

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	M.Tech Functional Materials and Devices	IIT Kharagpur	9.40/10
2022	MSc Physics	Central University of Kerala	8.22/10
2020	BSc Physics	University of Calicut	5.6/6
2017	Higher secondary exam	Kerala board of higher secondary examination	96.58 %
2015	Secondary school examination	Kerala board of public examination	100 %

INTERNSHIPS

Solid state synthesis and physiochemical characterization of Fe-doped NaMnPO₄ nanoparticles | IIT KGP | 2024

Fe-doped NaMnPO₄ was prepared using the solid-state reaction. The structural and physiochemical properties of the material have been studied. The formed material has a wide range of applications in batteries, supercapacitors and sensors.

PROJECTS

Mn₃O₄-PANI nanocomposites as high-performing cathode material for Aluminium-ion hybrid devices | M.Tech Project | 2024

The performances of Mn₃O₄ and Mn₃O₄-PANI nanocomposites synthesized using the co-precipitation method for use in Aluminium ion hybrid devices as cathode materials. Physiochemical and electrochemical characterizations of the materials were done and the Mn₃O₄-PANI nanocomposite showed better performances.

Structural and optical characterization of sol-gel synthesised SrTeO₃ | MSc Project | 2022

Strontium Tellurite was prepared using the sol-gel method, which was found to be monoclinic crystal structure. The sample were annealed at different temperatures and the variation of the structural and optical properties were studied. Due to quantum confinement, the band gap decreased with an increase in the temperature.

Investigation on structural and spectroscopic properties of selenium-doped silica in the presence of Cu ions | BSc project | 2020

Selenium-doped silica glass was fabricated using the sol-gel method. Morphological and crystalline nature of quantum dots were examined by FTIR and photoluminescence of the sample dipped in 1mM Cu was studied. From the data derived 1mM, Cu showed a blue shift along with quenching.

MINIPROJECTS

Advanced anode materials for next-generation batteries | 2024

One-dimensional electron transport | 2022

SKILLS AND EXPERTISE

Instrumentations: XRD, UV-Vis spectroscopy, FTIR spectroscopy, BET analyser, STM, Impedance spectroscopy and Electrochemical workstation

Languages: Python, Fortran

Tools and Frameworks: Origin, LaTeX and Adobe Photoshop

MS Office: MS PowerPoint, MS Word and MS Excel

POSITION OF RESPONSIBILITY

Teaching Assistant (2024-Present)

Tutored undergraduate students in laboratory sessions in the physics department and evaluated lab reports to enhance students ' learning.

WORK EXPERIENCES

Chegg, India Q&A Expert (2020-2022)

As a Chegg Q&A & expert, I employed my academic expertise to provide clear and complete answers.

ACHIEVEMENTS

2023: Qualified Graduate Aptitude Test in Engineering (GATE) in Physics.

2020: Qualified Central University Common Entrance Test (CUET) in Physics.