

FACULTY PROFILE

Name : **Dr. T. SOLAIYAMMAL**
Qualification : M. Sc., Ph.D.,
Designation : Assistant Professor
Dept. of UG Physics
Years of
Experience : **UG:** 4 years 2 Months **PG:** 1 year 2 Months
Email Id : tsolainirmala@gmail.com
Areas of
Specialization : Nanoscience and Nanotechnology

Publications

1. **T. Solaiyammal**, P. Murugakoothan, Green synthesis of Au and the impact of Au on the efficiency of TiO₂ based dye sensitized solar cell, **Materials Science for Energy Technologies (2019)**, doi: <https://doi.org/10.1016/j.mset.2019.01.001>.
2. **T. Solaiyammal**, S. Muniyappan, B. Gomathi Thanga Keerthana, K. Perumal, P. Murugakoothan, Green Synthesis of Silver nanoparticles using *piper nigrum* extract for Dye Sensitized Solar Cell Applications, **Science and Technological Research Journal**, Vol.1, No. 2, January - February 2018, p. 53-59.
3. **T. Solaiyammal**, S. Muniyappan, B. Gomathi Thanga Keerthana, Siva sankar nemala, Parag Bhargava, P. Murugakoothan, Synthesis of Ag and the effect of Ag on the efficiency of TiO₂ based dye sensitized solar cell, **Journal of Material Science: Materials in Electronics**, Vol. 28, (2017), pp.15423-15434.
4. **T. Solaiyammal**, P. Murugakoothan, Green Synthesis of Au and Au@TiO₂ core-shell structure formation by hydrothermal method for Dye Sensitized Solar Cell Applications, **Journal of Material Science: Materials in Electronics**, Vol. 29, (2018), pp.491-499.
5. **T. Solaiyammal**, P. Murugakoothan, Green Synthesis and Characterization of Au@TiO₂

core-shell Structure Nanocomposite by Sol-gel and Hydrothermal Methods, IWAN 4 Proceedings, (2017), pp. 213-218, ISBN :9 789352 792313.

Presentations

1. Presented a paper on “**Green Synthesis of Au and Au@TiO₂ core-shell structure formation by hydrothermal method for Dye Sensitized Solar Cell Applications**”, in the International Conference on Materials and Spectroscopy (ICMS - 2018) during 11th and 12th December 2018. Organized by Saveetha Engineering College, Chennai India.
2. Presented a paper on “**Green Synthesis of Silver nanoparticles using *piper nigrum* extract for Dye Sensitized Solar Cell Applications**”, in the International Conference on Recent Trends in Applied Science and Technology (ICRAST 2017) in Tamil during 8th and 9th September 2017. Organized by Centre for Research & Centre for Nanoscience and Technology, Anna University, Chennai India.
3. Presented a poster on “**Studies on the effect of TiO₂ film thickness on the efficiency of dye sensitized Solar Cell**”, in one day International Conference on Recent Trends in Materials Science and Applications held during 6th January, 2017 at Sri Meenakshi Govt. Arts College for Women (A), Madurai 625 002, Tamilnadu.

Conferences/Workshops/Seminar/Webinars Participated

1. Participated in the webinar on “Artificial Intelligence coupled devices the future of Health care” organized by Department of Electronics and Physics, Bhaktavatsalam memorial College for Women held on 23rd DEC 2021.
2. Participated and Presented a paper on “**Application of Gold Nanoparticles Obtained via Green Synthesis using extract of Eucalyptus in Dye Sensitized Solar Cells**”, in the National Conference on Recent Trends in Physics on Materials (NCRTPM 2018) in Tamil during 9th and 10th February 2018. Organized by PG and Research Department of Physics, Pachaiyappa’s College, Chennai India. Received the beat Tamil Translator Book Prize award and also received the cover page designing participate certificate.
3. Participated one day workshop on Photovoltaics Fundamentals, Device Characterization, Simulation and Emerging Concepts Conducted on 10th March

2018. Organized by Department of Physics, Indian Institute of Technology Madras.

4. Participated in the International Workshop on Advanced Functional Nanomaterials – 4th Edition (IWAN 4) during 22nd 24th March 2017. Organized by Centre for Nanoscience and Technology Anna University, Chennai, 600 025.
5. Presented a paper on “**Green synthesis and characterization of Au@TiO₂ core-shell structure nanocomposite by Sol-gel and hydrothermal method**”, in the International Workshop on Advanced Functional Nanomaterials – 4th Edition (IWAN 4) during 22nd 24th March 2017. Organized by Centre for Nanoscience and Technology Anna University, Chennai, 600 025.
6. Presented a paper on “**Silver – Titanium Dioxide Nanocomposite Photoanode based Dye Sensitized Solar Cell**”, in the “National Seminar on Crystal Growth and Applications (NSCGA-2017)” organized by Department of Physics, Sacred Heart College (Autonomous), Tirupattur, Vellore Dt. Tamilnadu, during 29-31, January 2018.
7. Presented a poster on “**Gold – TiO₂ nanocomposite Photoanode based Dye Sensitized Solar Cell**”, in the 21st National Seminar on Crystal Growth and Applications (NSCGA-2017) organized by PG and Research Department of Physics, National College (Autonomous), Tiruchirappalli, in association with Indian Association for Crystal Growth (IACG) during 6-8 March 2017.