D. RANI ROSALINE

Assistant Professor

Department of Chemistry

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Educational Background:

B.Sc. CHEMISTRY – Bharathidasan University

M.Sc. CHEMISTRY – Madurai Kamaraj University

Ph.D CHEMISTRY – Madurai Kamaraj University

Teaching Experience: 4 years, 3 months at LDC, other institutions 15 years

Research Experience: 8 years

Research Interests: Nanotechnology, Green synthesis, Thin films and energy applications

Total Number of Publications: 9 Citations - 117

Mariyadhas Jarvin, Sundararajan Ashok Kumar, **Daniel Rani Rosaline**, Edson Luiz Foletto, Guilherme Luiz Dotto & Savariroyan Stephen Rajkumar Inbanathan, Remarkable sunlight-driven photocatalytic performance of Ag-doped ZnO nanoparticles prepared by green synthesis for degradation of emerging pollutants in water, 2022, [Springer, 4.22]

DR Rosaline, A Suganthi, G Vinodhkumar, Inbanathan, S. S. R, Enhanced sunlight-driven photocatalytic activity of SnO_2-Sb_2O_3 composite towards emerging contaminant degradation in water, 2022, [Elsevier publication IF – 5.316].

Moorthy, K., Inbanathan, S. S. R.,Gopinathan, C., Lalla, N. P,. Alghamdi, Abdulaziz Ali ·Kumar, Rajesh, **Rani Rosaline, D**.,Umar, Ahmad, Ni-Doped ZnO Thin Films: Deposition, Characterization and Photocatalytic Applications, 2021, [American Scientific Publishers, IF – 2.142]

Ruby, S. **Rosaline, D. Rani,** Inbanathan, S. S. R., Anand, K., Kavitha, G. Srinivasan, R.,Umar, Ahmad; Hegazy, H. H, Algarni, Hamed, Sunlight-Driven Photocatalytic Degradation of Methyl Orange Based on Bismuth Ferrite (BiFeO3) Heterostructures Composed of Interconnected Nanosheets, 2020, [American Scientific Publishers, IF – 2.142]

A Karthika, DR Rosaline, SSR Inbanathan, A Suganthi, M.Rajarajan, Fabrication of Cupric oxide decorated β-cyclodextrin nanocomposite solubilized Nafion as a high performance electrochemical sensor for l-tyrosine detection, 2020 [Elsevier publication IF – 3.9].

DR Rosaline, SSR InbanathanVisible-Light Driven Photocatalytic Degradation of Eosin Yellow(EY) Dye Based on NiO-WO_3, 2019 [researchgate.net, IF – 1.43]

VR Raja, **DR Rosaline,** A Suganthi, M Rajarajan, Facile sonochemical synthesis of Zn_2SnO_4-V_2O_5 nanocomposite as an effective photocatalyst for degradation of Eosin Yellow, 2018, [Elsevier publication IF – 3.707].

VR Raja, **DR Rosaline,** A Suganthi, M.Rajarajan, Ultrasonic assisted synthesis with enhanced visible-light photocatalytic activity of NiO/Ag_3VO_4 nanocomposite and its antibacterial activity, 2018 [Elsevier publication IF – 7.49].

VR Raja, **DR Rosaline,** A Suganthi, M Rajarajan, Facile fabrication of PbS/MoS2 nanocomposite photocatalyst with efficient photocatalytic activity under visible light, 2017,[Elsevier publication IF – 3.09].

Details about Funded Research Projects: -

Principle Investigator - TNSCST student Project 2021 - 2022, Wastewater treatment by using nanocrytalline zinc oxide thin films

Co PI - Institutional Project 2021 - 2022, Anaerobic digestion of Kitchen waste and Leaf litter for the Production of Biogas and Installation of an Institutional level Biogas Plant - A pilot study

Seminars / conferences / workshop attended: (Papers presented)

1. Efficient photocatalytic degradation of Victoria Blue by $MnWO_4$-$BiSbO_4$ nanocomposite under visible light irradiation, **D. Rani Rosaline**, V. Ramasamy Raja, A.Suganthi, M.Rajarajan (Published in the Proceedings of the CSIR, UGC and DST sponsored International Conference on Frontier Areas in Chemical Technologies - 2016 (FACTs - 2016), March 21-23, 2016).

2. Fabrication of Novel Zn_2SnO_4/ V_2O_5 Composite for degradation of Eosin Yellowunder visible light irradiation V.Ramasamy Raja, **D. Rani Rosaline**, A.Suganthi ,M. Rajarajan (Published in the Proceedings of the CSIR, UGC and DST sponsored International Conference on Frontier Areas in Chemical Technologies - 2016 (FACTs - 2016), March 21-23, 2016.

3. Microwave synthesis,characterisation and photocatalytic properties of $BiFeO_3$ nanoparticles,**D. Rani Rosaline,** V. Ramasamy Raja, A.Suganthi, M.Rajarajan, (Published in the Proceedings of the UGC and DST sponsored national Conference at National college, Trichy, March 6-8, 2017).

4. Novel NiO/Ag_3VO_4 Composite for Efficient Degradation of Organic Pollutants under visible-light.

D. Rani Rosaline, V.Ramasamy Raja, A.Suganthi ,M. Rajarajan (Published in the Proceedings of the Second International Conference on International Conference on Frontier Areas in Chemical Technologies - 2016 (FACTs - 2017)

5. Visible light induced photocatalytic degradation of Celestine Blue using ZrO_2/ CeO_2, **D.Rani Rosaline,** V. Ramasamy Raja, A.Suganthi, M.Rajarajan, (Published in the Proceedings of the Second International Conference on International Conference on Frontier Areas in Chemical Technologies - 2016 (FACTs - 2017), organized by Department of Chemistry, Thiagarajar College, Madurai on July 06-08, 2017).

6. Synthesis and characterization of novel $ZnFe_2O_4$/CeO_2 heterojunction nanocomposite with enhanced visible-light-driven photocatalytic degradation of malachite green. **D.Rani Rosaline**, V.Ramasamy Raja, A.Suganthi ,M. Rajarajan, (Published in the Proceedings of the International Conference on Functional Materials (ICFM - 2017), organized by Department of Chemistry, Thiagarajar College, Madurai on September 07-08, 2017).

7. Synthesis, Characterisation and photocatalytic properties of NiO-WO_3 **D. Rani Rosaline**, V. Ramasamy Raja, A.Suganthi, M.Rajarajan, (Published in the Proceedings of the International Conference on Functional Materials (ICFM - 2017), organized by Department of Chemistry, Thiagarajar College, Madurai on September 07-2017).

8. Degradation of Eosin Yellow in SnO_2-Sb_2O_3, **D. Rani Rosaline**, V. Ramasamy Raja, A.Suganthi, M.Rajarajan, (Published in the Proceedings of the UGC sponsored national Conference at Jayaraj Annapackiam college for women, Periyakulam, January 23, 2018).

Conferences attended:

1. Two-Day training workshop on High Performance Thin Layer Chromatography on 23 & 24.02,2022 at Lady Doak College, Madurai.

2. National Seminar on Electrode-Electrolyte Interfaces, Prof. Evelyn Rhine Endowment Lecture Series organized by the Department of Chemistry, Lady Doak College, Madurai, on 26th March 2021.

3. International Webinar on "Gamification as an Educational Strategy" organized by Centre for Communication and Multimedia (CCM) held on December 16, 2021 at Lady Doak College.

4. Workshop on " writing successful research article on publication" on October 6, 2021

5. Recent Advances in Material Science (ICRAMS-2021)" held on 15th to 17th May 2021· Prof. Evelyn Rhine Lecture Series "Academy Industry Interaction meet- 2019" organized by the Department of Chemistry, Lady Doak College, Madurai, on 13th December, 2019

6. State Level Lecture Programme on "Emerging Novel and Functional Materials"Prof. Evelyn Rhine Endowment Lecture Series organized by the Department of Chemistry, Lady Doak College, Madurai, on 22nd February 2019

7. National Level Advanced Lecture Series Programme on "Organic Spectroscopy, Stereochemistry and Reaction Mechanism",

8. Prof. Evelyn Rhine Endowment Lecture Series organized by the Department of Chemistry, Lady Doak College, Madurai, on 21st February 2018.

Responsibilities held in college:

Member, R&D cell (2021 till date)

Convener, YRC Batch 2 (2019 - till date)

Member, Rotaract club (2021- till date)

Organizer of the International Webinar, Evelyne Rhyne Lecture Series (2022)

Organizer of various guest lecture programs in Youth Red Cross (2020-till date)

Responsibilities in the Department

Convener, Amalchem Club (2021- till date)

Prizes in-charge (2019 - till date)

Invited Resource Person:

Entrepreneurial skills development programme on organic consumer products, conducted by the Dept.of chemistry, 22.03.2021

Indigenous cosmetics, training programme jointly organized by Dept.of chemistry and Rotaract club, March 18, 2022