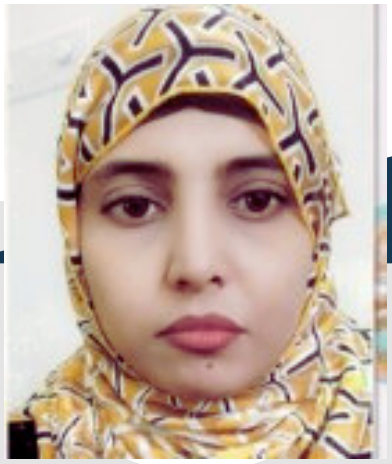

# DR.NAZIMA SIDDIQUI

## ASSISTANT PROFESSOR - PHYSICS

Muffakham Jah College of Engineering & Technology

Enthusiastic and research-driven Assistant Professor in Physics with strong academic and teaching credentials.

## CONTACT


7674825227

nazima.siddiqui@mjcollege.ac.in

Hyderabad

https://mjcollege.ac.in/


## SKILLS

- Machine learning basics in physics research
- AI-based material property prediction
- Graph Neural Networks (GNNs) for physical modeling
- Strong communication and public speaking
- Mentoring and student counseling
- Critical thinking and problem-solving
- Leadership in academic events
- Time management and multitasking

## Research & Publications :

- Machine learning refractive index model and nitrogen implantation studies, Journal of Australian Ceramic Society, 2023
- Cobalt zinc boro sodium fluoride glasses with $Y_2O_3$: AI-based density & dielectric study, Optik, 2023
- FTIR & Raman study on borate glasses with $Mn^{2+}$ ions, Optical Materials, 2024
- Effect of $K_2O$ on bioactivity & drug delivery in borosilicate glasses, Ceramics International, 2025
- Spectroscopic & viscosity studies on edible oils, IJSET, 2013; J. Pure & Applied Physics, 2011

### Patent Contributions

- AI-Based Method for Predicting Glass Density – Republic of South Africa
- Refractive Index Prediction System – Nitrogen-implanted Zinc-Arsenic-Tellurite Glasses

### Certifications (NPTEL/FDP)

- Biophotonics – IIT Kharagpur (84%) – 🥈 Top 5%, Silver Medal
- Biomimicry – IIT Madras (80%) – 🥈 Silver Medal
- Electrochemical Tech for Pollution Control – IISc Bangalore – 🥇 Topper (65%)
- Biomedical Nanotechnology – IIT Madras (82%) – 🥈 Silver Medal
- Neural Science for Engineers – IISc Bangalore – (65%)
- Wastewater Treatment & Recycling – IIT Kharagpur (72%)
- Fiber Optics – IIT Roorkee (59%)

t

### Conferences & Seminars

- ICONBMS 2014 – FTIR spectroscopy on oil adulteration
- NCLTEM 2012 – Refractive index studies of edible oils
- Biophysics Seminar 2011 – Physical properties of medicinal oils
- Nano/Bio Seminars 2013–2018 – FTIR, viscosity, and gamma-ray studies on edible oils and glasses

**Presented** in 10+ National/International conferences

### Workshops Attended

Experimental Physics Lab Course – JNTUH
Faculty Development Programme – SWCET

### Skills

- Research Tools: LaTeX, OriginPro, MATLAB, Basic Python
- Spectroscopy: FTIR, Raman, UV-Vis, Gamma-ray attenuation
- Teaching Platforms: Google Classroom, Moodle
- Academic Strengths: Research supervision, Curriculum planning, Event coordination, Assessment and evaluation