

**FACULTY PROFILE**

Name	Dr. ASWATHY JOSEPH
Designation	ASSISTANT PROFESSOR
Department	CHEMISTRY

PERSONAL VISION AND MISSION

The secret of success is constancy to purpose.

PERSONAL DETAILS

Date of entry into permanent service	29-11-2021
Total teaching experience as on 01 December 2022	2 years
Age and Date of Birth	34; 29-12-1987
Residential Address	Vechukettickal(H), Thottuva, Kuravilangadu, Kottayam, Kerala 686633
Address for Correspondence	Assistant Professor, Department of Chemistry, Catholicate College, Pathanamthitta
Mobile / Whatsapp Number	9495244558
E-mail (Personal and Official)	aswathyj@gmail.com ; aswathyj@catholicatecollege.ac.in



ACADEMIC QUALIFICATIONS

Degree	Subject	Institution and University	Grade/ Rank etc.
UG	B.Sc. Chemistry (2008)	St. Xavier's College, Thumba, University of Kerala	93.6%
PG	M.Sc. Chemistry (2010)	Department of Chemistry, Karriyavattom Campus, University of Kerala	80% 5 th position
Ph D	PhD Chemistry (2019)	School of Chemical Sciences, Mahatma Gandhi University	N.A.
Additional Qualifications	PG Diploma in Education Technology and Management (PGD-ETM 2021)	ICAR-NAARM & University of Hyderabad (Distant Education)	1 st Division

POSITIONS HELD/ AWARDS/ RECOGNITIONS/ MAJOR ACHIEVEMENTS

Name	Details
Reviewer	Journal of Molecular Liquids (Elsevier)
Awards	- Kerala University Merit Scholarship 2008. - UGC-CSIR National Eligibility Test for Lectureship in Chemical Science, December 2010. - Jawaharlal Nehru Scholarship for Doctoral Studies 2015-17, Jawaharlal Nehru Memorial Fund, New Delhi.

RESEARCH AND CONSULTANCY

Year of Award of Ph.D.	2019
No. of Publications	10
No. of papers presented in Conferences, Seminars, Workshops and Symposia	12



PUBLICATIONS AND PRESENTATIONS

International/
National
Publications

- *Porous Liquids*, Aswathy Joseph, Suresh Mathew, *Resonance: Journal of Science Education*, **2022** (accepted)
- *Ionic Liquid and Ionanofluid-Based Redox Flow Batteries—A Mini Review*, Aswathy Joseph, Jolanta Sobczak, Gawel Żyła, Suresh Mathew, *Energies*, **2022**, 15, 4545. <https://doi.org/10.3390/en15134545>
- *Electronic properties of PVP-ionic liquid composite: spectroscopic and DFT-based thermochemical studies on the effect of anions*, **Aswathy Joseph**, Suresh Mathew, *Iranian Polymer Journal*, **2021**, 30, 505–512. <https://doi.org/10.1007/s13726-021-00908-x>
- *Investigation of Iron Oxide-Based Ionanofluids and Ionic Liquids by Ultrasonic Sound Velocity Method*, **Aswathy Joseph**, Pankajakshan Radhakrishnan Nair & Suresh Mathew, *International Journal of Thermophysics*, **2020**, 41, 168. <https://doi.org/10.1007/s10765-020-02748-y>
- *Synthesis and electrochemical characterization of electroactive IoNanofluids with high dielectric constants from hydrated ferrous sulphate*, **Aswathy Joseph**, Marylin Mary Xavier, Jacek Fal, Gawel Żyła, Soorya Sasi, P. Radhakrishnan Nair, A. S. Padmanabhana and Suresh Mathew, *Chemical Communications*, **2019**, **55**, 83 – 86. <https://doi.org/10.1039/C8CC08243J>
- *Nanostructuring of 1-butyl-4-methylpyridinium Chloride in Ionic Liquid- Iron Oxide Nanofluids*, **Aswathy Joseph**, Jacek Fal, Gawel Żyła, Suresh Mathew, *Journal of Thermal Analysis and Calorimetry*, **2019**, 135 (2), 1373–1380. <https://doi.org/10.1007/s10765-020-02748-y>
- *Theoretical Probing of Weak Anion-Cation Interactions in Certain Ionic Pairs of Pyridinium based Ionic Liquids and the Application of Molecular Electrostatic Potential in their Ionic Crystal Density Determination : A Comparative Study Using Density Functional Approach*, **Aswathy Joseph**, Vibin Ipe Thomas, Gawel Żyła, A. S. Padmanabhan, Suresh Mathew, *Journal of Physical ChemistryA*, **2018**, 122 (1), 328–340. <https://doi.org/10.1021/acs.jpca.7b09189>
- *Synthesis, Characterization and Theoretical Studies on Novel Organic–inorganic Hybrid Ion–gel Polymer Thin Films from a γ -Fe₂O₃ doped Polyvinylpyrrolidone–N-butylpyridinium Tetrafluoroborate Composite via Intramolecular Thermal Polymerization*, **Aswathy Joseph**, Marilyn Mary



	Xavier, Gawęł Żyła, P. Radhakrishnan Nair, A. S. Padmanabhan, Suresh Mathew, <i>RSC Advances</i>, 2017, 7, 16623-16636. https://doi.org/10.1039/C6RA27411K • <i>Paramagnetic Ionic Liquids for Advanced Applications: a Review</i>, Aswathy Joseph, Gawęł Żyła, Vibin Ipe Thomas, P. Radhakrishnan Nair, A.S. Padmanabhan, Suresh Mathew, <i>Journal of Molecular Liquids</i>, 2016, 218, 319-331. DOI: 10.1016/j.molliq.2016.02.086 • <i>Ferrofluids: Synthetic Strategies, Stabilization, Physicochemical Features, Characterization, and Applications</i>, Aswathy Joseph, Suresh Mathew, <i>ChemPlusChem</i>, 2014, 79, 1382–1420. https://doi.org/10.1002/cplu.201402202, • <i>Photoluminescence study on amino functionalized dysprosium oxide–zinc oxide composite bifunctional nanoparticles</i>, Aswathy Joseph, Praveen G.L., Abha. K, Lekha. G. M., Sony George, <i>Journal of Luminescence</i>, 2012, 132, 1999–2004. https://doi.org/10.1016/j.jlumin.2012.03.023
Chapters in Books	• <i>Chapter 12: Imidazolium-based room temperature ionic liquids for electrochemical reduction of carbon dioxide to carbon monoxide</i>, Aswathy Joseph, Suresh Mathew, <i>Green Sustainable Process for Chemical and Environmental Engineering and Science: Ionic Liquids as Green Solvents</i>, 2020, Edited by: Inamuddin, Abdullah M. Asiri and Suvardhan Kanchi Pages 343-365 https://doi.org/10.1016/B978-0-12-817386-2.00012-3
Books	• <i>Theoretical and Computational Approaches to predicting Ionic Liquid Properties</i>, Edited by Aswathy Joseph, Suresh Mathew, Elsevier, ISBN no: 9780128202807.
Paper Presentations (International/ National)	• “The Effect of Aminofunctionalization on the Photoluminescence of Silica coated Dysprosium oxide-Zinc oxide Composite Bi-functional Nanoparticles” at the UGC sponsored National Seminar on “GREEN CHEMISTRY- The Ultimate Tool For Pollution Control” organized by Assumption College, Changanasheery, held on February 14th -15th, 2012. • “The Effect of TOPO coating on the Photoluminescence of Dysprosium oxide- Zinc oxide Core-shell Nanoparticles” at the UGC sponsored National Seminar on “MODERN TRENDS IN ORGANIC CHEMISTRY” organized by Basilius College, Kottayam, held on 23rd & 24th February, 2012. • “Amino-functionalized Zinc Oxide-Dysprosium Oxide Composite Nanoparticles” at the National Seminar on Nanoscience And Technology



	organized by Department of Science and Humanities, Sree Narayana Gurukulam College of Engineering, Kolenchery on 15th & 16th February, 2013 in association with KSCSTE & ISTE. • <i>“Hydrothermal Synthesis of Magnetic Nanostructures Using Ionic Liquid”</i> in the National Seminar “Frontiers of Polymers and Advanced Materials (FPAM-2014)” at Department of Chemistry, University of Kerala during 5th -7th November 2014. • <i>“Density Functional Theory analysis of CO₂ capture ability of 1-Butyl-4-methylpyridinium ionic liquids with chloride, bromide and tetrafluoroborate anions”</i>, presented at 25th Swadesi Science Congress, Sree Sankaracharya University, Kalady on 15th -18th December 2015. • <i>“Ultrasonic characterization of 1-Butylpyridinium and 1-Butyl-4-methylpyridinium tetrafluoroborate ionic liquids”</i>, presented at “Second International Conference on Materials Science and Technology (ICMST 2016)”, St. Thomas College, Pala, Kottayam on 7th June, 2016. • <i>“Theoretical probing of anion-cation interaction in 1-butylpyridinium based ionic liquid”</i>, presented at “The Twelfth International School on Theoretical Physics Symmetry and Structural Properties of Condensed Matter (SSPCM 2016)”, Poland, Rzeszów on 5-10th September, 2016. • <i>“Fabrication of thinfilms via free radical induced thermal cross polymerization in ionogels for charge storage applications”</i>, presented at “The International Conference on Advanced Materials and Processes (ADMAT 2017 SkyMat)”, Kovalam, Thiruvananthapuram on 14-16th December 2017. • <i>“Synthesis and characterization of highly stable surfactant-free iron oxide - ionic liquid nanofluids via one step microwave irradiation”</i>, presented at “Indian Analytical Science Congress (IASC 2018)”, Kumarakom, Kerala, 8-10th February, 2018. • <i>“Synthesis and Characterization of Iron oxide Magnetic Nanoflakes via Hydro-ionothermal Method”</i> presented at International Conference of Emerging Trends in Advanced Functional Materials (ETA FM-2022), Catholicate College, Pathanamthitta on 11th-12th August 2022. • <i>“Cyber Threats to Chemical Plants Handling Toxic Materials”</i> presented at International Conference on Cyber Security, Catholicate College, Pathanamthitta on 8th November 2022. • <i>“Investigation of Redox Nature of Iron Oxide-Ionic Liquid Nanofluids for Flow Battery Applications”</i> presented as International Online Conference on Basic Sciences for Sustainable Development (ICBSSD 2022) organized
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	by Amal Jyothi College of Engineering, Kottayam on 16 th -17 th December 2022.
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WORKSHOPS /FDP/ORIENTATION/REFRESHERCOURSES ATTENDED

Name	Details
Five day Molecular Modeling Workshop on "Training on Gaussian 09 software"	Organized by Department of Chemistry, C.M.S. College, Kottayam on 20 th September, 2014
Five day Online Training on "Teaching Learning through Learning Management System"	Organized by CIET-NCERT, Ministry of Education, Govt. of India from 24-01-2022 to 28-01-2022
Online IP Awareness/Training program under National Intellectual Property Awareness Mission.	Organized by Department of Life Long Learning and Extension (DLLE) and Business Incubation and Innovation Centre (BIIC) Mahatma Gandhi University & Intellectual Property Office, Govt. of India on 11-02-2022
Six day Online National Workshop "Use of Excel in Data Analysis"	Organized by Centre of Research, IITE, Gandhinagar, Gujarat from 7-03- 2022 to 12-03-2022
19 th One day Conference for Accademic Staff of MOC colleges on NEP	Held at K.G. College, Pampady, Kottayam on 26-03-2022
One Week Online National Faculty Development Program/Leadership Development Program on "Building Academic Leaders for 21st Century Higher Education".	Organized by Guru Angad Dev Teaching Learning Centre of Ministry of Education under the PMMMNMTT Scheme, Govt. of India from 14-04-2022 to 20-04-2022.



Faculty Development Program On <i>"Academic Research Writing & Best Practices"</i>	Organized by H.S.N.C Board's Kishinchand Chellaram Law College, University of Mumbai & Droit Penale Group: A Unit of Arjun Das Gulati Memorial Society, Prayagraj, In-collaboration with Guru Angad Dev Teaching Learning Centre of Ministry of Education under the Pandit Madan Mohan Malaviya National Mission on Teachers & Teaching (PMMMNMTT) Ministry of Education, Government of India from 25-04-2022 to 02-05-2022.
Online Faculty Development Programme on <i>"Best Practices for Online Teaching: Classrooms, Courseware and Tools"</i>	Organized by Faculty Development Centre, The Kerala State Higher Education Council from 11-05-2022 to 17-04-2022
Two Day Workshop on <i>"Outcome Based Education"</i> (OBE)	Organized by IQAC, Catholicate College, Pathanamthitta, in collaboration with The Kerala State Higher Education Council & M.G. University, Kottayam on 20-05-2022 to 21-05-2022.
Fifteen Days Online Refresher Course <i>"New Age Teaching Methods & Skills in Higher Education"</i>	Organized by Jagran Lakecity University, Bhopal & Droit Penale Group, A Unit of Arjun Das Gulati Memorial Society, Prayagraj, In collaboration with Guru Angad Dev Teaching Learning Centre Pandit Madan Mohan Malaviya National Mission on Teachers & Teaching (PMMMNMTT) Ministry of Education, Government of India on 17-08-2022 to 31-08-2022.

ANY OTHER RELEVANT INFORMATION

- Invited Lectures at online webinar organized by Dept. of Chemistry, MES College, Mampad, Kerala on "How to write a review In Chemistry?" on 26-07-2021.
- Participated in DST Indo-Poland Joint Research Project 2015-17 "Study of Fundamental Chemical and Physical Properties of Magnetic Ionic Liquid Nanofluids" (PI: Prof. Dr. Suresh Mathew, School of Chemical Sciences, Mahatma Gandhi University, Kottayam).
- Google Scholar ID: <https://scholar.google.com/citations?user=rxgggKgAAAAJ&hl=en>
- ORCID ID: <https://orcid.org/0000-0002-0652-5102>



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Name and Signature of Teacher with date