

SAM KIRUBAKAR P



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RESEARCH OBJECTIVE

I am an aspiring chemist with insatiable fervour to make a tangible achievement in the fields of *organometallics* and *bio-inorganics*. I am committed to working diligently and learning relentlessly to surmount any hurdles I may face. As a creative and innovative thinker, I am always open to novel ideas and unconventional approaches. I am excited to collaborate with and learn from other researchers to perpetually expand my intellectual horizons and refining my practical skills. I am looking for a challenging and rewarding position that will enable me to apply my knowledge and skills to contribute to the advancement of science.

EDUCATION

- **Master of Science in Chemistry** 2020 – 2023
Pondicherry University, Puducherry.
 - **CGPA: 7.63** (*First Class*).
- **Bachelor of Science in Chemistry** 2017 – 2020
Bishop Heber College, Tiruchirappalli.
 - Minored in Physics and Mathematics
 - **CGPA: 7.88** (*First Class*).
- **Higher Secondary Certificate (HSC)** 2015 – 2017
GRT Mahalakshmi Vidyalyaya Matriculation Higher Secondary School, Chennai.
 - Passed with **78.25%**.
- **Secondary School Leaving Certificate (SSLC)** 2014 – 2015
GRT Mahalakshmi Vidyalyaya Matriculation Higher Secondary School, Chennai.
 - Passed with **92.40%**.

RESEARCH EXPERIENCE

- **Master's Project** 2021 – 2022
Organometallics & Supramolecular Chemistry Lab, Department of Chemistry, Pondicherry University, Puducherry.
 - 1) Synthesis and Characterisation of Dinuclear Metallocycles with Ester and Thioester Functionalised Pyridyl Ligands
 - Designed and synthesised dinuclear metallo-supramolecular assemblies with semi-rigid ester and thioester functionalised pyridyl ligands with organic spacers and metal precursor containing *fac*-M(CO)₃ core (M = Re, Mn).
 - Characterised using various analytical techniques, such as ¹H NMR, FT-IR, UV-Vis, and High-Resolution ESI-Mass Spectroscopy.
 - These complexes will be used for studying their biological, photoemission, therapeutic, catalytic and electro-catalytic properties.
 - Supervisor: **Prof. Dr Bala. Manimaran**
 - 2) Synthesis and Characterisation of Ester and Thioester Functionalised Pyridyl and Amino quinone Ligands
 - Designed and synthesised novel dipodic and tripodic ester and thioester functionalised pyridyl and amino quinone ligands.
 - Characterised using various analytical techniques, such as ¹H NMR, FT-IR, UV-Vis, and High-Resolution ESI-Mass Spectroscopy.

- These dipodic and tripodic ligands will be used for the preparation of metallo-supramolecular transition metal-carbonyl assemblies.
- Supervisor: **Prof. Dr Bala. Manimaran**
- **Summer Internship** 2021
Organometallics & Supramolecular Chemistry Lab, Department of Chemistry, Pondicherry University, Puducherry.
 - Designed and synthesised 2,2',2'',2'''-(ethane-1,2-diylbis(azanetriyl))tetrakis(N-(2-(pyridin-4-yl)ethyl)acetamide), a novel quadrapodic ligand.
 - Characterised using various analytical techniques, such as ¹H NMR, FT-IR, UV-Vis, and High-Resolution ESI-Mass Spectroscopy.
 - This quadrapodic ligand will be used for the preparation of metallo-supramolecular transition metal-carbonyl assemblies.
 - Supervisor: **Prof. Dr Bala. Manimaran**

AWARDS AND HONOURS

- **Academic Topper** 2020
Bishop Heber College, Tiruchirappalli.
- **First Prize** 2019
Bishop Heber College, Tiruchirappalli.
 - Awarded for proficiency in Part 1 French.
- **High Achiever Award** 2015
GRT Mahalakshmi Vidyalaya Matriculation Higher Secondary School, Chennai.
 - Awarded for getting more than **90%** in SSLC.

WORKSHOPS

- **Energy Materials-Fundamentals to Device Fabrication (ECPE)** 2021
CSIR-Central Electrochemical Research Institute, Karaikudi – 630003
 - **Fifth place** in the overall evaluation.

CONFERENCES AND SEMINARS

- **Participant, International High Energy Materials Conference & Exhibit (HEMCE-2019)** organized by **High Energy Materials Society of India (HEMSI), SHAR-Chennai Chapter** in association with **Satish Dhawan Space Centre (SDSC), SHAR and Indian Institute of Technology, Madras (IITM), Chennai, 2019**
- **Participant, Regional Level Workshop on Analytical Techniques & Instrumentation for Chemists-ATIC'18, at Bishop Heber College, Tiruchirappalli, 2018**
 - Attended lectures and demonstrations on various analytical techniques and instruments, such as GC-MS, HPLC, FTIR, UV-Vis, etc.

SKILLS

- **Research Skills:** Synthetic and coordination chemistry, analytical techniques, data analysis, literature review, report writing, presentation skills.
- **Technical Skills:** Purification of common Organic Solvents - Hexanes, DCM, Toluene, Mesitylene, Thionyl chloride and THF; Preparation of Samples for spectroscopic studies - IR Spectroscopy (solid and liquid), High Resolution ESI-Mass Spectroscopy and NMR Spectroscopy; PerkinElmer ChemOffice 22.0, Mnova 14, OriginPro® 2022, L^AT_EX, Python 3, Microsoft 365, Adobe Photoshop 2024, Adobe Illustrator 2023.
- **Instrumentation Skills:** Vacuum - Schlenk Line; FT-IR Spectroscopy; Rotary Evaporator Chromatographic Techniques - Column chromatography and TLC

- **Linguistic Skills:** Tamil (native/bilingual proficiency), English (full professional proficiency), French (limited working proficiency)

PERSONAL INFORMATION

Father's name : Mr R. Pugalenth
DOB : 18 – 03 – 2000
Residential address : № 6/4, Kamakodi Street,
 Subramania Salai,
 West Saidapet,
 Chennai – 600015.
 Tamil Nadu, *INDIA*.
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REFERENCES

1) Prof. Dr Bala. Manimaran

*Professor and Head,
 Department of Chemistry,
 Pondicherry University,
 R.V. Nagar, Kalapet,
 Puducherry – 605014.
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DECLARATION

I hereby declare that the above-furnished details are true and complete to the best of my knowledge.

Place: Chennai

Yours sincerely,

Date:

(SAM KIRUBAKAR P)