

DEPARTMENT OF CHEMISTRY

The background of the slide features a dark blue field with a subtle grid pattern. Scattered across this field are several stylized molecular structures, each composed of light blue spheres connected by thin grey lines. Interspersed among these molecular models are five pieces of laboratory glassware: an Erlenmeyer flask containing orange liquid in the upper left, a test tube with yellow liquid in the middle left, a round-bottom flask with green liquid in the upper right, a test tube with orange liquid in the middle right, and a round-bottom flask with yellow liquid in the lower right.

Faculty Achievements

Faculty Research Details



**Ph.D
Completed
5**

**Ph.D
Supervisors
5**

**Ph.D
Pursuing
1**

Faculty Publications

| S.No | Year | No. of SCI Journals | No. of ESCI Journals | No. of Scopus Indexed Journals | No. of UGC and Other Journals | Total |
|------|-----------|---------------------------|----------------------------|---|--|-------|
| 1 | 2024-2025 | 1 | - | - | - | 1 |
| 2 | 2023-2024 | 5 | - | - | - | 5 |
| 3 | 2022-2023 | 2 | - | - | - | 2 |
| 4 | 2021-2022 | 2 | - | - | - | 2 |

Research Paper Published 2024-2025

8

| Sl No | Faculty Name | Title of the Paper | Name of the Journal | Vol.No.Issue No., Page No., Month & Year |
|-------|--------------------|---|---|---|
| 1 | Dr. S. Luna Eunice | A Review on boosting the Photo catalytic degradation of organic pollutants using modified Nano composites | Research Journal of Chemistry & Environment | Volume, 29, Issue 05, May 2025 |

Research Paper Published 2023-2024

8

| Sl No | Faculty Name | Title of the Paper | Name of the Journal | Vol.No.Issue No., Page No., Month & Year |
|-------|---------------------|---|--------------------------------|---|
| 1 | Dr. J. Dhanalakshmi | Spectroscopic (FT-IR, FT-Raman, UV–Vis and NMR) and computational (DFT, MESP, NBO, NCI, LOL, ELF, RDG and QTAIM) profiling of 5-chloro-2-hydroxy-3-methoxybenzaldehyde: A promising antitumor agent | Journal of Molecular Structure | 1298, 1, 136974, 2024 |
| 2 | Dr. J. Dhanalakshmi | Insights into structural, vibrational, and chemical shift characteristics, solvents impact (polar and nonpolar) on electronic properties and reactive sites, ADMET predictions, and ligand-protein interactions for antiviral drugs safrole and isosafrole: An in-silico approach | Chemical Physics Impact | 8, 100443, 2024 |

Research Paper Published 2023-2024

8

| Sl No | Faculty Name | Title of the Paper | Name of the Journal | Vol.No.Issue No., Page No., Month & Year |
|-------|--|---|-----------------------------------|---|
| 3 | Ellappan Vaishnavi a, Keerthana Balasubramaniam a, Karuppiyah Nagaraj b, Mohammad Ahmad Wadaan c, Prasenjit Maity d, Almohannad Baabbad c, Subramanian Kamalesu e, Rajalingam Renganathan f, S.M. Abhijith b, Nilesh Prakash Badgujar g, S. Shamim Rishwana | Synthesis of CdTe quantum dots using Glutathione promoted in Vitro Interaction between Lysozyme and Flavanoids: An investigation through spectroscopic methods, | Journal of Molecular Structure | Volume 1306, 15 June 2024, 137818, |
| | | | | |

Research Paper Published 2023-2024

8

| SI No | Faculty Name | Title of the Paper | Name of the Journal | Vol.No.Issue No., Page No., Month & Year |
|-------|-------------------------------------|---|------------------------------------|---|
| 4 | J. Dhanalakshmi | Studies on thermoset blend of bismaleimide having multiple swivel groups and biscyanate ester | Journal of Elastomers and plastics | Vol.55, Issue.4, pp. 475-491, & 2023 |
| 5 | S. Shamim Rishwana, J. Dhanalakshmi | Fumarate metal organic frameworks as reactive and curing reaction alternant in hydrophobic bispropargyl ether based matrix resin system | Journal of Polymer Research | Vol.30, pp.431-439 & 2023 |

Research Paper Published 2022-23

7

| Sl No | Faculty Name | Title of the Paper | Name of the Journal | Vol.No. Issue No., Page No., Month & Year |
|-------|--------------------------------------|---|------------------------------------|---|
| 1 | J.Dhanalakshmi | Studies on thermoset blend of bismaleimide having multiple swivel groups and biscyanate ester | Journal of Elastomers and plastics | Vol.55, Issue.4, pp. 475-491, & 2023 |
| 2 | S.Shamim Rishwana, J.Dhanalakshmi | Fumarate metal organic frameworks as reactive and curing reaction alternant in hydrophobic bispropargyl ether based matrix resin system | Journal of Polymer Research | Vol.30, pp.431-439 & 2023 |

Research Paper Published 2021-2022

8

| SI No | Faculty Name | Title of the Paper | Name of the Journal | Vol.No.Issue No., Page No., Month & Year |
|-------|--|--|---------------------------------|---|
| 1 | Dr.S.Luna Eunice | Effect of Polymer Structure on the Size and Shape of Metal and Metal Oxide Nanopowder: An HR-TEM Approach | NANO: Brief Reports and Reviews | Vol. 17, No. 7 (2022) 2250055 |
| 2 | S.Shamim Rishwana. Dr.J.Dhanalakshmi | Low-Temperature Processable Glass Fibre Reinforced Aromatic Diamine Chain Extended Bismaleimide Composites with Improved Mechanical properties | Polymer Composites | Vol.43, pp. 6987– 6997 & 2022 |

Book Chapters Published

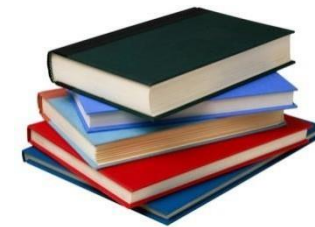


17

1. **J. Dhanalakshmi**, and C.T. Vijayakumar, “Studies on thermal curing and thermal degradation of recyclable thermoset material”, Book Title: Recent Advances in Bioremediation and Phyto remediation, Springer Nature, 53-62, 2025, ISBN: 978-3-031- 77884-1
2. **J. Dhanalakshmi** and C.T.Vijayakumar. “Bismaleimide and Nano Composite Blends: Studies on thermal curing and thermal degradation”, Book Title: Indo-South Korea-Thailand 2nd International e-Conference on Nanoscience and Nanotechnology for Energy, Environment and Biomedical Applications (iNEEBA-2022) Special Issue November 2022, ISBN: 978-93-5768-301-2



Book Chapters Published



17

1. Siva kaylasa sundari, **S. Shamim Rishwana, J. Dhanalakshmi**, R. Ramani and C.T. Vijayakumar, “Nanoporous metal organic frameworks: Effect of thermal history on crystallinity and thermal stability”, Chapter 15, Multidisciplinary science and advanced technology, Nova science publishers, Newyork. ISBN: 978-1-53619-198-1 (ebook), Publication Date: January 2021
2. **J. Dhanalakshmi**, S. Siva Kaylasa Sundari and C.T. Vijayakumar, “Thermal Studies on Styryl Modified Resorcinolic Resin – Formaldehyde Donar Adhesion Systems for Rubber Industry”, Book Title: A Comprehensive Guide to Formaldehyde, Book Chapter: 4, Nova Science Publishers, New York. e-ISBN: 978-1-53619-507-1, Publication Date: April 2021.



Copyrights Granted

21



LABORATORY MANUAL FOR UNDER GRADUATE STUDENTS



Faculty Awards

BEST PAPER PRESENTATION IN THE INTERNATIONAL
CONFERENCE ORGANISED – CURRENT INNOVATIONS OF
CHEMICAL SCIENCES



Dr. S. LUNA EUNICE

NPTEL-ELITES

| | |
|------------------------|--|
| Dr. T. Dhanalakshmi | NPTEL Online Course on Soft Skill Development |
| Dr. T. Dhanalakshmi | NPTEL Online Course on Innovation By Design |
| Dr. S. Shamim Rishwana | NPTEL Online Course on Soft Skill Development |
| Mr. N. Sivakumar | NPTEL Online Course on Stress Management |
| Dr. J. Dhanalakshmi | NPTEL Online Course on Food Packaging Technology |
| Dr. S. Luna Eunice | NPTEL Course on Effective Engineering Teaching in Practise |



Faculty Industrial Training

28

SPIC, Tuticorin

Chairman



Atomic Power Plant, Kudankulam



CSIR, Chennai



Faculty Industrial Training 2024-25

ARASU RUBBER CORPORATION, KEERIPAARAI



ISRO , MAHENDRAGIRI

