

Faheem Amin

Associate Professor
School of Natural Sciences

Email: faheemamin@sns.nust.edu.pk
Contact: 051886558
LinkedIn:



About

Dr. Faheem Amin is working as Associate Professor in the School of Natural Sciences. Dr. Faheem Amin has a PhD in Physics. Dr. Faheem Amin has published 41 research articles & conference papers having a citation count of 1981, carried out 3 projects and filed 0 intellectual property.

Qualifications

PhD in Physics Phillips-Universität Marburg , Germany	2007 - 2012
MPhil in Physics Quaid-i-Azam University , Pakistan	2004 - 2006
MSc in Physics Quaid-i-Azam University , Pakistan	2002 - 2004
BSc in Physics & Maths University of the Punjab , Pakistan	2000 - 2002
F.Sc in Engineering BISE, Rawalpindi , Pakistan	1998 - 2000
Matric (SSC) in Science BISE, Rawalpindi , Pakistan	1996 - 1998

Experience

Associate Professor School of Natural Sciences	2024- Present
Associate Professor School of Natural Sciences	2024 - 2024
Associate Professor School of Natural Sciences	2022 - 2024
Assistant Professor School of Natural Sciences	2013 - 2022
Assistant Professor School of Natural Sciences	2013 - 2013
Postdoctorate German Aerospace Institute, Stuttgart, GERMANY , Institute of Engineering Thermodynamics, Pfaffenwaldring 38-40, 70569 Stuttgart	2015 - 2016

Awards

Research Funding DAAD-Research Grant	2016
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Research Projects

National Projects

Gold nanocages for detection of circulating tumor cells in breast cancer	2022
Funding Agency: National Institute of Health (NIH), PAK	
Amount: PKR 1,770,000.00	
Status: Completed	
Development of Nanocomposites for high temperature thermochemical energy storage	2019
Funding Agency: HEC	
Amount: PKR 16,935,625.00	
Status: Completed	
Gold Nanoparticles as a Targeted Drug Delivery Vehicle in Breast Cancer Therapy	2018
Funding Agency: HEC	
Amount: PKR 5,760,000.00	
Status: Completed	

International Projects

Research Articles

Zn and Ba doped Ca(OH)2 for enhancement of energy storage and thermal conductivity for thermochemical energy storage systems	2025
Basit Ali Muhammad Anis ur Rehman Faheem Amin	
Applied Thermal Engineering , Volume 278, Part B, Article Number 127242	
Impact Factor: 6.900 Quartile: 1	
DOI: https://doi.org/10.1016/j.applthermaleng.2025.127242	
Metal-organic frameworks derived cobalt doped-calcium oxide for thermochemical energy storage	2025
Muhammad Zeeshan Khalid Basit Ali Manzar Sohail Faheem Amin	
Journal of Energy Storage, Volume 132, Part A, Article Number 117683	
Impact Factor: 9.800 Quartile: 1	
DOI: https://doi.org/10.1016/j.est.2025.117683	
PMA-coated gold nanoparticles functionalized with diamine-PEG conjugated with betulinic acid for in vitro mitochondrial-targeted anticancer and ROS detection study against MDA-MB-231 cell lines	2025
Yasir Iqbal Saima Asghar Rumeza Hanif Faheem Amin	
Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume:721, Article Number: 137170	
Impact Factor: 5.4 Quartile: 1 Citations: 2	
DOI: https://doi.org/10.1016/j.colsurfa.2025.137170	
Sustainable synthesis and characterization of bioplastic films from whole banana peel: a comparative study on plasticizer–hydrolyzer ratios	2025
Sawaira Sheikh Faheem Amin Yasir Iqbal	
Chemical Papers	
Impact Factor: 2.5 Quartile: 3	
DOI: https://doi.org/10.1007/s11696-025-04241-y	
Flexible sodium alginate-gelatin hydrogel membrane incorporated with green synthesized bimetallic ZnO:CeO2 nanocomposite for antioxidant, antibacterial and biocompatibility studies	2025
Yasir Iqbal Faheem Amin Muhammad Hammad Aziz Mansoor Khalid Hisham A. Alhadlaq ZabnAllah M. Alaizeri	
Reactive and Functional Polymers , Volume:212, Article Number 106228	
Impact Factor: 4.500 Quartile: 1 Citations: 2	
DOI: https://doi.org/10.1016/j.reactfunctpolym.2025.106228	
Ternary carbides ZrxAlCx–1: Innovative sol-gel synthesis and their biomedical applications	2025
Muhammad Shahbaz Zobia Zulfiqar Muhammad Ibrahim Saqer S. Alotaibi Nimra Nadeem Nadeem Sabir Faheem Amin Muhammad Zahid	
Inorganic Chemistry Communications , Volume:176, Article Number 114275	
Impact Factor: 5.400 Quartile: 1	
DOI: https://doi.org/10.1016/j.inoche.2025.114275	
Biomimetic sodium alginate functionalized gold nanoparticles loaded with Trans-resveratrol for in-vitro cancer treatment and intercellular ROS studies against MCF-7 cell lines	2025
Yasir Iqbal Faheem Amin MUhammad Hammad Aziz Hisham A. Alhadlaq ZabnAllah M. Alaizeri	

Impact Factor: 4.900 | **Quartile:** 2 | **Citations:** 4
DOI: <https://doi.org/10.1016/j.colsurfa.2025.136448>

Effect of Ni-doping on the electronic bandgap and thermal conductivity of calcium hydroxide: Experimental and theoretical investigation <i>Basit Ali Aamir Khan Faheem Amin</i> <i>Results in Physics</i> , Volume:70, Article Number 108177 Impact Factor: 4.400 Quartile: 1 Citations: 3 DOI: https://doi.org/10.1016/j.rinp.2025.108177	2025
In-situ fabrication of resveratrol loaded sodium alginate coated silver nanoparticles for in vitro studies of mitochondrial-targeted anticancer treatment against MCF-7 cell lines <i>Yasir Iqbal Faheem Amin Muhammad Hammad Aziz Rizwan Wahab</i> <i>International Journal of Biological Macromolecules</i> , Volume 280, Part 1, Article Number 135656 Impact Factor: 7.700 Quartile: 1 Citations: 11 DOI: https://doi.org/10.1016/j.ijbiomac.2024.135656	2024
Optimization of ammonia and TEOS concentration for the development of Ca(OH)₂@SiO₂ nanocomposites for optimal energy storage performance <i>Basit Ali Saqib Rehman Michael Steiger Muhammad Rashid Farooq Faheem Amin</i> <i>Materials Chemistry and Physics</i> , Volume 322, Article Number 129534 Impact Factor: 4.300 Quartile: 2 Citations: 3 DOI: https://doi.org/10.1016/j.matchemphys.2024.129534	2024
Freeze-gelated sodium alginate incorporated GO hydrogel membrane fabrication, thermal and mechanical studies <i>Yasir Iqbal Faheem Amin Noor ul Huda Gillani</i> <i>Materials Letters</i> , Volume 351, Article Number 135060 Impact Factor: 3.0 Quartile: 2 Citations: 12 DOI: https://doi.org/10.1016/j.matlet.2023.135060	2023
In-situ formation of Azo dye capped-silver nanoparticles and their nanocomposite with reduced graphene oxide for dye degradation <i>Iram Noreen Awab Hashmi Yasir Iqbal Fouzia Perveen Malik Mudassir Iqbal Faheem Amin</i> <i>Materials Chemistry and Physics</i> , Volume:308, Article Number: 128299 Impact Factor: 4.6 Quartile: 2 Citations: 8 DOI: 10.1016/j.matchemphys.2023.128299	2023
Cytotoxicity study of gold nanoparticles synthesis using Aloe vera, honey and Gymnema sylvestre leaf extract <i>Rumeza Hanif Faheem Amin Sidra Anwar Bisma Rauf Maham Khan Maha Niazi Shizza Malik</i> <i>ACS Omega</i> , Volume 8, No. 7, Pages 6325–6336 Impact Factor: 4.132 Quartile: 2 Citations: 28 DOI: https://doi.org/10.1021/acsomega.2c06491	2023
Ag Nanoparticle-Decorated V2CTx MXene Nanosheets as Catalysts for Water Splitting <i>Zulqarnain Haider Sabeen Fatima Syedah Afsheen Zahra Hu Li Syed Hassan Mujtaba Jafri Faheem Amin Syed Rizwan</i> <i>ACS Applied Nano Materials</i> , Vol:6, No.4, Pages:2374-2384 Impact Factor: 6.140 Quartile: 2 Citations: 52 DOI: 10.1021/acsanm.2c04428	2023
Effect of annealing environment on dielectric properties of erbium oxide <i>Samsamm uddin Asad Sameem Ur Rehman Huma Tariq Saima Perveen Faheem Amin Muhammad Nadeem Fahad Azad</i> <i>Ceramics International</i> , 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	2022
Optical Dynamics of Copper-Doped Cadmium Sulfide (CdS) and Zinc Sulfide (ZnS) Quantum-Dots Core/Shell Nanocrystals <i>Muhammad Haroon Rasheed Ants Koel Toomas Rang Nadeem Nasir Nadeem Sabir Faheem Amin Abher Rasheed</i> <i>Nanomaterials</i> , Volume 12, Issue 13, Article Number 2277 Impact Factor: 5.3 Quartile: 1 Citations: 10 DOI: 10.3390/nano12132277	2022

A Novel Sprague-Dawley Rat Model Presents Improved NASH/NAFLD Symptoms with PEG Coated Vitexin Liposomes <i>Adil Farooq Arfa Iqbal Nosheen Fatima Rana Misha Fatima Tuba Maryam Farhat Batool Zahra Rehman Farid Meena Afrah Nawaz Faheem Amin Zuhair M Mohammedsaleh Salma Saleh Alradhe Shabia Azhar</i> <i>International Journal of Molecular Sciences</i> , Volume 23, Issue 6, Article Number 3131 Impact Factor: 6.208 Quartile: 1 Citations: 16 DOI: https://doi.org/10.3390/ijms23063131	2022
Synthesis and antimicrobial activities of manganese (Mn) and iron (Fe) Co-Doped cerium dioxide (CeO₂) Nanoparticles <i>Muhammad Moazzam Latif Anwar-ul- Haq Faheem Amin Muhammad Ajaz-un-Nabi Ikram-ullha Khan Nadeem Sabir</i> <i>Physica B: Condensed Matter</i> , Volume 600, Article Number 412562 Impact Factor: 2.436 Quartile: 3 Citations: 18 DOI: https://doi.org/10.1016/j.physb.2020.412562	2021
Fabrication of bifunctional nanocomposite for dye degradation <i>Waqas Khalid M Ali Abbasi F Ullah M Atif Zulqurnain Ali Kashif Nadeem Umer Farooq Faheem Amin</i> <i>Ceramics International</i> , - Impact Factor: 3.830 Quartile: 1 Citations: 8 DOI: 10.1016/j.ceramint.2019.09.274	2019
Synergy of Green Tea Reduced Tamoxifen-Loaded Silver Nanoparticles Exhibit OGT Downregulation in Breast Cancer Cell Line <i>Mariam Rasheed Amjad Ali Shahzina Kanwal M. Ismail Nadeem Sabir Faheem Amin</i> <i>Digest Journal of Nanomaterials and Biostructures</i> , Volume 14, Issue 3, Pages 695-704 Impact Factor: 0.785 Quartile: 4 DOI: -	2019
Formulation of active packaging system using Artemisia scoparia for enhancing shelf life of fresh fruits <i>Javaria Hanif Nauman Khalid Rao Sanaullah Khan Muhammad Faraz Bhatti Mohammad Qasim Hayat Muhammad Ismail Saadia Andleeb Qaiser Mansoor Faria Khan Fahim Ameen Rumeza Hanif Muhammad Uzair Hashmi Hussnain Ahmed Janjua</i> <i>Materials Science and Engineering C</i> , Volume 100, Pages 82-93 Impact Factor: 5.880 Quartile: 1 Citations: 20 DOI: https://doi.org/10.1016/j.msec.2019.02.101	2019
La- and Mn-Codoped Bismuth Ferrite/Ti₃C₂ MXene Composites for Efficient Photocatalytic Degradation of Congo Red Dye <i>M. Abdullah Iqbal S. Irfan Ali Faheem Amin Ayesha Tariq Muhammad Z. Iqbal Syed Rizwan Hussain</i> <i>ACS Omega</i> , Volume 4, Issue 5, Pages 8661-8668 Impact Factor: 2.870 Quartile: 2 Citations: 149 DOI: 10.1021/acsomega.9b00493	2019
Effect of lanthanum substitution on shape and cytotoxicity of zinc oxide (La_xZn_{1-x}O) nano-colloids <i>Khuram Shahzad Sadaf Mushtaq Sara Akhtar Kiran Yaseen Faheem Amin Zulqurnain Ali</i> <i>Materials Research Express</i> , Volume 6, Issue 5, Article Number 055012 Impact Factor: 1.929 Quartile: 3 Citations: 12 DOI: 10.1088/2053-1591/ab024e	2019
Bandgap Engineering of Bilayer Ge/CdS Thin Films via Interlayer Diffusion under Different Annealing Temperatures <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	2019
Quantification of gold nanoparticle cell uptake under controlled biological conditions and adequate resolution <i>B R Rutishauser Faheem Amin Wolfgang Parak Dagmar A Kuhn Zulqurnain Ali Michael Gasser Dmitri Vanhecke Alke Fink Peter Gehr Christina Brandenberger</i> <i>Nanomedicine</i> , Volume 9(5), Pages 607-621 Impact Factor: 5.413 Quartile: 1 Citations: 74 DOI: https://doi.org/10.2217/nnm.13.24	2014
Multiplexed measurements by time resolved spectroscopy using colloidal CdSe/ZnS quantum dots <i>U. Kaiser D. Jimenez de Aberasturi R. Malinowski W. J. Parak W. Heimbrodt Faheem Amin</i>	2014

Impact Factor: 3.302 | **Quartile:** 1 | **Citations:** 20

DOI: 10.1063/1.4862753

Distance control in-between plasmonic nanoparticles via biological and polymeric spacers

2013

Xiang Yu Dang Yuan Lei Faheem Amin Raimo Hartmann Guillermo P. Acuna Andrés Guerrero-Martínez Stefan A. Maier Philip Tinnefeld Susana Carregal-Romero Wolfgang J. Parak

Nano Today , Volume 8, Issue 5, Pages 480-493

Impact Factor: 18.432 | **Quartile:** 1 | **Citations:** 52

DOI: 10.1016/j.nantod.2013.09.001

Cytotoxic Effects of Gold Nanoparticles: A Multiparametric Study

2012

S J Soenen Faheem Amin Wolfgang Parak Bella Manshian Jose Maria Montenegro Bjoern Meermann Toke Thiron Maria Cornelissen Frank Vanhaecke Shareen Doak Stefan de Smedt Kevin Braeckmans

ACS Nano , Volume 6(7), Pages 5767–5783

Impact Factor: 12.062 | **Quartile:** 1 | **Citations:** 260

DOI: <https://doi.org/10.1021/nn301714n>

Integration of Organic Fluorophores in the Surface of Polymer-Coated Colloidal Nanoparticles for Sensing the Local Polarity of the Environment

2012

Faheem Amin Dmytro A. Yushchenko Jose M. Montenegro Wolfgang J. Parak

ChemPhysChem , Volume 13, Issue 4, Pages 1030-1035

Impact Factor: 3.349 | **Quartile:** 1 | **Citations:** 43

DOI: 10.1002/cphc.201100901

Polymer-Coated Nanoparticles: A Universal Tool for Biolabelling Experiments

2011

Feng Zhang Emma Lees Faheem Amin Pilar Rivera_Gil Fang Yang Paul Mulvaney Wolfgang J. Parak

Small , Volume 7, Issue 22, Pages 3113-3127

Impact Factor: 8.349 | **Quartile:** 1 | **Citations:** 292

DOI: 10.1002/smll.201100608

Characterization of protein adsorption onto FePt nanoparticles using dual-focus fluorescence correlation spectroscopy

2011

Faheem Amin Pauline Maffre Wolfgang J. Parak Karin Nienhaus G. Ulrich Nienhaus

Beilstein Journal of Nanotechnology , Volume 2, Pages 374-383

Impact Factor: 0.789 | **Quartile:** 3 | **Citations:** 136

DOI: 10.3762/bjnano.2.43

How Colloidal Nanoparticles Could Facilitate Multiplexed Measurements of Different Analytes with Analyte-Sensitive Organic Fluorophores

2011

Azhar Zahoor Abbasi Faheem Amin Wolfgang Parak Tobias Niebling Sebastian Friede Markus Oochs Susana Carregal Romero Jose Maria Montenegro Pilar Rivera Gil Wolfram Heimbrot

ACS Nano , Volume 5(1), Pages 21-25

Impact Factor: 11.421 | **Quartile:** 1 | **Citations:** 52

DOI: <https://doi.org/10.1021/nn1034026>

In vitro and intracellular sensing by using the photoluminescence of quantum dots

2010

Feng Zhang Faheem Amin Wolfgang Parak Zulqurnain Ali Andreas Riedinger

Analytical and Bioanalytical Chemistry , Volume 397, Pages 935–942

Impact Factor: 3.841 | **Quartile:** 1 | **Citations:** 37

DOI: 10.1007/s00216-010-3609-8

Ion and pH Sensing with Colloidal Nanoparticles: Influence of Surface Charge on Sensing and Colloidal Properties

2010

Feng Zhang Faheem Amin Wolfgang Parak Zulqurnain Ali Anne Feltz Martin Oheim

ChemPhysChem , Volume 11, Issue 3, Pages 730-735

Impact Factor: 3.34 | **Quartile:** 1 | **Citations:** 110

DOI: <https://doi.org/10.1002/cphc.200900849>

Structural, magnetic and electrical properties of Co_{1-x}0002_xZn_xFe₂O₄ synthesized by co-precipitation method

2007

Iftikhar Hussain Gul Azhar Zahoor Abbasi Faheem Amin M. Anis-ur-Rehman Asghari Maqsood

Journal of Magnetism and Magnetic Materials , Volume 311, Issue 2, Pages 494-499

Impact Factor: 1.704 | **Quartile:** 2 | **Citations:** 342

DOI: 10.1016/j.jmmm.2006.08.005

Physical and magnetic characterization of co-precipitated nanosize Co–Ni ferrites <i>Iftikhar Hussain Gul Faheem Amin Azhar Zahoor Abbasi M. Anis-ur-Rehman Asghari Maqsood</i> <i>Scripta Materialia</i> , Volume 56, Issue 6, Pages 497-500 Impact Factor: 2.841 Quartile: 1 Citations: 126 DOI: 10.1016/j.scriptamat.2006.11.020	2007
Effect of Ag₂CO₃ addition on the morphology and physical properties of Bi-based (2223) high- T_c superconductors <i>Iftikhar Hussain Gul Faheem Amin Azhar Zahoor Abbasi M. Anis-ur-Rehman Asghari Maqsood</i> <i>Physica C: Superconductivity and its applications</i> , Volume: 449 Issue: 2 Pages: 139-147 Impact Factor: 0.792 Quartile: 3 Citations: 57 DOI: 10.1016/j.physc.2006.08.004	2006

Book Chapters

II-VI Quantum Dots and Their Surface Functionalization <i>Faheem Amin Zulqurnain Ali Ghenadii Korotcenkov</i> In: <i>Handbook of II-VI Semiconductor-Based Sensors and Radiation Detectors</i> , Chapter 14, Vol:1, Pages:385–422 Citations: N/A DOI: 10.1007/978-3-031-19531-0_14	2023
Luminescence and Fluorescence Ion Sensing. <i>Faheem Amin Yasir Iqbal Ghenadii Korotcenkov</i> In: <i>Handbook of II-VI Semiconductor-Based Sensors and Radiation Detectors.</i> , Chapter 14, Vol. 3, Pages:361–391 Citations: 1 DOI: 10.1007/978-3-031-24000-3_14	2023

Editorial Activities

Inorganic and Nano-Metal Chemistry Reviewed Papers for Journals Impact Factor: 1.514	2023
Scientific Reports Reviewed Papers for Journals Impact Factor: 4.6	2023
ACS Photonics Reviewed Papers for Journals Impact Factor: 7.07	2023
ACS Applied Materials & Interfaces Reviewed Papers for Journals Impact Factor: 10.38	2023