SRM TRP Engineering College, Trichy

Department of Science and Humanities-

Faculty Profile

Name :	Dr.P.Muthukrishnan					
Date of Birth :	25.06.1984					
Highest Qualification :	M.Sc., M.Phil., B.Ed., Ph.D					
Date of Joining :	04.09.2023					
Designation :	Associate Professor					
Date of promotion (Present Designation) :	NA					
Area of Interest :	Corrosion Mitigation, Nanomaterials synthesis					
Mobile No :	+91 9994440669		Email ID :	muthukrishnan.p@trp.srmtrichy.edu.in		
Experience :	Teaching :	12	Industry :	nil	Research :	3
Address (for Communication) :	Associate Professor, Department of Chemistry					
	SRM TRP Engineering College, Trichy-621 105					

Association with Professional Bodies

Name (Professional Body)	Indian Science Congress Association	Indian Nano Biologist Association	International Association of Engineers	The Society for advancement of Electrochemical science and Technology
Type of Membership	Life Member	Life Member	Life Member	Life Member

Research

Ph. D Guidance					
Supervisor / Guide ship No. :	nil	University :	nil	No. of Scholars :	nil

Publication*			
International Journals :	50	National Journals :	3
International Conference :	-	National Conference :	-
Project Grants (Research projects guided or undertaken/ Sponsored Projects)			
Received (Amount) :	-	Applied (Amount) :	-
Patent			
Published :	-	Granted :	-

Books

Published :	-

FDPs / STTPs / Workshops / Seminars etc.,

FDP		STTP		Workshop		Seminar		Others	
Attended :	1	Attended :	-	Attended :	-	Attended :	-	Attended :	24
Organized :	-	Organized :	-	Organized :	-	Organized :	-	Organized :	3

Online courses (NPTEL, MOOC etc.)	**1. Laser and Fundamental applications** **2. Municipal solid waste management**

***List of Publications :**
1.Identification of volatile constituents from *Premna Serratifolia L*. Through GC-MS, International Journal of PharmTech Research, 3 **(2011)** 1050-1058.
2.Heaptoprotective and anti-oxidant effect of Root and Root Callus extract of *Premna Serratifolia L*. in paracetamol induced liver damage in male albino rats International Journal of Pharma and Bio sciences, 2 **(2011)** 244-252.
3.Corrosion inhibition of *Leucaena Leucocephala Pod* on mild steel in sulfuric acid solutions. *Acta Metallurgica Sinica (English Letters)*,26 **(2013)** 416-424.
4.Corrosion Behavior of Steel Bars, International Journal of Earth Sciences and Engineering 6 (2013) 32-38
5. Adsorption and corrosion inhibiting behavior of *Lannea coromandelica* leaf extract on mild steel corrosion., *Arabian Journal of Chemistry*, 10 (**2013**)S2343-S2354
6. Corrosion Inhibition and Adsorption Behavior of *Setaria verticillata* Leaf Extract in 1M Sulphuric Acid, *Journal of Materials Engineering and Performance*, 22 (2013), 3792-3800
7. Benevolent Behavior of *Kleinia grandiflora* Leaf extract as Green Corrosion Inhibitor for Mild steel in Sulphuric Acid Solution, *International Journal of Minerals, Metallurgy and Materials*, 21(**2014**) 1083 – 1095
8.Direct electrochemistry of myoglobin at silver nanoparticles/myoglobin biocomposite: Application for hydrogen peroxide sensing, *Sensors and Actuators B: Chemical, 202**(2014)**177–184.*
9. Green bio-synthesis of silver nanoparticles and nanomolar detection of p- Nitrophenol. *Journal of Solid State Electro Chemistry*, 18 (2014) 1847 – 1854
10. Anticorrosive Activity of *Kigelia Pinnata* Leaves extract on Mild steel in Acidic Media *Metallurgical and Materials Transactions A*, 45 **(2014),** 4510 – 4524
11. Corrosion inhibition of mild steel by aqueous extract of *Hyptis Suaveolens (L) Poit leaves International Journal of Industrial Chemistry*, 5 (2014)1-5
12. Extract of Cassia Senna as Green Inhibitor for the Corrosion of Mild Steel in 1 M Hydrochloric Acid Solution, *Advances in Civil Engineering Materials*, 3 (1) **(2014)**, 413 – 433
13. Corrosion Inhibition of Mild Steel By 1-Benzyl-3-Methylimidazolium Chloride in 2M H_2SO_4 and 3.5% NaCl Media, *International Journal of Engineering Research & Technology*, 3 (4)**(2014)**2704 – 2720
14. Effect of Acidified Feronia elephantum Leaf Extract on the Corrosion Behavior of Mild Steel, *Metallurgical and Materials Transaction B, 46 (***2015***)*1448-1460
15. The corrosion inhibition of mild steel in acidic media by a new antipyridine derivative *Research on Chemical Intermediates*, 41**(2015)** 5961 – 5984
16. Adsorption and Corrosion Inhibiting Behavior of a New S-Triazine Derivative *Protection of Metals and Physical Chemistry of Surfaces*, **(2015)**,51, No. 4, 667–679
17. *Kigelia Pinnata* Leaves Extract as Green Corrosion Inhibitor for Mild steel in 1M HCl solution, Roots International Journal of Multidisciplinary Researches, 2 **(2015)** 5-8
18. Anti-Corrosion Inhibition of Mild Steel in 1M Hydrochloric Acid solution by using *Tiliacora accuminata* leaves Extract, *International Journal of Electrochemical Science*, 10 (2015)3707 – 3725
19. Convenient Synthesis of Micron-Sized Macro Porous Polymers with silica on their surfaces and Excellent Adsorption Performance for Pb (II) Ion, Environmental & Analytical Toxicology, 5 (**2015**) 1-7.
20. Preparation and application ofβ-cyclodextrin polymerized with phenol-formaldehyde as an adsorbent for the removal of Pb(II) and Hg(II) from aqueous media, International Journal of Current Research, 7 (**2015**) 17829-17838.
21. Synthesis and Characterization of green metallic silver nanoparticles using aqueous extract of *setaria verticillata* and assessing its antimicrobial activity, International Journal of Pharma and Bio Sciences, 6 (**2015**) 423-429.
22. An Investigation on the Cytotoxicity and Apoptotic effect of Biologically synthesized silver nanoparticles on MCF-7 and A549 cell lines using weed *setariaverticillata L*, Indo American Journal of Pharmaceutical Sciences, 3 (**2015**) 37-43.
23. Stigmasterol extracted from *Ficus hispida* leaves as a green inhibitor for the mild steel corrosion in 1 M HCl solution, *Arabian Journal of Chemistry*, 12 **(2019)** 3345-3356
24. Eco-friendly synthesis of Ag-NPs using CerasusSerrulate plant extract-Its catalytic, electrochemical reduction of 4-NPh and antibacterial activity, Journal of Industrial and Engineering Chemistry,37 (**2016**) 330-339.

25. Electrochemical and Quantum chemical studies of 1,5-Bis(2-Nitrophenyl)-1,4-Pentadiene-3-one as corrosion inhibitors for mild steel in Hydrochloric acid solution,
International Journal of Electrochemical Science, 11 (**2016**) 8892-8913.

26. Electrochemical studies of Biosynthesized silver nanoparticles by using *setaria verticillata plant*, Journal of Advanced Chemcial Sciences, 2 (**2016**) 302-304.

27. Phyto mediated biogenic synthesis of gold nanoparticles using Cerasus serrulata and its utility in detecting hydrazine, Microbial activity and DFT studies,
Journal of Colloid and Interface Science, 468 (**2016**), 163-175.

28. A Highly sensitive Electrochemical determination of non-steroidal prostate anti-cancer drug nilutamide based on f-MWCNT in tablet and human blood serum sample,
Journal of Colloid and Interface Science, 487 (**2017**) 289-296.

29. Biosynthesis of silver nanoparticles by using Camellia japonica leaf extract for the electrocatalytic reduction of nitrobenzene and photocatalytic degradation ofEosin-Y
Journal of Photochemistry & Photobiology B: Biology, 170 (**2017**) 164-172.

30. Electro-oxidative determination of aromatic amine (o-phenylenediamine) using organic-inorganic hybrid composite, Journal of Colloid and Interface Science, 504 (**2017**) 149-157.

31. Synthesis of *Leucaena* mediated silver nanoparticles: Assessing their photocatalytic degradation of Cr (VI) and *in vitro* cytotoxicity against DLA cells,
Journal of Photochemistry and Photobiology A: Chemistry, 346 (**2017**) 470-478

32. Synthesis, Characterisation and DFT studies of Stigmasterol mediated Silver Nanoparticles and their Anticancer Activity, Journal of Inorganic and Organometallic Polymers and Materials, 28 **(2018)** 702-710

33. Benign approach of Plant-Derived Inhibitor: Assessing their anticorrosive activity on Mild Steel in Acidic Media, Journal of Failure analysis and Prevention, 18 **(2018)**677-689

34. Azo Schiff Base as Antiscaling Agent for Mild steel in Hydrochloric acid: Electrochemical, Non-Electrochemical and DFT Studies,Journal of Bio and Tribo Corrosion,5**(2019)** 1-13.

35. Photocatalytic degradation of environmental perilous gentian violet dye using *leucaena*-mediated zinc oxide nanoparticle and its anticancer activity,Rare metals,38 **(2019)** 277-286

36. Antimicrobial, Cytotoxicity and Photocatalytic Degradation of Norfloxacin using Kleiniagrandiflora Mediated Silver Nanoparticles, Journal of Cluster Science, 30 (2019) 1415-1424

37. Structural, optical, photoluminescence and electrochemical behaviours of Mg, Mn dual-doped ZnS quantum dots, Journal of Material Science; Materials in Electronics, 30, (2019) 11984-11993

38. Ultrasound-Assisted Fabrication of a New Nanocomposite electrode of samaria and borazon for high performance supercapacitors, Ultrasonics Sonochemistry, 1 (2020) 104871

39. Detoxication and Theranostic aspects of Biosynthesised Zinc oxide Nanoparticles for drug delivery, Acta Metallurgicasinica (English Letters), 34 (2021) 729-740

40. Adsorption and Charge Transfer resistance Behavior of *Ficus Hispida* Leaf Extract on Mild Steel against Acid Attack, Journal of Failure analysis and Prevention, 20 (2020) 1803-1809.

41. Structural Elucidation and Position Identification of Cu(II) ion in Hexaaquazinc (diaquabismalonto)zincate: Single Crystal EPR and Optical Studies, Journal of Cluster Science, (2020) https://doi.org/10.1007/s10876-020-01902-8

42. Investigation on the structural and optical properties of Mn2+ doped MgS nanoparticles synthesized by hydrothermal method, Optik, 225 (2020) 165774

43. *Mangifera indica* Resin Assisted Synthesis of Nano Silver: Assessing their Photocatalytic Degradation of Methylene Blue, Anticorrosive and Antioxidant Activity, Journal of Cluster Science, (2021), https://doi.org/10.1007/s10876-020-01965-7

44. Band gap tailoring, structural and optical features of MgS nanoparticles: Influence of Ag+ ions, Optik, 236 (2021) 166544

45. Corrosion Inhibiting Effect of Cetyl Pyridinium Chloride on Aluminium in Acid Media in presence of KI, International Journal of Electrochemical science, 16 (2021) doi:10.20964/2021.06.20

46. Charge Transfer Resistance and Adsorption performance of a New Pyrrole derivative on Mild steel in Acidic media: Antibacterial studies, Oriental Journal of Chemistry, 37 (2021) 779-790.

47. Inhibitor Effect of N-(5-((4-chlorophenyl)diazenyl)-2-hydroxybenzylidene)-2-hydroxy benzohydrazide

for Mild SteelCorrosion in chloride and sulphate acidic solutions, International Journal of Electrochemical science, 16 (2021) doi:10.20964/2021.09.18.

48. Green synthesis and characterization of Ag and Ag/Fe_3O_4 nanocomposites for antimicrobial effect and rhodamine-B dye degradation, Journal of the Indian Chemical Society 99 (8), 100575

49. Green synthesis of Gold Nanoparticles Using Quercetin biomolecule from mangrove plant, Ceriops tagal: Assessment of antiproliferative properties, Cellular Uptake and DFT studies, Journal of Molecular Structure, 1272 (2022) 134167.

50. Charge transfer resistance of nitro substituted dibenzalacetone on mild steel against acid attack, Journal of the Indian Chemical Society 100 (2023) 100834

51. Application of Carbon Nanotubes in energy storage devices, Indian Journal of Chemical Technology, 30 (2023) 4

52. High quality synthesis of graphene by electrochemical exfoliation using methyl sulfonic acid media. Inorganic Chemistry Communications, 111154 (2023)

53. Regioslective synthesis of multi-funcationlized benzopyranophenazine derivatives: comparative studies on corrosion inhibition efficiency on mild steel in 1M H_2SO_4 solution
Journal o Chinese Chemical Society (2023)