

# Muhammad Umar

**About Me:** Develop skills and knowledge by applying my abilities in a friendly environment to become an expert in my field.

## Education

### MS in Physics

Sep. 2015 - Sep. 2017

CGPA: 3.35/4.00

National University of Sciences and Technology, Islamabad, Pakistan

(<http://www.nust.edu.pk/>)

### BS(Hons.) in Physics

Sep. 2011 - Aug. 2015

CGPA: 3.36/4.00

Govt. College University, Lahore, Pakistan

(<http://www.gcul.edu.pk/>)

## Professional Experience

### Temporary Visiting Faculty

Sep 2015 – May 2017

Teacher Visiting Faculty at School of Natural Science, University of Sciences and Technology (NUST), Islamabad, Pakistan.

My duties as a T.V.F. were to

- Teach Physics Laboratory Courses (Physics Lab Basic Electronics & Physics Lab Kinematics) to undergraduate students
- Supervise and demonstrate laboratory experiments
- Design and Development of new experiments
- During Lab courses, interacting with students, supervising their Research projects, and helping them in writing laboratory reports

### Research Associate

Jan. 2018 – Feb. 2020

Research Associate in Physics Characterization and Simulations Lab, SNS, National University of Sciences and Technology (NUST), Islamabad, Pakistan.

My essential duties and responsibilities were to

- Plan, organize and conduct independent research in synthesis and characterization of Nano materials
- Responsible for routine operations of the Lab, including equipment maintenance, safety training, purchase inventory etc.
- Organize and prepare reports of completed projects for publication in journals
- Supervision of new/junior members of the group and UG/PG students and interface with collaborators and technical staff

### Physics Lecturer

Dec 2020- May2023

Physics Lecturer in Government Degree College, Sheikhpura, Punjab, Pakistan.

My job duties and tasks for Lecturer (Physics) are

- Prepare and deliver lectures to undergraduate students.
- Evaluate and grade students' class work, assignments, and papers.
- Plan, evaluate, course content & course materials and methods of instruction

Muhammad Umar

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## MS Thesis

**“Structural, Magnetic and Photocatalytic Properties of La and Se co-doped BFO Nanoparticles based Nano Hybrids”**

## Publications

### Published Article

1. **Umar, M.**, Mahmood, N., Awan, S. U., Fatima, S., Mahmood, A., & Rizwan, S. (2019). “Rationally designed La and Se co-doped bismuth ferrites with controlled bandgap for visible light Photocatalysis”. *RSC advances*, 9(30), 17148-17156.
2. Rizwan, S., **Umar, M.**, Babar, Z. U. D., Awan, S. U., & ur Rehman, M. A. (2019). Selenium-enriched flower-like of bismuth ferrite nanosheets assembly with associated magnetic properties. *AIP Advances*, 9(5), 055025.

## Relevant Courses Studied

Quantum Mechanics, Experimental Technique for Physics, Nano- Physics, Material Science, Electronics, Atomic & Molecular Physics, Method of Mathematical Physics, Solid State Physics, Computational Physics, Linear Algebra and Differential Equation, Thermal and statistical Physics. And basic Physics courses

## Software Development Skills

- Mathematica
- MatLab
- MDI-Jade
- Origin
- Microsoft-Office

## Conferences Attended

1. Participant in One Day Workshop on Vacuum Science and Technology held on, Jan 17 2014 at Government College University, Lahore, Pakistan.
2. Participant in the International Conference on Nanocomposites and Multifunctional Materials held on, Aug, 21 2017 at National University of Sciences and Technology, H-12, Islamabad, Pakistan.
3. Participant in International Bhurban Conference on Applied Sciences & Technology held on, Feb 8 2019 at National Centre for Physics, Islamabad Pakistan.
4. Participant in International Nathiagali Summer College-2022

## Extracurricular Activities

### Games

1. Playing cricket for Departmental Cricket
2. Participation in Chess tournament
3. Badminton
4. Volley Ball

### Social Skills

1. Social Networking (Collaborating and Cooperating)
2. Excellent oral and written communication skills
3. Team work
4. Pertinence & Empathy

## Languages

**English (Proficient)**

**Urdu (Mother Tongue)**

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## References

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