Faculty Profile

Dr. P. Sugumar, M.Sc., Ph.D.
Associate Professor, Department of Physics

HIGHLIGHTS:

- Number of Journal Publications: **52**
- H-Index: **11**
- i10 index: **13**
- Patents Published: **01**

PROFESSIONAL LINKS:

- Scopus ID: **25825742500**
- Scopus Link: **https://www.scopus.com/authid/detail.uri?authorId=25825742500**
- Google Scholar ID: **https://scholar.google.com/citations?hl=en&user=3F9pmwcAAAAJ&view_op=list_works&sortby=pubdate**
- AICTE Faculty ID: **1-1751866455**
- LinkedIn**:** **https://www.linkedin.com/in/sugumar-paramasivam-85b7b474/**

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 8 years 5 months

AREA OF SPECIALIZATION:

- Crystallography
- Structural Biology
- Molecular Modelling Studies

ACHIEVEMENTS AND AWARDS:

- Award of "**UGC Research Fellowship in Science for Meritorious Students**" by University Grants Commission (UGC), Government of India for JRF and SRF positions (April 2012 to June 2015)
- In Agni College of Technology Selected as **Best Researcher Award** in the academic Year of 2022-23.
- In Agni College of Technology Selected as **100% Result Award** in the academic Year of 2023-24.

LIST OF INSTRUMENT HANDLING

- Bruker-Single Crystal X-ray Diffraction
- UV-Visible Spectrometer

PROFESSIONAL MEMBERSHIPS:

- Life Time Fellow Member in International Union of Crystallography

CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:

- International Conference: 10
- National Conference: 15
- Seminars: 8
- Workshops: 2

SELECTED PUBLICATIONS

- Iron‐Doped Cadmium Sulfide/Graphene Oxide (Cd(1‐x)Fe(x)S/GO) Nanocomposites for Photocatalytic Degradation of Toxic Pollutants, S. Dorothy, **P. Sugumar**, S. Meenakshi, Munusamy Settu, Sandhanasamy Devanesan, K. Kalpana, Saurav Dixit, K. Rajendran, Luminescence 39 (12), e70044.

- Synthesis, spectroscopic profiling, biological evaluation, DFT, molecular docking and mathematical studies of 3, 5-diethyl-2r, 6c- diphenylpiperidin-4-one picrate, S Bharanidharan, S Savithiri, G Rajarajan, **P Sugumar**, A Nelson, Molecular Physics, 2023, e2173964. (Impact Factor: **1.937**).

- Synthesis of thiophene derivatives: Substituent effect, antioxidant activity, cyclic voltammetry, molecular docking, DFT, and TD- DFT calculations, N Uludag, G Serdaroğlu, **P Sugumar**, P Rajkumar, N Colak, E Ercag, Journal of Molecular Structure, 2022, 1257, 132607. (Impact Factor: **3.841**).

- Carbazole derivatives: Synthesis, spectroscopic characterization, antioxidant activity, molecular docking study, and the quantum chemical calculations, Goncagül Serdaroğlu Nesimi Uludağ Erol Ercag **Paramasivam Sugumar** Parthasarathi Rajkumar, *Journal of*

Molecular Liquids, 330, 2021, 115651. (Impact Factor: **5.065**).

- Synthesis, spectral characterization and conformational assignment of N-formyl-2,7-diaryl-1,4-diazepan-5- ones as potent antibacterial agents and type I DHQase inhibitors, Sethuvasan, S.; **Sugumar, P**.; Ponnuswamy, M. N.; Ponnuswamy, S. Journal of Molecular Structure, 1236, 2021, 130293. (Impact Factor: 3.841).

- Synthesis, characterizations and quantum chemical calculations of the spinel structure of Fe3O4 nanoparticles, C. Rajeevgandhi, S. Bharanidharan, S. Savithiri, L. Guganathan, **P. Sugumar**, K. Sathiyamurthy & K. Mohan, Journal of Materials Science: Materials in Electronics, 31, (2020), 21419– 21430. (Impact Factor: 2.195).

- Experimental and theoretical studies of imidazole based chemosensor for Palladium and their biological applications, S. Suresh, N. Bhuvanesh, A. Raman, **P. Sugumar**, D. Padmanabhan, S. Easwaramoorthi, M. N. Ponnuswamy, S. Kavitha, R. Nandhakumar, J. Photochem. Photobiol. A: Chem. 385 (2019) 112092- 112101. (Impact Factor: 3.261).

- Stereochemical investigation of N-formyl-2, 7-diphenyl-1, 4-diazepan-5-ones by NMR spectroscopy and single crystal X-ray diffraction studies, UP Senthilkumar, S Sethuvasan, S Ponnuswamy, **P Sugumar**, M.N.Ponnuswamy, R.Jeyaraman, Journal of Molecular Structure, 1175, (2019), 935-947. (Impact Factor: 3.841).

- Synthesis, stereochemistry, crystal structure, docking study and biological evaluation of some new N- benzylpiperidin-4-ones, S.Ponnuswamy, R.Kayalvizhi, S.Sethuvasan, **P.Sugumar**, M.N.Ponnuswamy, Journal of Molecular Structure, 1155, (2018), 654- 665. (Impact Factor: 3.841).

- Enhanced catalytic activity towards one-pot hydroxylation of phenol with hydrogen peroxide by nickel(II) complex encompassing 3-formylchromone-Smethylisothiosemicarbazone derivatives, P. Vijayan, P. Anitha, M. Rajeshkumar, P. Viswanathamurthi, **P. Sugumar**, MN Ponnuswamy, Polyhedron, 124, (2017), 77-85, (Impact Factor: 2.108).

- Toward a new avenue in ruthenium-sulfur chemistry of binuclear μ-sulphido bridged (μ -S)2 complexes having Ru2S core: Targeted synthesis, crystal structure, biomolecules interaction and their invitro anticancer activities, P. Vijayan, P. Viswanathamurthi, **P. Sugumar**, MN Ponnuswamy, K. Velmurugan, R. Nandhakumar, M. Dakshinamoorthi Balakumaran, P. Thangavelu Kalaichelvan, Inorganica Chimica Acta, 453, (2016), 596-617, (Impact Factor: 2.046).

- N-benzyl-2,7-diphenyl-1,4-diazepan-5-one analogues: Synthesis, spectral characterization, stereochemistry, crystal structure and molecular docking studies, S. Sethuvasan, **P. Sugumar**, M.N. Ponnuswamy, S. Ponnuswamy, Journal of Molecular Structure, 1121 (2016) 215-225.(Impact Factor: 3.841)

- Synthesis, spectral characterization, crystal structure and molecular docking study of 2,7-diaryl-1,4- diazepan-5-ones. S. Sethuvasan, **P. Sugumar**, V. Maheshwaran, M.N. Ponnuswamy, S. Ponnuswamy, Journal of Molecular Structure, 1116, (2016), 188–199.(Impact Factor: 3.841)

- Unprecedented formation of organo-ruthenium(II) complexes containing 2-hydroxy-1-naphthaldehyde S- benzyldithiocarbazate: synthesis, X-ray crystal structure, DFT study and their biological activities in vitro. Paranthaman Vijayan, Periasamy

Viswanathamurthi, **Paramasivam Sugumar**, Mondikalipudur Nanjappagounder Ponnuswamy, Manickam Dakshinamoorthi Balakumaran, Pudupalayam Thangavelu Kalaichelvan, Krishnaswamy Velmurugan, Raju Nandhakumar and Ray Jay Butcher, Inorg. Chem. Front., (2015), 2, 620-639. (Impact Factor: 4.532)

- Synthesis, crystal structures and docking studies of 2,7-diphenyl-1,4-diazepan-5-one derivatives. Maheshwaran Velusamy, Sethuvasan Sreenivasan, Ravichandran Kandasamy, Ponnuswamy Subbu, **Sugumar Paramasivam**, Ponnuswamy Mondikalipudur Nanjappagounder. Chemistry Central Journal, 2015, 9:17 (2015). (Impact Factor: 2.55)

- Synthesis, growth,characterization, structure and molecular docking studies of 1-[(E)-{[4-(morpholin- 4- yl)phenyl]imino}methyl]naphthalen-2-ol single crystal:A potential antimicrobial agent. S.Ranjith, **P.Sugumar**, G. Rajagopal, M. Udayakumar, M.N.Ponnuswamy. Journal of Molecular Structure. (2014), 21- 28, 1065-1066.(Impact Factor: 3.841)

PATENTS PUBLISHED/GRANTED:

- Estimation of Indoor & Outdoor Ambient Radiation Levels at the Take-Off Site, 202241008446-A (Published)

BOOK CHAPTERS PUBLISHED

- “Advanced Nanomaterials: Synthesis and Applications, Bloomsbury Publishing India Pvt. Ltd, ISBN - 9789385436741, pp.159-164,2015.

SPECIAL SESSIONS DELIVERED:

- "*Purification and Crystalization of Hemoglobin from Eel Fish (Anguilla Anguilla)*". **P. Sugumar** - International Conference on Recent Perspectives in Macromolecular Structures and Functions, 2012, held in Central Agricultural Research Institute, Port Blair, Andaman & Nicobar Islands, INDIA.

COURSES CERTIFIED:

- 7-Days Online New Hands-on-Training sessions on Rietveld Refinement of X-Ray Diffraction Data (RRD).