

Dr. Chinnu R Thara

PhD in Chemistry | Chemical Science | India

chinnurthara@gmail.com +91 6282865718

Professional Summary

PhD in Chemical Science with 6+ years of expertise in **solid-state synthesis, nanomaterial fabrication, Catalysis, Hydrogen generation, Electrochemistry**. Published 15+ peer-reviewed papers on catalysis, pollutant degradation, and energy applications. Proficient in **XRD, TEM, SEM**, and **air-sensitive synthesis** techniques.

Key Skills

- Solid-State Synthesis: Green synthesis, Sealed-tube methods, Core-shell nanoparticles, carbon dots and nanosheets.
- Materials Characterization: XRD, SEM, TEM, BET, TGA, FT-IR.
- Sensing: Fluorescence sensing, Electrochemical sensing
- Catalysis & Photocatalysis: CO oxidation, water splitting, Biomass reforming, pollutant degradation.
- Air-Sensitive Techniques: Glovebox handling, reactive precursor synthesis.

Professional Experience

- **PhD Researcher in Chemical Science**
School of Chemical Sciences, Mahatma Gandhi University | 2021–2024
- **Assistant professor on contract** at Department of Chemistry, Sanatana Dharma College, Alappuzha, India (from 5/08/2024).

Research Experience

- **Junior and Senior Research Fellow (2018 - 2024)**: School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, & Catalysis and Inorganic Chemistry Division, CSIR- National Chemical Laboratory, Pune, India.
- **Project Assistant (2017-2018)**: Chemical Engineering and Process Development Division, Catalysis and Inorganic Chemistry Division, CSIR- National Chemical Laboratory, Pune, India.
- **Project Intern (2016)**: Catalysis and Inorganic Chemistry Division, CSIR- National Chemical Laboratory, Pune, India.

Analytical skill

1. Instruments Handling:

XRD	Solid and Liquid UV-vis.	Electrochemical work station
FT-IR	Particle size and Zeta potential analyser	Sonicator
TGA	BET surface area analyser	Conductivity meter
GC and GC-MS	Solid and Liquid PL	P ^H meter

2. Instrumental Analysis: ¹H, and ¹³C NMR, SEM, TEM, AFM, and X

Awards and Fellowship

- MSc Inorganic chemistry second rank holder in university.

- Qualified Graduate Aptitude Test in Engineering (GATE) in 2017.
- CSIR-Junior and Senior Research Fellow in 2018-2022.

Research Publications

1. **Thara C. R**, Walko P. S, & Mathew B (2024). Hydrogen evolution via photocatalytic reforming of biomass with palladium nanoparticles decorated g-C₃N₄ nanosheets. *Renewable Energy*, 230, 120811.
2. **Thara C. R**, & Mathew B (2024). Microwave synthesized N-doped carbon dots for dual mode detection of Hg (II) ion and degradation of malachite green dye. *Talanta*, 268, 125278.
3. **Thara C. R**, Korah B. K, Mathew S, John B. K, & Mathew B (2023). Dual mode detection and sunlight-driven photocatalytic degradation of tetracycline with tailor-made N-doped carbon dots. *Environmental Research*, 216, 114450.
4. **Thara C. R**, Mathew S, Chacko A. R, & Mathew B (2023). Dual functional carbon nitride dots as electrochemical sensor and anticancer agent with chemotherapeutic and photodynamic effect. *Microchemical Journal*, 187, 108379.
5. **Thara C. R**, Korah B. K, John B. K, & Mathew B (2022). One-pot synthesized multifunctional carbon nitride dots for fluorescent sensing, bioimaging, and selective cytotoxic effect on cancer cells. *Journal of Molecular Liquids*, 368, 120809.
6. John B. K, **Thara C. R**, Korah B. K, John N, & Mathew B (2023). Bioresource-derived multifunctional carbon quantum dots as a fluorescence and electrochemical sensing platform for picric acid and nontoxic food storage application. *Journal of Industrial and Engineering Chemistry*, 126, 546-556.
7. Mathew S, **Thara C. R**, John N, & Mathew B (2023). Carbon dots from green sources as efficient sensor and as anticancer agent. *Journal of Photochemistry and Photobiology A: Chemistry*, 434, 114237.

Higher Education

PhD (2024)		Chemical Science	School of Chemical Sciences, Mahatma Gandhi University, India
M.Sc. (2016)	CGPA 8.03	Inorganic Chemistry	School of Chemical Sciences, Mahatma Gandhi University, India
B.Sc. (2014)	CGPA 9.0	Chemistry, Physics, and Mathematics	B C M College, Kottayam, India

Conferences and Symposiums Attended

- Participated in catalysis conference CATSYMP-23 held in Bangalore, India during January 17- 19, 2018.
- 4th International Conference on Recent Advances in Material Chemistry (ICRAMC-2020) organized by Department of Chemistry, SRM IST, Kattankulathur, Tamil Nadu, India in association with Alternative Energies and Atomic Energy Commission (CEA), France & University Paris-Est Marne-la-Vallée, Paris, France “Deactivation Studies on Porous Silica
- Encapsulated Copper Catalyst for CO Oxidation”, Chinnu R Thara presented a paper, 19-21 February 2020.

- International Conference on Contemporary Catalysis, Energy and Sustainability (ICCC-2022) organized by Ariel University, Israel, Ben Gurion University of Negev, Israel, and MGU,
- Kottayam, India “Catalytic Degradation of Malachite Green Dye with Undoped Carbon Dots – A Homogeneous Reaction”, Chinnu R Thara and Beena Mathew presented a flash talk, 21-23rd June 2022.
- Participated in a webinar on Perspectives in Spectroscopy organized by School of Chemical Sciences, MGU, Kottayam, India during 7-8 January 2022.

Referees

Dr. Beena Mathew

Senior Professor,
School of Chemical Sciences Mahatma Gandhi
University, Priyadarshini Hills,
Kottayam 686560, Kerala, India
Email: beenamathew@mgu.ac.in
Phone: +91 9447145412

Dr. K I Suresh

Chief Scientist
CSIR- National Institute for
Interdisciplinary Science and
Technology Council of Scientific and
Industrial Research,
Thiruvananthapuram, Kerala, India
Email: kisuresh@niist.res.in
Phone: +919652470482