


AAKRATI KUSHWAHA

Bowling Green, OH 43403

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Education

BOWLING GREEN STATE UNIVERSITY

Major: Photochemical Sciences (GPA: 3.85/4.0)

2022 – Present

Bowling Green, OH

INDIAN INSTITUTE OF TECHNOLOGY

Master of Sciences (GPA: 8.43/10.00)

2020 – 2022

Madras, India

MIRANDA HOUSE, UNIVERSITY OF DELHI

Bachelor of Science (GPA: 8.20/10.00)

2016 – 2019

Delhi, India

Skills

Subject Knowledge: Gel Permeation Chromatography (GPC), High Performance Liquid Chromatography (HPLC), Gas Chromatography Mass Spectrometry (GCMS), Matrix-assisted Laser Desorption/Ionization (MALDI), Cyclic voltammetry, — IR spectroscopy, X-Ray Diffraction (XRD), Rudimentary handling knowledge of Titrimetric analysis, Laser flash photolysis.

Tools: Photoluminescence spectrometer (FLS-1000), NMR spectroscopy machine, pH meter, Potentiometer, NMR, FTIR, XRD, GPC, HPLC, XRD, GCMS

Maintenance: Regular inspection and calibration of Ecosc-GPC instrument, HPLC waters and XRD-Bruker D8 Quest.

Languages: C++, Q-Basic, python, SQL (primary level)

Research & Internships

BOWLING GREEN STATE UNIVERSITY

2022 – Present

Teaching Assistant

Bowling Green, OH

- Synthesized biomass-derived photoinitiators for light-responsive polymeric materials and investigated novel excited states photo transformations, Ph.D. Thesis.
- Explored and analyzed the properties of environmentally-friendly photoinitiators for application in light-responsive polymers.

INDIAN INSTITUTE OF TECHNOLOGY

2020 - 2022

Research Intern

Madras, India

- Developed and synthesized organic redox electroactive molecules and examined their behavior in redox flow batteries in non-aqueous media.
- Implemented advanced methodologies for the characterization and electrochemical analysis of synthesized compounds.

CSIR-NEIST SRTP

Summer, 2020

Research Intern

Delhi, India

- Conducted a comparative analysis of slow codons and slow di-codons in genes encoding TCA cycle enzymes of Mycobacterium tuberculosis KZN 1435 and Mycobacterium gilvum Spyr1.
- Performed bioinformatics analyses to identify significant genetic differences between pathogenic and non-pathogenic species.

INDIAN INSTITUTE OF REMOTE SENSING

Summer, 2020

Research Intern

Delhi, India

- Completed the Outreach Program on “Remote Sensing and Digital Image Analysis” conducted by IIRS-ISRO.
- Utilized remote sensing techniques to analyze satellite imagery for various environmental monitoring projects.

Leadership & Achievements

- Student mentor for summer undergraduate research fellow. 2024
- Supervised the Robot tour event at BGSU Science Olympiad. 2024
- Student volunteer for international student orientation at BGSU. August 2023
- Received outstanding teaching assistant award. 2023
- Attended Ohio Photochemical Society conference organized by BGSU. July 2023
- Student mentor for high school student during parents' involvement with children nurturing intellectual curiosity in science (PICNICS) program funded by NSF at BGSU. June 2023- July 2023

- Student volunteer at BGSU Science Olympiad. March 2023
- Served as a bridge between class and academic authorities by being a class representative in M.Sc. Chemistry. 2020-2022
- Attended spotlight lecture series held at IIT Madras. Feb 25, 2021- Feb 28, 2021
- Participated in COWCE-21, web based chemistry orientation workshop on competitive examinations. 2021
- Volunteered in organized cleaning and restoration campaigns in National Service Scheme.