


# Curriculum Vitae

**Muhammad Zakria**

Lecturer

## Personal Information

Nationality	Pakistani	
Department	Physics	
Faculty	Faculty of Physical and Environmental Sciences	
University	University of Balochistan, Quetta	
Mailing Address	Department of Physics, University of Balochistan, Quetta	
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## Professional Summary

Experienced physicist, academic, and researcher with strong expertise Solid State Physics, Semiconductor Physics, Medical physics, Medical imaging, Biophysics, Energy and Environmental physics. Holds an M.Sc. in Physics (with distinction) from the University of Balochistan and an M.S. in Solid State Physics from Universiti Sains Malaysia and doing PhD from International University. Actively engaged in university-level teaching, academic leadership, and research since 2012, currently serving as a Lecturer at the University of Balochistan. Has authored and co-authored 1+ research publications in reputable national and international journals and conference proceedings. Research interests include expertise Solid State Physics, Semiconductor Physics, Medical physics, Medical imaging, Biophysics, Energy and Environmental physics, nanotechnology applications, and sustainable energy technologies. Committed to advancing scientific knowledge through high-impact research, innovation, and international academic collaboration. Open to research partnerships and professional opportunities with universities, research centers, and industry stakeholders.

- Semiconductor Fabrication
- Light emitting diode
- Green synthesis of nanoparticles
- Composite Materials
- Ultraviolet Detector
- Renewable energy
- Medical Imaging
- Medical Physics

<b>Articles published (n)</b>	<b>14</b>
W-Category articles (n)	1
X-Category articles (n)	1
Y-Category articles (n)	12
Z-Category articles (n)	
Books published (n)	

## Research Pages and Accounts

Title	Links
Google Scholar	<a href="https://scholar.google.com/citations?user=jxmhNwAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=jxmhNwAAAAJ&amp;hl=en</a>
ResearchGate	<a href="https://www.researchgate.net/profile/Jafar-Khan-Kasi?ev=hdr_xprf">https://www.researchgate.net/profile/Jafar-Khan-Kasi?ev=hdr_xprf</a>
ORCID	<a href="https://orcid=0009-0005-8740-3156">https://orcid=0009-0005-8740-3156</a>

## Areas of Research Interests/ Specialization

▪ Semiconductor Fabrication
▪ Light emitting diode
▪ Green synthesis of Semiconducting nanoparticles
▪ Composite Materials
▪ Environmental Physics
▪ Ultraviolet Detectors
▪ Renewable energy
▪ Medical Imaging

## Education

Degree	Field of Study	Institution	Year
MS	Solid State Physics	University Sains Malaysia, Penang, Malaysia.	2025
M.Sc	Physics	University of Balochistan, Quetta, Pakistan	2010
B.Sc	Physics, Maths, Stats	Govt degree college Quetta	2008

## Honors and Awards

Title of Award (s)	Institutions	Year
2 <sup>nd</sup> Position in MSc Physics	University of Balochistan, Quetta Pakistan	2010

## Thesis/Dissertations

Thesis Title	Degree	University	Year
Rapid Eco-friendly synthesis of Zinc Oxide nanoparticles using Garcinia mangostana by laser decomposition as an ultraviolet photodetector.	MS	University Sains Malaysia (USM) Malaysia	2025

## Professional Experience

Position	Institution/Organization	Duration	Responsibilities
Lecturer	University Of Balochistan	From 2012 to till date	

## Academic Appointments

Position	Institution	Duration	Years
Lecturer	University of Balochistan, Quetta Pakistan	2012 to date	14 years

## Courses Taught

Course Title	Level	Years
Mechanics	BS Physics	2018 to 2023
Environmental Physics	MSc Physics	2012 to 2023
Electrodynamics	MSc Physics	2012 to 2015
Mathematical Method of Physics	MSc Physics	2013 to 2016
Atomic and Molecular Physics	MSc Physics	2014 to 2015
Medical Physics	BS Physiotherapy	2018 to 2023
Basic electronics	BS(CS and IT)	2012 to 2018
Applied Physics	BS Geology	2012 to 2018

## Courses Developed

Course Title	Level	Years
Mechanics	BS	2025
Electricity and Magnetism	BS	2025
Environmental Physics	BS	2018
Medical Physics	BS	2025
Biophysics	BS	2025

## Publications

Journal Articles		
No.	Title	Category/Impact Factor
<b>2025 (1)</b>		
1.	<b>M Zakria</b> , WM Wan Ahmad Kamil, NM Ahmed (2025). Rapid eco-friendly synthesis of zinc oxide nanoparticles using mangosteen ( <i>Garcinia mangostana</i> ) by laser decomposition as an ultraviolet photodetector. Journal of the Optical Society of America B 43 (1), 29-39	<b>W / IF: 2.21</b>
<b>(2026) (1)</b>		
2.	J Yasir, Y Wang, S Mutale, <b>M Zakria</b> , M Souare, Y Jie. (2026). Short and medium-term wind power forecasting using a novel time series dynamic context-aware GRU model. International Journal of Sustainable Energy 45 (1), 2651009.	<b>X / IF: 2.7</b>
<b>Y category Research Papers (2025-2026)</b>		
<b>Discipline</b>		
1.	Mumtaz, A., Javaid, M. N., Lalwani, A. K., Muhammad, S. K., & <b>Zakria, M.</b> (2025). "Randomized trial of AI-assisted chest radiograph triage reducing time-to-antibiotics in suspected pneumonia. 3(12),180-188.	<b>Medical Physics</b>
2.	Amin, N., Khan, A. H., Jamal, S., Ayad, M. B., <b>Zakria, M.</b> , & Nisar, D, Assessing the Effectiveness of Advanced Radiation Therapy Techniques in Improving Survival and Reducing Side Effects Among Cancer Patients: A Systematic Review, 3(12),34-41 (2025).	<b>Radiotherapy and Oncology</b>

3.	Nangrejo, Z., Jamro, D. A., Abbasi, O. H., Ali, D., Arshad, N., <b>Zakria, M.</b> , Owais, M., Majeed, I., & Rashid, M. Light-Controlled Defect Engineering for Enhanced Superconductivity in Layered Nickelate Quantum Materials, Haya: The Saudi Journal of Life Sciences 11(1),39-58 (2026).	<b>Condensed Matter Physics (Solid State Physics)</b>
4.	Mahboob, F., Ayad, M. B., Khattak, R., Nadeem, M. A., <b>Zakria, M.</b> , Abro, F. S., & Iqbal, A. Integrating Advanced Radiological Imaging Techniques for Accurate Diagnosis and Monitoring of Chronic Pulmonary Diseases in Clinical Practice: A Systematic Review, 3(12),66-73 (2026).	<b>Medical Imaging and Radiology</b>
5	Yaqoob, O. B., Akram, U., Zafar, K., Noor, A., Abbas, H. M., Muhammad, S. K., & <b>Zakria, M.</b> Artificial intelligence-based MRI radiomics for early prediction of ischemic stroke outcomes. International Journal of Social Sciences Bulletin, 4(1),382-394, (2026).	<b>Medical Imaging</b>
6	Sherkheli, M. A., Iftikhar, A., Waheed, B., Shah, A., Wasiullah, U., <b>Zakria, M.</b> , & Yousaf, H. (2026). Assessment of a novel antimicrobial chitosan–graphene oxide coating for orthodontic wires: A surface and biofilm analysis. Journal of Health and Wellness Clinical Research (JHWCR), 4(4), (2026).	<b>Biomaterials</b>
7.	Sufyan, S. M., Rafique, A., Rafique, M. W., <b>Zakria, M.</b> , Aslam, M., & Ullah, S. (2025). Synthesis and preclinical evaluation of novel chalcone-derived hybrids as dual-action antimalarial and anti-inflammatory agents. Health and Research Insights, 3(12).	<b>Composite Biomaterial</b>
8.	Ali, N., Munawar, J., & <b>Zakria, M.</b> (2026). Assessment of heavy metal pollution in surface waters and bioaccumulation in fish: Implications for human health risk. Journal of Physical Education, Health and Social Sciences, 4(1), 17–30.	<b>Environmental pollution</b>
9.	Waseem, M. A. A., Nasir, A., Sadiq, A., Aziz, M. T., <b>Zakria, M.</b> , Shah, U. A., & Shah, W. (2026). Ambient air pollution exposure and its association with emergency respiratory visits in an urban population. Journal of Health and Weather-Climate Research, 4(3), 1–12.	<b>Urban Air Quality and public health</b>
10	<b>Zakria, M.</b> , Hassan, L., & Raza, M. A. (2026). Tailoring electronic and optical properties of two-dimensional semiconductors for next-generation nanoelectronic devices. Policy Research Journal, 4(3), 637–648.	<b>Nanoelectronics and Optoelectronic Device Physics</b>
11.	Mirza, S., Noor, M., Tariq, H., Hafeezullah, H., Hussain, M., <b>Zakria, M.</b> , & Noor Ul Ain. (2026). Exploring the effectiveness of biodegradable nanoparticles in preventing dental plaque formation. International Journal of Social Sciences Bulletin, 4(3), 954–972.	<b>Biomaterials</b>

## Citations (As of March 26, 2026)

### Google Scholar

Citations	<b>2</b>
Publications	<b>14</b>
h-index	<b>2</b>
i-10 index	

## Conferences Presentations with Abstracts Publications

### Conference Title Year and Location

1. Jan, Y., **Zakria, M.**, Wang, Y., Ahmed, Z., Mutale, S., & Ahmed, S, Enhancing Wind Power Forecasting with GRU-Dynamic Context-Aware Power Forecasting Hybrid Model Authors, IEEE 10th Asia Conference on Power and Electrical Engineering (ACPEE 2025), 1327-1332. **Beijing (China)**

## Workshops and technical talks Attended

Title	Workshop/Seminar Name	Location	Year	Role
1.	<b>Introduction to Wave optics Simulation for integrated photonics</b>	University Sains Malaysia, Penang Malaysia.		
2.	<b>Introduction to silicon photonics Fabrication, ams OSRAM, SILTERA and school of physics</b>	Penang, Malaysia.		
3.	<b>Single Crystal X-ray diffraction and geometry of X-ray diffraction spots</b>	School of Physics, University Sains Malaysia, Penang Malaysia.		
4.	<b>Practical and theoretical medical Physics</b>	University Sains Malaysia, Penang, Malaysia, June 21-22, 2025.		
5.	<b>Photonics and Semiconductor devices, systems and applications</b>	University Sains Malaysia, Penang Malaysia, January 19-23, 2025.		
6.	<b>Faculty development workshop on physics Laboratory equipments</b>	held on 10 <sup>th</sup> to 20 <sup>th</sup> May 2014 AIOU, Islamabad, Pakistan. Islamabad		
7.	<b>Professional competency enhancement program for teachers</b>	National Academy of Higher education, COMSAT Islamabad.		
8.	<b>Ensuring training effectiveness</b>	University of Balochistan, Quetta Balochistan.		

## Languages Proficiency

Language	Proficiency
English	Read, write, understand, speak
Urdu	Read, write, understand, speak
Bahasa Melayu	Read, write, understand, speak
Balochi	Read, write, understand, speak
Brohvi	Read, write, understand, speak
Persian	Read, write, understand, speak

## Softwares/ Analytical Tools

Software	Proficiency
MATLAB	Advanced
Mathematica	Advanced
LaTeX	Advanced
COMSOL	Advanced
Gaussian	Advanced
Quantum espresso	Advanced

## References

1.	Name	<b>Prof. Dr. Wan Maryam Wan Ahmad Kamil</b>
	Institution	Professor, School of Physics, University Sains Malaysia (USM), Penang, Malaysia