

STAFF PROFILE 2022



Name	: Dr. D. Henry Raja
Gender	: Male
Designation	: Associate Professor & Head
Department	: Physics
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Approval Guide (University Name)	: Manonmaniam Sundaranar University

Served as Resource Person:

1. Writer's workshop conducted by CSI synod – Department of communication Association meetings in colleges.
2. Bank coaching conducted by employment exchange Nagercoil for SC/STs.
3. Regular preacher in the Home Church English service.

List of Publications:

1. Fabrication and photoluminescent properties of cylindrical and conical-shaped titania nanotube photoanodes and its application in hydrogen generation via photoelectrochemical process. *Energy Procedia* 22 (2012) 67 – 77.
2. Synthesis of various generations titania nanotube arrays by electrochemical anodization for H₂ production. *Energy Procedia* 22 (2012) 88 – 100.
3. Remarkable role of annealing time on anatase phase titania nanotubes and its photoelectrochemical response. *Chemical Physics Letters* 610–611 (2014) 103–107.
4. Glycine assisted hydrothermal synthesis of α -Fe₂O₃ nanoparticles and its size dependent properties. *Chemical Physics Letters* 610–611 (2014) 103–107.
5. Fabrication of α -Fe₂O₃ hexagonal disc/SnO₂ nanoparticle semiconductor nanoheterostructures and its properties. *Chemical Physics Letters* 619 (2015) 1- 6.
6. An analysis of nano sized powder of jackfruit seed for big-bag purpose. *International Journal of Emerging Technologies in Engineering Research (IJETER)* 4(12) (2016) 86-91.
7. Experimental investigations on molecular structure vibrational spectra, Mulliken atomic charge, and homo-lumo, analysis of 4-(phenylmethyl) Phenol. *International journal of creative Research thoughts (IJCRT) IJPUBI802055* (2018) 295-316.
8. Vibrational spectra, First Order hyperpolarizability, HOMO-LUMO and Molecular electrostatic Potential Analysis of Methyl-2-Hydroxy-4-Methoxybenzoate. *International Journal for Research in Applied Science & Engineering Technology (IJRASET) Volume 6 issue IV* (2018) 4745 – 4759.
9. Vibrational Spectral Investigations of the FT-IR and FT- Raman Spectra DFT Study on 2, 3- Pyrazine Dicarboxamide. *International Journal of Scientific Research in Science and Technology* 4(5) (2018) 1844- 1847.
10. Fabrication of titanium dioxide nanotubes with reduced with reduced bandgaps by varying electrolytic concentrations. *IOP Conference Series Materials Science and Engineering* 1166(1):012054 (2021).
11. Fabrication of titanium oxide nanotubes by varying the anodization time. *Materials today: Proceedings* 33(3), 2711 – 2715. (2020).
12. Electrochemical anodization and characterization of titanium oxide nanotubes for photo electrochemical cells. *IOP Science: Journal of Physics (A conference proceedings journal) J. Phys.: Conf. Ser.* **2070** 012073.

13. Non hazardous and eco-friendly synthesis of metal oxide nanocomposites for supercapacitor application – A review. ICEMA – 2022, ISBN NO : 978-81-956471-0-1.
14. A review on preparation of TiO_2 nanotubes as a photocatalyst for sustainable energy applications. ICEMA – 2022, ISBN NO : 978-81-956471-0-1.
15. Review of doped titania nanotubes via anodization and its application in water purification. ICEMA – 2022, ISBN NO : 978-81-956471-0-1.

Project details:

UGC funded (Rs. 1,00,000) minor project titled “Ionic conductivity and electrochromic studies on polyoxometalates of Tungsten”