

Arun Kantholi

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Education

University of Calicut, Kerala, India

MSc in Applied Chemistry Campus , Major: Chemistry
MS-Thesis Advisor: Dr. M.T Ramesan

Jun 2018 - May 2020

3.42/4(absolute)

University of Calicut, Kerala, India

BSc in Chemistry , Major: Chemistry(Pre-majors: Maths and Physics)
BS-Thesis Advisor: Dr. Jasila Kurayil

Jun 2013 - May 2016

3.32/4(absolute)

Chandan Brothers Higher Secondary School, Kerala, India

Central Board Of Secondary Education, Class 12th

April 2011 - May 2013

90%

Publications

JOURNAL ARTICLES

1. Effect of boehmite nanoparticles on structural, optical, thermal, mechanical and electrical properties of poly (methyl methacrylate) nanocomposites for flexible optoelectronic devices, Vyshakh. **K Arun. K** and Rohith Sathian and Furhan AR and Meenakshi Verma and Ramesan. M.T,

Journal : Journal of Thermoplastic Composite Materials(IMP:3.027), Doi : 10.1177/0892705723116741 ,

2. Nanochitosan Reinforced Polyvinyl Alcohol/Cashew Gum Bio-blend Nanocomposites: Promising Materials for Future Frontiers optoelectronic devices, Meera.K., **Arun.K.** Ramesan, M.T,

Journal : Journal of Polymers and the Environment(IMP:5.3), Doi : 10.1007/s10924-023-02909-8 ,

3. High-performance biopolymer blend nanocomposites derived from cashew gum/ polyvinyl alcohol/boehmite for flexible electronic devices, , Meera.K., **Arun.K.** Ramesan.M.T,

Journal : Journal Journal of Applied Polymer Science(IMP:3.057), Doi : 10.1177/08927057231167418,

Research Experience

Indian Institute Of Science Education And Research Kolkata

2022 -.....

Junior Research Fellow

1. Exploring Atomic and Molecular Electronic Excitation in Strong Magnetic Fields
2. Computational investigation of Sustainable materials.

Dr. Sangita Sen, Assistant Professor, Department of Chemical Sciences

Central University of Tezpur, Assam

2021 - 2022

Junior Research Fellow

1. "Applied research and development for the industrial realization of lignin recycling and conversion to value-added international market products."

Dr. Dhanpati Deka , Professor, Department of Energy

Project Student

1. Effect of boehmite nanoparticles on structural, optical, thermal, mechanical and electrical properties of poly (methyl methacrylate) nanocomposites for flexible optoelectronic devices-devices

2. Nanochitosan Reinforced Polyvinyl Alcohol/Cashew Gum Bio-blend

Nanocomposite: : Promising Materials for Future Frontiers

3. High-performance biopolymer blend nanocomposites derived from cashew gum/ polyvinyl alcohol/boehmite for flexible electronic devices

Dr. M.T Ramesen, Professor, Department of Chemical Sciences

University of Calicut, Kerala

2019 - 2020

MS Thesis Research Project

1. "Synthesis, characterization, conductivity, and gas-sensing performance of polymer polypyrrole/silicon nanocomposite"

Dr. M.T Ramesen, Professor, Department of Chemical Sciences

University of Calicut, Kerala

2013 - 2016

BS Thesis Research Project

"1. Analysis and Comparison of Physical, Chemical, and Biological water quality parameters: the main objectives of this project were to analyze the physical, chemical, and biological parameters of water samples from wells, ponds, and rivers and conduct comparative studies by classifying the results into two categories based on the location of samples collection and source of sample collection"

Dr. Jasila Karayil, Assistant Professor, Department of Chemical Sciences

Laboratory/Research Skills

Synthesis of Organic materials like condensation reactions, addition reactions, and substitution reactions,

Synthesis of material by using Hydrothermal, Polymerization, Sol-Gel, Chemical Vapor Deposition Methods

Experience in conducting tensile, compression, and other mechanical tests to determine mechanical properties of materials such as strength, ductility, and hardness.

Experience in biomass valorisation via thermal and chemical Conversion methods like combustion, pyrolysis, gasification, liquefaction, hydrolysis, dehydration, hydrogenation, and esterification.

Experience in Homogeneous, Heterogeneous catalytic synthesis methods

Computational skills: Familiarity with software packages such as MATLAB, Python and Gaussian to analyze materials behaviour

Technical Skills: a) X-ray diffraction (XRD), Differential scanning calorimetry (DSC) and thermogravimetric analysis (TGA), X-ray photoelectron spectroscopy (XPS) and scanning electron microscopy (SEM), Transmission electron microscopy (TEM), Infrared (IR), Raman, and nuclear magnetic resonance (NMR) spectroscopy, Python, ORCA, Gaussian, London, Materials Studio, Chem draw, EndNote, Ubuntu Linux, Linux tools,

Soft Skills: Teamwork, Time Management, Communication, Presentation skills.

Academic Achievements

National Level Graduate aptitude test in Engineering in Chemistry conducted by IIT Delhi (90.7 percentile) Mar 2020

Secured IIT JAM (Joint Admission Test for M.Sc) Chemistry conducted by IIT Bombay Mar 2017

Relevant Technical Courses

- Solid State | Nanotechnology | Polymer chemistry | Bio-Inorganic chemistry | Co-ordination chemistry
Molecular spectroscopy
- Green chemistry | Computational chemistry | Organo metallic chemistry | Catalysis | Electro chemistry
Thermodynamic

Courses & Workshops

National Training Course on "prerequisites to Recent Advances in Catalysis "

December 2019

Five days workshop organised by Central University of Kerala
Dr. A. Sakthivel - Associate Professor Department Of Chemistry

Skill development Training program on Energy Materials - Fundamentals to Device fabrication

June 2021

Online workshop organised by (CSIR-CECRI)Central Electrochemical Research
Institute Karaikudi

American Chemical Society's (ACS) flagship outreach program

September 2018

National Institute of Technology Calicut

Workshop for college chemistry students and Teachers 2020

December 2020

Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore

Sustainability and Interdisciplinarity in Chemical Sciences 2023

July 2023

IISER Kolkata

Language

English	Professional proficiency
Malayalam	Native proficiency
Hindi	Professional proficiency
Tamil	Professional proficiency
Assamese	Professional proficiency
Bengali	Professional proficiency