Dr. RUGMINI R

Assistant Professor of Physics (On contract)

International Publications – 09
Conferences (International – 04)

Citation indices	All	Since 2020
Citations	188	188
h-index	03	03
i10-index	01	01

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QUALIFICATION

M.Sc., B.Ed., Ph.D.

DATE OF JOINING

04.06.2025

AREA OF RESEARCH

- Metal nanoparticles
- Plasmonics
- Photothermal activity
- Sensors
- Flexible systems

PUBLICATIONS

1. **Rugmini R**, Sathyan A, Sivaraman RK, Sathish S, Kamakshi K, Sekhar KC. Sensing, antimicrobial and photothermal activity of ultra-stable colloidal copper nanoparticles. Plasmonics. 2022 Dec 17(6):2521-31. **IF: 3.3**
2. **Rugmini R**, Sekhar KC, Sathish S. Synthesis of silver nanoparticles for photothermal and sensing applications and sustainable gel formation. Materials Research Innovations. 2023 Nov 5:1-0. **IF: 1.9**
3. **Rugmini R**, Chandana BDS, Sekhar KC. Silver nanoparticles for colorimetric dual ion sensing and development of paper sensors: A strategy towards waste valorisation and sustainability. Plasmonics. 2024. **IF: 3.3** (https://doi.org/10.1007/s11468-024-02431-0)
4. **Rugmini R**, Chandana BDS, Sekhar KC, Sathish S. Naked-eye detection of Fe^{3+} and photothermal applications of flexible and sustainable banana pith stabilized silver nanoparticle-rice starch composite. Emergent Materials. 2024. **IF: 4.8** (https://doi.org/10.1007/s42247-024-00905-9)
5. Varghese Alex K, Tamil Pavai P, **Rugmini R**, Shiva Prasad M, Kamakshi K, Sekhar KC. Green synthesized Ag nanoparticles for bio-sensing and photocatalytic applications. ACS Omega. 2020 May 5(22):13123-9. **IF: 4.1**
6. Gokulakrishnan J, Kamakshi K, **Rugmini R**, Sekhar KC. Green synthesis of carbon dots-functionalized silver nanoparticles for SERS-based detection of thiram fungicide. Applied Physics A. 2023 Nov 129(11):778. **IF: 2.7**

7. Kumar SR, Anusha R, Sathish S, **Rugmini R**, Sekhar KC, Ibrahim AS. Anti-Nephrotoxic effect of green synthesized Actiniopteris radiata silver nanoparticles (AR-AgNPs) against gentamicin induced nephrotoxicity. Inorganic Chemistry Communications. 2023 Nov 157:111244. **IF: 4.4**
8. Majdi B, Kais Iben Nassar, Manel Essid, **Rugmini R**, Sekhar KC, José PB Silva. Visible light driven removal of Rhodamine B using indium doped zinc oxide prepared by sol-gel method. Journal of Sol-Gel Science and Technology. 2024 Aug 111(2):553-65. **IF: 2.3**
9. **Book chapter:** Kumar NSK, Jayakrishnan AR, **Rugmini R**, Silva JP, Pereira M, Sathish S, Sekhar KC. Electrical properties of flexible ceramics. In Advanced Flexible Ceramics 2023 Jan (75-127). Elsevier.

Papers presented in International Conferences

1. Delivered an oral presentation on “Metal nanoparticles for plasmonic applications” at the International Workshop on Advanced Materials for Emerging Applications (IWAMEA-2024), organized by School of Pure and Applied Physics, Mahatma Gandhi University, Kottayam, Kerala.
2. Published and presented a paper entitled “Photocatalytic dye degradation properties of copper nanoparticle thin films” at International Conference on Advances in Chemistry (ICAC-2023) organized by PG & Research Department of Chemistry, The American College, Madurai (ISBN:978-93-80368-45-0).
3. Presented a poster entitled “Surface plasmon enhanced photo-degradation activity of copper nanoparticle thin films” at the ‘International Conference On Advanced Materials And Mechanical Characterization (ICAMMC-2021)’ organized by the Department of Physics and Nanotechnology and Department of Mechanical Engineering, SRM Institute of Science and Technology.
4. Delivered a talk on “Surface plasmon enhanced activities of colloidal copper nanoparticles” at Department of Physics, Central University of Tamil Nadu at World Science Day celebrations-2022.