



Dr. Vinaya Jose

Assistant Professor in Basic Sciences and Humanities

Administrative Responsibilities

Institute level :

- Member of Institution's Innovation Council (IIC)
- Member of ERP Committee
- Member of Project Club
- Member of Magazine Committee
- Member of Dance Club
- Member of Website Committee
- Member of Admission Test Cell

Department Level

- First year tutorship – S1 CSD
- Semester 2- B.Tech. Chemistry Course Coordinator

Education Summary

- **PhD:** *Studies on Nano-Structured Perovskite-Based Materials for Environmental and Energy Storage Applications* under the guidance of Dr. A Samson Nesaraj, Karunya Institute of Technology and Sciences, Coimbatore - January 2025
- **Post Graduation:** MSc Chemistry (2020) - Karunya Institute of Technology and Sciences, Coimbatore.
- **Graduation:** BSc Chemistry (2017) - Christ College, Irinjalakuda

Employment History

Teaching and Research

- Assistant Professor at Christ College of Engineering Irinjalakuda (August 2025 - present)
- Full-time Research Scholar at Division of Physical Sciences, Karunya Institute of Technology and Sciences (2021 – 2025)
- Research Associate at Division of Physical Sciences, Karunya Institute of Technology and Sciences (2022 – 2024)
- Intern in main laboratory of QC & QA department, Flora Natural Flavours and Extracts Pvt.Ltd., Thrissur (June 2019).

Journals/Papers Published

- **Vinaya Jose**, Vismaya Jose, Elizabeth Kuruvilla, A. Samson Nesaraj, ‘Fabrication, Phytotoxicity, and Electrochemical Performance of Rare-Earth Metal-Based Mixed La-Ce cobaltite Nanospheres: Applications in Energy storage and Environmental Remediation’, *Journal of physics and chemistry of solids*, 2025, 207, 112935, <https://doi.org/10.1016/j.jpcs.2025.112935>
- **Vinaya Jose**, Vismaya Jose, Elizabeth Kuruvilla, Manasai Arunkumar, Subramanian Sowmya, Arputharaj Samson Nesaraj, ‘Synthesis, phytotoxic, and electrochemical evaluation of mixed Ce-Cr nickelate nanorods for environmental and energy storage applications’, *Advanced Powder Technology*, 2024, 35, 104383, <https://doi.org/10.1016/j.appt.2024.104383>
- **Vinaya Jose**, Vismaya Jose, Elizabeth Kuruvilla, Manasai Arunkumar, Alagu Segar Deepi, Gopalakrishnan Srikesh, Arputharaj Samson Nesaraj, ‘Facile chemical synthesis of Mg-doped NiMnO₃ perovskite based nano-structured materials: Application in photocatalysis and supercapacitors’, *Inorganic Chemistry Communication*, 2023, 156, 111205, <https://doi.org/10.1016/j.inoche.2023.111205>
- **Vinaya Jose**, Vismaya Jose, C. Freeda Christy, A. Samson Nesaraj, ‘Overview of perovskite based electrode materials used in electrochemical capacitors: Present status and prospects’, *Asian Journal of Chemistry*, 2021, 34(3),497-507, <https://doi.org/10.14233/ajchem.2022.23549>
- **Vinaya Jose**, Vismaya Jose and A. Samson Nesaraj, ‘Overview of electrode materials progressed for application in electrochemical supercapacitors – An update’, *Asian Journal of Chemistry*, 2021, 33(5), 1039-1050, <https://doi.org/10.14233/ajchem.2021.23157>
- Vismaya Jose, **Vinaya Jose**, Elizabeth Kuruvilla, Arputharaj Samson Nesaraj, ‘Energy storage and Environmental remediation of Mixed Mg-Mn aluminate nanospheres: Phytotoxicity and Electrochemical evaluation’, *Inorganic chemistry communication*, 2025, 177, 114422, <https://doi.org/10.1016/j.inoche.2025.114422>
- Vismaya Jose, **Vinaya Jose**, Elizabeth Kuruvilla, Manasai Arunkumar, Subramanian Sowmya, Arputharaj Samson Nesaraj, ‘Phytotoxic-Electrochemical properties of Mixed Cu-Ni cobaltite

nanoflowers: Environmental and Energy storage applications’, *Journal of alloys and compounds*, 2024, 978, 173383, <https://doi.org/10.1016/j.jallcom.2023.17338>

- Vismaya Jose, **Vinaya Jose**, Elizabeth Kuruvilla, Manasai Arunkumar, Alagu Segar Deepi, Gopalakrishnan Srikesh, Arputharaj Samson Nesaraj, Facile chemical synthesis of mixed Zn-Co manganite based tetragonal spinels for energy storage and environmental remediation, *Optik*, 2023, 291, 171335, <https://doi.org/10.1016/j.ijleo.2023.171335>
- Vismaya Jose, **Vinaya Jose**, C. Freeda Christy, A. Samson Nesaraj, ‘Spinel based electrode materials for application in electrochemical supercapacitors – Present status and future prospects,’ *Inorganic and Nano-Metal Chemistry*, 2021, 1-14, <https://doi.org/10.1080/24701556.2021.1956968>
- Elizabeth Kuruvilla, Arputharaj Samson Nesaraj, **Vinaya Jose**, Vismaya Jose, Manasai Arunkumar, ‘Photocatalytic Characteristics of Cobalt Doped ZnO and Cobalt/Manganese Co-Doped ZnO Nanocrystalline Materials Synthesized by Soft Chemical Route: Effective Elimination of Orange G Dye under UV Light’, *Integrated Ferroelectrics*, 2023, 237, 265–286, <https://doi.org/10.1080/10584587.2023.2239095>
- Elizabeth Kuruvilla, Arputharaj Samson Nesaraj, **Vinaya Jose**, Vismaya Jose, Manasai Arunkumar, Padmanabhan Dhanasekaran, ‘Facile synthesis of 3D graphite incorporated double doped ZnO nanocomposite material with enhanced photocatalytic properties: Evaluation of ecotoxicity and phytotoxicity’, *Inorganic Chemistry Communication*, 2024, 162, 112202, <https://doi.org/10.1016/j.inoche.2024.112202>
- Elizabeth Kuruvilla, Arputharaj Samson Nesaraj, **Vinaya Jose**, Vismaya Jose, Manasai Arunkumar, Padmanabhan Dhanasekaran, ‘Hybridized Co, Mn co-doped ZnO@graphite for photocatalytic degradation of orange G dye: Ecotoxicity and phytotoxicity evaluation’, *Materials Today Communication*, 2024, 41, 110227, <https://doi.org/10.1016/j.mtcomm.2024.110227>

Papers Presented In International Conferences

- Vinaya Jose, Arputharaj Samson Nesaraj, ‘*Studies on perovskite based nanostructured electrode materials for electrochemical supercapacitors*’, International Conference on Recent Advances in Material Chemistry (ICRAMC-2022), SRM Institute, Kattankulathur, 17-19, February, 2022.
- Vinaya Jose, Arputharaj Samson Nesaraj, ‘*Mg-doped NiMnO₃ perovskite based Nano-structured Materials for Supercapacitor and Photocatalysis Applications*’, International Conference on Advanced Materials and their Applications (ICAMA-2022), V.O. Chidambaram College, Thoothukudi, 29-30, September, 2022.
- Vinaya Jose, Arputharaj Samson Nesaraj, ‘*Cr-doped CeNiO₃ perovskite based Nano-structured Materials for Supercapacitor and Photocatalysis Applications*’, International Conference Multidisciplinary Aspects in Chemistry (ICMAC-2023), Sri Ramakrishna College of Arts and Science, Coimbatore, 9-10, February, 2023.

- Vinaya Jose, Arputharaj Samson Nesaraj, '*CeNiO₃ perovskite Based Nano-structured Material for Supercapacitor Application*', National Conference on Materials and Mathematical Sciences (NCMMS-2023), KARE, Krishnankoil, 30-31, March, 2023.
- Vinaya Jose, Arputharaj Samson Nesaraj, '*Mixed Ce-Cr Nickelate Nanorods for Environmental and Energy storage applications*', 2nd International Conference on Frontiers in Chemical Sciences (ICFCS-2023), Karunya Institute of Technology and Sciences, Coimbatore, 26-27, October, 2023.

Area of Interest

- Material chemistry
- Nanomaterial science and technology
- Photocatalysis
- Water purification technology
- Energy storage
- Supercapacitor

Professional Training Received/ Conferences Attended

- Certificate training program on Nuclear Magnetic Resonance spectroscopy (2021).
- Conference on Emerging Trends in chemistry and Forensic sciences (2021).
- Technical workshop on Liquid Chromatography and Separation Technology (2019).
- Workshop on Electrochemical Energy Conversion Systems (2019).
- National Level Seminar on X-Ray Photoelectron Spectroscopy for Nanomaterials Characterization (2019).
- India-Russia International Consultation on Water Resources Research, Development and Management for Human Welfare and Environmental Protection & Conference on Emerging Technologies in Textile Waste Water Management (2018).

Achievements

- First rank in MSc Chemistry, Karunya Institute of Technology and Sciences (2018-2020).
- Chancellor's Award for best outgoing student, School of Science, Arts, Media & Management (2018-2020).