

THE AGENDA

NEWSLETTER

FROM THE DEPARTMENTS OF SCIENCE AND HUMANITIES

(APPLIED CHEMISTRY, APPLIED MATHEMATICS, APPLIED PHYSICS & HUMANITIES AND SOCIAL SCIENCES)

Pi Day!

π

March 14

Pi Day is an annual celebration of the mathematical constant π (pi). Pi Day is observed on March 14 (3/14 in the month/day format) since 3, 1, and 4 are the first three significant figures of π

SRI VENKATESWARA COLLEGE OF ENGINEERING
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TAMIL NADU, INDIA

VOLUME 02; ISSUE 4 MARCH 2023 MONTHLY UPDATED

March highlights



Published a paper

Dr. G. Baskar, AP, ACH, published a paper on the Journal of Molecular Liquids, Impact Factor (6.633).



Defended doctoral thesis

Dr. S. Anandhavelu's scholar has successfully completed the oral examination held on March 13, 2023, for the award of a Ph.D. degree.



Published a paper

Dr. B. Thilaka and Dr. A.R. Vijayalakshmi published papers in Advances and Applications in Mathematical Sciences and the journal Open Mathematics.



Secured prizes

Dr. N.R. Sheela, AP, APH, served as a mentor for UG students. And they secured first and third prizes for their contributions.



Invited as a guest speaker

Dr. T Murugavel was invited to inaugurate Justice Basheer Ahmed Sayeed College for Women's Eco Club and deliver a talk on 'Connecting dots - Sustainability and You'.



Applied Chemistry

PAPER PUBLISHED

Dr. G. Baskar, Assistant Professor, Department of Applied Chemistry, published a paper entitled "Covalent interaction, solvent effects, electrochemical, and spectroscopic characterization of novel (4Z)-4-{2-[amino(hydroxy)methyl]hydrazinylidene}-2,6-di(furan-2-yl)-3-methylpiperidin-1-ol derivative-antimicrobial activity study" in Journal of Molecular Liquids 374 (2023) 121272.

ScienceDirect Journals & Books Register Sign in Brought to you by: Sri Venkateswara College of Engineering Email: ranand@elsevier.com

Journal of Molecular Liquids Supports open access 9 CiteScore 6.633 Impact Factor

Contents lists available at ScienceDirect

Journal of Molecular Liquids journal homepage: www.elsevier.com/locate/molliq

Covalent interaction, solvent effects, electrochemical, and spectroscopic characterization of novel (4Z)-4-{2-[amino(hydroxy)methyl]hydrazinylidene}-2,6-di(furan-2-yl)-3-methylpiperidin-1-ol derivative-anti-microbial activity study

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ARTICLE INFO

Article history:
Received 5 October 2022
Revised 29 December 2022
Accepted 14 January 2023
Available online 18 January 2023

Keywords:
DFT
Solvation effect
Cyclic voltammetry
IR, mass & NMR spectroscopy
Piperidone semicarbazone
Antimicrobial activity

ABSTRACT

In this study, the (4Z)-4-{2-[amino(hydroxy)methyl]hydrazinylidene}-2,6-di(furan-2-yl)-3-methylpiperidin-1-ol [AHMH-DFMP] was synthesized, characterized using spectroscopic and DFT analyses, and its antimicrobial activity was assessed. On this synthesized material, theoretical computations with spectroscopy studies have been carried out utilizing B3LYP level density functional theory (DFT) with a 6-311++(d,p) basis set. The cyclic voltammetry method is used to determine the electrochemical properties of produced heterocyclic compounds. The shape of the voltammetry curves and their peak potential virtually fingerprint the electrochemical reduction of the compound. Structural assignment of the product was concluded based on elemental analysis, infrared, mass and NMR spectroscopy with DFT. In the compound's higher excitation state (TD-DFT approach), the effects of polar and non-polar solvents on UV-vis absorption were examined. The electronic structure of the molecule was extensively studied using topological features of AIM, LOL, and ELF. Furthermore, MEP, FMOs, NLO, Fukui functions, and NBO were calculated for the reactivity and biological needs of the synthesized compound in this work. The final product was evaluated for its anti-microbial activities using disc diffusion method and molecular docking studies.



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Applied Chemistry

DEFENDED DOCTORAL THESIS

Dr. S. Anandhavelu's Ph.D. scholar, Mr. S. Vinurajkumar, has successfully completed the oral examination held on March 13, 2023, for the award of a Ph.D. degree under the Faculty of Information and Communication Engineering. Programme in Medical Electronics during January-2017. The thesis is entitled, "DEVELOPMENT OF AN IMAGE PROCESSING PIPELINE FOR THE EXTRACTION OF WHITE MATTER FROM MRI" .

 **ANNA UNIVERSITY**
CENTRE FOR RESEARCH
Sardar Patel Road, Chennai - 600 025, India 

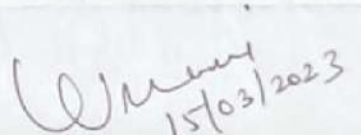
Dr. C. UMARANI, M.E., Ph.D., PDF(NZ)
Director

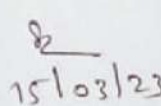
Ref : No. 17134991324/Ph.D./AR6 Date : 15.03.2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr.S.Vinurajkumar**, has registered for Ph.D. Programme in **Medical Electronics** during January-2017. The scholar has submitted the thesis entitled, "**DEVELOPMENT OF AN IMAGE PROCESSING PIPELINE FOR THE EXTRACTION OF WHITE MATTER FROM MRI**" and has successfully completed the oral examination held on 13.03.2023 for the award of Ph.D. Degree under the Faculty of **Information and Communication Engineering**.

The Ph.D. Degree awarded by this University is in compliance of UGC Regulations 2016.


15/03/2023
DIRECTOR (RESEARCH) 2/2


15/03/23

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Applied Chemistry

WORKSHOPS/FDPS/CONFERENCES PARTICIPATED

Dr.T. Balusamy participated in the webinar "Environmentally Sound Management of Polychlorinated Biphenyls (PCBs) Containing Transformer Oils in India" on March 21, 2023, via Online (MS Team). Organized by the CSIR-National Environmental Engineering Research Institute, Nehru Marg, Nagpur, 440020, Maharashtra, India (Stockholm Convention Regional Centre (SCRC) on POPs for Asia Region)



Applied Mathematics

PAPERS PUBLISHED

Dr.B.Thilaka, Professor, published a paper titled Grade sizes in two-grade models & Advances and Applications in Mathematical Sciences, Volume 22, Issue 4, February 2023, Pages 837-859.



Advances and Applications in Mathematical Sciences
Volume 22, Issue 4, February 2023, Pages 837-859
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GRADE SIZES IN TWO-GRADE MODELS

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Abstract

Employees in hierarchical organizations are ideally placed in grades depending upon their skill levels, seniority, and the relevance of their role in the organizations. The control of grade sizes is fundamentally managed through recruitment and promotion. Human Resource systems at the highest level can be considered as a system with two groups with certain characteristics.



Applied Mathematics

PAPERS PUBLISHED

Dr.A.R.Vijayalakshmi, Assistant Professor, published a paper titled “Lucas non- Wieferich primes in arithmetic progressions and the abc conjecture”, in the journal Open Mathematics, Vol. 21, no. 1 (2023), pp. 20220563. <https://doi.org/10.1515/math-2022-0563>.

LUCAS NON-WIEFERICH PRIMES IN ARITHMETIC PROGRESSIONS AND THE *abc* CONJECTURE

K. ANITHA⁽¹⁾, I. MUMTAJ FATHIMA⁽²⁾ AND A R VIJAYALAKSHMI⁽³⁾

ABSTRACT. We prove the lower bound for the number of Lucas non-Wieferich primes in arithmetic progressions. More precisely, for any given integer $k \geq 2$ there are $\gg \log x$ Lucas non-Wieferich primes $p \leq x$ such that $p \equiv \pm 1 \pmod{k}$, assuming the *abc* conjecture for number fields. Further, we discuss some applications of Lucas sequences in Cryptography.

1. INTRODUCTION

Let $a \geq 2$ be an integer. An odd rational prime p is said to be a *Wieferich prime for base a* if

$$a^{p-1} \equiv 1 \pmod{p^2}. \quad (1.1)$$

Otherwise, it is called a *non-Wieferich prime for base a*. In 1909, Arthur Wieferich [25] proved that if the first case of Fermat’s last theorem is not true for a prime p , then p is a Wieferich prime for base 2. Today, 1093 and 3511 are the only known Wieferich primes for base 2. It is still unknown whether there are infinitely many Wieferich primes that exist or not, for any given base a . But, Silverman proved that there are infinitely many non-Wieferich primes that exist for any base a , assuming the *abc* conjecture.



Applied Mathematics

ARTICLES REVIEWED



Dr.R.Muthucumaraswamy , Professor & Head, reviewed the following articles:

1. “Numerical Modelling of Double Slit Caisson Breakwater Integrated Oscillating Water Column Wave Energy Converter with Modal Superposition Method” for The Open Journal of Fluid Dynamics (OJFD), March, 2023.
2. “Effect of 10-ppi Copper Foam layer height on the Solar Cooker Performance”, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, March, 2023.
3. “Rotation without Imaginary Numbers, Transcendental Functions, or Infinite Sums”, Journal of Advances in Mathematics and Computer Science, March, 2023.
4. “Two-Fuzzy modeling of heat transfer in water-copper Nano-fluid”, Journal of Nanomaterials, March, 2023.





Applied Mathematics

WORKSHOPS/FDPS/CONFERENCES PARTICIPATED

01

Dr.R.Suresh, Assistant Professor, attended a five day workshop on “Recent advances in Numerical and Statistical methods, organized by Department of Mathematics, College of Engineering, Guindy, Anna University from 6-10, March, 2023.

02

Dr.M.Radhakrishnan, Dr.B.Saravanan & Dr.R.Umadevi, Assistant Professor, attended FDP on “Open Source Software Tools for Research” organized by Division of Mathematics, School of Advanced Sciences during 13 – 17, March, 2023 at Vellore Institute of Technology, Chennai.



Applied Mathematics

WORKSHOPS/FDPS/CONFERENCES PARTICIPATED:

03

Dr.B.Saravanan, Assistant Professor, attended a six day National level online workshop on “Effective Filing of NAAC AQAR – Streamlining Institutional Performance” held from 13-18, March, 2023 organized by IQAC, Vardhaman College of Engineering, Hyderabad.

04

Dr.R.Suresh, Assistant Professor, attended a five day workshop on “Recent advances in Numerical and Statistical methods, organized by Department of Mathematics, College of Engineering, Guindy, Anna University from 6-10, March, 2023.



Applied Physics

WORKSHOPS/FDPS/CONFERENCES PARTICIPATED

01

Ms. G.Bharathy, Assistant Professor, Department Of Applied Physics Participated in Six-Day National Level Workshop on “Effective Filing of NAAC AQAR- Streamlining Institutional Performance” organized by Internal Quality Assurance Cell (IQAC) ,Vardhaman College of Engineering, Hyderabad from 13th to 18th March 2023.

02

Dr. T.Senthilnathan, Assistant Professor, Department Of Applied Physics Participated in the Workshop on “A Path way to higher studies, organised by CSE department of SVCE from 9th to 12th March 2023.



Applied Physics

EVENT ORGANIZED

Dr. N.R. Sheela, Assistant Professor, Department of Applied Physics, organised a one-day workshop on HAM RADIO INTRODUCTION CUM DEMONSTRATION, on March 17, 2023, for our staff and students of SVCE.





Applied Physics

MENTORSHIP

Dr. N.R. Sheela, Assistant Professor, Department of Applied Physics, is a mentor. The listed students secured prizes for their contributions.



01

R.Rohith Ram and Mr. Syed Abyan Bahaauddin won first place in SVCE INNOVATES 2023, Mechanical Engineering Department students For the project "Mischief managed," .

02

Mr. S. Muralidharan and Mr. A. R. Mohammed Ghayaz won third place in the SVCE INNOVATES 2023, Computer Science and Engineering Department, for the project "IoT-Based Fire Indication system in farm land".



Humanities and Social Sciences

WORKSHOPS/FDPS/CONFERENCES PARTICIPATED

01

Mr.Shrihari.S, Mr.Bharathikumar.S, Dr.Iyuswariya Lakshmi and Dr.Bhargavi.S have attended a six day “International Virtual Faculty Development Program on New Frontiers in Humanities: Contemporaray Approaches in Literature, Linguistics and Language Teaching” from 06 th March 2023 to 11 th March 2023 organized by Presidency University, Bangalore.

02

Mr.Shrihari.S, Mr.Bharathikumar.S, Dr.Iyuswariya Lakshmi and Dr.Bhargavi.S have attended an “International Virtual Faculty Development Program on Poetry in Life” on 21 st March 2023 organized by Kumaraguru College of Liberal Arts and Science, Coimbatore, Tamilnadu.



Humanities and Social Sciences

WORKSHOPS/FDPS/CONFERENCES PARTICIPATED

03

Mr.Shrihari.S and Mr.Bharathikumar.S have attended an “International Virtual Conference Emerging trends in English and Foreign Language Teaching” on 10 th March 2023 organized by Vellore Institute of Technology, Chennai.

04

Dr.Iyuswariya Lakshmi and Dr.Bhargavi.S have attended a “International Faculty Development Program on Translanguaging: Language Proficiency for Indian Learners” on 26 th of March 2023 sponsored by Elt@i Association.

05

Mr.Dhureshavar has attended a Six day “National Level Workshop on EFFECTIVE FILING OF NAAC AQAR- Streamlining Institutional Performance from 13 th March 2023 to 18 th March 2023 organized by Vardhaman College Of Engineering.

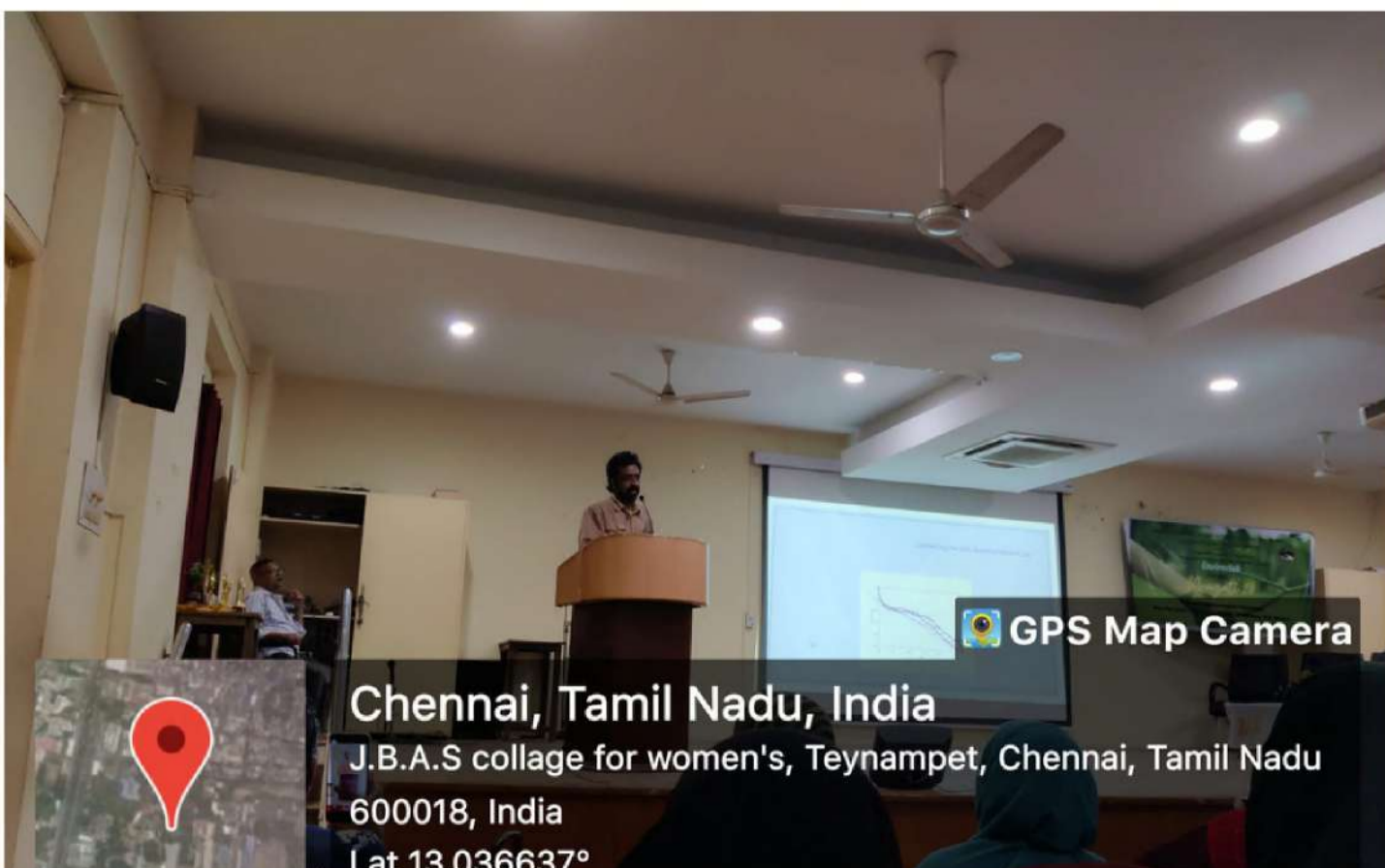


Humanities and Social Sciences

GUEST SPEAKER

01

Dr. T. Murugavel, HoD HSS, was invited to inaugurate Justice Basheer Ahmed Sayeed College for Women's Eco Club on March 16 and deliver a talk on 'Connecting dots - Sustainability and You'.





Humanities and Social Sciences

GUEST SPEAKER

02

Dr. T. Murugavel, HoD HSS, lectured on Building Strong Resume, organised by the ISTD, SVCE Chapter, on March 24, 2023.

 **SVCE** Sri Venkateswara College of Engineering 

SRI VENKATESWARA COLLEGE OF ENGINEERING
INDIAN SOCIETY FOR TRAINING AND DEVELOPMENT
PRESENTS
One Day Programme on

How to build yourself for an Interview

Exclusively for Pre-final Years
KEY SPEAKERS

SESSION 1-RESUME BUILDING

Prof. Murugavel T
Professor & Head,
Department of Humanities and
Social Sciences, SVCE



SESSION 2-FACING INTERVIEW



Mr J Vijayakumar
Chairman,
Indian Society for Training and
Development
Chennai Chapter

DATE : 24th March, 2023
VENUE : Function Hall and Video Hall
TIME : 09:00 AM - 12:15 PM

THE AGENDA NEWSLETTER

FROM THE DEPARTMENTS OF SCIENCE AND HUMANITIES

(APPLIED CHEMISTRY, APPLIED MATHEMATICS, APPLIED PHYSICS & HUMANITIES AND SOCIAL SCIENCES)

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DEPARTMENT OF APPLIED CHEMISTRY

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DEPARTMENT OF APPLIED MATHEMATICS

DR. T. SENTHILNATHAN
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MR. S. BHARATHIKUMAR
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