

Name : Dr. P. Amutha

Designation : Assistant Professor

Department : Chemistry

Qualification : M.Sc., Ph.D, SET

Experience : Teaching -15 Years

Research : 20 Years



Area of Specialization(s): Organic Chemistry, Material Science, Nano Sensors

Email (Official ID) : amutha@psgrkcw.ac.in

Academic Qualifications

Degree	Branch	Institution/University Name	Year of Graduation
Ph.D.	Chemistry	Annamalai University, Chidambaram	2010
M. Sc.	Chemistry	Madura College, Madurai	2005
B.Sc.	Chemistry	Lady Doak College, Madurai	2003

Additional Qualifications

Diploma/ Vocational/ Certification	Area of Specialization	Institution/University/AgencyName	Year
Certification	Tamil Nādu SET	Mother Theresa University	2018
Diploma	Industrial water analysis and waste water treatment	Madura College, Madurai	2004

Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
M.Phil.	2	-
Ph.D.	1	1

International : 20

1. S. Monisha, R. Sutha, A. Thangamani and **P. Amutha**, Synthesis, crystal structure, Hirshfeld surface, computational and biological studies of spiro-oxindole derivatives as MDM2-p53 inhibitors, **Molecular Diversity**, **2024**.
2. S. Monisha, S. Uma and **P. Amutha**, In-silico molecular docking, ADMET and DFT evaluation of piperidin-4-one furoic hydrazone derivatives as antimicrobial, antioxidant and anticancer agents, **Journal of Iranian Chemical Society**, **2024**, 21, 463–478.
3. S. Monisha and **P. Amutha**, In-silico Molecular Docking and ADMET predictions of Pyrido[2,3-d]pyrimidine-2,4(1H,3H)-Dione Analogues as promising Antimicrobial, Antioxidant and Anticancer agents, **Polycyclic Aromatic Compounds**, **2023**
4. S. Monisha, **P. Amutha**, In-silico Molecular Docking and ADMET predictions B. Krishnakumar, NbCl₅ Functionalized Perlite: A Potent and Recyclable Catalyst for Synthesis of Pyrans, **Sustainability**, **2023**, 15, 3678.
5. S. R. Nimel, N. Srinivasan, **P. Amutha**, Munish Kumar Gupta, Mehmet Erdi Korkmaz Thermo-physical, tribological and machining characteristics of Hastelloy C276 under sustainable cooling/lubrication conditions, **Journal of Manufacturing Processes**, **2022**, 80, 397–413.
6. S. Monisha, **P. Amutha**, C. Surya, L. Komalavalli, B. Krishnakumar, D. Mani and A. Young-Ho, Facile approach for green synthesis of fluorescent carbon dots from Manihot esculenta and their potential applications as sensor and bio-imaging agents, **Inorganic Chemistry Communications**, **2022**, 137, 109219.
7. L. Komalavalli, **P. Amutha**, M. Alam, N. Ahmad and B. Krishnakumar, Perlite impregnated - HPA/ α -Fe₂O₃: Magnetically separable catalyst for the synthesis of 3,3,6,6-tetramethyl-9-substituted-3,4,6,7-tetrahydro-2H-xanthene-1,8-(5H,9H)-dione, **Journal of Physics and Chemistry of Solids**, **2021**, 157, 110192
8. B. Krishnakumar, Ali Alsalmeh, Fahad A. Alharthi, D. Mani, K. Anandan, **P. Amutha**, Abilio J.F.N. Sobral, Synthesis, characterization of gelatin assisted ZnO and its effective utilization of toxic azo dye degradation under direct sunlight, **Optical Materials**, **2021**, 113, 110854
9. B. Sathishkumar, P. Tamilarasu, **P. Amutha**, N. Srinivasan, Triboengineered Industrial Lubricant Using Perlite Loaded Fe₂O₃ Nano-Additives: A Greener Approach, **Tierärztliche Praxis**, **2020**, 40, 2062-2070.
10. L. Komalavalli, **P. Amutha** and S. Monisha, A facile approach for the synthesis of carbon dots from Hibiscus sabdariffa & its application as bio-imaging agent and Cr (VI) sensor, **Materials Today: Proceedings**, Volume 33, 2020, Pages 2279-228.
11. N. Srinivasan, D. Rajenthirakumar, R. Sridhar and **P. Amutha**, Tribomechanical performance of MgO–ZnO nanoparticles as lubricating additives in the microextrusion process, **Journal of Mechanical Engineering Science**, SAGE, **2020**, 234, 4543–4553.

12. C. Surya, N. Agnel Arul John, V. Pandiyan, S. Ravikumar, **P. Amutha**, Abilio J.F.N.Sobral and B. Krishnakumar, Costus speciosus leaf extract assisted CS-Pt-TiO₂ composites: Synthesis, characterization and their bio and photocatalytic applications, **Journal of Molecular Structure**, Elsevier, **2019**, 1195, 787-795.
13. C. Surya, N. Agnel Arul John, V. Pandiyan, **P. Amutha**, Abilio J. F. N. Sobral and B. Krishnakumar, Antioxidant (in vitro), antidiabetic (in vitro) and photocatalytic activity of Costus speciosus leaf extract assisted CS-Ag-TiO₂ composites, **Toxicology and Environmental Health Sciences**, Springer, **2019**, 11, 197 – 209.
14. K. Brindhya and **P. Amutha**, B. Krishnakumar and Abilio J. F. N. Sobral, BiCl₃-modified perlite as an effective catalyst for selective organic transformations: a green protocol, **Reaction on Chemical Intermediate**, Springer, **2019**, 11-30.
15. M. Ingarsal, **P. Amutha**, M. Gopalakrishnan and S. Nagarajan, Synthesis and stereodynamics of N-formyl-1,2,3-selinodiazolopyridines, **Phosphorus, Sulfur and Silicon**, Taylor and Francis, **2012**, 187, 515.
16. **P. Amutha** and S. Nagarajan, Synthesis and antimicrobial activities of new 4,6-diaryl-4,5-dihydro-3-hydroxy-2H-indazoles, **Journal of Heterocyclic Chemistry**, Wiley, **2012**, 49, 428.
17. **P. Amutha** and S. Nagarajan, Synthesis of novel spiropyrimidinones, **Helvetica Chimica Acta**, Wiley, **2010**, 93, 430.
18. **P. Amutha** and S. Nagarajan, A facile synthesis of 2-amino-5,6,7,8-tetrahydro-5,7-diarylpyrido[4,3-d]pyrimidin-4-ols, **Synthetic Communication**, Taylor and Francis, **2009**, 39, 3348.
19. N. Ingarsal, G. Saravanan, **P. Amutha** and S. Nagarajan, Synthesis, in vitro antibacterial and antifungal evaluation of 2-amino-4-(1-naphthyl)-6-arylpyrimidines, **European Journal of Medicinal Chemistry**, Elsevier, **2007**, 42, 517.
20. N. Ingarsal, G. Saravanan, **P. Amutha** and S. Nagarajan, Synthesis and antibacterial activities of some 2-amino-4-(1,1'-biphenyl-4-yl)-6-aryl-6H-1,3-thiazines, **Journal of Sulphur Chemistry**, Taylor and Francis **2006**, 27, 455.

Other Publications: International/National

K. Selvambigai, **P. Amutha** and S. Nagarajan, Inclusion complexes of 3,4-dihydropyrimidin-2-(1H)-ones with β -cyclodextrin, **Bulgarian Chemical Communications**, **2008**, 40, 36.

Patent

S. No.	Name of the Faculty	Title of the Invention	Application No.	Date of Filing	Publication Date
1.	Dr. P. Amutha	Method of Synthesizing Hybrid Metal Plastic Composite and 3D Printing Thereof	202141006967	19/02/2021	26/02/2021
2.	Dr. P. Amutha	Method of Synthesizing Hybrid Metal and Composite and 3D Printing Thereof for Construction	202141006977	19/02/2021	26/02/2021

Book Chapter Published

1. Contributed a chapter entitled “**Qualitative Analysis of Sugars**” in **Life Sciences Protocol Manual**, published by **Department of Biotechnology, Ministry of Science & Technology, Government of India**.
2. Green Synthesis of Carbon Quantum Dots and Their Environmental Application for the Detection of Heavy Metal Ions. In: Kumar, V., Singh, P., Singh, D.K. (eds) Green Carbon Quantum Dots. Engineering Materials. Springer

Short Term Course

One-week QIP short term course on “**Advances in biological systems and material science in nano world**” organized by Department of Chemistry in Coimbatore Institute of Technology, Coimbatore during 17th – 23rd April 2017.

Acted as a Resource Person

Workshop / FDP – 2

Reviewer in journal

1. Discover Nano, Springer Nature
2. Biomass Conversion and Biorefinery, Springer Nature
3. Anti-Cancer Agents in Medicinal Chemistry, Bentham Science

Paper Presentations in Conference / Seminar

International : 10

National : 15

Participation in Seminars : 26

Participation in Workshop : 32

Participation in Faculty Development Programme : 28

Conference/Seminar/Workshop Organized

National Conference : 2

National Workshop : 2

Grants

“Selective organic transformations using novel heterogeneous catalyst: A green protocol” - **GRG Trust-major project: 2018-19 (5.0 Lakhs)**

Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
Indian Society of Systems for Science & Engineering	Life Member	-
The Indian Science Congress Association	Life Member	-
Doctoral Committee Member – Anna University, Chennai	Doctoral Committee Member	-

Awards/Honors

Awards/Honors	Agency/Institute	Year of Award
Best Faculty	Lions Club	2024

Indexing and Citations

h-index: 11; Citations: 386

Contribution

IQAC Coordinator (2021 - till date)

Department Society In charge