Namratha W.N.

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Education

University of Padova *(Padova, Italy)* *Oct 2023 – Present*
PhD in Physics
Focus: Functional oxides for green hydrogen production using synchrotron techniques.

Christ Deemed to be University *(Bengaluru, India)* *2020 – 2022*
M.Sc. in Physics (Material Science Specialization), ***CGPA: 8.43/10***
Thesis Supervisor: *Dr. Manoj Balachandran*

Alva's College *(Moodbidri, India)* *2017 – 2020*
B.Sc. in Physics, Chemistry, and Mathematics, ***CGPA: 8.13/10***

Professional Experience

Project Research Assistant *Oct 2022 – Aug 2023*
Combustion, Gasification and Propulsion Laboratory (CGPL)
Indian Institute of Science (Bengaluru, India)

Publications

- **Namratha, W. N.** et al.(2024). *Titania-doped CDs as effective CT-DNA binders: A novel fluorescent probe via green synthesis. Particle & Particle Systems Characterization.*
- Sreehari, K.S., **Namratha, W.N.** et al. (2022). *Toxic heavy metal ion detection by fluorescent nanocarbon sensor derived from a medicinal plant. Results in Chemistry.*
- Satheeshchandra, S.; **Namratha, W.N.** et al. (2020). *Novel methyl furan-based chalcone material for potential nonlinear optical applications. Materials Today: Proceedings.*
- Satheeshchandra, S.; **Namratha, W.N.** et al (2020). *Third-order nonlinear optical properties of novel furan-based organic crystal. Materials Today: Proceedings.*
- Suhana, ... **Namratha, W.N.** et al. (2025). *Exploring the Potential of Ni-Ru MOFs for Overall Water-Splitting Applications* **(Manuscript in preparation)**

Patents

A process of synthesizing novel methyl substituted chalcone molecules – potential cancer inhibitors
Patent No. 201941046359, India *2019*

Research Experience

- **Xray Absorption Spectroscopy** – University of Padova (2023-2025)
  Study of functional nanomaterials by synchrotron studies. Guide: Assoc Prof.Chiara Maurizio.
- **Project assistant** – CGPL, IISc,Bengaluru (2022-2023)
  Biomass derived hydrogen testing and fuel cell operation - Guide: Dr. Anand Shivpuji
- **Carbon Nanomaterials from Biomass** – Christ University (2021–2022)
  Optical and electrochemical properties – under Dr. Manoj B.
- **Research Internship** – AIET (2019)
  Role of Catalyst and catalytic activity in hydrogen fuel cell- under Dr. Richard Pinto & Dr. Jayram A.
- **Research Internship** – AIET (2019)
  Synthesis and characterization of furan-based Chalcone derivatives - under Dr. Richard Pinto & Dr. Jayram A.

Conferences and Workshops

- Best Poster – Advanced Materials Workshop, University of L'Aquila, Italy (2024)
- Best Paper – ICRTSET-2022, PSG College, Coimbatore
- Invited Lecture – Nanomaterials Conference, MG University, Kottayam (2022)

- Poster Presentations – KM Cariappa College (2020), AIET Mijar (2019)

Technical Skills

Software: Athena, Artemis, ImageJ, Origin,Larch.
Analysis: XAS, SEM, TEM, XPS, XRD, Raman, PL, UV
Instrumentation: Potentiostat, AFM, PEM/SOFC test station, BET analyzer, EIS analyzer

Scholarships and Awards

INSPIRE (SHE) Scholarship *2018*
Awarded by DST, Govt. of India for top 2% students in Natural Sciences

Other Activities

- Research Volunteer – Centre for Academic and Professional Support, Christ University (2020)
- Coursera: Understanding Research Methods – SOAS, University of London (2020)
- Business English Certificate (BEC) Vantage – Cambridge English (2019)
- 18th State-level Children Science Congress, Bengaluru (2011)
- Karnataka Junior Grade – Vocal Music and Bharatanatyam (2010–2011)