

Fahad Azad

Associate Professor

School of Natural Sciences

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About

Dr. Fahad Azad is working as Associate Professor in the School of Natural Sciences. Dr. Fahad Azad has a PhD in Experimental Condensed Matter Physics. Dr. Fahad Azad has published 45 research articles & conference papers having a citation count of 517, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Experimental Condensed Matter Physics	2014 - 2017
University of Hong Kong , Hong Kong	
MPhil in Nanophysics	2011 - 2013
NUST, Islamabad , Pakistan	
BS in Physics	2007 - 2011
BZU, Multan , Pakistan	

Experience

Associate Professor	2024- Present
School of Natural Sciences	
Assistant Professor	2022 - 2024
School of Natural Sciences	
Assistant Professor	2020 - 2022
School of Natural Sciences	
Assistant Professor	2017 - 2020
School of Natural Sciences	
Assistant Professor	2017 - 2017
School of Natural Sciences	

Awards

Gold Medal	
Gold Medal in BS	

Research Articles

Exploring the functional properties of ternary Ag@PEG@Mg-ZnFe2O4 nanocomposite for low-frequency electronics, and ferromagnetic resonance (FMR) applications	2025
Saima Perveen Ghulam Mustafa Ana Vila-Costa Nico Dix Marti Gich Fahad Azad	
Composites Communications , Volume:56, Article Number 102337	
Impact Factor: 6.500 Quartile: 1	
DOI: https://doi.org/10.1016/j.coco.2025.102337	
Tuning the Electrochemical Performance of CuO Nanoparticles via Hydrothermal Synthesis	2025
Sonadia Abdul Hakim Shah Saima Perveen . Anwar Ul-Hamid Fahad Azad	
JOM , Volume:77, Pages:1586-1594	
Impact Factor: 2.1 Quartile: 2 Citations: 1	
DOI: https://doi.org/10.1007/s11837-024-07073-5	
High-performance cauliflower-like Er2O3/NiO nanocomposite derived from Er-Ni-MOF for energy conversion and storage applications	2025
Sonadia Waheed Miran Zoya Iqbal Maryam Shah Ghulam Mustafa Muhammad Umair Mushtaq Anwar Ul-Hamid d Fahad Azad	

Tailoring the electrochemical performance of rods-like Co-MOF: Fe-derived Co₃O₄: Fe electrodes for supercapacitor applications

2025

Maryam Shah Sonadia Zoya Iqbal Anwar Ul-Hamid Muhammad Umair Mushtaq Fahad Azad

Fuel, Volume 381, Part C, Article Number 133574

Impact Factor: 6.700 | Quartile: 1 | Citations: 9

DOI: <https://doi.org/10.1016/j.fuel.2024.133574>

Design of Ga₂O₃ trench gate MOSFET devices with dielectric pillars

2024

Tianle Zhao Fahad Azad Yanrun Jia Hanzhe Zhang Chunyang Yang Shichen Su

Semiconductor Science and Technology, Volume:40, Number:1, Article Number:015002

Impact Factor: 1.9 | Quartile: 3

DOI: [0.1088/1361-6641/ad904b](https://doi.org/10.1088/1361-6641/ad904b)

Investigation of semiconductor to metallic transitions of perovskite CsGeCl₃ material through induced pressure: a DFT calculation for photovoltaic and optoelectronic applications

2024

Waqar Azeem Muhammad Khuram Shahzad Shoukat Hussain Fahad Azad Muhammad Jehanzaib Aslam Vineet Tirth Hassan Alqahtani Ali Algahtani Tawfiq

Al-Mughanam Yew Hoong Wong

Materials for Renewable and Sustainable Energy, Volume: 14, Article Number: 1

Impact Factor: 3.6 | Quartile: 2 | Citations: 7

DOI: <https://doi.org/10.1007/s40243-024-00276-5>

Two-dimensional MXene and molybdenum disulphide for the removal of hexavalent chromium from water: A comparative study

2024

Asma Maqsood Abbasi Waqas Qamar Zaman Hassan Anwer Fahad Azad Xizi Long Waheed Miran Musharib Khan

Desalination and Water Treatment, Volume 320, Article Number 100693

Impact Factor: 1.000 | Quartile: 4 | Citations: 3

DOI: doi.org/10.1016/j.dwt.2024.100693

Tailored Flower-Like Ni-Fe-MOF-Derived oxide Composites: Highly active and durable electrocatalysts for overall water splitting

2024

Zoya Iqbal Sonadia Waheed Miran Anwar Ul-Hamid Manzar Sohail Fahad Azad

Fuel, Volume:372, Article Number:132112

Impact Factor: 6.7 | Quartile: 1 | Citations: 10

DOI: [10.1016/j.fuel.2024.132112](https://doi.org/10.1016/j.fuel.2024.132112)

Computational insights of double perovskite X₂CaCdH₆ (X = Rb and Cs) hydride materials for hydrogen storage applications: A DFT analysis

2024

Waqar Azeem Shoukat Hussain Muhammad Khuram Shehzad Fahad Azad Gul Khan Vineet Tirth Hassan Alqahtani Ali Alghatani Tawfiq Al-Mughanam Yew Hoong Wong

International Journal of Hydrogen Energy, Volume 79, Pages 514-524

Impact Factor: 8.100 | Quartile: 1 | Citations: 36

DOI: <https://doi.org/10.1016/j.ijhydene.2024.07.044>

Electrochemical and dielectric analysis of Multifunctional GQDs@PEG@Mg-ZnFe₂O₄ Ternary nanohybrid for low-frequency electronics, water splitting, and sustainable energy storage applications

2024

Saima Perveen Sonadia Saiqa Hafeez Muhammad Zarrar Khan Anwar Ul-Hamid Fahad Azad

Journal of Alloys and Compounds, Volume: 995, Article Number: 174746

Impact Factor: 6.2 | Quartile: 1 | Citations: 5

DOI: [10.1016/j.jallcom.2024.174746](https://doi.org/10.1016/j.jallcom.2024.174746)

Synergistic augmentation of dielectric and photocatalytic properties of ZnO via Ag nanoparticle integration

2024

Saima Perveen Farhana Tayyaba Ahmad Muhammad Zarrar Khan Huma Tariq Fahad Azad

Journal of Molecular Structure, Volume 1307, Article Number 138042

Impact Factor: 3.800 | Quartile: 2 | Citations: 9

DOI: <https://doi.org/10.1016/j.molstruc.2024.138042>

Enhanced Electrocatalytic Performance of Erbium-Incorporated Nickel-Based Metal–Organic Frameworks for Water Splitting

2024

Sonadia Zoya Iqbal Waheed Miran Anwar Ul-Hamid Khuram Shehzad Ayub Fahad Azad

Energy Fuels, Vol:38, Issue: 6, Pages:5397-5406

- Impact Factor:** 5.3 | **Quartile:** 1 | **Citations:** 12
DOI: 10.1021/acs.energyfuels.3c04609
- Deciphering the role of rGO in tuning dielectric properties of Er₂O₃/ZnO/rGO nanocomposites synthesized via facile approach** 2024
Saiqa Hafeez Saima Perveen Muhammad Zarrar Khan Awab Hashmi Fahad Azad
Journal of Rare Earths, Volume:42, Issue:3, Page:578-585
Impact Factor: 4.9 | **Quartile:** 1 | **Citations:** 6
DOI: 10.1016/j.jre.2023.03.014
- Optimized electrocatalytic degradation of ciprofloxacin using Co₃O₄ coated stainless steel electrodes** 2024
Muhammad Usman Saleem Muhammad Jawad Fahad Azad Muhammad Asif Nawaz Waqas Qamar Zaman Waheed Miran
Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 681, Article Number 132738
Impact Factor: 5.2 | **Quartile:** 2 | **Citations:** 6
DOI: 10.1016/j.colsurfa.2023.132738
- Influence of Er substitution on the properties of ZnO: A comprehensive study** 2023
Fahad Azad Caiqin Luo Xing_Zhong Cao Anderj Kuznetsov Kaimin Shih Chang Zhong Liao Francis Ling Waqar Azeem
Ceramics International, Volume 49, Issue 24, Pages 41071-41077
Impact Factor: 5.2 | **Quartile:** 1 | **Citations:** 2
DOI: <https://doi.org/10.1016/j.ceramint.2022.10.224>
- The synergistic triad of graphene quantum dots, polymer, and ferrites for the photodegradation of dyes in aqueous solution** 2023
Saima Perveen Waheed Miran Gajanan Ghodake Waqar Azeem Xizi Long Fahad Azad
Heliyon, Volume 9, Issue 11, Article Number e21739
Impact Factor: 4.0 | **Quartile:** 2 | **Citations:** 4
DOI: <https://doi.org/10.1016/j.heliyon.2023.e21739>
- Numerical investigation of the effect of oblique laser shock processing parameters on the residual stress and deformation characteristics of TC6 titanium alloy** 2023
Yue Liu Sina Li Yanmin Zhao Chongyang Wang Fahad Azad Shichen Su
Journal of Laser Applications, Volume 35, Issue 4, Article Number 042020
Impact Factor: 2.1 | **Quartile:** 3 | **Citations:** 1
DOI: ; doi: 10.2351/7.0001060
- Graphene quantum dots (GQDs) decorated Co-Zn ferrite: Structural, morphological, dielectric, and magnetic properties** 2023
Sania Rashid Saima Perveen Saiqa Hafeez Samsaam Uddin Asad Muhammad Zarrar Khan Fahad Azad
Journal of Magnetism and Magnetic Materials, Volume:570, Article ID:170548
Impact Factor: 3.097 | **Quartile:** 3 | **Citations:** 19
DOI: 10.1016/j.jmmm.2023.170548
- A strategy to improve dielectric permittivity of Mg-Zn ferrite by using silver nanoparticles** 2023
Saima Perveen Saiqa Hafeez Sania Rashid Samsaam uddin Asad Muhammad Zarrar Khan Fahad Azad
Materials Chemistry and Physics, Volume 297, Article Number 127303
Impact Factor: 4.6 | **Quartile:** 2 | **Citations:** 10
DOI: <https://doi.org/10.1016/j.matchemphys.2023.127303>
- Color-tunable and high-quantum-yield afterglow of carbon dots by covalent fixation** 2022
Wenhai Wang Jian-An Li Shushu Ma Zebin Chai Shan Huang Yunpeng Zhao Sujuan Wang Yang CHen Fahad Azad Hongyu Chen Dewu Yue Bingjia Xu Shichen Su
Journal of Luminescence, Volume 252, Article Number 119399
Impact Factor: 4.171 | **Quartile:** 2 | **Citations:** 12
DOI: <https://doi.org/10.1016/j.jlumin.2022.119399>
- Effect of annealing environment on dielectric properties of erbium oxide** 2022
Samsamm uddin Asad Sameem Ur Rehman Huma Tariq Saima Perveen Faheem Amin Muhammad Nadeem Fahad Azad
Ceramics International, Volume 48, Issue 16, Pages 23536-23542
Impact Factor: 5.2 | **Quartile:** 1 | **Citations:** 8
DOI: <https://doi.org/10.1016/j.ceramint.2022.05.001>
- Photothermal-effect-promoted interfacial OH⁻ filling and the conversion of carrier type in (Co_{1-x}Ni_x)₃C during water oxidation** 2022
Xinzhi Ma Mingyi Zhang Fahad Azad Qiong Gao Zhikun Xu Lin Li Lili Wu Xitian Zhang Yujin Chen
Journal of Materials Chemistry A, Volume 10, Issue 15, Pages 8258-8267

- Impact Factor:** 11.9 | **Quartile:** 1 | **Citations:** 12
DOI: DOI <https://doi.org/10.1039/D1TA11015B>
- Investigation by nanosecond fiber laser for hybrid color marking and its potential application** 2022
Y. F. Xiang R. L. Mei Fahad Azad L. Z. Zhao S. C. Su G. G. Lu S. P. Wang
Optics and Laser Technology, Volume 147, Article Number 107553
Impact Factor: 4.939 | **Quartile:** 1 | **Citations:** 22
DOI: <https://doi.org/10.1016/j.optlastec.2021.107553>
- Functional Properties of Donor (Al) and Acceptor (Cu) Codoped High Dielectric Constant ZnO Nanoparticles** 2022
Huma Tariq Fahad Azad
Journal of Nanomaterials, Volume 2022, Article ID 3855582, 13 pages
Impact Factor: 3.791 | **Quartile:** 3 | **Citations:** 11
DOI: <https://doi.org/10.1155/2022/3855582>
- Si doping-induced phase control, formation of p-type and n-type GaAs nanowires** 2022
Yubin Kang Jilong Tang Fahad Azad Xiaotian Zhu Xue Chen Xueying Chu Dengkui Wang Xuan Fang Dan Fang Fengyuan Lin Kexue Li Xiaohua Wang Zhipeng Wei
Vacuum, Volume 195, Article Number 110643
Impact Factor: 4.110 | **Quartile:** 2 | **Citations:** 11
DOI: <https://doi.org/10.1016/j.vacuum.2021.110643>
- Pyrenyl-Based Aggregation-Induced Emission Luminogen for Highly Sensitive and Selective Detection of 2,4,6-Trinitrotoluene in Water** 2021
Hongmin Hao Zijian Ye Hui Dai Cong Liu Aihua Yi Bingjia Xu Guang Shi Shichen Su Fahad Azad Zhenguo Chi
ChemistrySelect, Volume:6, Issue:43, Page:12182-12187
Impact Factor: 2.307 | **Quartile:** 3 | **Citations:** 6
DOI: <https://doi.org/10.1002/slct.202103098>
- Numerical investigation of the effect of laser shock peening parameters on the residual stress and deformation response of 7075 aluminum alloy** 2021
Y. F. Xiang R. L. Mei S. P. Wang Fahad Azad L. Z. Zhao Shichen Su
Optik, Volume 243, Article Number 167446
Impact Factor: 2.840 | **Quartile:** 2 | **Citations:** 30
DOI: <https://doi.org/10.1016/j.ijleo.2021.167446>
- Effect of Rapid Thermal Annealing on the Emission Properties in InGaAsSb/AlGaAsSb Multiple Quantum Wells** 2021
Huimin Jia Dengkui Wang Fahad Azad Jilong Tang Lin Shen Xiaobing Hou Xuan Fang Dan Fang Fengyuan Lin Kexue Li Shichen Su Xiaohui Ma Zhipeng Wei
Physica Status Solidi-Rapid Research Letters, Volume 15, Issue 6, Article Number 2000612
Impact Factor: 3.277 | **Quartile:** 2
DOI: <https://doi.org/10.1002/pssr.202000612>
- Enhanced photovoltaic performance of quantum-dot-sensitized solar cells using Graphene/Cu₂-xSe composite counter electrode** 2021
Meitong Chu Zhonglin Du Yanying Zhang Lin Li Shujie Jiao Fahad Azad Shichen Su
Journal of Alloys and Compounds, Volume 851, ID:156869, 15 January 2021
Impact Factor: 6.371 | **Quartile:** 1 | **Citations:** 16
DOI: <https://doi.org/10.1016/j.jallcom.2020.156869>
- Synthesis of Core-Shell Au@TiO₂@C Nanoparticles and Their Photocatalytic Properties for the Degradation of Rhodamine B Under Simulated-Solar Light** 2020
Xue-qin Wang Dong-ying Li Shi-Peng Wang Fahad Azad Shichen Su
ChemistrySelect, Volume 5, Issue 32, Pages 10055-10059
Impact Factor: 2.109 | **Quartile:** 3 | **Citations:** 3
DOI: <https://doi.org/10.1002/slct.202002713>
- Single-step synthesis of polychromatic carbon quantum dots for macroscopic detection of Hg²⁺** 2020
Dongying Li Shuangpeng Wang Fahad Azad Shichen Su
Ecotoxicology and Environmental Safety, Volume 190, Article Number 110141
Impact Factor: 6.291 | **Quartile:** 1 | **Citations:** 64
DOI: <https://doi.org/10.1016/j.ecoenv.2019.110141>

A simple method for the preparation of multi-color carbon quantum dots by using reversible regulatory color transformation	2019
<i>Dongying Li Shuangpeng Wang Fahad Azad Lingzhi Zhao Shichen Su</i> <i>Microchemica Acta</i> , Volume 186, Issue 9, Article Number UNSP 612 Impact Factor: 6.232 Quartile: 1 Citations: 14 DOI: 10.1007/s00604-019-3717-x	
Resistive Switching Tuning Ferromagnetism and Near Band Edge Emission in Metal/ZnO:Cu/n+-ZnO:Ga/c-Sapphire Structure	2019
<i>L. P. Ho M. Younas F. Azad F. C. C. Ling Shengqian Zhou</i> <i>Acta Physica Polonica A</i> , Volume 136 Issue 1, Pages 122-126 Impact Factor: 0.579 Quartile: 4 DOI: 10.12693/APhysPolA.136.122	
Point contact bipolar resistive switching observed in transparent ZnMgO/ZnO: Ga heterostructure	2019
<i>Waqar Azeem Shichen Su Lok Ping Ho Muhammad Younas Fahad Azad Rashad Rashid</i> <i>Journal of Materials Science: Materials in Electronics</i> , Volume 30, Issue 7, Pages 7080-7086 Impact Factor: 2.220 Quartile: 2 Citations: 3 DOI: 10.1007/s10854-019-01024-6	
Bandgap Engineering of Bilayer Ge/CdS Thin Films via Interlayer Diffusion under Different Annealing Temperatures	2019
<i>Faheem Amin Syedah Afsheen Zahra Muhammad Sultan Sajjad Hussain Mirza Fahad Azad</i> <i>Journal of Nanomaterials</i> , Volume 2019, Article ID 8384794, 10 pages Impact Factor: 1.980 Quartile: 3 Citations: 1 DOI: 10.1155/2019/8384794	
Enhancing ultraviolet photoresponsivity of an oversized Sn-doped ZnO microwire based photodetector	2019
<i>Xinyu Sun Fahad Azad Shuangpeng Wang Lingzhi Zhao Shichen Su</i> <i>Journal of Materials Science: Materials in Electronics</i> , Volume 30, Issue 1, Pages 518-524 Impact Factor: 2.220 Quartile: 2 Citations: 2 DOI: 10.1007/s10854-018-0317-1	
Low-Cost Flexible ZnO Microwires Array Ultraviolet Photodetector Embedded in PAVL Substrate	2018
<i>Fahad Azad Xinyu Sun South China Normal University Lingzhi Zhao Shichen Su</i> <i>Nanoscale Research Letters</i> , Volume 13, Article Number 277 Impact Factor: 3.159 Quartile: 2 Citations: 13 DOI: 10.1186/s11671-018-2701-4	
Band offset and an ultra-fast response UV-VIS photodetector in gamma-In₂Se₃/p-Si heterojunction heterostructures	2018
<i>Y. X. Fang H. Zhang S. P. Wang F. C. C. Ling S. C. Su Fahad Azad</i> <i>RSC Advances</i> , NULL Impact Factor: 3.049 Quartile: 2 Citations: 20 DOI: 10.1039/c8ra05677c	
Sb-related defects in Sb-doped ZnO thin film grown by pulsed laser deposition	2018
<i>Fahad Azad</i> <i>Journal of Applied Physics</i> , Volume 123, Article Number 161525 Impact Factor: 2.328 Quartile: 2 Citations: 24 DOI: 10.1063/1.4997510	
Reversible Tuning of Ferromagnetism and Resistive Switching in ZnO/Cu Thin Films	2017
<i>Muhammad Younas Chi Xu Muhammad Arshad Lok Ping Ho Shengqiang Zhou Fahad Azad Muhammad Javed Akhtar Shichen Su Waqar Azeem Francis C. C. Ling</i> <i>ACS Omega</i> , Volume: 2 Issue: 12 Pages: 8810-8817 Impact Factor: N/A Citations: 15 DOI: 10.1021/acsomega.7b01192	
Surface localization of the Er-related optical active centers in Er doped zinc oxide films	2017
<i>Caiqin Luo Fahad Azad Su, Shichen Younas, Muhammad Azeem, Waqar Kuznetsov, Andre Azarov, Alexander Shih, Kaimin Liao, Changzhong Maqsood, Asghari</i> <i>Journal of Applied Physics</i> , Volume: 121 Issue: 23 Impact Factor: 2.176 Quartile: 2 Citations: 7 DOI: 10.1063/1.4986234	

- Fabrication, Structural Characterization and Optical Properties of Oversized ZnO Microwires** 2017
SS yan H. Zhang Fahad Azad
Nano , Volume 12, Issue 07, Article No.1750081
Impact Factor: 1.1 | **Quartile:** 4 | **Citations:** 1
DOI: 10.1142/S1793292017500813
- Fabrication and Modification of n-ZnO/p-GaN Heterojunction Light Emitting Diodes with White Light Emission Characteristics** 2017
Shichen Su Chungchong Ling Fahad Azad Hua Zeng Youming Lu Shuai Xing
Nanoscience and Nanotechnology letters , Volume: 9 Issue: 6 Pages: 880-884
Impact Factor: 2.917 | **Quartile:** 2 | **Citations:** 3
DOI: <https://doi.org/10.1166/nnl.2017.2414>
- Role of multivalent Cu, oxygen vacancies and CuO nanophase in the ferromagnetic properties of ZnO:Cu thin films** 2015
Junying Shen Mingquan He R Lortz Fahad Azad M.J. Akhtar A. Maqsood F.C.C Ling Muhammad Younas
RSC Advances , Volume: 5 Issue: 69 Pages: 55648-55657
Impact Factor: 3.289 | **Quartile:** 2 | **Citations:** 33
DOI: 10.1039/c5ra09002d
- Fabrication, Structural Characterization, Dielectric and Electrical Parameters of the Synthesized Nano-Crystalline Erbium Oxide** 2014
Fahad Azad Asghari Maqsood
Electronic Materials Letters , Volume 10, Issue 3, Pages 557-563
Impact Factor: 1.980 | **Quartile:** 2 | **Citations:** 41
DOI: 10.1007/s13391-013-3195-y

Editorial Activities

Materials Letters Reviewed Papers for Journals Impact Factor: 2.7	2025
Separation and Purification Technology Reviewed Papers for Journals Impact Factor: 8.1	2025
Journal of Energy Storage Reviewed Papers for Journals Impact Factor: 8.9	2025
Renewable Energy Reviewed Papers for Journals Impact Factor: 9	2025
Applied Surface Science Reviewed Papers for Journals Impact Factor: 6.3	2025
Journal of Molecular Structure Reviewed Papers for Journals Impact Factor: 4.0	2025
Journal of Energy Storage Reviewed Papers for Journals Impact Factor: 8.9	2025
Journal of Energy Storage Reviewed Papers for Journals Impact Factor: 8.9	2025
Heliyon Reviewed Papers for Journals Impact Factor: 3.7	2025
Journal of Inorganic and Organometallic Polymers and Materials Reviewed Papers for Journals Impact Factor: 3.9	2024
Journal of Molecular Structure Reviewed Papers for Journals Impact Factor: 4.0	2024