 106

Editors' Suggestion

Freezing phase transition in hard-core lattice gases on the triangular lattice with exclusion up to seventh next-nearest neighbor

Asweel Ahmed A. Jaleel, Dipanjan Mandal, Jetin E. Thomas, and R. Rajesh
 Phys. Rev. E **106**, 044136 – Published 26 October 2022

Article

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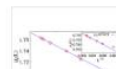
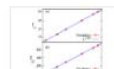
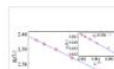
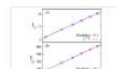
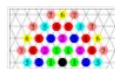
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ABSTRACT

Hard-core lattice-gas models are minimal models to study entropy-driven phase transitions. In the k -nearest-neighbor lattice gas, a particle excludes all sites up to the k th next-nearest neighbors from being occupied by another particle. As k increases from one, it extrapolates from nearest-neighbor exclusion to the hard-sphere gas. In this paper we study the model on the triangular lattice for $k \leq 7$ using a flat histogram algorithm that includes cluster moves. Earlier studies focused on $k \leq 3$. We show that for $4 \leq k \leq 7$, the system undergoes a single phase transition from a low-density fluid phase to a high-density sublattice-ordered phase. Using partition function zeros and nonconvexity properties of the entropy, we show that the transitions are discontinuous. The critical chemical potential, coexistence densities, and critical pressure are determined accurately.



Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. R. Kumuthini	Physics	ROC Curve Analysis of Different hybrid feature descriptors using multi classifiers	ASEAN Engineering journal

ROC CURVE ANALYSIS OF DIFFERENT HYBRID FEATURE DESCRIPTORS USING MULTI CLASSIFIERS

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Graphical abstract



Abstract

Tremendous success of machine learning algorithms at pattern recognition creates interest in new inventions. Machine learning in an era of big data is that significant hierarchical relationships within the data can be discovered algorithmically than other handcraft like features. In this study, Convolutional Neural Network (CNN) is used as feature descriptors in pulmonary malignancy prediction. Various feature descriptors such as Histogram of Oriented Gradient (HOG), Extended Histogram of Oriented Gradient (EHOG) and Under Binary Pattern (LBP) descriptors are analysed with classifiers such as Random Forest (RF), Decision Tree (DT), K-Nearest Neighbour (KNN) and Support Vector Machine (SVM) for Computed Tomography (CT). The phenotypic features of pulmonary nodules are important cues for identification. The nodule solidity is an important cue for white/black area identification. The method is analysed in Lung Image Database Consortium (LIDC) dataset. Receiver Operating Characteristics (ROC) curves show the graphical summaries of detectors performances. It is proved that CNN based feature extraction with SVM classifier works well in pulmonary malignancy prediction.

Keywords: CT images, Features, Descriptors, Classifiers, CNN, ROC

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1.0 INTRODUCTION

Computed Tomography [1-5] is the best high resolution and volumetric, modality used to detect the characteristics of pulmonary nodule [6-8] in bronchial trees. Instead some of the nodules are in low quality resolution which the system could not identify itself or less experienced radiologists. Hence Computer Aided Design [9] improves the identification of nodule in previous studies. Annual Screening is recommended by doctors and associations for pulmonary cancer patients [10]. Early detection prevents the life of the patient, suggested by American society of clinical oncologies. Pulmonary nodules are grouped in to, Elliptical, Lobulated, Spiculated and Spherical.

The nodule named justapleura placed near the lung wall is dangerous to diagnose in segmentation process.

Various feature extractors and classification models are studied in [11]. The wavelet filters are useful to extract texture feature and have determined the number of corals using LBP descriptor because they use the pixel values from eight directions [12-15]. Deep feed forward Artificial Neural Network (ANN) [16-17] analyses the visual imagery. ANNs consist of a method of solving problems related to science through simple models that mimic the human brain, including behavior. An ANN is armed by small modules which simulate operation of a neuron. In ANN, only minimum number of layers is used. Deep feed-forward ANN analyses the visual imagery. The convolutional neural network has hundreds of hidden layers, which uses filters to extract features.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. V. Chinna Thambi	Physics	Nonlinear response of a position dependent mass system driven by an amplitude modulated force	Dynamic Systems and Applications 32

Dynamic Systems and Applications 32 (2023) 18-32

NONLINEAR RESPONSE OF A POSITION DEPENDENT MASS SYSTEM DRIVEN BY AN AMPLITUDE MODULATED FORCE

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ABSTRACT. This paper highlights on the occurrence of vibrational resonance (VR), investigated in a double-well position-dependent mass (PDM)-Duffing oscillator system driven by an amplitude modulated (AM) force. The AM force consists of one low-frequency (ω) component and two high-frequencies ($\Omega + \omega$) and ($\Omega - \omega$) components with ($\Omega \gg \omega$). In the PDM-Duffing oscillator with one low-frequency and one high-frequency forces, by applying a theoretical approach an analytical expression is obtained for the response amplitude at the low-frequency (ω). The system provides an interesting scenario where PDM function makes a significant contribution to the occurrence of VR. We examine the role played by PDM parameters (m_0, λ) and force parameters (g, ω, Ω) on VR. We show the enhanced response amplitude Q at the low-frequency ω , showing more number of resonance peaks, a non-decay of response amplitude and hysteresis and a jump phenomenon on the response amplitude curve due to the amplitude modulated force. Results of analytical investigations are validated and complemented by numerical simulation.

AMS (MOS) Subject Classification. 34K18, 37C29, 65P20, 65P30, 74H65.

Key Words and Phrases. Position dependent mass system, Amplitude modulated force, Vibrational resonance, Hysteresis, Chaos.

1. INTRODUCTION

Vibrational resonance (VR) was first reported by Landa and McClintock [1] in biharmonically driven bistable systems when there is a large difference between the frequencies ($\Omega \gg \omega$) of the two driving forces. Thereafter, an analytical investigation

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. V. Chinna Thambi	Physics	Chaos control via external periodic forcing in an autocatalytic dissipative chemical system	Journal of Chemistry and Technologies



UDC 541.1

CHAOS CONTROL VIA EXTERNAL PERIODIC FORCING IN AN AUTOCATALYTIC DISSIPATIVE CHEMICAL SYSTEM

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Abstract

In this paper, we study the controlling of chaotic behaviours in an autocatalytic dissipative chemical system governed by a forced modified Duffing – Van der Pol (DVP) oscillator driven by various sinusoidal periodic forces. The external sinusoidal periodic forces considered are sine wave, modulus of sine wave and rectified sine wave. The effects of the sinusoidal forces and the perturbation parameter Γ on chaotic motions of the chemical system have been strongly analyzed. Controlling of chaotic behaviours have been investigated through bifurcation structures, Lyapunov exponent, phase portrait, Poincar'e section and time series. Coexistence of several attractors and hysteresis phenomenon have been studied in detail in the system with sinusoidal excitations.

Keywords: Autocatalytic dissipative chemical system; bifurcation; chaos; hysteresis; sinusoidal excitation.

КЕРУВАННЯ ХАОСОМ ЗА ДОПОМОГОЮ ЗОВНІШНЬОГО ПЕРІОДИЧНОГО ПРИМУСУ В АВТОКАТАЛІТИЧНІЙ ДИСИПАТИВНІЙ ХІМІЧНІЙ СИСТЕМІ

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Анотація

У цій статті вивчено керування хаотичною поведінкою в автокаталітичній дисипативній хімічній системі, керованій примусово модифікованим осцилятором Даффінга – Ван дер Поля (DVP), що приводиться в дію різними синусоїдальними періодичними силами. Розглянуто зовнішні синусоїдальні періодичні сили: синусоїдальна хвиля, модуль синусоїди та випрямлена синусоїдальна хвиля. Ретельно проаналізовано вплив синусоїдальних сил і параметра збурення Γ на хаотичні рухи хімічної системи. Керування хаотичною поведінкою досліджено за допомогою біфуркаційних структур, експоненти Ляпунова, фазового портрета, перерізу Пуанкаре та часових рядів. Детально вивчено співіснування кількох атракторів та явище гістерезису в системі з синусоїдальними збудженнями.

Ключові слова: автокаталітична дисипативна хімічна система; біфуркація; хаос; гістерезис; синусоїдальне збудження.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. V. Chinna Thambi	Physics	Energy variability approach in plasma oscillations modelled a modified doffing equation	International Journal Nonlinear Anal Applcation

Int. J. Nonlinear Anal. Appl. 14 (2023) 5, 37–48
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Energy variability approach in plasma oscillations modelled by a modified Duffing equation

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(Communicated by Haydar Akca)

Abstract

In many nonlinear systems, regular and chaotic behaviours are strongly linked to the energy variability of the system. Energy variability plays a major role in chaotic systems. The Melnikov function provides a measure of the distance between a stable and unstable manifold. If the two manifolds intersect, chaos is possible. The concept of energy variability is introduced in the work through the Melnikov integral. In the paper, we apply the energy variability approach to plasma oscillations modelled by the modified Duffing equation. Due to the energy variability approach, the plasma oscillations show very interesting results during the evolution shown by the works. We observed periodic, quasiperiodic and chaotic oscillations in the system by adjusting the amplitude (f) of the external excitation, energy variability parameter (ϵ), quadratic (β) and cubic (δ) nonlinear parameters. Control of chaos is also observed in some parameter values. The numerical results are demonstrated by a bifurcation diagram, phase plot, Poincaré map and time series graph.

Keywords: Plasma oscillation, Periodic force, Energy variability, Quasiperiodic, Chaos, Melnikov integral
 2020 MSC: 34C55,37M20,37G35,74H10,70K30,70K50

1 Introduction

Chaos is a characteristic of a complicated deterministic dynamical system with completely unpredictable behaviour without perfect information. The theories of chaotic dynamical systems are applied to many fields such as sociology [27], economics [30], physics [19], chemistry [14], biology [26] and engineering [28]. Over the past century, chaotic behaviour has become more evident in a variety of active topics. Furthermore, chaos theory is very surprising because chaos is found within almost trivial systems [16]. We have been researching nonlinear systems with constant energy for a long time. But in studying the actual phenomenon, energy is considered a variable. The concept of energy variability in nonlinear dynamics was introduced by Ali [1] and he applied the concept to the Duffing-vander Pol oscillator. Saha et al. [24] studied the energy variability in chaotic dynamical systems and Bharti et al. analyzed the concept of transient chaos and energy variability in double-well Duffing-van der Pol oscillator [7] and Ueda oscillator [8]. Energy variability analysis and methodology are very helpful in understanding the dynamics and evolutionary behavior of nonlinear dynamical systems. Therefore, one can proceed with variable energy to enhance the investigation of various dynamical behaviors in some nonlinear dynamical systems.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. V. Chinna Thambi	Physics	Control of chaos and bifurcation by nonfeedback methods in an autocatalytic chemical system	International journal of Chemical kinetics



RESEARCH ARTICLE

Control of chaos and bifurcation by nonfeedback methods in an autocatalytic chemical system

Karuppasamy Suddalai Kannan, Mohamed Ali Thameem Ansari, Kasinathan Amutha, Veerapadran Chinnathambi ✉, Shunmuganathan Rajasekar

First published: 19 February 2023 | <https://doi.org/10.1002/kin.21633> | Citations: 1

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Abstract

Nonfeedback methods of chaos and bifurcation control are suited for practical applications because of their speed, flexibility, no online monitoring, and processing requirements. In this paper, we analyze the control performance of various nonfeedback methods such as (i) adding a weak periodic force, (ii) adding a second periodic force, and (iii) adding a quasiperiodic force. We apply these methods to control chaos and bifurcation in an autocatalytic chemical system. By choosing the amplitudes (f , g) of the external excitation as control parameters, we investigate what effect the amplitudes have on the dynamics of the chemical system with suitable system's parameters value. Controlling of chaotic and bifurcation behaviors has been investigated through the bifurcation diagram, phase portrait, and time series.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. D. Sathya	Physics	Antibacterial effect of guanidine derivative nlo single crystals grown by temperature gradient method	Journal of Xi'an Shiyou University, Natural Science Edition

ANTIBACTERIAL EFFECT OF GUANIDINE DERIVATIVE NLO SINGLE CRYSTALS GROWN BY TEMPERATURE GRADIENT METHOD

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Abstract- A solitary precious stone of Guanidine subordinantes have developed by sluggish vanishing arrangement development procedure. The limiting of Guanidinium with amino acids was examined. The Guanidine subsidiaries were identified through powder XRD crystallography and evaluated for its antimicrobial action. In the current work Organic and metal organic Guanidine derivative single crystals are taken into Powder XRD, Single crystal XRD and antimicrobial movement. Guanidine family single gems (Guanidine tartarate, Guanidine acetic acid derivation, Guanidine maleate and Guanidine acrylate single crystals) are thought about for this work. The Guanidine subordinantes displayed inhibitory outcomes against *Escherichia coli*, *Enterobacter aerogens*, *Pseudomonas aeruginosa* and *Proteus vulgaris* the obvious upgrade in the strength as antibacterial specialist. The examples are taken into well dispersion strategy with various antimicrobes the resultant better obstruction from the microorganisms are noticed. The presence of unequivocal zone of hindrance of any size around the very much showed antibacterial action and the zone of restraint was estimated. The compound was viewed as dynamic against a bacterium on the off chance that the hindrance zone was 6mm or more. The tests showed superb bactericidal impact of acidic corrosive and acrylic corrosive, especially with *P. aeruginosa*. The less inhibitory action displayed against the germicide Guanidine subsidiaries by *P. vulgaris*. In contrast with our as of now involved kanamycin as germicide arrangement, it showed comparative - in certain microscopic organisms, far better - bactericidal properties. It tends to be finished up Guanidine acetic acid derivation and Guanidine acrylate make incredible bactericidal difference and, in this manner, is by all accounts reasonable as a neighborhood sterile specialist, yet further clinical investigations are important.

Key Words- Guanidine subsidiaries, *Escherichia coli*, *Enterobacter aerogens*, *Pseudomonas aeruginosa* and *Proteus vulgaris*

I. INTRODUCTION

The expanded obstruction of microorganisms to antimicrobial specialists forces the quest for option and more compelling specialists. By and large, antibacterial specialist compound blend is separated into two classes: natural and inorganic antibacterial specialist [1]. Generally, natural mixtures have found boundless purposes in medication and veterinary practice

[2]. As of late, natural guanidine compounds have drawn in emphatically consideration because of their adaptable organic action, for example, antifungal and antibacterial [3-5]. Guanidine is a sort of straightforward and solid base in a natural science and has broad application in many fields [6-8]. Guanidine bases and their naturally dynamic buildings have been frequently utilized as denaturant of proteins in the natural science of change components as radiopharmaceuticals for absorption, as model frameworks for organic macromolecules, as impetuses and as protein denaturant [9]. Guanidine has been generally utilized for a long time as a clean in medication and the food business as a mouth wash, as a sanitizer for an assortment of strong surfaces and furthermore in water medicines [10]. Vivek et al. explained about Development of organic crystalline nature guanidinium nitrate (GuN): structural, frontier molecular orbital, optical, thermal, mechanical, theoretical and experimental ways [11]. Various types of Guanidine salts have been presented as microbicides [12]. Atomic guanidine, similarly as the anionic and cationic salts (i.e., NaCN_3H_4 and $\text{CN}_3\text{H}_6\text{Cl}$) of the key biomolecule, is an ideal model substance to concentrate on hydrogen-reinforced networks and the impact of charges and counterions on these organizations [13]. While cationic salts of guanidine have been known for a long time and are industrially accessible, the anionic mixtures were incorporated as of late and offer intriguing new designs [14]. Fluid translucent material gives new chances to plan material connection points that can report designated natural collaborations Liquid glasslike materials [15]. A good quality biologically active single crystal of L-tryptophan L-tryptophanium bromide (LTTB) with molecular formula $\text{C}_{22}\text{H}_{27}\text{BrN}_4\text{O}_5$ was successfully synthesized and grown from aqueous solution using slow evaporation solution growth technique was proposed by Darling et al. [16]. The single gems arranged from Guanidine admixture aminoacids. In natural single gems, Guanidine subordinantes have been broadly utilized as great stage move impetuses in alkylation and epoxidation particular base impetuses in lopsided responses [17]. The LDT value of MCAM crystal was found by using Nd: YAG laser. Also Hirschfeld surface and antibacterial activity analyses for the sample have been carried out by Vasumathi et al. [18]. Coincidentally, the Guanidine acetic acid derivation, Guanidine tartarate, Guanidine maleate has been accounted for to have intriguing germicide specialist and natural action [19]. So that, to investigate the impact of the microstructure and gem on the

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Syed Mohamed	Chemistry	A Residue Free Green Synergistic Biopesticide Piper betle Extract to Supersede Pesticide Thiram	Indian J. Environmental protection

A Residue free green synergistic biopesticide *Piper betle* extract to supersede pesticide thiram

IJEP 42(11): 1376-1381 : Vol. 42 Issue. 11 (November 2022)

[Full Text](#)

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Abstract

Thiram (tetramethyldithiocarbamate) is used as fungicide and seed protectant in agriculture. It belongs to dithiocarbamate fungicides. The harmful effects of thiram include liver enlargement and dysfunction, degenerative changes, hepatitis and necrosis. Hence an alternative biopesticide to supersede thiram is essential. The *Piper betle* extract proves to be most economic, cost-effective and leaves no residue. It is easily biodegradable and available. Extract of betel leaves is very effective against pathogenic bacteria. The active component present in this extract is sterol which helps in the rupture of membrane structure of pathogens. The fungal infection occurs due to the hydrophobicity of the cell surface which contains non-polar amino acids. The leaf extract reduces the hydrophobicity and results in less adhesion of fungus. In the present study, the sample was subjected to evaluate biological activity of solvent extracts against fungal species, such as *Fusarium sp.* and *Penicillium notatum*. The high inhibition for *Penicillium notatum* and *Fusarium solani* in ethyl acetate extract proves that it can be used as effective fungicide against these fungi instead of thiram.

Keywords

Thiram, Seed protectant, Fungicide, biopesticide, *Piper betle*

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Syed Mohamed	Chemistry	Growth and characterization of DL-Norleucine maleate crystals	Journal of Ovonic Research

Growth and characterization of DL-Norleucine maleate crystals

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To obtain the single crystals of DL-Norleucine Maleate (DLNM), slow evaporation solution growth technique was used. The good crystalline quality of the crystal was validated by the diffraction peaks of the Powder X-Ray diffraction techniques. The functional groups which are present in the crystal were validated by FTIR and FT Raman method. Density functional theory (DFT) computation gives optimized structure parameters of DLNM molecule. The compound is changeless thermally up to 160°C and it is illustrated by TG-DTA thermal studies. The composition of the DLNM crystal was studied by EDAX spectroscopy. NMR spectral and chemical shifts of the grown crystal of DLNM were analyzed. The study of Vickers micro hardness study leads to the hardness number (H_v) evaluation and work hardening coefficient. Various dielectric parameters like AC conductivity, dielectric constant and loss energy of the sample were determined from the dielectric studies.

(Received November 29, 2021; Accepted March 28, 2022)

Keywords: Dielectric studies, DFT, EDAX, FT-IR, Norleucine maleate, Vickers micro hardness

1. Introduction

Organic compounds with large π -electron delocalization, in recent years, have attracted the interests of material scientists. The reason is their potentiality of applications in optical signal processing; optical communication. They frequently own exciting ferroelectric, ferromagnetic and superconducting properties, etc. [1]. Obtain the craved optical properties; the structures of organic materials can be modified easily. The hydroxyl groups of heterocyclic nitrogen atoms and carboxylic acids have been confirmed to a beneficial and effective organizing force contribution of supra molecules owing to its strongly hydrogen bonding [2-3]. Maleic acid is a dicarboxylic acid with chemical formula HO₂CCH=CHCO₂H. The intermolecular hydrogen bond is strongly enough in maleic acid. Through hydrogen bonding and π - π interactions, crystalline maleates of various organic molecules are formed by it. As an acceptors to various various π -stacking complexes with other aromatic molecules, the maleic acid acts. Also, it acts as an acidic ligand for the formation of salts through determined electrostatic interaction [4]. DL-Norleucine is a synthetic amino acid which is of distinct interest because of its steric and structural similarities to the natural amino acid methionine [5]. It is hydrophobic, aliphatic and non-polar in nature. It has been used in various computational studies such as molecular dynamics simulations for elucidating the solid-state transition mechanism in molecular crystals [6-8]. In this work, DL-Norleucine maleate crystals are formed by slow evaporation method by mixing DL-Norleucine and maleic acid and its properties have been analyzed by various techniques.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Syed Mohamed	Chemistry	Spiro-Acridyl Substituted Adamantylidene 1,2-Dioxetane (SAAD) Chemiluminescent Mechanism: DFT Investigations utilizing Long Range Corrected Functionals	Eur.Chem.Bull.2023

Spiro-Acridyl Substituted Adamantylidene 1,2-Dioxetane (SAAD) Chemiluminescent Mechanism: DFT Investigations Utilizing Long Range Corrected Functionals

Section: Research Paper



Spiro-Acridyl Substituted Adamantylidene 1,2-Dioxetane (SAAD) Chemiluminescent Mechanism: DFT Investigations Utilizing Long Range Corrected Functionals

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Abstract

The mechanism of chemiluminescent decomposition in Spiro-Acridyl Substituted Adamantylidene 1,2-Dioxetane (SAAD) is explored by LC-wPBE /6-31+G* method using the Gaussian 09 software. The energetics of the decomposition reaction via transition states/intermediates at the lowest singlet and triplet states are studied using complete optimisation as well as frequency analysis. According to the findings of the current study, SAAD's chemiluminescent decomposition occurs via a biradical pathway that includes the production of the triplet biradical intermediate ³BR. The findings are in accordance with earlier theoretical and experimental studies.

Keywords: Chemiluminescent, 1,2-Dioxetane, spiro-acridane, SAAD, transition state, biradical pathway, decomposition.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. A. Syed Mohamed	Chemistry	Xanthyliadeneadamantane-1, 2-dioxetane(XAD) Chemiluminescent Decomposition Mechanism- a DFT study	A Journal for New Zealand Herpetology

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Xanthyliadeneadamantane-1, 2-dioxetane (XAD) Chemiluminescent Decomposition Mechanism– A DFT Study

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Abstract

The Xanthyliadeneadamantane- 1, 2-dioxetane (XAD) is decomposition mechanism examined by long-range-corrected hybrid functional LC-wPBE /6-31+G* method using Gaussian 09. The energetics of the decomposition reaction through transition states/intermediates at the lowest singlet and triplet states is studied with full optimization as well as frequency analysis. Thus, our calculations indicate that the chemiluminescent decomposition of XAD occurs via a biradical pathway.

Keywords: Chemiluminescent, xanthyl, XAD, biradical pathway, long-range-corrected hybrid functional.

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Introduction

Chemiluminescent reactions (CL), which involve chemical changes leading to light emission, are closely related to peroxide chemistry, particularly cyclic four-membered peroxide chemistry. Although CL and bioluminescence have been known for a long time^{1,2,3}, mechanistic research into generating electrically excited states through chemical or enzymatic transformations began with the creation of these four-membered ring peroxides^{4,5}.

Significant theoretical and experimental efforts have been made over the last 25 years to better understand the mechanism of four-membered ring peroxide cleavage. Turro⁶ first postulated a concerted mechanism, and Richardson^{7,8} first proposed a biradical mechanism. The concerted mechanism is a one-step reaction in which the C-C and O-O bonds dissolve at the same time. The two-step biradical process, on the other hand, proposes that once the O-O link is broken before the C-C bond is broken results in the formation of a biradical intermediate. The generated intermediate is then expected to split between excited state carbonyl compounds.

Schuster et al. (Schuster, 1979)⁹ proposed a different mechanism called chemically triggered electron exchange luminescence (CIEEL). The process starts with a one-electron transfer (ET) from a suitable donor molecule (activator, ACT) to a high-energy organic molecule (peroxide for example). Following the rearrangement or loss of a neutral fragment (e.g., carbon dioxide), the reduced peroxide is converted to a powerfully reducing species in the form of a radical anion. Following charge annihilation, an electrically excited state of ACT is created, and the chain concludes with ACT emission.

Computational Methods

The long-range-corrected hybrid functional LC-wPBE¹⁰ is more precise for representing a wide range of molecular activities, such as long-range charge transfer, thermochemistry, reaction barrier heights, and bond lengths.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sheik Muhideen Badhusha	Chemistry	novel biogenic method to synthesis a ternary (Zno-Ag)/g-nanocomposite with an enhanced photocatalytic and antibacterial activities	Inorganic Chemistry Communications



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Inorganic Chemistry Communications

Volume 154, August 2023, 110877



Short communication

A novel biogenic method to synthesis a ternary (ZnO-Ag)/g-C₃N₄ nanocomposite with an enhanced photocatalytic and antibacterial activities

M. MuthuKathija ^a, R.M. Muthukrishnan ^b, D. Renuka Devee ^c, S.M. Abdul Kader ^b, V. Rama ^d, M. Sheik Muhideen Badhusha ^a

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Highlights

- A Ternary (ZnO-Ag)/g-C₃N₄ nanocomposite was successfully synthesized via green route.
- XRD and XPS analysis confirms the phase purity of the synthesized samples.
- PL spectra explains the recombination rate in the nanocomposite and the

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sheik Muhideen Badhusha	Chemistry	Development of novel electrochemical biosensor of dopamine based on core-shell CuNi bimetallic nanoparticles modified by g-	Diamond & Related Materials



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Diamond and Related Materials

Volume 136, June 2023, 109908



Development of novel electrochemical biosensor of dopamine based on core-shell CuNi bimetallic nanoparticles modified by g-C₃N₄

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Abstract

This study looks at the formation of g-C₃N₄@CuNi nanoparticles with good electrocatalytic properties. UV-DRS, FT-IR, XRD, SEM, EDX, XPS, BET, and HR-TEM techniques were used to characterise the produced g-C₃N₄@CuNi nanoparticles. The energy gap values like 3.4eV, 3.2eV, and 2.7eV for g-C₃N₄, CuNi bimetallic, and g-C₃N₄@CuNi NPs, respectively. Electroanalysis on core-shell nanoparticles demonstrated dopamine's electrocatalytic activity. The sensor has a detection limit (S/N=3) of 0.001M, a sensitivity of 198.12 μAmM⁻¹ cm⁻² and a high recovery in real sample analysis,

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sheik Muhideen Badhusha	Chemistry	Green synthesis of zinc oxide nanoparticles using pisonia Alba leaf extract and its antibacterial activity	Applied Surface Science Advances

Applied Surface Science Advances 15 (2023) 100400



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Applied Surface Science Advances

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Green synthesis of zinc oxide nanoparticles using *Pisonia Alba* leaf extract and its antibacterial activity

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Keywords:
Pisonia Alba
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ABSTRACT

The reducing and capping agent of *Pisonia Alba* leaf extract were used in a green production of zinc oxide (ZnO) nanoparticles. UV-Vis, X-ray diffraction (XRD), Fourier transform infrared spectroscopy (FTIR), and scanning electron microscopy with EDS (SEM) were all used to examine the produced ZnO nanoparticles. UV-Vis spectroscopy verified the synthesis of ZnO nanoparticles and their resulting optical characteristics. The UV-Vis spectra showed that the ZnO nanoparticles formed at an absorption peak maximum of 378 nm. Bandgap of the ZnO nanoparticles was also examining. The relevance of *Pisonia Alba* leaf extract's phenolic chemicals, alkaloids, terpenoids, and proteins in the nucleation and stability of ZnO nanoparticles was proposed by Fourier transform infrared spectroscopy (FTIR). XRD pattern compared with the standard confirmed spectrum of ZnO nanoparticles formed in the present experiments. These results provide further evidence that ZnO has a hexagonal structure (JCPDS-file: 89-1397). There appears to be no contaminants in the ZnO nanoparticles, as evidenced by the XRD pattern. Nanoparticle morphology is investigated with a SEM with EDX. Based on these morphological analyses, ZnO nanoparticles have a similar shape to aloe vera leaves. Oxidation state of the Zn was determined by XPS. The green synthesized ZnO nanoparticles were used to evaluate for the antibacterial activity against gram positive and gram negative bacteria. ZnO nanoparticles have potent antimicrobial properties.

1. Introduction

Nanotechnology is a fast expanding topic of study in the today world. Due to its larger surface area than bulk materials, nanotechnology development primarily offers novel solutions in processing, including optics, electronics, food packaging etc. [1–4]. In addition, there has been a rise in interest in the development of nanotechnology to produce nanosized semiconducting materials due to their unique properties, which make them suitable materials for a wide range of applications, such as sensors, catalysts, energy storage devices, antimicrobial agents, etc. Semiconducting materials include, for example, TiO₂, CuO, SnO₂, NiO, and ZnO [5–9].

ZnO has unique semiconducting, optical, pyro, and piezo electric capabilities and is biodegradable, making it the most gifted substance known amongst these semiconducting materials. In addition, ZnO is a widely known n-type semiconducting material with a large excitonic bond and a large band gap [10–14]. Zinc oxide has a minimal toxicity and is therefore designated as 'Generally Recognized as Safe' (GRAS) by the FDA [15]. Therefore, it has found applications in many different

areas, including electronic transistors, catalysis, cosmetics, biosensors, food safety and packaging. ZnO potent antibacterial action has found widespread application in industry, and it also has the potential to serve as a safe and effective antibiotic substitute [16–22]. Sol-gel, infrared irradiation, pulsed laser deposition, spray pyrolysis, microwave-assisted sputtering, chemical vapour deposition and hydrothermal technique are just a few of the physical and chemical processes utilized to synthesized ZnO NPs with a variety of morphologies [23–27].

Most of these physical and chemical processes have high costs, strict pressure or temperature requirements, and use hazardous chemicals that are bad for the environment. It is essential to develop new methods of synthesis that do not negatively impact the environment or call for the usage of potentially dangerous substances. The "green synthesis," a process that is safe for the planet, has recently attracted the attention of many scientists. In contrast to previous methods, this one helps create more stable and biocompatible NPs while also being easy on the environment, cheap to implement, amenable to mass production, and devoid of unnecessary chemicals [28–33]. Synthesis of NPs is used in green methods, which involve the use of bacteria, fungi, enzymes, plants, etc.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sheik Muhideen Badhusa	Chemistry	Copper Modified g-C ₃ N ₄ Nanosheet prepared by Co-precipitation method enhanced Antimicrobial Application	Applied Surface Science Advances

Copper Modified g- C₃N₄ nanosheet Prepared by Co-precipitation method enhanced Antimicrobial Applications

Section A-Research paper



Copper Modified g- C₃N₄ nanosheet Prepared by Co-precipitation method enhanced Antimicrobial Applications

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Abstract:

This study used the Co-precipitation approach to successfully manufacture an effective g-C₃N₄@Cu nanocomposite. Copper nitrate was used as a source of copper, and melamine was used to create the g-C₃N₄ nanosheet. The synthesized composite was then examined under a scanning electron microscope (SEM), subjected to X-ray diffraction (XRD) studies, energy dispersive X-ray (EDX) techniques, Fourier transforms infrared spectroscopy (FT-IR), and examined using ultraviolet and visible (UV-Vis) spectroscopy by using UV-Visible absorption spectroscopy, the optical band gap of the g-C₃N₄ nanosheet and g-C₃N₄@Cu nanocomposite were determined. In comparison to the g-C₃N₄@Cu nanocomposite, the g-C₃N₄ nanosheet displayed a higher apparent absorption, and a further red shift was seen for the g-C₃N₄ containing Cu. g-C₃N₄@Cu nanocomposite was respectively 3.2 eV and 2.7 n. For g-C₃N₄, FT-IR spectra indicated a prominent peak at 840 cm⁻¹. Additionally, a broad peak with a range of 2500 cm⁻¹ to 3500 cm⁻¹ provides more proof that g-C₃N₄ was constructed. A face-centered cubic (fcc) structure is visible in the g-C₃N₄@Cu Nanocomposite's X-ray Diffraction pattern. The multilayer structure and certain rods with rough areas are seen in the

1940

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sheik Muhideen Badhusha	Chemistry	Bio Synthesis and characterization of cobalt oxide nanoparticles using aqueous extract of moringa oleifera leaves	International Journal of Zoology and Applied Bioscience

Article

Bio synthesis and characterization of Cobalt oxide nanoparticles using aqueous extract of Moringa oleifera leaves

December 2022

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References (7)

Abstract

Recently the green synthesis of nanoparticles involving plant extract has attracted the attention of researchers. In this work we present an environmentally friendly, one step, ultra-fast, cost-efficient method for producing cobalt oxide nanoparticles using readily available Moringa Oleifera (Drumstick) extracts as reducing and capping agent. The bio-reduced cobalt nanoparticles were appropriately characterized. The cobalt oxide nanoparticles are characterized by UV-DRS, IR, powder XRD, SEM and EDX. To characterize the crystal phase identification of the nanoparticle, X-ray Powder Diffraction (Powder XRD) is used. Surface morphology was studied by SEM and EDX to determine the amount of cobalt present. The unique physicochemical characteristics of Cobalt oxide are believed to have increased medical applications when synthesized via environmentally benign methods free of toxic byproducts.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. I. Antony Danish	Chemistry	Chaos control via external periodic forcing in an autocatalytic dissipative chemical system	Journal of Chemistry and Technologies



UDC 541.1

CHAOS CONTROL VIA EXTERNAL PERIODIC FORCING IN AN AUTOCATALYTIC DISSIPATIVE CHEMICAL SYSTEM

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Received 5 August 2022; accepted 29 March 2023; available online 25 April 2023

Abstract

In this paper, we study the controlling of chaotic behaviours in an autocatalytic dissipative chemical system governed by a forced modified Duffing – Van der Pol (DVP) oscillator driven by various sinusoidal periodic forces. The external sinusoidal periodic forces considered are sine wave, modulus of sine wave and rectified sine wave. The effects of the sinusoidal forces and the perturbation parameter Γ on chaotic motions of the chemical system have been strongly analyzed. Controlling of chaotic behaviours have been investigated through bifurcation structures, Lyapunov exponent, phase portrait, Poincar'e section and time series. Coexistence of several attractors and hysteresis phenomenon have been studied in detail in the system with sinusoidal excitations.

Keywords: Autocatalytic dissipative chemical system; bifurcation; chaos; hysteresis; sinusoidal excitation.

КЕРУВАННЯ ХАОСОМ ЗА ДОПОМОГОЮ ЗОВНІШНЬОГО ПЕРІОДИЧНОГО ПРИМУСУ В АВТОКАТАЛІТИЧНІЙ ДИСИПАТИВНІЙ ХІМІЧНІЙ СИСТЕМІ

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Анотація

У цій статті вивчено керування хаотичною поведінкою в автокаталітичній дисипативній хімічній системі, керованій примусово модифікованим осцилятором Даффінга – Ван дер Поля (DVP), що приводиться в дію різними синусоїдальними періодичними силами. Розглянуто зовнішні синусоїдальні періодичні сили: синусоїдальна хвиля, модуль синусоїди та випрямлена синусоїдальна хвиля. Ретельно проаналізовано вплив синусоїдальних сил і параметра збурення Γ на хаотичні рухи хімічної системи. Керування хаотичною поведінкою досліджено за допомогою біфуркаційних структур, експоненти Ляпунова, фазового портрета, перерізу Пуанкаре та часових рядів. Детально вивчено співіснування кількох атракторів та явище гістерезису в системі з синусоїдальними збудженнями.

Ключові слова: автокаталітична дисипативна хімічна система; біфуркація; хаос; гістерезис; синусоїдальне збудження.

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Dr. M. Thameem Ansari	Chemistry	Control of chaos and bifurcation by nonfeedback methods in an autocatalytic chemical system	International journal of Chemical kinetics



RESEARCH ARTICLE

Control of chaos and bifurcation by nonfeedback methods in an autocatalytic chemical system

Karuppasamy Suddalai Kannan, Mohamed Ali Thameem Ansari, Kasinathan Amutha, Veerapadran Chinnathambi ✉, Shunmuganathan Rajasekar

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Abstract

Nonfeedback methods of chaos and bifurcation control are suited for practical applications because of their speed, flexibility, no online monitoring, and processing requirements. In this paper, we analyze the control performance of various nonfeedback methods such as (i) adding a weak periodic force, (ii) adding a second periodic force, and (iii) adding a quasiperiodic force. We apply these methods to control chaos and bifurcation in an autocatalytic chemical system. By choosing the amplitudes (f , g) of the external excitation as control parameters, we investigate what effect the amplitudes have on the dynamics of the chemical system with suitable system's parameters value. Controlling of chaotic and bifurcation behaviors has been investigated through the bifurcation diagram, phase portrait, and time series.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sheik Muhideen Badhusha	Chemistry	A Systematic review on application of nanotechnology for the insect pest management	IFJANS

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Research Paper

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A SYSTEMATIC REVIEW ON APPLICATION OF NANOTECHNOLOGY FOR THE INSECT PEST MANAGEMENT

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ABSTRACT:

Nanotechnology is a promising field of interdisciplinary research. It provides up prospects in the areas of medicine, electronics, agriculture, and insecticides. The uses of nanotechnology are quite diverse. Among these is the use of nanomaterials for the management of insect pests. The use of chemical pesticides, which are harmful to people, animals, and the fertility of the soil, renders integrated pest management ineffective. Without having a negative impact on the environment, nanotechnology can one day provide environmentally friendly and efficient methods for the management of insect pests in agriculture. This painting focuses on traditional means to managing insect pests as well as the potential of using nanomaterials in such management as a modern use of nanotechnology.

Pesticides increase the productivity of agriculture, but their misuse can contaminate both the environment and the food supply. Improvements to pesticide delivery systems can increase bioefficacy while minimizing negative effects on the environment and human health. In modern insect pest management, nanoparticles are used as an effective tool. The efficiency of nanopesticides at low concentrations is beneficial to farmers and helps decrease pollution. This article provides a systematic review of traditional approaches to the management of insect pests as well as the potential of nanomaterials in the context of contemporary nanotechnology-based insect pest control.

Keywords: Agriculture, Nanotechnology, Bioefficacy, formulation, Nanoparticles, Environmental, Pest and Management.

1. INTRODUCTION

Agriculture employs 19% of the global population [1]. Both biotic and abiotic stresses are factors that reduce agricultural yield. Pests, which include weeds, insects, illnesses, and nematodes, are responsible for 20–40% of lost crops (FAO) [2]. 18–20% of the world's crops are destroyed by insect pests. Insect larvae and adults harm agricultural plants. Since the beginning of human history, people have used cultural, mechanical, biological, and chemical pest management measures in order to keep insect pests under control. Chemical pest management that is based on synthetic pesticides is popular among farmers. It plays an important role in modern agriculture, helping to enhance crop productivity while also protecting crops. Insecticides make up 29.5% of the total 2 million tons of chemicals. Traditional formulations of pesticides have several flaws, including insufficient dispersion, harmful solvents, dust, drift, and so forth. After application, then, more than 90 percent of pesticides are carried over into agricultural products and remain there. The uncontrolled and excessive use of dangerous pesticides contributes to the development of pest resistance, the spread of disease, the destruction of natural habitats, the reduction of biodiversity, and the disruption of ecological balance, as well as to the risk to human health. The process of bioaccumulation takes place when active compounds or their metabolites build up in an environment or in organisms. This opens the door for toxins to enter the food chain, which puts

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Fathima Shahana	Chemistry	Molecular Synthesis, Structural elucidation, charge transfer interaction, vibrational investigation and molecular docking studies of ethoxy substituted ketothiophene-thiazole derivative	Wutan Huatan Jisuan Jishu

Wutan Huatan Jisuan Jishu

ISSN NO: 1001-1749

Molecular synthesis, structural elucidation, charge transfer interaction, vibrational investigation and molecular docking studies of ethoxy substituted ketothiophene-thiazole derivative

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Abstract: The molecular structure of the novel ketothiophene-thiazole derivative was synthesized. Optimized parameters of the compound was investigated by using density functional theory calculation using Beckes three-parameter exchange functional in combination with the Lee Yang Parr correlation Gaussian 09 program package with the standard 6-311G basis software set. Reactivity of the compound was predicted by the existence of hydrogen bonded intramolecular interactions and the hyperconjugative energy transfer leading to the stabilization of the system. Molecular docking scores reveal good binding affinity and the inhibition activity of the molecule against PDB : 4QP1 as a crystal structure of empty hepatitis A virus and the protein structure of heparan sulfate lyase HepC mutant from Pedobacter heparinus (PDB code: 4MMI) obtained from the protein data bank.

Keywords: Ketothiophene derivative, ethoxy substitution, thiazole ring, Density functionl theory, molecular docking.

Introduction:

Despite existing therapies for various ailments, emerging diseases or disorders need more selective treatments. Therefore the runaway progress of drug discovery and development is inevitable. In medicinal chemistry, nitrogen and sulfur based heterocycles, including thiophene and thiazoles, are regarded as a fundamental platform for constructing newer entities for various diseases. Thiophene is a 5-membered ring having sulfur atom, thiazole is a five membered ring having both nitrogen and sulphur. A heterocyclic ring, which serves as the central component of pharmacological compounds, is a widespread occurrence in both natural and synthesized medications. One of the effective strategies utilized in the process of discovering novel drugs is the hybrid architecture of bioactive pharmacophore compounds [1]. Thiophenes clubbed with other thiazole have recently been favored as scaffolding for the creation of new promising bioactive compounds [2]. Thiophene along with the thiazole and carbonyl group possesses antibacterial, antifungal activities, antitubercular[3], anticancer activities [4], anti-oxidant, anti-inflammatory [5].

In the process of doing research of new heterocyclic compounds with expected biological activities, we reported the synthesis of new ketothiophene-thiazole derivatives, viz.(4-amino-2-(ethoxyphenylamino)thiazol-5-yl)(thiophene-2-yl)methanone (AETM), The optimized structure of the compound was analyzed by the density functional theory (DFT) calculation using Becke's three-parameter exchange functional in combination with the Lee-Yang-Parr correlation (B3LYP) Gaussian 09 program package with the standard 6-311G basis software set. Docking studies were carried out to find its antiviral and antibacterial activities using the Hex 8.0 software and visualized by Discovery Studio 3.5.

EXPERIMENTAL SECTION

1.1. INTRODUCTION

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sithi Jameela	Zoology	Effect of <i>Calotropis procera</i> (Aiton) dryand. Based zinc oxide nanoparticles on the cotton pest <i>Spodoptera litura</i> Fab	Indian Journal of Experimental Biology



Indian Journal of Experimental Biology
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Note

Effect of *Calotropis procera* (Aiton) Dryand. based zinc oxide nanoparticles on the cotton pest *Spodoptera litura* Fab.

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Major loss in agricultural crops is caused by insect pests. In India, various synthetic insecticides are used against pests. These are much expensive and cause environmental hazards. The nanoparticles, as an alternative approach is gaining considerable interest in this field. In the present study, we explored the biological synthesis of zinc oxide nanoparticles using Giant milkweed, *Calotropis procera* (Aiton) Dryand. and its effects on the tobacco cutworm, *Spodoptera litura*. The reduction of zinc ions (Zn²⁺) to zinc nanoparticles (ZnO NPs) was prepared by mixing 50 g of *C. procera* leaves with 100 mL of single distilled water in a 250 mL glass beaker. To synthesize nanoparticles, 50 mL of *C. procera* leaf extract was taken using a stirrer-beater and 5 g of zinc oxide was added at 60°C, boiled, then kept in a hot air oven at 70°C for 24 h. Finally, the obtained light yellow coloured powder was carefully collected and characterized using X-ray diffraction (XRD) analysis. The results revealed that the biologically synthesized zinc oxide nanoparticles pesticide was highly effective against the pest. The weight of the pest decreased from low concentration to high concentration. It is concluded that the *Calotropis Procera* based zinc oxide nanoparticles could be used for the control of *Spodoptera litura*.

Keywords: Apple of sodom, Biocontrol, Calotropis, Giant milkweed, Nano formulation, Pest control, Sodom apple, Tobacco cutworm

Spodoptera litura Fab, commonly called Tobacco cutworm, is a polyphagous lepidopteran pest that feeds on 87 plant species of 40 botanical families including

many economically important crops. It is found in Asia, Africa, Australia, Europe, Pacific islands, and the Middle East. It is an extremely serious pest of several field crops in India. Arthropods are destroying an estimated 18–20% of the annual crop production worldwide and loss of more than US\$470 billion¹. *S. litura* alone caused a loss of 1.39 billion rupees during an epidemic in India². Currently, pesticides are used against *S. litura* and the residues affect human health and the environment^{3,4}. Hence, biosynthesized nanoparticles would be alternative to pesticides and their utilization in agriculture has wide scope^{5,6}.

Nanotechnology is a field, where synthesis, identification, investigation, and application of nanosized (1-100 nm) materials for the advancement of science. Though chemical methods are effectively investigated to shape the synthesis of metal nanoparticles in various shapes and sizes, it is harmful to the environment and other beneficial insect species. Recent research shows that the utilization of botanicals is a novel method for the synthesis of metal nanoparticles, which has many advantages over the existing chemical methods. Zinc oxide (ZnO) is considered to be a remarkable material having a wide spectrum of applications, such as that of a semiconductor (E_g = 3.37 eV), electroluminescent material, magnetic material, piezoelectric sensor, UV-absorber, actuator, nanostructure varistor, field emission displaying material, thermoelectric material, gas sensor, and as a constituent of cosmetics, etc.^{7,8}.

Calotropis procera (Aiton) Dryand, commonly known as Apple of Sodom or Giant milkweed, is widely distributed in tropical and subtropical regions of Asia and Africa including India, Pakistan, Afghanistan, Nepal, Iran, Iraq, Algeria, Israel, Kuwait, Niger, Kenya, Nigeria, Oman, Saudi Arabia, Vietnam, Yemen, the United Arab Emirates, Zimbabwe and China⁹. It is a desert plant and referred as "Madar" in Greeco-Arab medicine, and also used in Indian traditional medicine to treat fever, muscular spasms, allergy, dysentery, rheumatism, asthma, and as an expectorant, analgesic, anti-inflammatory and antitumor agent⁹⁻¹¹. *C. procera* secretes a milky liquid called latex. During mechanical damage, the tissues of this plant break and secrete the milky latex, which

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. I. Zahir Hussain	Zoology	Larvicidal activity of <i>Rivea hypocrateriformis</i> (Convolvulaceae) leaf extracts against <i>Aedes aegypti</i> (Diptera: Culicidae)	International journal of Entomology Research



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Larvicidal activity of *Rivea hypocrateriformis* (Convolvulaceae) leaf extracts against *Aedes aegypti* (Diptera: Culicidae)

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Abstract

The deadly human disease dengue is spread by the *Aedes aegypti* vector. Scientists have focused more attention to plant-derived products because they are a grate source of new natural compounds with insecticidal capabilities that are safe for humans and the environment. Many studies conducted over the past decade years on natural plant products against vector mosquitoes suggest they could replace chemical and synthetic pesticides as a new approach of mosquito control. In this present investigation, larvicidal activity against the *A. aegypti* vector was observed for crude extracts of *Rivea hypocrateriformis* leaf prepared in hexane, ethanol, Ethyl acetate, petroleum ether, and acetone. For a 24hrs, mortality was recorded. The larvicidal activity of petroleum ether leaf extract had highest mortality, with LC₅₀ and LC₉₀ values of 106.63 ppm and 399.94 ppm, respectively, after 24 hours. Plant phytochemicals can be utilized as efficient of vector control agents alone or in combination.

Keywords: larvicidal activity, *Rivea hypocrateriformis*, Phytochemicals, *Aedes aegypti*

Introduction

Worldwide, diseases spread by insects continue to be a main source of illness and demise (Pavefa *et al.*2009)^[26]. Due to their social and economic effects, particularly in subtropical and tropical nations, vector and vector-borne diseases have grown to be a difficult concern for public health (Klempner *et al.* 2007)^[27] (Rahuman *et al.* 2008)^[73]. Millions of people die each year from mosquito-borne diseases such malaria, dengue fever, chikungunya, filariasis, and Japanese encephalitis that afflict both humans and domestic animals worldwide (James *et al.*1992)^[27]. In many regions of the world, the mosquito *Aedes aegypti* is a significant carrier of dengue fever and dengue hemorrhagic fever. Programs for preventing and controlling dengue have relied on vector control in the absence of an effective vaccine and medications (Scott *et al.*1993)^[77]. The development of pesticide tolerance in *Aedes* has made it difficult to control this disease vector with synthetic organic chemical insecticides. *A. aegypti*, the dengue virus's vector, is widely distributed throughout tropical and subtropical areas. *A. aegypti* and other dengue vectors are common in areas where two-thirds of the world's population lives. Asia, the Americas, and a number of Pacific islands are currently afflicted by epidemic dengue hemorrhagic fever, and all continents aside from Europe-have endemic dengue populations. Dengue viruses, which are the main cause of dengue fever and more dangerous dengue hemorrhagic fever/dengue shock syndrome, infect almost 100 million individuals each year (Hahn *et al.*2001)^[108]. The alphavirus genus's chikungunya virus poses major public health risks in countries throughout Southeast Asia and Africa continents. (Pastorino *et al.*2005)^[27]. Scientists have been working diligently to find solutions to these issues on a global scale. Recently, green chemistry, which uses natural plant

phytochemicals to control mosquitoes, has received a lot of attention. It is generally known that natural substances made from plants, especially in the field of infectious diseases, are efficient, secure, and often utilized (Cragg *et al.*1997). Numerous studies (Rahuman *et al.*2000, Consoli *et al.*1988, Sakthivadive *et al.*2008, Das *et al.*2007, Arivoli and Samuel *et al.* 2011, Arivoli *et al.*2011, Arivoli and Tennyson *et al.* 2012, Arivoli *et al.*2012, Raveen *et al.*2011, Tennyson *et al.*2012)^[5, 6, 7, 8, 11, 14, 15, 30, 33, 35, 41] have concentrated on plant products as efficient insecticides and larvicides for controlling various mosquito species. Since they include a variety of bioactive compounds that are selective and don't affect non-target creatures or the environment, natural products from plants provide an alternative source of pest control agents (Arnason *et al.*1989 and Hedin *et al.*1997)^[9, 20]. Natural pesticides derived from plants are valuable sources of new pesticide research leads (Newman *et al.*2000)^[26]. Numerous studies on natural plant products against mosquito vectors conducted over the past ten years suggest they may be an alternative to synthetic and chemical insecticides. To make these eco-friendly compounds practical for field use and for large-scale vector control activities, more focused efforts must be put into these investigations.

Rivea hypocrateriformis The Convolvulaceae family of woody climbing shrubs, or choisy, is extensively found throughout India, Nepal, Sri Lanka, Pakistan, Bangladesh, Myanmar, and Thailand (Salehi *et al.*2020)^[76]. Traditional remedies for this plant's bark, stems, and leaves include treatments for analgesia, malaria, cancer, and mental illnesses. For instance, this plant is used by the locals of Pakistan's Tharparkar region to treat malaria and relieve discomfort. The plant has been linked to a variety of biological potentials, including anti-inflammatory, anti-

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Mohamed Ramlath Sabura	Zoology	Analysis of antifungal activity using powdered cuttlebone <i>Sepia pharaonis</i> Ehrenberg 1831 against selected pathogens	Uttar pradhesh journal of zoology

UTTAR PRADESH JOURNAL OF ZOOLOGY

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ANALYSIS OF ANTIFUNGAL ACTIVITY USING POWDERED CUTTLEBONE *Sepia pharaonis* EHRENBERG, 1831 AGAINST SELECTED PATHOGENS

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Original Research Article

ABSTRACT

Sea food is regarded as a good source of animal protein since it had a high content of polyunsaturated fatty acids. Cephalopods are considerably important a food resource as well as in scientific investigations. The aim of the present study is to evaluate the antifungal activity of methanolic extract of powdered cuttlebone of *Sepia pharaonis* against five fungal strains such as, *Candida albicans*, *Aspergillus flavus*, *Mucor*, *Aspergillus niger* and *Aspergillus fumigatus* using well diffusion method. The methanolic extract was active against *Candida albicans*, *Mucor* and *Aspergillus fumigatus* at higher concentration level and dormant against *Aspergillus flavus* and *Aspergillus niger*. These results revealed that the methanolic extract of powdered cuttle bone possess relatively good antifungal activity.

Keywords: Cephalopods; *Sepia pharaonis*; cuttlebone; methanolic extract; fungal strains.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Peer Mohamed	Zoology	Evaluation on haematological differences of cat fish (<i>mystus montanus</i>) in three different ponds, tirunelveli district tamil nadu	The Seybold report

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JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
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Evaluation on Haematological Differences of Cat Fish (*Mystus montanus*) in Three Different Ponds, Tirunelveli District, Tamil Nadu.

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Abstract

The present study was designed to evaluate the haematological parameters of catfish (*Mystus montanus*) in three different ponds near Tirunelveli District, Tamil Nadu. 30 adult fish of *Mystus montanus*, 10 fishes from Veinthaan Kulam pond, 10 fishes from Ariya kulam pond, and Ten fishes from Nainar Kulam pond were used for the present study. The application of haematological measures is very important in evaluating fish health as it monitors stress and pollutants in the pond. The mean weight and length of fish from the pond were 10±2 g and 12±3 cm. There were no important differences in haematological parameters between the fish in the ponds of Ariyakulam and Veinthaankulam. However, significant differences were observed ($P < 0.005$) in the full blood count, Haematological indications, and differential leukocyte counts of fish in the Nainar kulam pond.

Keywords: Three different ponds, *Mystus montanus*, Haematology, Pollution index, Cat fish

Introduction

Ponds are an important part of the urban ecosystem. Though relatively small in size, ponds perform significant environmental, social, and economic functions, ranging from being a source of drinking water, recharging groundwater, acting as seaweed to control flooding, supporting biodiversity, and even providing livelihoods. Ponds have been used since time immemorial as a traditional source of water supply in India. However, the water of the ponds, lakes, and river is polluted mainly due to discharged waste water from residential areas, sewage outlets, solid wastes, detergents, automobile oil wastes, fishing facilities, and agricultural pesticides from farmlands (Hasan *et al.*). Water is one of the most abundant compounds on earth, covering approximately three-fourths of the earth's surface. The majority of water available on earth is marine water by nature, only a small quantity exists as fresh water. Fresh water has become a scarce commodity due to over-exploitation and pollution (Basavaraj Sampi, *et al.*). Day by day water is becoming more and more unfit for mankind due to unwise use, neglect, and mismanagement. Many of the physical and chemical properties of water must be considered in its management. Some of these properties are temperature, pH, hardness, dissolved oxygen. The characteristics of water bodies are influenced by seasonal variations. A good knowledge of the chemical qualities of raw water is necessary to guide its suitability for use. The study of dissimilar physio-chemical parameters is very important for understanding the metabolic events in aquatic ecosystems. The parameters influence each other and govern the distribution and abundance of flora and fauna (Shinde, *et al.*)

Blood is a complex fluid containing a large variety of dissolved suspended organic and inorganic substance (Stewart, 1991) or specialized circulating tissues and cells suspended in the intra cellular fluid substance (Dellman and Brown, 1976). Haematological characteristics are an important tool that can be used to understand as an effective and sensitive index to monitor physiological and pathological changes in fishes and also environmental and physiological factors are known to influence fish haematology.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Peer Mohamed	Zoology	Innovative methodology for pest control in Indian architecture-integrated pest management	Eur. Chem Bull 2023



**INNOVATIVE METHODOLOGY FOR PEST CONTROL IN
INDIAN ARCHITECTURE - INTEGRATED PEST
MANAGEMENT**

Dr. S. Peer Mohamed*

Abstract:

Pesticides are often used in agricultural settings to control pests and diseases, guarantee a high crop yield, and protect the crop's market value. However, there are dangers to human and environmental health from agricultural land that gets a lot of chemical inputs. In addition, consumers seek for products that haven't been subjected to any chemical processing or pesticides. The majority of people throughout the world eat rice, which is grown with the use of artificial pesticides. Natural predators can help decrease the need for chemical pesticides in rice farming. Predators and parasitoids have an almost zero chance of survival in rice-growing environments due to the absence of cover and sustenance. This research work eco-engineered the rice landscape to boost crop protection biocontrol agents. Blooming plants that produce nectar on top of rice bunds offer shelter and food for biocontrol agents, which in turn serves to decrease insect numbers and sustain grain output. The variety of predators, parasitoids, and parasites was higher in ecoengineered plots compared to pesticide-treated and control plots. Bund-grown flowering plants attracted fewer significant insect pests and suffered less damage than neighbouring plots. Pest populations can be reduced and crop yields maintained without the use of pesticides, as shown in this research, just by altering the habitat of natural enemies in rice landscapes.

Keywords: Agricultural, Pest control, Management, Crop protection and Environment.

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Dr. M. I. Delighta Mano Joyce	Zoology	Analysis of Antifungal Activity using powdered cuttlebone sepia phararis eherenberg, 1831 against selected pathogens	Uttar Pradesh journal of zoology

Socio-Economic Conditions Of Beedi Workers With Reference To Melapalayam Town (Tirunelveli District) In Tamil Nadu

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Abstract

This Study investigates the Socio, economic and demographic conditions of Beedi workers with special reference to Melapalayam located in the banks of Tamirabarani river adjunct to Tirunelveli city, Tamil Nadu in Southern part of India. Melapalayam a densely populated area in Tirunelveli which predominantly occupied by Muslim neighborhoods in which most of the women engages in beedi rolling. India's Beedi workers is one of the unorganized vulnerable segment of labor force in rural areas consist majority of women faces very low wages than other industries. Tamil Nadu is one of the top producers in Beedi industry among the southern states. Lower compensation and Health hazards are the alarming issue in the Industry. Melapalayam is home to more than one hundred thousand populations with Muslim majority also holds hundreds of beedi workers from door to door. The study analyzed the contribution of beedi industry to the development in the area towards their education, health spending, social status and problems faced by the beedi workers.

KEYWORDS Beedi workers, Beedi rollers, work force, Beedi Industry, Socio- economic, demographic, Gross Value Added, etc.,

PRELUDE AND BACKGROUND

Beedi Industry is one of the largest Industry in India which employs more than 4 million work force which is accounted for only 7.04% of the entire manufacturing Industry. In 2010-11 Beedi Industry contributed only 0.65 percent of the total Gross Value Added of the entire manufacturing sector in the country. Women accounted for 90 per cent of the total workforce by home based work or work from home whereas men work at factory job. The employment of workers classified into direct employment by companies and employment through contractors. The majority of the workers are employed directly through companies. More than 95 per cent of Beedi producing are concentrated in 10 states like West Bengal, Karnataka, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Bihar and other states. Beedi workers earns only 17% of the annual average wage earned per worker in the registered manufacturing industry.

Most of the women employees works from their houses and men works at factory site. The wages earned by beedi workers are very lesser than other manufacturing industries. The low wages earned by beedi workers are not able to cope up the inflation and basic amenities. Government of India and State Governments are offering educational scholarships to the children of beedi workers which helps them in some way to attain education.

STUDY OBJECTIVES

- o To assess the reasons for doing Beedi rolling.
- o To identify the monthly income range earned by Beedi workers.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. I. Delighta Mano Joyce	Zoology	Biosynthesis, characterization and corrosion inhibitory efficiency of silver nanoparticles using ascidians	Eur.Chem.Bull.2023

A Study on Fintech and the Future of Financial Services with Reference to Chennai

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Abstract

India's economic inclusion has considerably progressed over the past several years. In recent years, there was an upward thrust within the range of Indians who have financial institution bills, with this determine believed to be close to 80% at present. Fintech businesses in India are gradually becoming extra major because the Government of India keeps to strive for expanding economic services to the underbanked area of the populace. To attain the underbanked segments of the populace and offer a solid running environment for fintech businesses, India must be seeking to growth monetary inclusion. In this look at, regression and correlation were employed, together with secondary facts accrued from the RBI, to analyses this influence. The goal become to determine the effect of fintech and digital economic offerings on economic inclusion in India. According to the outcomes, fintech corporations have extensively aided economic inclusion in this nation, especially for the centre magnificence. These findings may be helpful for coverage-makers running difficult to bring each man or woman on this country into an organized monetary gadget.

Keywords: *Technology, financial, economy, digital, services, initiatives.*

INTRODUCTION

Financial Technology is the minute technology and innovation that directs the traditional financial methods to deliver financial services. The operation of smartphones for mobile banking, investing, and cryptocurrency are instances of technologies that make financial services extra comprehensible to the general public. Financial technology companies subsist of both startups and established financial and technology companies demanding to succeed or strengthen the utilization of financial services provided by existing financial companies. In other words, "fintech is a new

financial industry that applies technology to improve financial activities." Fintech is the new applications, processes, products, or business models in the financial services industry, composed of one or more complementary financial services and provided as an end-to-end process via the internet.

LITERATURE REVIEW

Yoon et al (2016) studied the User Behaviours for Consulting of Fintech Companies, they utilized the casual analysis method through various linear regression analysis as a statistical analysis method. This method had a

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. I. Delighta Mano Joyce	Zoology	Comparative Analysis of the Diversity of Bird in Rural and Urban Areas of the Tirunelveli District, Tamil Nadu	Positif journal

Positif Journal

Issn No : 0048-4911

Comparative Analysis of the Diversity of Bird Species in Rural and Urban Areas of the Tirunelveli District, Tamil Nadu

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Abstract

Bird species richness and community structure differed from region to region. Urban development leads to changes in habitat structure and resource base. A total of 31 species of birds belonging to 26 families and 13 orders were recorded from the two study sites (urban and rural area). Among these, 13 species were passerines and 18 species non passerine birds. Species diversity in Ariyapuram was (28 species) significantly higher than that of Sarah Tucker College campus (21 species). Six feeding guilds were assessed by the study and insectivores were the most dominant group. The insectivorous feeding guild was mostly composed of species from families Apodidae and Hirundidae. The results of this study suggest that higher bird diversity is found in rural areas than in urban areas. To save the urban avifauna, now-a-days reforestation is necessary to create some natural habitat like gardens, parks and lakes besides the human habitation to facilitate the foraging, sheltering and breeding for birds. Therefore, a conservation plan should be under taken by the government to save the rural and urban species of birds and their sustainable population. Additionally, people are more likely to take action to conserve biodiversity if they have direct contact with nature.

Keywords: Bird diversity, Urban, Rural, Feeding guilds, Conservation.

Introduction

Biodiversity is essential for human survival and economic wellbeing and for the ecosystem function and stability [1]. Biodiversity is the variety of life in all its forms, levels, and

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sithi Jameela	Zoology	Survey of Insect diversity in the pilot silkworm rearing centre at sadakthullah app college(Autonomous), Tirunelveli.	Mukt shabd Journal

SURVEY OF INSECT DIVERSITY IN THE PILOT SILKWORM REARING CENTRE AT SADAKATHULLAH APPA COLLEGE (AUTONOMOUS), TIRUNELVELI

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ABSTRACT

Mulberry is the indispensable food for mulberry silkworm and is known for its luxuriant growth. About 300 insect and non-insect species of pests are known to inflict the damage to mulberry in different parts of the world. Among the pests sucking pests are considered as major pests causing considerable damage to mulberry in all the growing stages of crop particularly in the apical portion. A field investigation on the seasonal incidence of frequently occurring leaf eating pests of mulberry was carried out for the past two years from Pilot silkworm rearing centre in the Sadakathullah Appa College campus. The present survey was conducted during January, 2021 to January 2022. The result shows that, different pests are damaging the mulberry crop from the study area which causes heavy economical loss to sericulture farm. The pests occurred were leaf roller, bihar hairy caterpillar, cutworms, red hairy caterpillar, Jassid / leaf hopper, Southern green stink bug / Pentatomid bug, Tree hoppers, Litchi bug, wasp moth and grasshopper etc. In the

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Peer Mohamed	Zoology	Implementation of combined pest management performs in sericulture – A case study in tirunelveli district, Tamil Nadu..	International Journal of food and Nutritional Sciences

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Research Paper

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IMPLEMENTATION OF COMBINED PEST MANAGEMENT PERFORMS IN SERICULTURE – A CASE STUDY IN TIRUNELVELI DISTRICT, TAMIL NADU

Dr .S. Peer Mohamed

Assistant professor, Department of Zoology, SadakathullahAppa College (Autonomous), Rahmath Nagar, Tirunelveli-627011 Affiliated to ManonmaniamSundaranar University, Tirunelveli, Tamilnadu, India

Abstract:

Sericulture is an agro-based initiative, highly suited to small and marginal farm holdings with less capital investment. Cocoon production involves activities namely, mulberry leaf production, which is the sole feed for silkworm and silkworm rearing. Both mulberry and silkworm are infested with a number of pests, which affect the cocoon quality and productivity resulting in economic loss to the farmers. Chemical control measure of pests is widely adopted by the farmers and its hazardous effects on human health and beneficial organisms are the least measured. Therefore, Integrated Pest Management (IPM) techniques mainly involving suitable biological measures have been evolved and popularized for the control of mulberry and silkworm pests. However, despite the favourable results, the adoption level has remained low. In this context, a study was conducted in Tirunelveli districts of Tamil Nadu with the information collected from 100 randomly selected farmers to understand the gap between available scientific knowledge in IPM practices and its implementation by sericulture farmers. The results revealed that there was the highest technological gap (89.60 %) in the adoption of biological control measures against the mulberry pests whereas the gap with cultural/ mechanical practices was 67.30 % and minimum 12.80% in the adoption of chemical measures. In case of management of Uzi fly threat on silkworms, there was no technological gap with respect to mechanical method of using nylon net to prevent the entry of Uzi fly inside the rearing house, whereas the technological gap of 87.00 % and 81.50% was observed for biological and chemical control methods, respectively. Thus, the IPM practices with the special emphasis on biocontrol method needs to be popularized among the farmers by intensified extension efforts for broader implementation at the farmer's level.

Key words: Adoption, biological control, chemical control, IPM, mulberry, silkworm

1. Introduction:

About 200 insect and non-insect pest species attack mulberry due to indiscriminate use of chemicals and fertilizers. Among these, Pink mealy bug (*Maconellicoccus hirsutus* Green), papaya mealy bug (*Paracoccus marginatus* Williams and Granara De Willink), leafwebber (*Diaphania pulverulentalis* Hampson) and thrips (*Pseudodendrothrips mori* Niwa) are the major pests. The average incidence and loss in mulberry leaf yield caused by these pests is estimated to be 34.24% and 4500 kg/ha/yr (Manjunath, 2004). Silkworm (*Bombyx mori* Linnaeus) is a domesticated insect and reared in colonial form. The incidence of pests and diseases in silkworm rearing is very common and sometimes lead to complete crop loss. The mulberry silkworm is affected by a number of insect pests like uzifly (*Exoristabombycis* Louis), carwig, dermestid beetle and ants. Among the pests, uzifly is the most serious pest in Karnataka, Andhra Pradesh, Tamil Nadu and West Bengal. Saratchandra (1997) recorded 10 to 40 % silkworm crop loss due to uzi infestation. Though chemicals control measure is invariably used by the farmers, the method has some drawbacks viz. pollution due to toxic residues, development of resistance in the pests, destruction of natural enemy complex as well as hazardous effects on silkworms and human beings. Therefore, Integrated Pest Management (IPM) techniques comprising physical, chemical and biological measures have been evolved and popularized for the control of mulberry and silkworm pests. The objective of IPM is to maximize pest control in terms of overall financial, social and environmental values. Since farmers are the final decision-makers for the adoption of any technology, it is essential to identify their reaction and adoption level of various package of practices recommended for pest management in sericulture. However, not much attention has been paid to assessing the farmer's perception and knowledge about the pests and their control measures. Therefore, a study was conducted to understand the gap between available scientific knowledge in IPM practices and its adoption by sericulture farmers.

2. Materials and Methods

Tirunelveli district of Tamil Nadu were purposively selected for the study. As the sericulturists in the study area are highly scattered, the farmers practising sericulture were selected by random sampling

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Syed Ali Fathima	Zoology	Phytochemical Pharmacological studies on Ethanolic Extracts of pouzolzia wightii Benn. Leaves and Stem	Current advance research trends in Medicinal plants



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Original Article

SPECTROSCOPIC STUDIES ON *POUZOLZIA WIGHTII* BENN

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Received: 21 Apr 2017 Revised and Accepted: 01 Feb 2018

ABSTRACT

Objective: The present study was aimed to reveal the spectroscopic profile (UV-Vis and FT-IR) of *Pouzolzia wightii* Benn.

Methods: To detect the UV-Vis spectroscopic profile of *P. wightii* crude extracts were examined under UV-Vis Shimadzu spectrophotometer with the wavelength ranged from 100 to 1100 nm. About 1 mg of different extracts of petroleum ether, chloroform, ethyl acetate and acetone, ethanolic extracts of *P. wightii* were separately made into thin discs with 10-100 mg of potassium bromide using a mould and pressed under anhydrous conditions. The pellets were measured in an automatic recording FT-IR Spectrophotometer (Shimadzu 8400S) in the range of 400 to 4000 cm^{-1}

Results: In UV-Vis analysis, *P. wightii* petroleum ether extracts showed more number of peaks in roots (15) than other studied parts. Chloroform and ethyl acetate extracts of *P. wightii* leaves observed 9 peaks and acetone extracts of *P. wightii* stem showed 10 peaks. Medicinal property of plant extracts are confirmed by the presence of secondary metabolites. FT-IR analysis of ethyl acetate extracts of *P. wightii* leaves, stem and root observed the highest number of (16, 12 and 16) functional compounds.

Conclusion: These UV-Vis and FT-IR spectroscopic results may be used as a pharmacognostic marker in the pharmaceutical industries and can be used as a chemometric tool to distinguish the studied *P. wightii* leaves, stem and root. The present study used to find out the bioactive compounds which may be subjected to subsequent target isolation. Further research will be needed for the structural characterization of the isolated compound by the use of different analytical methods such as NMR and mass spectrophotometer.

Keywords: *Pouzolzia wightii*, FT-IR-Fourier Transform-Infra Red, UV-Vis-Ultra Violet-Visible, Pharmacognosy

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Dr. A. I. Shakul Hameed	Commerce	Socio Economic Conditions of Beedi Workers with Reference to Melapalayam Town (Tirunelveli District) in Tamil nadu.	Journal of Pharmaceutical Negative Results

Original Article

Socio-Economic Conditions Of Beedi Workers With Reference To Melapalayam Town (Tirunelveli District) In Tamil Nadu

Dr. J. Abdul Khader¹, Dr. A.I. Shakul Hameed² & Dr. M. Mohamed Siddik²

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KEYWORDS Beedi workers, Beedi rollers, work force, Beedi Industry, Socio- economic, demographic, Gross Value Added, etc.,

PRELUDE AND BACKGROUND

Beedi Industry is one of the largest Industry in India which employs more than 4 million work force which is accounted for only 7.04% of the entire manufacturing Industry. In 2010-11 Beedi Industry contributed only 0.65 percent of the total Gross Value Added of the entire manufacturing sector in the country. Women accounted for 90 per cent of the total workforce by home based work or work from home whereas men work at factory job. The employment of workers classified into direct employment by companies and employment through contractors. The majority of the workers are employed directly through companies. More than 95 per cent of Beedi producing are concentrated in 10 states like West Bengal, Karnataka, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Bihar and other states. Beedi workers earns only 17% of the annual average wage earned per worker in the registered manufacturing industry.

Most of the women employees works from their houses and men works at factory site. The wages earned by beedi workers are very lesser than other manufacturing industries. The low wages earned by beedi workers are not able to cope up the inflation and basic amenities. Government of India and State Governments are offering educational scholarships to the children of beedi workers which helps them in some way to attain education.

STUDY OBJECTIVES

- o To assess the reasons for doing Beedi rolling.
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A Study on Fintech and the Future of Financial Services with Reference to Chennai

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Dr. M. Mohamed Siddik

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Abstract

India's economic inclusion has considerably progressed over the past several years. In recent years, there was an upward thrust within the range of Indians who have financial institution bills, with this determine believed to be close to 80% at present. Fintech businesses in India are gradually becoming extra major because the Government of India keeps to strive for expanding economic services to the underbanked area of the populace. To attain the underbanked segments of the populace and offer a solid running environment for fintech businesses, India must be seeking to growth monetary inclusion. In this look at, regression and correlation were employed, together with secondary facts accrued from the RBI, to analyses this influence. The goal become to determine the effect of fintech and digital economic offerings on economic inclusion in India. According to the outcomes, fintech corporations have extensively aided economic inclusion in this nation, especially for the centre magnificence. These findings may be helpful for coverage-makers running difficult to bring each man or woman on this country into an organized monetary gadget.

Keywords: *Technology, financial, economy, digital, services, initiatives.*

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financial industry that applies technology to improve financial activities." Fintech is the new applications, processes, products, or business models in the financial services industry, composed of one or more complementary financial services and provided as an end-to-end process via the internet.

LITERATURE REVIEW

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Mohamed Siddik	Commerce	Role of Artificial Intelligence(AI) in Marketing	Journal of Survey in Fisheries Sciences

Role of Artificial Intelligence (AI) in Marketing

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Abstract

Disruptive technologies along with the internet of things, large facts analytics, blockchain, and synthetic intelligence have modified the methods agencies' function. all the disruptive technology, artificial intelligence (AI) is the modern-day technological disruptor and holds a large advertising transformation ability. Practitioners International is looking to figure out satisfactory suit AI solutions for its advertising capabilities. However, a scientific literature review can spotlight the importance of synthetic intelligence (AI) in advertising and chart destiny studies directions. Furthermore, co-quotation and co-incidence evaluation presented the conceptual and intellectual community. Data clustering using the Louvain set of rules helped me become aware of studies sub-issues and future studies guidelines to enlarge AI in marketing.

Keywords: *Marketing, Artificial intelligence, Bibliometric analysis, Intellectual structure.*

INTRODUCTION

Artificial intelligence uses AI to automate the curation of a large quantity of data and data related to marketing blends for you to create knowledge. Subsequently, AIM makes use of the expertise to carry out and automate marketing procedures, such as producing marketplace intelligence. Such functionality allows AIM to head more duration to take place personalization for each client to recognize his/her wants and needs, allowing such, not possible features inside the beyond to become possible now. For comparison, AIM can drill all the way down to the individual purchaser degree throughout numerous sports (e.g., acquisition, intake, and disposal) associated with services or products, even as conventional advertising and marketing tend to focus on the firm degree and

acquisition/buy pastime most effective. Due to the importance of AIM, it has ended up a crucial tool that is speedy becoming part of most agencies to create, disseminate, and practice expertise. Many reports have been published over the current years approximately the ability of AI to enhance marketing drastically. Based on a survey conducted with the aid of Accenture, 86% of the C-suite executives believed that it is crucial to scale AI across their businesses, and 76% believed the danger of going out of business if they fail to implement it inside the subsequent five years. Based on any other survey posted, extra than 1400 commercial enterprise-to-enterprise (B2B) advertising executives believed that the top sector to include AI is the expert services area. Nevertheless, the usage of AIM has been

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Mohamed Siddik	Commerce	A Study on customers attitude towards e-tailing in Chennai city	IJFANS International journal of food and nutritional sciences

IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES

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Research paper

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A STUDY ON CUSTOMERS' ATTITUDE TOWARDS E-TAILING IN CHENNAI CITY

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ABSTRACT

This research has been undertaken to study about the attitude of the E-tailing customer to which extent he/she has been benefitted in the process of E-tailing. To examine the barriers of E-tailing and also to find out the factors which influence the E-tailing customers to purchase online. To identify the successful E-tailing websites to which the customers are attached to in the process of E-tailing. This study also aims to cover the present scenarios of e-tailing opportunities and challenges and the future trends etc.

Keywords : E-tailing, Websites, trends

INTRODUCTION

E-tailing is the sale of goods online. Electronic retailing may also be referred to as Internet retailing. The word E-tail has its root in the word 'retail'. Here the letter E stands for 'electronic' since the shopping process happens through the electronic media (Internet). E-tailing can be divided into two sub categories Business to Consumer (B2C) and Business to Business (B2B) E-Retailing. E-tailing has expanded rapidly over the years and it has influenced many of the consumers to purchase consistently. Due to the on-going COVID-19 pandemic situation, customer's inclination towards online shopping is growing since consumers are less likely to prefer shopping at brick and mortar shops and physical shops are not functioning at their full capacity. Hence pandemic has accelerated the growth in online sales.

OBJECTIVES OF THE STUDY

1. To know about the demographic profile of the E-tailing customer
2. To understand about the E-tailing customer to which extent he/ she has benefitted in the process of E-tailing

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Dr. M. Mohamed Siddik	Commerce	Socio-Economic Conditions of Beedi Workers with Reference to Melapalayam Town (Tirunelveli Districts) In Tamilnadu	Journal of Pha Maceutical Negative Results

Original Article

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Dr. J. Abdul Khader¹, Dr. A.I. Shekul Hameed² & Dr. M. Mohamed Siddik³

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Original Article

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Dr. J. Abdul Khader¹, Dr. A.I. Shekul Hameed² & Dr. M. Mohamed Siddik²

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Abstract

This Study investigates the Socio, economic and demographic conditions of Beedi workers with special reference to Melapalayam located in the banks of Tamirabarani river adjunct to Tirunelveli city, Tamil Nadu in Southern part of India. Melapalayam a densely populated area in Tirunelveli which predominantly occupied by Muslim neighborhoods in which most of the women engages in beedi rolling. India's Beedi workers is one of the unorganized vulnerable segment of labor force in rural areas consist majority of women faces very low wages than other industries. Tamil Nadu is one of the top producers in Beedi industry among the southern states. Lower compensation and Health hazards are the alarming issue in the Industry. Melapalayam is home to more than one hundred thousand populations with Muslim majority also holds hundreds of beedi workers from door to door. The study analyzed the contribution of beedi industry to the development in the area towards their education, health spending, social status and problems faced by the beedi workers.

KEYWORDS Beedi workers, Beedi rollers, work force, Beedi Industry, Socio- economic, demographic, Gross Value Added, etc.,

PRELUDE AND BACKGROUND

Beedi Industry is one of the largest Industry in India which employs more than 4 million work force which is accounted for only 7.04% of the entire manufacturing Industry. In 2010-11 Beedi Industry contributed only 0.65 percent of the total Gross Value Added of the entire manufacturing sector in the country. Women accounted for 90 per cent of the total workforce by home based work or work from home whereas men work at factory job. The employment of workers classified into direct employment by companies and employment through contractors. The majority of the workers are employed directly through companies. More than 95 per cent of Beedi producing are concentrated in 10 states like West Bengal, Karnataka, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Bihar and other states. Beedi workers earns only 17% of the annual average wage earned per worker in the registered manufacturing industry.

Most of the women employees works from their houses and men works at factory site. The wages earned by beedi workers are very lesser than other manufacturing industries. The low wages earned by beedi workers are not able to cope up the inflation and basic amenities. Government of India and State Governments are offering educational scholarships to the children of beedi workers which helps them in some way to attain education.

STUDY OBJECTIVES

- o To assess the reasons for doing Beedi rolling.
- o To identify the monthly income range earned by Beedi workers.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. M. Sulthana Barvin	Economics	A study on the Growth and trend of Indian GDP and its components	Journal of Positive School Psychology

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A Study On The Growth And Trend Of Indian GDP And Its Components

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Abstract

Economists have done a lot of research studies on the topic of economic growth in general. They have contributed to understand of the idea of economic growth, as well as its drivers, measurement, policy, and impacts. The primary factors that determine economic development have evolved to meet the requirements of a shifting context and way of thinking; the environment must be given a preeminent place in the definition of "economic growth" when applied to the setting of the modern day and age. Economic growth in the truest sense would involve increasing productivity along with the protection and development of natural resources and the environment. Increasing productivity through investments in infrastructure development and technological advancement at the expense of the environment that results in unfavourable environmental, social, economic, and political conditions is not economic growth. The measurement of inclusive growth makes it easier to evaluate growth in its truest form. The term "economic growth" refers to a process that takes place over the course of a lengthy period of time and signifies a rise in the overall production and revenue of a country. The Indian Gross Domestic Products and the components of the GDP from 2014-2015 to 2020-21 (base years 2011-2012) have been collected from the web site of the National Statistical Office (NSO). The data gives more information about the Indian economy and the role of the components of GDP of the study period (2014-2015 to 2020-2021).

Keywords: Growth and trend of Indian GDP and its components.

Introduction

Economists differentiate between short-term economic stability and long-term economic growth based on the short-run changes in national production, which are referred to as business cycles (Barro1997)¹. The concept of "economic growth" is distinct from the concept of "economic development": economic growth is a specific concept because it is solely focused on the level of national output, whereas economic development is a general concept because it is focused on the level of national output as well as the quality of life. The term

"intensive growth" refers to a situation in which a higher level of growth is achieved via the more effective utilisation of inputs. The term "extensive growth" refers to the rise in GDP that is produced solely by increases in inputs such as capital, population, or territory (Bjork 1999)². However, it is now widely acknowledged that economic expansion also corresponds to a process of continuous fast activity substitution and reorganisation of human activities. This process is made possible by investment and is driven by a desire to maximise profits. The origins and consequences of economic growth, as well as

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. M. Sahul Hameed	History	Ecofeminism and environment History;Environment Movements in India	International journal of Early Childhood Special Education(INT-JECSE)

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Ecofeminism and Environmental History;Environmental Movements inIndia

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Environmental history is a subset of history that explores the way humans and the environment interact. The phenomena that influence history's mechanisms include technological, intellectual, cultural, and social transformations. These have a profound effect on the natural world as well. Environmental history's main field of study is this phenomenon. In the intellectual or philosophical movement known as ecofeminism, women played a significant role in preserving and protecting the environment. They contend that a capitalist economy and a patriarchal social structure are harmful to women and the environment. The paper examines how environmental movements, ecofeminism, and environmental history converge.

In the 1970s and 1980s, environmental history became a separate subfield of history. However, environmental history has been treated and explored since the beginning of historical writing. The growth of environmental history has been influenced by both the capitalist economic system and the philosophical movement of Romanticism. Environmental historians have greatly benefited from the historical approaches to the writing of the Marxist and Annals movements. Considering women's exploitation and environmental degradation, ecofeminism is a philosophical analysis of the link between women and nature. As victims of the capitalist economic system and the patriarchal social structure, they investigate the interaction between women and the natural world. They believe that environmental destruction and the exploitation of women share an evolutionary lineage.

Ecofeminism and Environmental History.

The writings of Francoise d'Eaubonne, Vandana Siva, Maria Mies, and Carolyn Merchant are where the philosophy of ecofeminism first appeared. In the 1970s, d'Eaubonne wrote two books that dealt with aspects of ecofeminism. The first, *Le Féminisme ou la mort* (1974), set out to offer a background and explanation for her newly coined word. D'Eaubonne begins her book and prepares the stage for her theorizing by summarizing the central European political movements related to ecofeminism. (Gates, Barbara T. "A root of Ecofeminism: Ecofeminism." *Interdisciplinary Studies in Literature and Environment* (1996): 7-16.) But before them, ecofeminism may be traced to authors like Jane Goodall and Gloria Steinem. Ecofeminism was first articulated by French feminist and environmentalist Francoise d'Eaubonne. She made the case that the exploitation of nature and the dominance of women are related. In her book *"Le Féminisme ou la Mort"* (Feminism or Death), she first used the term. The claim that the Scientific Revolution of the 16th and 17th centuries led to the exploitation of nature and women is raised in Carolyn Merchant's book *The Death of Nature, Women, Ecology, and the Scientific Revolution*. *Staying Alive* by Vandana Siva is an important landmark in the history of ecofeminism. She redefines the idea of development in her book. She contends that the Western model of development is a cover for colonial exploitation and criticizes it. The Western world is adamant about using the resources of developing nations for its growth. She advocated for women engaging in traditional agriculture based on crop diversity. She disagrees with the notion of agriculture as a monoculture. Vandana Siva quotes Gustavo Esteva "Gustavo asserts that the sacredness of development has to be refuted because it threatens survival itself 'my people are tired of development ', 'they just want to live '(Vandana Shiva, 1988, pp13). The articles written by Gwyn Kirks illuminate some thoughts on the development of Ecofeminism.

The Life of the animal on the planet largely depended on the environment. The History of life on the earth has been a history of interaction between the living and their surroundings. To a large extent, the environment has molded the physical form and habits of the earth's vegetation and its animal life (Rachel Carson, 2000, pp 23). Human beings as animals are also greatly influenced by the Environment. The Environment has a significant role in shaping the history of the Human being Environmental history

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Ecofeminism and Environmental History;Environmental Movements inIndia

**Abdul Kalam.PKM.Sahul Hameed,
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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. K. A. Mohamed Riyazudeen	Computer Science	Converting 2D magnetic resource imagining brain tumors to 3D structure using depth map machine learning techniques	Indonesian Journal of Electrical engineering and Computer Science

Converting 2D magnetic resource imagining brain tumors to 3D structure using depth map machine learning techniques

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ABSTRACT

The use of medical imaging technology aids clinicians in recognizing and assessing patient problems, as well as improving treatment procedures. However, while conducting complex procedures such as the excision of brain tumors, the knowledge and biological research gathered from 2D images are insufficient. Converting 2D images to 3D images may assist doctors in determining the size, shape, and sharp area of tumor cells in the brain. The feasibility of translating 2D medical image data to a 3D model is described in this work. A suggested framework for predicting the size, shape, and location of a brain tumor using a minimized genetic machine learning method, and then converting the tumor information into 3D images using a depth map estimation approach after detecting the tumor information. When the tumor is located, the left and right view data are combined to form a 3D magnetic resonance imaging reconstruction. We used mixed reality methods to minimize file size while preserving the greatest quality of the model during a brain surgical operation.

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1. INTRODUCTION

The medical image data are huge, the selection of features of interest is the most important and complex process that needs to be done on time. Usually, magnetic resonance imaging (MRI), computed tomography (CT) scans, etc are used as imaging sources for capturing the affected parts. It is also difficult for the physicians for analyzing the images which are usually in a two-dimensional format. The depth of the cancer-affected parts cannot be observed in two-dimensional images; hence a three-dimensional view is mandatory for finding the depth of the cancerous cell. The issue, in a few words, is the emergence of contaminants/noise generated during in the analysis and conversion of digital imaging and communications in medicine (DICOM) medical picture data [1], [2]. This motivates us to concentrate on the transformation of two-dimensional images to three-dimensional images. Here we intend to create a framework to predict the size, shape, and region of the brain tumor using minimized genetic machine learning algorithm, and later after identifying the tumor information, 2D images are converted into 3D images using the depth map estimation technique. MRI dataset is given as input to the preprocessing system in which histogram equalization technique is used to remove the signal to noise ratio in the MRI images [3], [4].

Bharathi *et al.* [5] have come up with a 2D to 3D conversion model which segments the input image group of objects by applying an effective grouping model. Using the depth gradient model, the depth model

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Piramu Kailasam	Computer Application	ROC Curve Analysis of Different hybrid feature descriptors using multi classifiers	ASEAN Engineering journal

ROC CURVE ANALYSIS OF DIFFERENT HYBRID FEATURE DESCRIPTORS USING MULTI CLASSIFIERS

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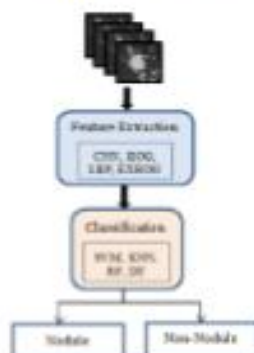
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Graphical abstract



Abstract

Tremendous success of machine learning algorithms at pattern recognition creates interest in new inventions. Machine learning in an era of big data is the significant hierarchical relationships within the data can be discovered algorithmically than other handcraft like features. In this study, Convolutional Neural Network (CNN) is used as feature descriptors in pulmonary malignancy prediction. Various feature descriptors such as Histogram of Oriented Gradient (HOG), Extended Histogram of Oriented Gradient (EHOG) and Linear Binary Pattern (LBP) descriptors are analyzed with classifiers such as Random Forest (RF), Decision Tree (DT), K-Nearest Neighbour (KNN) and Support Vector Machine (SVM) for Computed Tomography (CT). The phenotypic features of pulmonary nodules are important cues for identification. The nodule solidity is an important cue for white blob area identification. The method is analyzed in Lung Image Database Consortium (LIDC) dataset. Receiver Operating Characteristics (ROC) curves show the graphical summaries of detectors performance. It is proved that CNN based feature extraction with SVM classifier works well in pulmonary malignancy prediction.

Keywords: CT images, Features, Descriptors, Classifiers, CNN, ROC

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1.0 INTRODUCTION

Computed Tomography [1-5] is the best high resolution and volumetric, modality used to detect the characteristics of pulmonary nodule [6-8] in bronchial trees. Instead some of the nodules are in low quality resolution which the system could not identify itself or less experienced radiologists. Hence Computer Aided Design [9] Improves the identification of nodule in previous studies. Annual Screening is recommended by doctors and associations for pulmonary cancer patients [10]. Early detection prevents the life of the patient, suggested by American society of clinical oncologies. Pulmonary nodules are grouped in to Elliptical, Lobulated, Spiculated and Spherical.

The nodule named Justapure placed near the lung wall is dangerous to diagnose in segmentation process.

Various feature extractors and classification models are studied in [11]. The wavelet filters are useful to extract texture feature and have determined the number of coils using LBP descriptor because they use the pixel values from eight directions [12-15]. Deep feed forward Artificial Neural Network (ANN) [16-17] analyzes the visual Imagery. ANNs consist of a method of solving problems related to science through simple models that mimic the human brain, including behavior. An ANN is armed by small modules which simulate operation of a neuron. In ANN, only minimum number of layers is used. Deep feed-forward ANN analyzes the visual Imagery. The convolutional neural network has hundreds of hidden layers, which uses filters to extract features.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Piramu Kailasam	Computer Application	Carotenoid screening in selected flowers	Journal of Xi'an shiyou University, Natural Science Edition

CAROTENOID SCREENING IN SELECTED FLOWERS

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Abstract

Flowering plants have interesting potential as sources of pigments for use in food products. This research focuses on the carotenoid composition of five commonly grown garden flowers that bloom year-round and that have adapted well to the environmental conditions in Tamil Nadu and may be of commercial value as sources of carotenoids. The five selected flowers are divided into five different families: Apocynaceae, Boraginaceae, Fabaceae, Cucurbitaceae and Malvaceae. The colors of the selected flowers are varying from yellow to red. In this work the carotenoid pigments were extracted, separated and identified and quantified for their potential use as low-cost and abundant sources in the food industries. The majority methods of extraction of carotenoids from plant sources make use of organic solvents such as hexane, ethanol, methanol, tetrahydrofuran, benzene, and petroleum ether. It has been observed that the stability of carotenoid extract obtained with hexane, acetone, ethanol was higher than that of extracts obtained with other organic solvents, such as chloroform, methanol or dichromate. The proposed work was done by Soxhlet method and all metrics were analyzed by high performance factor Concentration of β -carotene ($\mu\text{g/g}$).

Keywords:

Colored Flowers, Carotenoid, Organic Solvents, Screening, β -carotene

Introduction

A flower, sometimes known as a bloom or blossom, is the reproductive structure found in flowering plants. Flowers have long held an important role in human societies. They have been used for ornamental purposes as well as in diverse dishes, mainly due to their appealing and diverse colours. In addition, flowers have been used in traditional medicine. In recent years, there has been a growing interest in the study from different points of view of the health-promoting secondary metabolites present in flowers, including carotenoids and phenolics. Flowers inherit their appearance from genes. Flower colour is one of the most important traits of ornamental plants and is attributed to various pigments. As a plant looks aesthetic, the colours of a flower must attract us first. Therefore the brighter the flower, the more likely it will be visited. Plants have a number of different means to attract pollinators, with bright showy colours being one of the most common ways to maximize their visual effect. While other flower features, such as texture and fragrances, are also used to attract pollinators, a plant's colour is vital to its survival from one generation to the next. The colour observed in flowers is actually the result of reflected light from various chemical compounds called "Plant Pigments".

Pigments are born into these plants, producing a range of colours across the spectrum. There are many different plant pigments, and they are found in different classes of organic compounds. The selective absorption of different wavelength determines the color of a pigment. The molecular

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Piramu Kailasam	Computer Application	A study of Hybrid and YOLO model in covid 19	Turkish Journal of computer and Mathematics Education

A Study of Hybrid Features and YOLO model in COVID'19

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Abstract: Nowadays, Covid '19 disease threaten people's health and life. Accurate detection of Covid'19 is necessary to control its spread. In critical diagnosis, its better to analyze CT imaging than Lab test for fast recovery. Traditional deep learning method has the learning problem which affects the accuracy. In this paper, a new methodology based on YOLOv3 deep learning model proposes to detect Covid'19 in low dose computed tomography lung images. The feature vectors Haar-like, HOG, LBP are added to calculate shape and texture of the object. The efficacy of hybrid computational YOLOv3, Haar-like, HOG and LBP features are compared. The sole usage of Haar-like, LBP is less effective, where fast access YOLOv3 features are most promising in multitask schemes. The automatic assessment between the low dose lung CT contents and the clinical semantic terms may help to retrieve reports and medical images from medical database for better diagnostic decision support system. This leads improvement of retrieval accuracy in medical databases.

Keywords: Low dose lung CT Images, Feature Vector, Object Detection, Deep Learning

1. Introduction

The outbreak of Coronavirus Disease 2019 is an unexpected global pandemic with an exponential growth rate and caused large number of deaths declared by world health organization. Coronavirus are mostly spread to animals and mammals and sometimes these infect humans lungs from moderate to serious level. Every day millions of people infected by this virus and spent lot of money, cost and time. Doctors, radiologists and researchers are diagnosing the disease with the help of medical images like X-ray and Computed tomography (CT) images(Shah, F.M., Joy, S.K.S., Ahmed, F. *et al* (2021)). Lung ultrasound imagery is a portable , low cost shown great potential to diagnosing pulmonary conditions (Julia Diaz-Escobar, Nelson E. Ordóñez-Guillén, Salvador Villarreal-Reyes et al (2020)). Hence its clear to develop a novel CAD tool to provide fast screening in places where traditional testing is not effective. Computed tomography (CT)(Murphy, K., van Ginneken, B., Schilham, A. M., De Hoop, B., Gietema, H., and Prokop, M. (2009)) is a test that provides an initial window into pathophysiology that could focus on several stages of disease detection and analysis (Lin Li, Lixin Qin, Zeguo Xu, Young Yin. et al(2020)).

2.Significance Of The Study

Texture and shape classification techniques are popular to detect specific region of interest objects. HOG and Haar like features are shape feature vector techniques and LBP is texture feature vector method(Dalal, N., Triggs, B (2005)). In recent years, the hybrid features are used to detect object with best accuracy. It can be HOG with LBP or LBP with Haar or Haar and HOG. However the arrival of YOLO family dominates the hybrid feature vector models.

A deep learning model can accurately detect coronavirus 2019 and differentiate it from other lung diseases.Though RT-PCR (Reverse transcription - polymerase chain reaction) introduced by Food and Agriculture Organization can distinctly identify coronavirus disease, it has a high false-negative rate. In Further, many regions of the world RT-PCR's availability is

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Piramu Kailasam	Computer Application	Phytochemical screening in solanum torvum. And murraya koenigii (L.) Spreng.fruits	Education and Society

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PHYTOCHEMICAL SCREENING IN SOLANUM TORVUM SW. AND MURRAYA KOENIGII (L.) SPRENG-FRUIT

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Abstract

Plants play a major role as sources of crude drug and are an integral part of the health care system of a significant impact of world population. There are several medicinal plants which are being widely used in the traditional systems of medicine. The family solanaceae represent one of the most economically and medicinally important families of Angiosperms. The genus Solanum is a hyper diverse taxon of this family. In the present work the fruits of Solanum torvum(sw) and Murraya koenigii(L.) spreng were selected and phytochemical activity and of the chosen fruits were screened with petroleum ether, Distilled water and methanol extracts. The results predicted proved that fruit of both the above said plants contained phytochemical, bioactive compounds alkaloids, saponins, steroids, flavanoids and aminoacids. By isolating and identifying these bioactive compounds new drugs can be formulated naturally to treat various infectious diseases.

INTRODUCTION

Medicinal plants grow naturally around us. Over centuries, cultures around the world have learned how to use plants to fight illness and maintain health. These readily available and culturally important traditional medicines form the basis of an accessible and affordable healthcare regime and are an important source of livelihood for indigenous and rural populations (Steenhuysen, 2007). The world Health Organization has compiled a list of 20,000 medicinal plants used in different part of the globe. A large number of these species have local uses within the country or spread over several countries in a region (Wang, 2006). The introduction of modern medicine in India in the 20th century has been extremely important for the improved welfare of the Indian people.

Indian systems of Medicine derive many of their curative tools for plants which are used as drugs. Information about these is often found in old literature (Atharveda, Charak Samhita, Sushruta Samhita, etc.). In spite of the many achievements of allopathic medicines, the Indian Systems of Medicine still continue to provide medical care to majority of the people on account of their cheaper cost with no side effects (Kokate, 2002). Herbal drugs obtained are safer in the treatment of various diseases (Ayyanar, 2005). Medicinal plants play an important role in supporting healthcare system in India. According to the World Health Organization (WHO, 2000), 80% of the rural population in developing countries utilizes locally available medicinal plants for their primary healthcare needs.

The Medicinal plants are useful for healing as well as for curing of human diseases because of the presence of phytochemical constituents (Abdul et al., 2013). Phytochemicals are naturally occurring in the medicinal plants in all the parts namely, leaves, stem, fruits and roots that have defense mechanism and protect from various diseases. Phytochemicals are primary and secondary compounds. Proteins and common sugars are included in primary constituents and secondary compounds have terpenoid, alkaloids and phenolic compounds (Krishnaiah et al., 2007). Terpenoids exhibit various important pharmacological activities i.e., anti-inflammatory, anti-cancer, anti-malarial, inhibition of cholesterol synthesis, anti-viral and anti-bacterial activities (Mahato and Sen, 1997). Terpenoids are very important in attracting useful mites and consume the herbivorous insects (Kappers et al., 2005). Alkaloids are used as anaesthetic agents and are found in medicinal plants (Herouart et al., 1988).

Medicinal plants are now more focused than ever because they have the capability of producing many benefits to society indeed to mankind, especially in the line of medicine and pharmaceutical.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Piramu Kailasam	Computer Application	Study of solanum lycopersicum L. Disease detection using watershed segmentation technique	Dogo Rangsang Research journal

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STUDY OF SOLANUM LYCOPERSICUM L. DISEASE DETECTION USING WATERSHED SEGMENTATION TECHNIQUE

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Abstract

Agriculture is a backbone of India where Farmer cultivates different types of plants which produce grains, vegetables and fruits. vegetable diseases are primarily responsible for the reduction in production which causes economic losses. In this paper we focus to detect the diseases of tomato at earlier stage. The existing system used different algorithms such as color thresholding segmentation techniques, K-means clustering are used. The Colorthresholder enables to create a segmentation mask of fruit color image based on the exploration of different color spaces like RGB, HSV and La*b. K-means clustering method is used for conducting image segmentation and disease detection. In this study K-means clustering algorithm is used for grouping related pixels which helps to detect the disease in fruit image. The watershed is a classical algorithm used for segmentation, that is, for separating different pixel groups in an image. Starting from user-defined markers, the watershed algorithm treats pixels values as a group of local elevation. To do so, one computes an image that is the distance to the background. In watershed algorithm, the seed-level and the garbage volume keep their original functionalities. Compared to Schematic flooding algorithm, the Inverted schematic emphasize flooding method is best for fruit disease detection. In proposed system shows the Watershed method is better than RGB color based color threshold method and K-means clustering method to detect fruit diseases and its types in earlier stage.

Keywords: Fruit Image, Binary Image, Watershed Segmentation method, Tomato Fruit Disease Detection

Introduction

Nature has bestowed on us with very rich botanical health. Among different fields one of the most significant field is agriculture. Agriculture play a vital role in the development of democratic India. Increase in economy could be enhanced with the production of crops fruits and vegetables in accordance with the increase in population. Occurrence of various diseases in fruit crops is a great menace. The greatest challenging task is identification of diseases in fruits by CAD techniques using image processing tools. Diseases can be detected by continuous visual photos or video monitoring system. By means of automated image processing method diseases caused by pests in fruits can be detected. The proposed work has been focused on detection of various diseases in tomato fruits. Image Segmentation is the process that segment an image into many disjoint small area based on the certain principle, and it is the one of the most basic area of research in the image processing. Image segmentation is used in many applications such as film and photo analysis, geo information systems, medical image analysis and etc.

Statement of the Problem

Images can be segmented by various techniques. Images cannot be predicted using colours. Though there are several methods regarding segmentation techniques area and edge segments could be segmented by watershed segmentation techniques. In the proposed study diseased and nondiseased segments have been identified using different measures like Mean, Standard Deviation and Peak Signal Noise Ratio.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Piramu Kailasam	Computer Application	Diabatic diagnosis support system using fuzzy logic technique	Dogo Rangsang Research journal

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DIABATIC DIAGNOSIS SUPPORT SYSTEM USING FUZZY LOGIC TECHNIQUE

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Abstract— Fuzzy set theory is mainly used to develop mathematical model applied to different technical domains including medical investigations. This paper presents a diagnostic model using fuzzy technique by considering diabetes related diseases and their symptoms. To demonstrate the model, a clinical trial data are considered. To make an appropriate diagnosis in a patient three non-fuzzy sets viz. the set of symptoms, the set of diagnoses and the Set of patients are introduced. Each symptom belonging to the set is a fuzzy set and a mathematical process is applied to develop an association between each one of the symptoms and each one of the diagnosis and fuzzy relation “patient – diagnosis” is established through the fuzzy relations “patient – symptom” and “symptom – diagnosis”.

Keywords— Diagnosis techniques, Fuzzy set method, Max-min composition, Medical diagnosis

Introduction

In recent years computational intelligence has been used to solve many real- life complex problems by developing intelligent systems. Fuzzy set proposition provides a possibility of defining problems in real-medical scenarios as fuzzy sets. Fuzzy logic is largely suitable and applicable for formulating and developing knowledge grounded system in medicine and also for the interpretation of medical findings. This paper illustrates the usage of fuzzy set theory and fuzzy logic for developing knowledge based systems in medicine through collection of data and analysis. Based on Zadeh’s (1965) opinion, one may conclude two things: the first one is, that everything with fuzziness may be called fuzzy logic and the second one is that, the formal many- valued logic, is the base of fuzzy logic. Most medical concepts are fuzzy. The imprecise nature of medical concepts and the relationships require the use of fuzzy logic. It defines inexact medical entities as fuzzy sets and provides linguistic approach to texts. In 1965, Zadeh proposed a theory that explains how to formulize fuzzy properties. Clinical decision making requires reasoning under uncertainties. Our objective is to develop a methodology using fuzzy set theory to assist a general practitioner in diagnosing and predicting patient conditions from certain ‘rules based on experience’. With this system, the patient with high risk factors or symptoms could be shortlisted to consult a skilled person for further investigation and treatment.

Sanchez approach: The basic idea presented by Sanchez(1996) is that medical knowledge is simply a flat relationship between symptoms and diseases. Because medical knowledge is inherently fuzzy and the degree to which the traits are present as well as the degree to which diagnosis’ applied can be associated with a scale from 0 to 1 and it seems fuzzy logic is the best technique to develop a model and also Fuzzy sets are the most appropriate to represent the set of symptoms or traits found in a patient and the relation representing the medical knowledge and set of diagnosis. If S and D are traits and diagnosis respectively then medical knowledge is a fuzzy relation between the sets S and D.

Methodology

To decide an appropriate diagnosis in a patient three non-fuzzy sets viz. the set of traits, the set of diagnoses and the set of patients, are introduced.

- | | | |
|-----------------|----|--|
| Set Of Symptoms | 1. | the set of traits {S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11} |
| | 2. | the set of diagnoses {D1, D2} |
| | 3. | the set of cases {P} |

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Mr. S.M. Prasad	Nutrition And Dietetics	Biosynthesis of two nanoparticles using ficus auriculata lour. Fresh fruit extract and their Antibacterial	Biological Forum- An International journal



Biosynthesis of Two Nanoparticles using *Ficus auriculata* Lour. Fresh Fruit extract and their Antibacterial Activity

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ABSTRACT: The bio synthesis of plant-mediated based nanoparticles is increasingly used to target bacteria as an alternative to antibiotics. The use of nanoparticles in antibacterial vaccines for the control of bacterial infections, antibiotic delivery systems for the treatment of many disease, the bacterial detection systems for the generation of microbial diagnostics, and antibacterial coatings for implantable devices and medicinal materials to prevent infection and promote wound healing. The present study was focused on studying the antibacterial activity of nano synthesized *Ficus auriculata* against the gram-negative and gram-positive pathogenic bacteria *Escherichia coli*, *Streptococcus pyogenes*, *Salmonella typhimurium*, *Enterobacter faecalis*, *Staphylococcus aureus*, *Shigellasonnei*, *Klebsiella pneumonia*, and *Vibrio cholerae*. The nanoparticles were characterized by UV-visible and FT-IR spectroscopy. The fruit extracts of *F. auriculata* have potent activity against bacterial pathogens. The result of the study will help to design the drug against selected human pathogens in the pharmaceutical industry.

Keywords: *Ficus auriculata* Antibacterial activity, UV-Visible spectroscopy and CuNPs, AgNPs.

INTRODUCTION

In current centuries, nanotechnology has attracted a significant number of researchers from a wide variety of domains, including biological, physics, chemistry, the material sciences, engineering, and medicine, among others. Traditional physical and chemical approaches for synthesising nanoparticles have limitations, including the need for hazardous reaction conditions, extended reaction durations, expensive and rare chemicals, and a tedious isolation process (Lanje *et al.*, 2010; Yang *et al.*, 2012). Therefore, there is room for innovation in the synthesis of NPs towards methods that are less resource- and energy-intensive. Nanoparticles' unique physical, chemical, and biological properties make them applicable in almost any field. As an example, metal nanoparticles have been put to use in the medical and industrial sectors (Mercado *et al.*, 1981; Shabeen *et al.*, 2019) because of their potent antibacterial capabilities. Synthesis techniques for nanomaterials that start with naturally occurring compounds are a rapidly growing area of research (Pelle *et al.*, 2018). By boosting the biocide qualities of nanoparticles, the application of natural extracts that function as both reducers and stabilisers can boost the microbiological activity of nanoproducts. Herbal, fruit, and vegetable extracts are commonly

employed in nanoparticle manufacturing (Zain *et al.*, 2014). Nanoparticles of silver and copper are frequently employed as antibiotics and antifungals. It is well-known that numerous extract types can be employed in the creation of nanoparticles. Antibacterial activity of silver nanoparticles synthesised with banana peel extracts was investigated (Yasir *et al.*, 2018). Used fresh leaves of *Syngonium podophyllum* for silver nanoparticle production; (Padma *et al.*, 2018) looked at extracts of *Punicagranatum* for copper nanoparticle synthesis. One of the major subfields of nanoparticle biosynthesis is the incorporation of plant extracts into the biosynthesis reaction. Because of its decreased qualities, plant extracts like those found in leaves and fruits can be employed as a capping and reducing agent in nanoparticle manufacturing. The current study used *Ficus auriculata* fruit extracts to biologically synthesise nanoparticles. *Atthi*, or *Ficus auriculata* (Moraceae), has been used for thousands of years in Ayurveda, the ancient Indian medical system, to treat a wide range of illnesses and conditions. UV-visible and FT-IR spectroscopy were used to characterise the synthesised silver and copper nanoparticles mediated by the fruit. Eight different harmful bacterial strains were used to test the nanoparticles' antimicrobial efficacy.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Shahul Hameed	Business Administration	Optimization System for Financial Early Warning Model Based on the Computational Intelligence and Neural Network Method	International Conference on Contemporary Computing and Informatics

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Optimization System for Financial Early Warning Model Based on the Computational Intelligence and Neural Network Method

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Abstract

Document Sections

- I. Introduction
- II. Related Study
- III. Methodology:
- IV. Results and Discussions
- V. Conclusion

Authors

Figures

References

Keywords

Metrics

Abstract:

In India right now, there is a rapid increase in the number of businesses experiencing financial difficulties, and businesses' overall resilience to risks is low. As a result of advances and changes throughout time, traditional financial accounting has developed into management accounting. Accountants will need to improve their skills and knowledge to add more value to their clients' businesses in the age of computational intelligence. To establish a corporate financial crisis early warning system, this paper selects the two-year data of five companies from 2019 to 2021 for training samples and the data of five companies for prediction samples, with the goal of detecting the early warning signs of a corporate financial crisis and alerting managers in advance so that they can take swift, decisive action to eliminate any potential threats. Based on the results of the tests, the 6 index variables that best capture the energy industry's financial woes have been chosen as the starting point for the modeling. Using In order to better the early-warning effect of enterprise financial crisis management and reduce the occurrence of enterprise financial crises, a financial crisis early-warning indicator system was developed from the five aspects of profitability: debt-paying ability, development ability, operation ability, and cash flow ability, using listed companies as examples. crises. We analyse and evaluate data from 2019 to 2021 using operational and Bayesian neural network models, to foresee fiscal risk in 2021. When comparing the two models, neural network for BP model does better than the logical model in terms of how well it fits the data and how well it predicts the future.

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I. Introduction

Because of India's market economy reform has been expanding rapidly, Indian businesses are currently in a pivotal phase of Reforming the market economy on the inside and integrating the world economy on the outside. Many inconsistencies exist in

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Shahul Hameed	Business Administration	Analyzing organizational barriers towards building postpandemic supply chain resilience in Indian MSMEs: a grey-DEMATEL approach	Benchmarking an International Journal

Analyzing organizational barriers towards building postpandemic supply chain resilience in Indian MSMEs: a grey-DEMATEL approach

Tuhin Banerjee, Ashish Trivedi, Gunjan Mohan Sharma, Moaz Gharib, S. Shahul Hameed

Benchmarking: An International Journal

ISSN: 1463-5771

Article publication date: 10 May 2022

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Issue publication date: 6 July 2023

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Abstract

Purpose

This study aims to identify the barriers to building supply chain resilience and assess the contextual relationship between them in the Indian micro, small and medium enterprise (MSME) sector for the post COVID-19 era.

Design/methodology/approach

Barriers to supply chain resilience were extracted from the extant literature and were evaluated using the grey sets and Decision-Making Trial and Evaluation Laboratory (DEMATEL) approach from strategic, tactical and operational business perspectives. The responses from experts on the identified barriers were collected through a structured questionnaire. The prominence-net effect results obtained after the DEMATEL application helped identify the most prominent barriers, their net cause and effect, and their correlation with each other.

Findings

A total of 16 barriers to resilience, identified from the literature, were considered for analysis. The findings of the study revealed that the lack of flexibility is the most critical causal barrier to building a resilient supply chain. Lack of planned resource management was also found to be an influential barrier. The study also identified the supply chain design, need for collaboration and technological capability as important factors for the MSME sector to focus on.

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Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Shahul Hameed	Business Administration	Representing women Entrepreneurs in Tamil movies	American Journal of Economics and Sociology

The American Journal of
ECONOMICS and SOCIOLOGY

Original Article

Representing Women Entrepreneurs in Tamil Movies

Thangaraja Arumugam ✉, S. Sethu, V. Kalyani, S. Shahul Hameed, P. Divakar

First published: 10 March 2022 | <https://doi.org/10.1111/ajes.12446>

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Abstract

Women's entrepreneurship is one of the most evocative terms used in this century. Women have achieved sustained progress in all domains. Nourishing a business as an entrepreneur is a critical activity, which means we need to understand the role of women in developing businesses. Movies about the struggles of female entrepreneurs can help provide that understanding. This article discusses women entrepreneurs in Tamil-speaking regions of India. Three Tamil movies that center on women's entrepreneurship are chosen: *36 Vayadhinile* (2015), *KaattrinMozhi* (2018), and *Miss India* (2020). One question that drives the action in the first of these films is what sets limits on women's ambitions. *Kaattrin Mozhi* is about a woman driven by the desire to work as a radio host while maintaining her family life. In *Miss India*, the protagonist aims even higher. She hopes to create a corporate empire. These three movies portray different dimensions of women's entrepreneurship and the struggles women face in establishing businesses. The movies reflect real situations. This article reveals the mounting evidence of consistent achievement by women entrepreneurs in Tamil society.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. S. Shahul Hameed	Business Administration	Buyer behaviour modelling of rural online purchase intention using logistic regression	International Journal of Zoology and Applied Bioscience

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Buyer behaviour modelling of rural online purchase intention using logistic regression

Thangaraja Arumugam, S. Shahul Hameed and M.A. Sanjeev

Published Online: February 8, 2023 · pp 139-157 · <https://doi.org/10.1504/IJMED.2023.130153>

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Abstract

Improvements in connectivity, smartphone adoption, data usage, a competitive e-commerce space, innovations in financial technologies, and logistics growth are expected to push the Indian e-commerce industry to 200 billion dollars by 2026. The growth will mainly be propelled by the rural populace - constituting 68% of the Indian population and accounting for half of its consumption. It will be primarily driven by their increasing aspirations, brand consciousness, and value search against a stagnant urban market. However, such growth depends on the marketer's understanding of rural consumers, whose online consumer behaviour has not been well investigated. The current study tries to bridge this gap by studying the antecedents of rural e-commerce adoption. The results indicate that service quality, enjoyment, and trust are the most critical parameters for rural e-commerce adoption. The study results can help e-commerce market participants design suitable intervention strategies to improve their rural sales and returns.

Keywords

service quality, enjoyment, trust, website quality, returns, information quality, past experience, online shopping, logistic regression, modelling, rural, consumer behaviour

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SUSTAINABLE DEVELOPMENT GOALS IN INDIA BY GST- A STUDY WITH SPECIAL REFERENCE TO HUL IN TIRUNELVELI MUNICIPAL CORPORATION

Dr.A.BENAZIR; Dr.P. Geetha

The fourth largest sector in the Indian economy is the Fast-moving consumer goods (FMCG) sector. FMCG accounts to 50 percent of FMCG sales in India. The Key growth of this sector is change in lifestyle, growing awareness etc. Recently, the growth of FMCG is faster in rural areas than in urban India. The Major factor for the development of FMCG is the middle- income group in the urban areas. The basic needs of most of the population are satisfied by the FMCG companies if India. FMCG products can be quickly purchased as the cost is low. Examples of FMCG products are food, personal care items, stationery and consumer goods. FMCG is one of the fastest improving sector in India. The objective of this study is found out Goods Service Tax rate and its impact on FMCG's. And also, key takeaways of the model GST. HUL one of the leading FMCG has stated that the new tax regime of Goods and Services (GST) has not affected the consumer off takes and there will be price cuts by increased sales. There was reduction in the prices of some of HUL products like detergents andsoaps.

Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal
Dr. K. Sheik Mydeen	Commerce Finance	A study on consumer's environment knowledge green advertisement and its impact on buying behaviour	Journal of Management & Entrepreneurship

JOURNAL OF MANAGEMENT & ENTREPRENEURSHIP

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UGC Care Group 1 Journal

A STUDY ON CONSUMER'S ENVIRONMENT KNOWLEDGE, GREEN ADVERTISEMENT AND ITS IMPACT ON BUYING BEHAVIOUR

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Abstract:

In an era when major social issues can be discussed and analyzed freely by the masses due to the advancement of the tools of social media and mobile Internet, advertisers often try to predict what consumers might want and how brands should be portrayed through these channels. An emerging trend in today's marketplace is the notion of being environmentally friendly, also phrased as "going green." Now a days with the demand of eco- friendly products is increased. So many organizations produce eco friendly products and taken into consideration of environmental protection and safe to consumers are turning towards more on ecological products for the betterment of self as well as environment. "Product promotion based on environment related situations is the central idea of green advertising". The primary objective of this study is to assess the level of Environment knowledge, green advertisement and it influence on buying behaviour. The study was conducted in Tirunelveli with a sample size 120. Percentage analysis and Mann-whitney U test and spearman rank correlation, Path analysis are used in this study.

Keywords: Green advertisement, Green purchase, Environment knowledge and Green Buying Behaviour

Introduction:

In an era when major social issues can be discussed and analyzed freely by the masses due to the advancement of the tools of social media and mobile Internet, advertisers often try to predict what consumers might want and how brands should be portrayed through these channels. An emerging trend in today's marketplace is the notion of being environmentally friendly, also phrased as "going green." Now a days with the demand of eco- friendly products is increased. So many organizations produce eco friendly products and taken into consideration of environmental protection and safety consumers are turning towards more on ecological products for the betterment of self as well as environment. "Product promotion based on environment related situations is the central idea of green advertising".

Green advertisement: Green advertisement is a specific type of advertisement, and it is focus on environment benefits rather than product benefits. . Green advertising is a new way to attract consumers with the features of green communication for the sustainable development or sustainable communication as this will help in detailing those features which consumers are looking for and in demand. With the help of green communication the organizations are retain their the consumers for the long period of time in today's scenario.

Green advertising is a new way to attract consumers with the features of green communication for the sustainable development or sustainable communication as this will help in detailing those features which consumers are looking for and in demand. With the help of green communication the organizations are retain their the consumers for the long period of time in today's scenario. So many organizations adopt "go Green" strategy is a natural phenomenon. Green