Muhammad Aftab Akram

Associate Professor

School of Chemical & Materials Engineering

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About

Dr. Muhammad Aftab Akram is working as Associate Professor in the School of Chemical & Materials Engineering. Dr. Muhammad Aftab Akram has a PhD in Solar Cells. Dr. Muhammad Aftab Akram has published 77 research articles & conference papers having a citation count of 1733, carried out 10 projects and filed 5 intellectual property.

Qualifications

PhD in Solar Cells 2010 - 2017
NUST, Islamabad , Pakistan

MS in Biomaterials 2008 - 2010
NUST, Islamabad , Pakistan

BE in Metallurgy And Materials 2004 - 2008
UET Lahore , Pakistan

Experience

Associate Professor 2022- Present
School of Chemical & Materials Engineering

Associate Professor 2022 - 2022
School of Chemical & Materials Engineering

Associate Professor 2022 - 2022
School of Chemical & Materials Engineering

Assistant Professor 2017 - 2022
School of Chemical & Materials Engineering

Visiting Researcher 2013 - 2014
City University of Hong Kong , City University of Hong Kong

TVF 2012 - 2017
SCME NUST , NUST H-12, Islamabad

Awards

Best Researcher Award 2020
Best Researcher Award SCME

President's Gold Medal 2012
President's Gold Medal for best in academics, 7th PG Convocation NUST

Reviewer Certificate
• Applied Surface Science [I.F = 5.155] • Materials Science and Engineering B [IF = 3.507] • Optik International Journal for Light and Electron Optics [I.F = 1.914] • Open Physics [I.F = 1.005] • Journal of Porous Materials [I.F = 1.947] • Physica E: Low-dimensional Systems and Nanostructures [I.F = 3.176] • Chinese Journal of Chemistry [I.F = 2376] • Guest Editor: Frontiers in Materials [I.F = 2.689]

Professional Memberships

TMS Since 2012

ACS Since 2020

Research Projects

National Projects

Design and Development of an EMI Shield for cable 2021
Funding Agency: NESCOM
Amount: PKR 200,000.00
Status: Approved_inprocess

Flexible conductive materials development for EMI Sheilding 2020
Funding Agency: NESCOM
Amount: PKR 250,000.00
Status: Approved_inprocess

Circular economy: recovery and restoration of glass fibers for composite materials. 2022
Funding Agency: HEC
Amount: PKR 12,100,000.00
Status: Approved_inprocess

Intestinal anastomosis with a skin stapler: a safe and efficient method in human 2022
Funding Agency: HEC
Amount: PKR 19,750,000.00
Status: Approved_inprocess

Development of Nano Engineered Electrode Materials for Commercialize-able Battery Prototypes 2020
Funding Agency: NUST Research Dte recurring budget under head Research Proposals
Amount: PKR 299,800.00
Status: Completed

Development of Flexible Electrode Materials with High Conductivity and Catalytic Activity for Room Temperature Sodium-Sulfur Batteries 2021
Funding Agency: PSF
Amount: PKR 42,214,000.00
Status: Approved_inprocess

Effect of Surfactant on Dielectric Permittivity of BaTiO3 Nano Powder Synthesize by Alkoxide-Hydroxide Sol-Gel Process and Sintered in Conventional and Microwave Furnaces 2018
Funding Agency: HEC
Amount: PKR 496,000.00
Status: Completed

Deposition of High aspect ratio, vertically aligned ZnO Nano wire array of UV and / or gas sensing applications 2017
Funding Agency: NESCOM
Amount: PKR 100,000.00
Status: Completed

Synthesis and Characterization Ni Nanoparticles Decorated LaxSr1-xTio3 (LST) electro-catalysts for Hydrogen Evolution reaction in alkaline water electrolysis 2018
Funding Agency: HEC
Amount: PKR 494,280.00
Status: Approved_inprocess

International Projects

Industry Projects

National Projects

Anticondensation coating for refrigerator glass shelves 2021
Client: Dawlance
Amount: PKR 600,000.00
Status: Approved_inprocess

International Projects

Research Articles

Mixed morphology ternary composites of ZnCo2O4/WS2/COOH-CNTs for high performance supercapacitor application 2025

Muhammad zafar Khan Muhammad Aftab Akram Zeeshan Ali Mohammad Mujahid Sofia Javed

Journal of Alloys and Compounds, Volume:1039, Article Number 182876

Impact Factor: 6.300 | **Quartile:** 1

DOI: https://doi.org/10.1016/j.jallcom.2025.182876

Boosted Hydrogen evolution reaction based on synergistic effect of graphene, MoS2 and RuO2 ternary electrocatalyst 2024

Zeeshan mehmood Khan Muhammad Aftab Akram Muhammad Abdul Basit Muhammad Mujahid Sofia Javed

International Journal of Hydrogen Energy, Volume 92, Pages 1423-1438

Impact Factor: 8.100 | **Quartile:** 1 | **Citations:** 2

DOI: https://doi.org/10.1016/j.ijhydene.2024.10.312

A key parametric study of ultrasonic exfoliation of 2D TiB2 using DI water as a unique medium 2024

Marghoob Ahmed Muhammad Aftab Akram Afsar Bano Muhammad Zafar Khan Rafia Rehman Rahim Jan Sofia Javed

Heliyon, Volume 10, Issue 8, Article Number e29417

Impact Factor: 3.4 | **Quartile:** 1 | **Citations:** 1

DOI: https://doi.org/10.1016/j.heliyon.2024.e29417

Investigating the Electrical and Optical Properties of Nickle and Strontium Co-Doped CsPbBr3 Nanocrystals: Potential Absorber Material for Perovskite Solar Cells 2024

Saqib Ali Sofia Javed Muhammad Aftab Akram Nadia Shahzad Muhammad Adnan Muhammad Usman Maryam Basit Faiza Rizwan Muhammad Mujahid

Transactions on Electrical and Electronic Materials, Pages 1-12

Impact Factor: 1.600 | **Quartile:** 4 | **Citations:** 4

DOI: https://doi.org/10.1007/s42341-024-00520-9

Design and development of porous CoCrFeNiMn high entropy alloy (Cantor alloy) with outstanding electrochemical properties 2024

Talha Abid M. Aftab Akram Talha Bin Yaqub M. Ramzan Abdul Karim Filipe Fernandes Muhammad Farooq Zafar Khurram Yaqoob

Journal of Alloys and Compounds, Volume 970, Article Number 172633

Impact Factor: 6.2 | **Quartile:** 1 | **Citations:** 17

DOI: https://doi.org/10.1016/j.jallcom.2023.172633

Design and development of NbTiVZr porous high entropy alloys for energy applications 2023

Talha Abid Muhammad Aftab Akram Talha Bin Yaqub M. Ramzan Abdul Karim Filipe Fernandes Rizwan Khan KHURRAM YAQOOB Ayesha Siddique

Journal of Energy Storage, Volume 73, Part C, Article Number 109131

Impact Factor: 9.4 | **Quartile:** 1 | **Citations:** 5

DOI: https://doi.org/10.1016/j.est.2023.109131

Low-temperature processed natural hematite as an electron extraction layer for efficient and stable perovskite solar cells 2023

Akbar Ali Qureshi Sofia Javed Azhar Fakharuddin Muhammad Aftab Akram Lukas Schmidt-Mende

Surfaces and Interfaces, Volume 40, Article Number 103003

Impact Factor: 6.2 | **Quartile:** 1 | **Citations:** 7

DOI: https://doi.org/10.1016/j.surfin.2023.103003

Facile synthesis of a multifunctional ternary SnO2/MWCNTs/PANI nanocomposite: Detailed analysis of dielectric, electrochemical, and water splitting applications 2023

Muhammad Zarrar Khan Iftikhar Hussain Gul Mutawara Mahmood Baig Muhammad Aftab Akram

Electrochimica Acta, Volume:441,

Impact Factor: 7.336 | **Quartile:** 1 | **Citations:** 30

DOI: 10.1016/j.electacta.2023.141816

Improved Electrical Properties of Strontium Hexaferrite Nanoparticles by Co2+Substitutions 2022

Mah Rukh Rehman Muhammad Aftab Akram Iftikhar Hussain Gul

ACS Omega, Volume 7, Issue 48, Pages 43432-43439

Impact Factor: 4.1 | **Quartile:** 2 | **Citations:** 19

DOI: 10.1021/acsomega.2c03256

Cellulose acetate based sustainable nanostructured membranes for environmental remediation 2022

Ayesha Rehman Zaib Jahan Tayyaba Noor Muhammad Bilal Khan Niazi Muhammad Aftab Akram Farqooq Sher Emina Karahmet Sher

Chemosphere, Volume 307, Part 1, Article Number 135736

Impact Factor: 8.943 | **Quartile:** 1 | **Citations:** 56

DOI: https://doi.org/10.1016/j.chemosphere.2022.135736

A highly efficient A-site deficient perovskite interlaced within two dimensional MXene nanosheets as an active electrocatalyst for hydrogen production 2022

Ramsha Khan Muhammad Taqi Mehran Salman Raza Naqvi Asif Hussain Khoja Mutawara Mahmood Baig Muhammad Aftab Akram Faisal Shahzad Sajjad Hussain

International Journal of Hydrogen Energy, Volume 47, Issue 88, Pages 37476-37489

Impact Factor: 7.139 | **Quartile:** 2 | **Citations:** 30

DOI: https://doi.org/10.1016/j.ijhydene.2021.09.017

Design of Multilayered 2D Nanomaterial Composite Structures for EMI Shielding Analysis 2022

Hafiz Muhammad Sajid Hafsa Afzal Muhammad Irfan Mohsin Saleem Rhim Jan Sofia Javed Muhammad Aftab Akram

ACS Omega , Volume 7, Issue 40, Pages 35586-35594

Impact Factor: 4.1 | **Quartile:** 2 | **Citations:** 12

DOI: 10.1021/acsomega.2c03186

Nano-architectured Cobalt selenide Spheres Anchored on Graphene Oxide sheets for Sodium Ion Battery Anode 2022

Zeeshan Ali Muhammad Ali Ahtisam Mehmood Ayesha Ishfaq Muhammad Aftab Akram Akif Zeb Xiaoming Lin

Frontiers in Materials , Volume 9, Article Number 950673

Impact Factor: 3.985 | **Quartile:** 2 | **Citations:** 5

DOI: 10.3389/fmats.2022.950673

MOF-Derived AlCuSe2 Embedded in a Carbon Matrix for an Economical Anode of Lithium-Ion Battery 2022

Muhammad Ali Muhammad Tayyab Ahsan Ahtisam Mehmood Ayesha Ishfaq Ghulam Ali Muhammad Aftab Akram Sofia Javed Zeeshan Ali

ACS Omega , Volume 7(34), Pages 30440-30446

Impact Factor: 4.132 | **Quartile:** 2 | **Citations:** 4

DOI: https://doi.org/10.1021/acsomega.2c03819

The Potential Effect of Annealing Mesostructured Titanium Dioxide Electrode in a Closed Box Furnace on the Concentration of Lead (II) Iodide Solution Required for Optimal Performance of Mesoscopic Perovskite Solar Cells 2022

Muhammad Talha Masood Amna Safdar Aftab Akram Sofia Javed Syeda Qudsia

Crystals , Volume 12, Issue 6, Article Number 833

Impact Factor: 2.670 | **Quartile:** 2 | **Citations:** 1

DOI: https://doi.org/10.3390/cryst12060833

Systematic Investigation of Structural, Morphological, Thermal, Optoelectronic, and Magnetic Properties of High-Purity Hematite/Magnetite Nanoparticles for Optoelectronics 2022

Akbar Ali Qureshi Sofia Javed Usman Ali Muhammad Aftab Akram Hafiz Muhammad Asif Javed Muhammad Jamshaid

Nanomaterials , Volume 12, Issue 10, Article Number 1635

Impact Factor: 5.719 | **Quartile:** 1 | **Citations:** 41

DOI: https://doi.org/10.3390/nano12101635

Controlling the Wettability of ZnO Thin Films by Spray Pyrolysis for Photocatalytic Applications 2022

Sofia Javed Muhammad Aftab Akram Ramsha Khan Muhammad Rabeel Shania Rehman Deok-kee Kim Muhammad Farooq Khan

Materials , Volume 15, Issue 9, Article Number 3364

Impact Factor: 3.748 | **Quartile:** 1 | **Citations:** 30

DOI: https://doi.org/10.3390/ma15093364

Investigating the physicochemical response of CdS quantum-dots deposition over SiO2-incorporated TiO2 photoanodes for solar cells 2022

Zunair Masroor Usman Ali Muhammad Aftab Akram Muhammad Abdul Basit

Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 636, Article Number 128131

Impact Factor: 4.539 | **Quartile:** 2 | **Citations:** 3

DOI: 10.1016/j.colsurfa.2021.128131

Morphological, structural, thermal and optical properties of Zn/Mg-doped TiO2 nanostructures for optoelectronic applications 2022

Sofia Javed Aftab Akram Akbar Ali Qureshi Muhammad Adnan Hafiz Muhammad Asif Javed Muhammad Adeel M. Shahid M. Irfan Ahmad M. Afzaal Hisham S. M. Abd-Rabboh M. Arif

Optics and Laser Technology, Volume 146, Article Number 107566

Impact Factor: 3.867 | **Quartile:** 1 | **Citations:** 19

DOI: 10.1016/j.optlastec.2021.107566

Ultrahigh performance asymmetric supercapacitor devices with synergetic interaction between metal organic frameworks/graphene nano platelets and redox additive electrolyte 2022

Muhammad Aftab Akram Sofia Javed Adeel Akram Muhammad Arman Liaqat Muhammad Hamid Usman Ali Faiza Javed Mingdeng Wei
Journal of Alloys and Compounds, Volume 891, Article Number 161961
Impact Factor: 6.2 | **Quartile:** 1 | **Citations:** 23
DOI: https://doi.org/10.1016/j.jallcom.2021.161961

Aluminum Doping Effects on Interface Depletion Width of Low Temperature Processed ZnO Electron Transport Layer-Based Perovskite Solar Cells 2022
Muhammad Adnan Muhammad Usman Saqib Ali Sofia Javed Mohammad Islam Muhammad Aftab Akram
Frontiers in Chemistry, Volume 9, Article Number 795291
Impact Factor: 5.5 | **Quartile:** 2 | **Citations:** 12
DOI: https://doi.org/10.3389/fchem.2021.795291

Facile synthesis of iron-nickel-cobalt ternary oxide (FNCO) mesoporous nanowires as electrode material for supercapacitor application 2022
Muhammad Usman Muhammad Tayyab Ahsan Sofia Javed Zeeshan Ali Yiqiang Zhan Irfan Ahmed Sajid Butt Mohammad Islam Asif Mahmood M. Aftab Akram
Journal of Materiomics, Volume 8, Issue 1, Pages 221-228
Impact Factor: 8.589 | **Quartile:** 1 | **Citations:** 23
DOI: 10.1016/j.jmat.2021.03.012

Incorporation of Zr-doped TiO2 nanoparticles in electron transport layer for efficient planar perovskite solar cells 2021
Sofia Javed Muhammad Aftab Akram Akbar Ali Qureshi Hafiz Muhammad Asif Javed AyeshaBashir Muhammad Usman M. Irfan Ahmad Usman Ali Muhammad Shahid Muhammad Rizwan Sabir Ali Raza
Surfaces and Interfaces, Volume 25, Article Number 101299
Impact Factor: 6.137 | **Quartile:** 1 | **Citations:** 33
DOI: https://doi.org/10.1016/j.surfin.2021.101299

Study of magnetic and dielectric properties of ZnFe2O4/CoCr2O4 nanocomposites produced using sol-gel and hydrothermal processes 2021
Muhammad Adnan Muhammad Usman Muhammad Aftab Akram Sofia Javed Saqib Ali Iftikhar Ahmad Mohammad Islam
Journal of Alloys and Compounds, Volume 865, Article Number 158953
Impact Factor: 6.371 | **Quartile:** 1 | **Citations:** 36
DOI: https://doi.org/10.1016/j.jallcom.2021.158953

Outlining the beneficial photocatalytic effect of ZnS deposition in simplistically developed iron oxide nanocomposites of different stoichiometry 2021
Mohsin Muhyuddin Muhammad Zaka Ansar Muhammad Abdul Basit Muhammad Muteeb Butt Talha Farooq Khan Muhammad Aftab Akram Sajid Butt
Applied Physics A-Materials Science and Processing, Volume 127, Article Number: 251
Impact Factor: 2.983 | **Quartile:** 2 | **Citations:** 4
DOI: https://doi.org/10.1007/s00339-021-04401-3

Facile formation of SnO2–TiO2 based photoanode and Fe3O4@rGO based counter electrode for efficient dye-sensitized solar cells 2021
Akbar Ali Qureshi Sofia Javed Hafiz Muhammad Asif Javed Aftab Akram M. Salman Mustafa Usman Ali M. Zubair Nisar
Materials Science in Semiconductor Processing, Volume 123, Article Number 105545
Impact Factor: 4.644 | **Quartile:** 2 | **Citations:** 73
DOI: https://doi.org/10.1016/j.mssp.2020.105545

Binder-free pseudocapacitive nickel cobalt sulfide/MWCNTs hybrid electrode directly grown on nickel foam for high rate supercapacitors 2021
Muhammad Aftab Akram Muhammad Saleem Akhtar Iftikhar Hussain Gul Mutawara Mahmood Baig
Materials Science and Engineering: B, Volume 264, Article Number 114898
Impact Factor: 3.407 | **Quartile:** 2 | **Citations:** 47
DOI: https://doi.org/10.1016/j.mseb.2020.114898

In Situ Synthesis of a Polyaniline/ Fe–Ni Codoped Co3O4 Composite for the Electrode Material of Supercapacitors with Improved Cyclic Stability 2021
Muhammad Aftab Akram Sofia Javed Muhammad shoaib Butt Muhammad Usman Muhammad Adnan Muhammad Tayyab Ahsan
ACS Omega, Volume 6(2), Pages 1190-1196
Impact Factor: 4.132 | **Quartile:** 2 | **Citations:** 55
DOI: https://doi.org/10.1021/acsomega.0c04306

Strategic design of Cu/TiO2-based photoanode and rGO-Fe3O4-based counter electrode for optimized plasmonic dye-sensitized solar cells 2020

Sofia Javed Muhammad Aftab Akram Akbar Ali Qureshi Hafiz Muhammad Asif Javed M. Jamshaid Asma Shaheen

Optical Materials , Volume 109, Article Number 110267

Impact Factor: 3.080 | **Quartile:** 2 | **Citations:** 20

DOI: https://doi.org/10.1016/j.optmat.2020.110267

Preparation and Characterization of PANI@NiO Visible Light Photocatalyst for Wastewater Treatment 2020

Muhammad Usman Muhammad Adnan Saqib Ali Sofia Javed Muhammad Aftab Akram

ChemistrySelect , Volume 5, Issue 40, Pages 12618-12623

Impact Factor: 2.109 | **Quartile:** 3 | **Citations:** 19

DOI: https://doi.org/10.1002/slct.202003540

Enhanced Mechanical Properties of Functionalized BN nanosheets-Polymer Composites 2020

M. Umer Farooq Rahim Jan Muhammad Azeem M. Adeel Umer Usman Liaqat Muhammad Aftab Akram Ahmad Nawaz Khan Imtiaz Ahmad Sajjad A. Khan Zeshan A. Umar

Journal of Polymer Research, Volume 27, Article Number 310

Impact Factor: 3.097 | **Quartile:** 2 | **Citations:** 18

DOI: 10.1007/s10965-020-02286-z

TASiW-12 modified SnO2 Electron Transport Layer for Efficient and Stable Perovskite Solar Cells 2020

Muhammad Aftab Akram Sofia Javed Yiqiang Zhan Guichuan Xing Fenghong Li Zejiao Shi Xin Zhang Jia Guo Xiaoguo Li Zhenhua Weng Fengcai Liu Lixin Wu Irfan Ahmed Lirong Zheng

Solar RRL , Pages 1-10

Impact Factor: 8.582 | **Quartile:** 1 | **Citations:** 12

DOI: https://doi.org/10.1002/solr.202000406

Significantly improved photo- and electro-chemical performance of CuS.PbS nanocomposites for dye degradation and paintable counter electrodes 2020

Muhammad Aftab Akram Mohsin Muhyuddin Talha Farooq Khan Ijaz Ali Tae Joo Park Muhammad Abdul Basit

Journal of Photochemistry and Photobiology A: Chemistry, Volume 400, Article Number 112720

Impact Factor: 4.291 | **Quartile:** 2 | **Citations:** 11

DOI: https://doi.org/10.1016/j.jphotochem.2020.112720

Synthesis and Characterization of PVA/Starch Hydrogel Membranes Incorporating Essential Oils Aimed to be Used in Wound Dressing Applications 2020

Farrukh Altaf Muhammad Bilal Khan Niazi Zaib Jahan Tahir Ahmad Muhammad Aftab Akram Amna Safdar Muhammad Shoaib Butt Tayyaba Noor Farooq Sher

Journal of Polymers and the Environment, Pages 1-19

Impact Factor: 3.667 | **Quartile:** 2 | **Citations:** 145

DOI: https://doi.org/10.1007/s10924-020-01866-w

TiO2 Mesocrystals Processed at Low Temperature as the Electron-Transport Material in Perovskite Solar Cells 2020

Muhammad Aftab Akram Mingdeng Wei Yafeng Li Deli Shen Minghuang Guo

ChemSusChem , Volume13, Issue19, Pages 5256-5263

Impact Factor: 8.928 | **Quartile:** 1 | **Citations:** 8

DOI: https://doi.org/10.1002/cssc.202001486

3D Hierarchically Mesoporous Zinc-Nickel-Cobalt Ternary Oxide (Zn0.6Ni0.8Co1.6O4) Nanowires for High-Performance Asymmetric Supercapacitors 2020

Sofia Javed Zeeshan Ali Muhammad Aftab Akram Muhammad Tayyab Ahsan Muhammad Usman Rashad Ali Muhammad U. Farooq Asif Mahmood Muhammad Tayyab Ahsan Muhammad Usman Rashad Ali Muhammad U. Farooq Asif Mahmood

Frontiers in Chemistry, Volume 8, Article Nunber 487

Impact Factor: 5.221 | **Quartile:** 2 | **Citations:** 34

DOI: https://doi.org/10.3389/fchem.2020.00487

Carbon Fibers Embedded with Iron Selenide (Fe3Se4) as Anode for High-Performance Sodium and Potassium Ion Batteries 2020

Asif Mahmood Zeeshan Ali Hassina Tabassum Suraj Loomba Waseem Aftab Rashad Ali Muhammad Waqas Khan Ahmed Alluqmani Muhammad Adil Riaz Muhammad Yousaf Nasir Mahmood Muhammad Aftab Akram

Frontiers in Chemistry, Volume 8, Article Number 408

Impact Factor: 5.221 | **Quartile:** 2 | **Citations:** 34

DOI: 10.3389/fchem.2020.00408

Effects of Ag doping on compact TiO2 thin films synthesized via one step sol-gel route and deposited by spin coating technique 2020

Muhammad Arman Liaqat Zakir Hussain Zikriya Khan Muhammad Aftab Akram Ahmed Shuja

Journal of Materials Science: Materials in Electronics, Volume 31, Pages 7172–7181

Impact Factor: 2.478 | **Quartile:** 3 | **Citations:** 5

DOI: 10.1007/s10854-019-00716-3

Graphene-ferrites interaction for enhanced EMI shielding effectiveness of hybrid polymer composites 2020

Sofia Javed Ibrar Ahmed Rahim Jan Ahmad Nawaz Khan Iftikhar Hussain Gul Ramsha Khan Muhammad Aftab Akram Ahmad Shafqat Hammad Mahmood Cheema Imtiaz Ahmad

Materials Research Express, Volume 7, Number 1, Article Number 016304

Impact Factor: 1.620 | **Quartile:** 4 | **Citations:** 34

DOI: 10.1088/2053-1591/ab62ed

TiO2@NbSe2 decorated nanocomposites for efficient visible-light photocatalysis 2019

Sofia Javed Muhammad Aftab Akram Ramsha Khan Adeel Riaz Muhammad Rabeel Rahim Jan

Applied Nanoscience, Vol:9, Pages:1915-1924

Impact Factor: 2.880 | **Quartile:** 3 | **Citations:** 12

DOI: 10.1007/s13204-019-01020-6

A new insight into solar paint concept: regeneration of CuS nanoparticles for paintable counter electrodes in QDSSCs 2019

Mohsin Muhyuddin Muhammad Tayyab Ahsan Ijaz Ali Talha Farooq Khan Muhammad Aftab Akram Muhammad Abdul Basit

APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, Volume: 125 Issue: 10 Article Number: 716

Impact Factor: 1.810 | **Quartile:** 3 | **Citations:** 19

DOI: 10.1007/s00339-019-3009-7

Comparative study of Ag, Sn or Zn doped TiO2 thin films for photocatalytic degradation of methylene blue and methyl orange 2019

Sofia Javed Muhammad Aftab Akram Muhammad Kamran Tariq Adeel Riaz Ramsha Khan Ahsan Wajid Hamza-ul Haq Mohammad Islam

Materials Research Express, Volume 6, Issue 10, Article Number 106435

Impact Factor: 1.929 | **Quartile:** 3 | **Citations:** 38

DOI: https://doi.org/10.1088/2053-1591/ab3efd

A Compact Review on Physical Vapor Deposition Techniques of Thin Films 2019

Muhammad Muzammil Sarah Farrukh Aftab Akram

Journal of Thin Films, Coating Science Technology and Application, Volume 6, Issue 2

Impact Factor: 0

DOI: -

EMI shielding properties of polymer blends with inclusion of graphene nano platelets 2019

Sofia Javed Muhammad Aftab Akram Hammad M. Cheema Muhammad Fayzan Shakir Ahmad Nawaz Khan Ramsha Khan Asra Tariq Muhammad Azeem Adeel Riaz Imtiaz Ahmad Rahim Jan Ahmed Shafqat

Results in Physics, Volume 14, Article Number 102365

Impact Factor: 4.019 | **Quartile:** 1 | **Citations:** 93

DOI: 10.1016/j.rinp.2019.102365

Simplistic wet-chemical coalescence of ZnO with Al2O3 and SnO2 for enhanced photocatalytic and electrochemical performance 2019

Hafz Muhammad Naeem Mohsin Muhyuddin Raheela Rasheed1 Ayesha Noor Muhammad Aftab Akram Muhammad Naeem Aashiq Muhammad Abdul Basit

Journal of Materials Science: Materials in Electronics, Volume 30, Issue 15, Pages 14508-14518

Impact Factor: 2.220 | **Quartile:** 2 | **Citations:** 22

DOI: 10.1007/s10854-019-01822-y

Surface degradation study of magnesium tested in simulated body fluid 2019

Muhammad Mujahid Aftab Akram Malik Adeel Umer Anum Sana Iqra Malik

Bio-Medical Materials and Engineering, Volume 30, Issue 3, Pages 341-348

Impact Factor: 1.243 | **Quartile:** 4 | **Citations:** 4

DOI: 10.3233/BME-191057

Orange/Red Photoluminescence Enhancement Upon SF6 Plasma Treatment of Vertically Aligned ZnO Nanorods 2019

Muhammad Aftab Akram Amine Achour Mohammad Islam Sorin Vizireanu Iftikhar Ahmad Khalid Saeed Gheorghe Dinescu Jean-Jacques Pireaux

Nanomaterials, Volume: 9, Issue: 5, Article Number: 794

Impact Factor: 4.324 | **Quartile:** 2 | **Citations:** 26

DOI: 10.3390/nano9050794

Photocatalytic and Photostability Behavior of Agand/or Al-Doped ZnO Films in Methylene Blue and Rhodamine B under UV-C Irradiation 2019

Sofia Javed Muhammad Aftab Akram Mohammad Mujahid Adeel Riaz Amna Ashraf Hymna Taimoor Mohammad Islam Iftikhar Ahmed Khalid Saeed

Coatings , Volume: 9, Issue: 3, Article Number: 202

Impact Factor: 2.436 | **Quartile:** 2 | **Citations:** 41

DOI: 10.3390/coatings9030202

Multiple energy applications of quantum-dot sensitized TiO2/PbS/CdS and TiO2/CdS/PbS hierarchical nanocomposites synthesized via p-SILAR technique 2019

Faryal Mughal Mohsin Muhyuddin Muhammad Rashid Muhammad Abdul Basit Muhammad Aftab Akram Tahir Ahmed

Chemical Physics Letters , Volume 717, Pages 69-76

Impact Factor: 2.029 | **Quartile:** 3 | **Citations:** 45

DOI: https://doi.org/10.1016/j.cplett.2019.01.010

Effect of Ethane-1,2-Diamine on Growth of ZnO Nanorods and Cyclohexane Sensing by Current-Voltage Characteristics Investigations 2018

Sofia Javed Muhammad Aftab Akram Shazrah Shahzad Dawar Ali Jawad Asif Muhammad Zafar Khan Umair Manzoor Muhammad Mujahid

Key Engineering Materials , Volume 778, Pages 126-131

Impact Factor: 0

DOI: 10.4028/www.scientific.net/KEM.778.126

Fabrication of Cellulose Acetate/Cellulose-HA Composite Films for Bone Fixation 2018

Sofia Javed Muhammad Aftab Akram Fatima Nisar Usman bin Khalid Muhammad Mujahid

Key Engineering Materials , Volume 778, Pages 325-330

Impact Factor: 0 | **Citations:** 2

DOI: 10.4028/www.scientific.net/KEM.778.325

Microstructural Evaluation of Inductively Sintered Aluminum Matrix Nanocomposites Reinforced with Silicon Carbide and/or Graphene Nanoplatelets for Tribological Applications 2018

Mohammad Islam Yasir Khalid Abdulhakim A. Almajid, Amine Achour Theresa J. Dunn Muhammad Aftab Akram SAQIB ANWAR

METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, NULL

Impact Factor: 1.985 | **Quartile:** 1 | **Citations:** 17

DOI: 10.1007/s11661-018-4625-0

Surface plasmon mediated optical properties of ZnO/Au/TiO2 nanoheterostructure rod arrays 2018

Mohammad Islam Muhammad Aftab Akram Sofia Javed Faiza Javed Mohammad Mujahid Arshad Saleem Bhatti

Materials Science and Engineering B-Advanced Functional Solid-State Materials, NULL

Impact Factor: 3.507 | **Quartile:** 2 | **Citations:** 11

DOI: 10.1016/j.mseb.2018.08.001

Flexible, thin films of graphene-polymer composites for EMI shielding 2017

Rahim Jan Muhammad Aftab Akram Amir Habib Imtiaz Ahmad Attaullah Shah Muhammad Sadiq Akhtar Hussain

Materials Research Express, Volume: 4, Number: 3, Article Number: 035605

Impact Factor: 1.151 | **Quartile:** 4 | **Citations:** 65

DOI: 10.1088/2053-1591/Aa6351

Uniaxial Drawing of Graphene-PVA Nanocomposites: Improvement in Mechanical Characteristics via Strain-Induced Exfoliation of Graphene 2016

Rahim Jan Amir Habib Muhammad Aftab Akram Tanveer-ul-Haq Zia Ahmad Nawaz Khan

Nanoscale Research Letters , Volume 11, Article Number: 377

Impact Factor: 2.833 | **Quartile:** 2 | **Citations:** 35

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Shahzad Salam Mohammad Islam Muhammad Aftab Akram

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Rabia Nazir Nida Iqbal Abdul S. Khan Aftab Akram Anila Asif Aqif A. Chaudhry Ihtesham ur Rehman Rafaqat Hussain

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Shahzad Salam Mohammad Islam Mahboob Alam Aftab Akram Mujtaba Ikram Asif Mahmood Majid Khan Muhammad Mujahid

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Impact Factor: N/A | **Citations:** 18

DOI: https://doi.org/10.1088/2043-6262/2/4/045001

Conference Proceedings

Effective Surface Washing of All Inorganic Perovskite Nanocrystals to Enhance Optoelectronic Properties 2023

Saqib Ali Sofia Javed Muhammad Aftab Akram Muhammad Arman Liaquat Muhammad Arman Liaquat Maryam Basit

6th Conference on Emerging Materials and Processes 23, res.country(177,)

Citations: N/A

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Highly Transparent N-Type TiO2 Coatings for Self-Cleaning Glass Application 2021

Sofia Javed Muhammad Aftab Akram Muhammad Rabeel Ramsha Khan Usman Ali

17th International Symposium on Advanced Materials, res.country(177,)

Citations: N/A

DOI: 10.4028/p-j91b2a

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Sofia Javed Muhammad Aftab Akram Ramsha Khan Adeel Riaz Muhammad Rabeel

16th International Bhurban Conference on Applied Sciences and Technology 2019, res.country(177,)

Citations: N/A

DOI: 10.1109/IBCAST.2019.8667107

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Sofia Javed Muhammad Aftab Akram Sufyan Naseer Adeel Riaz Ramsha Khan Khalid Mansoor Qaisar Abbas Rahim Jan

16th International Bhurban Conference on Applied Sciences & Technology, res.country(177,)

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In: *Zinc Oxide Nanoparticles - Fundamentals and Applications*, Chapter 3, Pages 1-47

Citations: N/A

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Editorial Activities

2020

Reviewed Papers for Journals
Impact Factor: 2.183

2020

Edited Journal Issue / Proceeding / Book
Impact Factor: 2.705

2020

Reviewed Papers for Journals
Impact Factor: 3.57

2020

Reviewed Papers for Journals
Impact Factor: 4.608

2020

Reviewed Papers for Journals
Impact Factor: 3.286

2020

Reviewed Papers for Journals
Impact Factor: 2.627

2020

Reviewed Papers for Journals
Impact Factor: 3.99

2020

Reviewed Papers for Journals
Impact Factor: 2.183

2020

Reviewed Papers for Journals
Impact Factor: 0.963

2019

Reviewed Papers for Journals
Impact Factor: 5.155

2019

Reviewed Papers for Journals
Impact Factor: 5.155

2019

Reviewed Papers for Journals
Impact Factor: 5.155

2019

Reviewed Papers for Journals
Impact Factor: 5.155

2019

Reviewed Papers for Journals
Impact Factor: 5.155

2018

Reviewed Papers for Journals
Impact Factor: 3.507

2018

Reviewed Papers for Journals
Impact Factor: 3.507

Intellectual Property

Copyrights

Patents

Design methodology and Fabrication of Bi-functional layered Fibre-reinforced Composite supercapacitor (BL-FCSC) 2024

Status: Filed

Method of continuous up-scaled synthesis of TiO2 QDs in fabricated microwave reactor 2022

Status: Filed

Silica Coated Polypropylene Geotextiles for Embankment Filters 2019

Status: Filed

Utilization of Hydroxiapatite Nano-Particles for Ground Improvement 2019

Status: Filed

TiO2/Ag/TiO2 based self-cleaning and energy efficient coatings for glass 2019

Status: Filed

Industrial Designs

Trademarks