

Faheem Ahmed, Ph.D

Department of Applied Sciences and Humanities, Faculty of Engineering & Technology,
Jamia Millia Islami, New Delhi-110025, India

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PROFESSIONAL PROFILE

- Internationally recognized track record of excellence in nanotechnology
- 225 peer reviewed journal publications in energy, spintronics, gas sensing, environmental and biomedical applications
- More than 10 Years of experience in research and teaching (Physics/Nanoscience)
- Extensive research and development experience in the nanostructures for energy storage (Li-ion, Li-S batteries, and supercapacitors) applications, gas sensors, and solar cells.
- Hands-on research experience in preparation of metal, metal oxide nanostructures, 2-D nanomaterials (Graphene, Graphene oxides, Carbon nanotubes) and nanocomposites with various dimensions
- Experienced research proposals writer with successfully funded projects from SAUDI ARAMCO, KACST, MINISTRY OF WATER (KSA), and Industry.

EMPLOYMENT HISTORY

09/2023 – Present

Associate Professor | Jamia Millia Islamia, New Delhi, India

- Focusing research on the nanostructures for energy storage (Lead free acid batteries, Li-ion, Li-S batteries and supercapacitors) applications, water desalination, and solar cells
- Teaching undergraduate and Master Student

09/2018 – 09/2023

Assistant Professor | King Faisal University, Hofuf, Saudi Arabia

- Focusing research on the nanostructures for energy storage (Li-ion, Li-S batteries and supercapacitors) applications, gas sensors, and solar cells
- Teaching undergraduate and graduate students

09/2014 – 08/2018

Assistant Research Professor | Alfaisal University, Riyadh, Saudi Arabia

- Focused research on the nanostructures for energy storage (Li-ion, Li-S batteries and supercapacitors) applications and solar cells
- Conducted experiments to fabricate thermally stable Li-ion and Li-S batteries
- Prepared nanofilters of graphene oxide for the removal of radioactive elements from ground water well
- Supervised undergraduate and graduate students
- Gave tutorials on General physics, General chemistry, Nanocharacterization tools, Growth of Nanostructures, Magnetic materials growth
- Published peer reviewed articles, writing patents, and proposals for funding

03/2013 – 08/2014

Postdoctoral Research Fellow | Changwon National University, Changwon, South Korea

- Developed innovative nanomaterials for solar cells, water purification, and biomedical applications.
- Developed highly sensitive metal oxide semiconductor-based gas sensors
- Developed ITO/FTO free flexible solar cells
- Various metal oxides were employed for device application in the form of nanorods, nanowires, nanotubes, and quantum dots prepared using chemical methods.

EDUCATION

08/2009 – 02/2013

Changwon National University | Changwon, South Korea

PhD: Nano and Advanced materials Engineering

Supervisor: Professor Koo

Thesis Title: Transition Metal (TM)-Doped ZnO Nanostructures

07/2005 – 06/2007

Aligarh Muslim University | Aligarh, India

MSc: Physics

PROFESSIONAL SKILLS

Preparation techniques:

- Growth of Metal, metal oxide nanostructures of various dimensions (0D, 1D, 2D, 3D, thin film growth on various substrates, Graphene based nanocomposites, Polymer nanocomposites

Characterization techniques:

- Transmission electron microscope (TEM) including HRTEM and SAED
- Scanning electron microscope (SEM)
- Atomic force microscope (AFM) and scanning tunneling microscope (STM)
- X-ray diffractometer (XRD)
- UV-visible spectrophotometer
- Raman spectrophotometer
- Photoluminescence (PL)
- Physical properties measurement system (PPMS)
- FT-IR
- Four point probe station
- Electrochemical studies (Potentiostat)
- Gas sensor

BOOKS/BOOK CHAPTERS

1. "CROP IMPROVEMENT UNDER ADVERSE CONDITIONS": Chapter 11: Nanobiotechnology: Scope and potential for crop improvement
Faheem Ahmed, Nishat Arshi, Shalendra Kumar, Narendra Tuteja, Sarvajeet Singh Gill and Bon Heun Koo; (2013), pp245-269, DOI: 10.1007/978-1-4614-4633-0_11; ISBN: 978-1-4614-4633-0
Springer Science + Business Media, LLC 233 Spring Street, New York, NY 10013, USA
2. "Renewable Energy Technologies for Water Desalination": Chapter 4: Metal oxide Nanophotocatalysts for water purification:
Edreese Alsharaeh, Faheem Ahmed, and Nishat Arshi, 2017; CRC press, Taylor and Francis group
3. "New generation graphene oxide for removal of polycyclic aromatic hydrocarbons": in Graphene-Based Nanotechnologies for Energy and Environment

I Hussain, A Hussain, A Ahmad, H Rahman, MF Alajmi, F Ahmed, S Amir; 241-266, Elsevier, (2019)

PATENTS

Filed:

1. Faheem Ahmed, Nishat Arshi, Nagih Shaalan, Shalendra Kumar, Ghzzai Almutairi, Bandar Alotaibi, Thamraa Alshahrani, PMZ Hasan [**Method of synthesizing Zinc Oxide Nanoroses**], [**United States Patent**, App. 33101.74U; 2023].
2. Faheem Ahmed, Nishat Arshi, Nagih Shaalan, Shalendra Kumar, Ghzzai Almutairi, PMZ hasan, Naushad Ahmad, Thamraa Alshahrani, Afzal Hussain [**Method of Forming Metal Oxide Nanostructures on a TIN- buffered-Substrate**], [**United States Patent**, App. 18122396; 2023].
3. Faheem Ahmed, Nishat Arshi, Nagih Shaalan, Shalendra Kumar, Ghzzai Almutairi, PMZ hasan, Thamraa Alshahrani [**Multiwalled Carbon Nanotubes Based Flexible and Binder-Free Anode for Li-ion Batteries**], [**United States Patent**, App. 18124495; 2023].
4. Faheem Ahmed, Nagih Shaalan, Shalendra Kumar, Abdullah Aljaafari, Adil Alshoaibi, Nishat Arshi [**Method of making an Electrode having Multi-Walled Carbon Nanotubes**], [**United States Patent**, App. 17749531; 2022].

Accepted:

5. Faheem Ahmed, Mohammed Benali Kanoun, Souraya Goumri-Said, Moussab Belarbi, Nagih Shaalan, Nishat Arshi, Abdullah Aljaafari, Adil Alshoaibi, [**Method of making Dye-sensitized solar cells using coffee as natural dye on ZnO nanorods based Photoanode**], [**United States Patent** App. 17/246,697; 2022].
6. Nagih Shaalan, Faheem Ahmed, [**Method of making nanostructures of metal using low temperature deposition technique**], [**United States Patent**, 11,242,595; 2022].
7. Edreese Alsharaeh, Faheem Ahmed, Nishat Arshi, yasmin Mussa, Meshael Alturki, Yazeed Aldawsari, Azmat Khan], [**Method of making nanocomposites of metal oxide and reduced graphene oxide and use for cancer treatment**], [**United States Patent**, Patent Number: US 10149862B2; Pub date: Dec 11, 2018.
8. Muhammad Arsalan, Edreese Alsharaeh, Faheem Ahmed, Yazeed Fahad Aldosari], [**Nanocomposite cathode materials for use in batteries**], [**United States Patent, (2019)**, Number: 2019/0214647A1
9. Muhammad Arsalan, Edreese Alsharaeh, Yasmin Mussa, Faheem Ahmed], [**Nanocomposite anode materials for use in batteries**], [**United States Patent, (2019)**, Number: 2019/0214633A1
10. Ayman Almohsin, Edreese Alsharaeh, Faheem Ahmed], [**Polymer gel with nanocomposite crosslinker, United States Patent, (2019)**, Number: 2019/0112468A1

SELECTED Top 10 PUBLICATIONS (Total No. of publications: Journals-225, Conferences-15; Citations: 6282; h-index: 44; i10-index: 144)

<https://scholar.google.com/citations?user=jFDI9R4AAAAJ&hl=en&oi=ao>

Scopus ID: 55419740000; **ORCID:** <https://orcid.org/0000-0002-5436-1966>; **Web of Science Researcher ID:** AAS-4175-2021

1. Faheem Ahmed, Ahmad Umar, Shalendra Kumar, Nagih Mohammed Shaalan, Nishat Arshi, Mohd Gulfam Alam, PMZ Hasan, Shahid M Ramay, Rizwan Khan, Abdullah Aljaafari, Adil Alshoaibi; Manganese dioxide nanoparticles/reduced graphene oxide nanocomposites for hybrid capacitive desalination; ***Advanced Composites and Hybrid Materials (IF:20.1)***, 6, 1-11, 2023

2. *Faheem Ahmed, Shalendra Kumar, Nishat Arshi, M.S.Anwar, Bon Heun Koo*; Direct relationship amongst lattice volume, bandgap, morphology and magnetization of transition metal (Cr, Mn and Fe)-doped ZnO nanostructures; **Acta Materialia (IF: 9.2)**, Volume 60, (2012), 5190-5196
3. *TW Tseng, TW Chen, SM Chen, T Kokulnathan, F Ahmed, PMZ Hasan*; Construction of strontium phosphate/graphitic-carbon nitride: A flexible and disposable strip for acetaminophen detection; **Journal of Hazardous Materials (IF: 14.2)**, 124542, 2020
4. *A Umar, AA Ibrahim, R Kumar, H Albargi, MA Alsaari, F Ahmed*; Cubic shaped hematite (α -Fe₂O₃) microstructures composed of stacked nanosheets for rapid ethanol sensor application; **Sensors and Actuators B: Chemical (IF: 9.2)** 326, 128851, 2021
5. *Thangavelu Kokulnathan, Tzyy-Jiann Wang, Elumalai Ashok Kumar, Faheem Ahmed*; Construction of Nickel Cobalt-Layered Double Hydroxide/Functionalized-Halloysite Nanotubes Composite for Electrochemical Detection of Organophosphate Insecticide; **Chemical Engineering Journal (IF: 16.7)**, 133639 (2021.)
6. *Ahmad Umar, Ahmed A. Ibrahim, Rajesh Kumar, Hassan Algadi, Hasan Albargi, Mabkhoot A. Alsairi, Mohsen A. M. Alhmami, Wen Zeng, Faheem Ahmed, hSheikh Akbar*; CdO–ZnO nanorices for enhanced and selective formaldehyde gas sensing applications ; **Environmental Research (IF: 8.4)** 200, 111377, (2021).
7. *Edreese Alsharaeh, Faheem Ahmed, Yazeed Aldawsari, Majdi Khasawneh, Hatem Abuhimd, Mohammad Alshahrani*; Novel synthesis of holey reduced graphene oxide (HRGO) by microwave irradiation method for anode in lithium-ion batteries; **Nature-Scientific Reports (IF: 4.9)**, 6, 29854 (2016)
8. *Faheem Ahmed, Shalendra Kumar, Nagih Mohammed Shaalan, Osama Saber, Sarish Rehman, Abdullah Aljaafari, Hatem Abuhimd, Mohammad Alshahrani*; Synergistic Effect of Hexagonal Boron Nitride-Coated Separators and Multi-Walled Carbon Nanotube Anodes for Thermally Stable Lithium-Ion Batteries; **Crystals, 12 (2), 125, (2021)**
9. *F Ahmed, G Almutairi, B AlOtaibi, S Kumar, N Arshi, SG Hussain, A Umar*; Binder-Free Electrode Based on ZnO Nanorods Directly Grown on Aluminum Substrate for High Performance Supercapacitors; **Nanomaterials (IF: 5.7)** 10 (10), 1979, 2020
10. *Faheem Ahmed, Shalendra Kumar, Nishat Arshi, M.S.Anwar, Bon Heun Koo*; Morphological evolution between Nanorods to Nanosheets and Room Temperature Ferromagnetism of Fe-doped ZnO Nanostructures; **CrystEngComm (IF: 3.75)** , Volume 14, (2012), 4016-4026

AWARDS/GRANTS

- Institutional Funding 2023 (\$ 8,000), Ministry of Education with King Faisal University, Saudi Arabia. "Fe₂O₃-Ag₂O/TiO₂ Nanocatalyst-Assisted LC-MS/MS-based Detoxification of Pesticide Residues in Daphnia magna and Algae Mediums".
- Annual Project reward 2022 (\$ 10,000), Deanship of Scientific Research, King Faisal University, Saudi Arabia. "Synergistic Effect of Hexagonal Boron Nitride-Coated Separators and Multiwalled Carbon Nanotube Anodes for Thermally Stable Lithium-Ion Batteries".
- Ministry of Education, Research and Development, Saudi Arabia, RDO grant 2020 (\$ 500,000). "New Plasmonic Metallic Nanoparticles Enhanced BaTiO₂ Photocatalysts".
- Innovative ideas Award (Hackathon) 2020, King Faisal University Entrepreneurship Center, KSA.

- Institutional Funding 2021 (\$ 8,000), Ministry of Education with King Faisal University, Saudi Arabia. "Development of Selenium Nanoparticle based Agriculture Sensor for Heavy Metal Toxicity Detection".
- EXPEC, Saudi Aramco Research Grant-2017 (\$ 200,000). "High Temperature High Pressure (HTHP) Rechargeable Li-ion batteries."
- EXPEC, Saudi Aramco Research Grant-2017 (\$ 200,000). "Polymer gel® for high temperature, high pressure water shut off applications".
- Alfaisal University Internal Research Grant (IRG 2015), 2015 (\$ 10,000). "Novel Biosynthesis of ZnO nanorods using Egg white and their antibacterial properties towards wide range of micro-organisms."
- KEPSTONE DESIGN (Korean Research Funding Agency) award (\$ 40,000) in 2013 for designing a gas sensor.

PROFESSIONAL MEMBERSHIPS

Editorial board Member | International Journal of Nanomedicines (Consulting editor)
 Nanotechnology and Nanoscience
 Science Research
 Advanced Science Letters
 Journal of Nanomaterials

Peer Reviewer | Nature-Scientific Reports
 International Journal of Nanomedicines
 Environmental Science and Pollution Research
 RSC Advances
 Materials Letter
 Alloys and Compounds
 Powder Technology
 Vacuum
 Ceramics International

Lead Guest Editor | Journal of Nanomaterials (Special issue)
 Scanning (Special issue)
 Crystals (Special issue)

Guest Editor | Journal of Oncology (Special issue)
 Crystals (Special issue)

Full List of Publications- Dr. Faheem Ahmed

PUBLICATIONS IN PEER REVIEWED JOURNALS

Year (2024)

- 1. Synergistic Effect of Electrolytes on the Electrochemical Performance of CoFe₂O₄ Nanoparticles as Anode Materials for Supercapacitor Applications**

Shalendra Kumar, Adil Alshoaibi, Ravina, Kavita Kumari, Faheem Ahmed, Nagih M Shaalan, Saurabh Dalela, Rajesh Kumar, PA Alvi

Journal of Electronic Materials, 1-10.

- 2. Impact of functionalized and structurally tuned cellulosic composite membranes on removal of metal ions, dye, drug, and proteins**

Zoheb Karim, Mohd Jahir Khan, Afzal Husain, Faheem Ahmed, Zishan Husain Khan

Colloids and Surfaces A: Physicochemical and Engineering Aspects, 134031.

- 3. Unveiling the potential of PANI@ MnO₂@ rGO ternary nanocomposite in energy storage and gas sensing**

Ahmad Umar, Sheikh Akbar, Rajesh Kumar, Faheem Ahmed, Sajid Ali Ansari, Ahmed A Ibrahim, Mohsen A Alhamami, Noura Almehbad, Hassan Algadi, Tubia Almas, Wen Zeng

Chemosphere, 349, 140657.

- 4. Band gap engineering of Au doping and Au–N codoping into anatase TiO₂ for enhancing the visible light photocatalytic performance**

Mohammed Benali Kanoun, Faheem Ahmed, Chawki Awada, Christian Jonin, Pierre-Francois Brevet
International Journal of Hydrogen Energy, 51, 907-913.

Year (2023)

- 5. Manganese dioxide nanoparticles/reduced graphene oxide nanocomposites for hybrid capacitive desalination**

F Ahmed, A Umar, S Kumar, NM Shaalan, N Arshi, MG Alam, PMZ Hasan, ...

Advanced Composites and Hybrid Materials 6 (1), 19

- 6. Fabrication of High-Performance Asymmetric Supercapacitors Using Rice Husk-Activated Carbon and MnFe₂O₄ Nanostructures**

F Ahmed, S Kumar, NM Shaalan, N Arshi, S Dalela, KH Chae

Nanomaterials 13 (12), 1870

- 7. Fabrication of a biomass-derived activated carbon-based anode for high-performance li-ion batteries**

F Ahmed, G Almutairi, PMZ Hasan, S Rehman, S Kumar, NM Shaalan, ...

Micromachines 14 (1), 192

8. Influence of Fe Doping on the Electrochemical Performance of a ZnO-Nanostructure-Based Electrode for Supercapacitors

S Kumar, F Ahmed, NM Shaalan, N Arshi, S Dalela, KH Chae

Nanomaterials 13 (15), 2222

9. Improvement of Supercapacitor Performance of In Situ Doped Laser-Induced Multilayer Graphene via NiO

NM Shaalan, S Kumar, F Ahmed, N Arshi, S Dalela, KH Chae

Nanomaterials 13 (14), 2081

10. Synthesis of 3D Flower-Like Zinc-Chromium Layered Double Hydroxides: A Functional Electrode Material for Furaladone Detection

T Kokulnathan, TJ Wang, F Ahmed, T Alshahrani

Process Safety and Environmental Protection

11. Investigations of Structural, Magnetic, and Electrochemical Properties of NiFe₂O₄ Nanoparticles as Electrode Materials for Supercapacitor Applications

S Kumar, F Ahmed, NM Shaalan, N Arshi, S Dalela, KH Chae

Materials 16 (12), 4328

12. Synthesis of praseodymium vanadate in deep eutectic solvent medium for electrochemical detection of furaladone

TW Chen, TS Priya, SM Chen, T Kokulnathan, F Ahmed, T Alshahrani

Process Safety and Environmental Protection 174, 368-375

13. Enhanced Thermal Stability of Sputtered TiN Thin Films for Their Applications as Diffusion Barriers against Copper Interconnect

A Aljaafari, F Ahmed, NM Shaalan, S Kumar, A Alsulami

Inorganics 11 (5), 204

14. Fe₂O₃-Ag₂O/TiO₂ Nanocatalyst-Assisted LC-MS/MS-Based Detoxification of Pesticide Residues in *Daphnia magna* and Algae Mediums

F Ahmed, TN Rao, N Arshi, Y Prashanthi, S Kumar, A Alshoaibi

Crystals 13 (4), 644

15. Synthesis and investigations of structural, surface morphology, electrochemical, and electrical properties of NiFe₂O₄ nanoparticles for usage in supercapacitors

Ravina, Shalendra Kumar, SZ Hashmi, Garima Srivastava, Jasgurpreet Singh, AM Quraishi, Saurabh Dalela, Faheem Ahmed, PA Alvi

Journal of Materials Science: Materials in Electronics 34 (10), 868

16. Structural, Optical, Magnetic and Electrochemical Properties of CeXO₂ (X: Fe, and Mn) Nanoparticles

S Kumar, F Ahmed, NM Shaalan, N Arshi, S Dalela, KH Chae

Materials 16 (6), 2290

17. Electrochemical Performance of Potassium Bromate Active Electrolyte for Laser-Induced KBr-Graphene Supercapacitor Electrodes

NM Shaalan, F Ahmed, S Kumar, MM Ahmad, AF Al-Naim, D Hamad

Inorganics 11 (3), 109

18. Electrochemical and electronic structure properties of high-performance supercapacitor based on Nd-doped ZnO nanoparticles

J Sahu, S Kumar, F Ahmed, PA Alvi, B Dalela, DM Phase, M Gupta, ...

Journal of Energy Storage 59, 106499

19. Potential Applications of Chitosan-Coated Zinc Oxide Nanoparticles for Degrading Pesticide Residues in Environmental Soils

WM Daqa, A Alshoaibi, F Ahmed, TN Rao

Crystals 13 (3), 391

20. Fabrication of flower-like nickel cobalt-layered double hydroxide for electrochemical detection of carbendazim

T Kokulnathan, TJ Wang, F Ahmed, N Arshi

Surfaces and Interfaces 36, 102570

21. Editorial for the Special Issue “Organic/Metal Oxide Thin Films for Optoelectronic/Photovoltaic and Sensing Applications”

MW Alam, SA Ansari, F Ahmed

Crystals 13 (2), 173

22. Combining second harmonic generation and multiphoton excited photo-luminescence to investigate TiO₂ nanoparticle powders

C Jonin, E Salmon, F Ahmed, MB Kanoun, C Awada, PF Brevet

Physical Chemistry Chemical Physics 25 (26), 17281-17286

23. Synthesis and gas-sensing properties of ZnO nanoflowers for hydrogen sulphide (H₂S) detection

A Umar, AA Ibrahim, MA Alhamami, S Hussain, H Algadi, F Ahmed, ...

Materials Express 13 (1), 117-123

24. Deep eutectic solvents-assisted synthesis of NiFe-LDH/Mo₂C nanocomposite for electrochemical determination of nitrite

T Kokulnathan, TJ Wang, F Ahmed, S Kumar

Journal of Molecular Liquids 369, 120785

25. Structural growth of zinc oxide nanograins on carbon cloth as flexible electrochemical platform for hydroxychloroquine detection

T Kokulnathan, TJ Wang, T Murugesan, AJ Anthuvan, RR Kumar, F. Ahmed, N. Arshi

Chemosphere 312, 137186

26. Hydrothermal synthesis of ZnCr-LDH/tungsten carbide composite: a disposable electrochemical strip for mesalazine analysis

T Kokulnathan, TJ Wang, F Ahmed, T Alshahrani

Chemical Engineering Journal 451, 138884

Year (2022)

27. Ceramic Ti/TiO₂/AuNP Film with 1-D Nanostructures for Selfstanding Supercapacitor Electrodes

Nagih M Shaalan, Faheem Ahmed, Mohamed Rashad, Shalendra Kumar, Osama Saber, Abdullah F Al-Naim, Hicham M Kotb, Mohammed Ezzeldien, Amara Z Mahmoud

Crystals, 12, 791, (2022)

28. Ceramic Ti/TiO₂/AuNP Film with 1-D Nanostructures for Selfstanding Supercapacitor Electrodes

Nagih M Shaalan, Faheem Ahmed, Mohamed Rashad, Shalendra Kumar, Osama Saber, Abdullah F Al-Naim, Hicham M Kotb, Mohammed Ezzeldien, Amara Z Mahmoud

Crystals, 12, 791, (2022)

29. Morphological evaluation of hematite nanostructures and their shape dependent photocatalytic and magnetic properties

Sarish Rehman, Faheem Ahmed, Muhammad Umar Aslam Khan, Abdullah Aljaafari, Sivakumar Manickam, Pau Loke Show

Chemical Engineering and Processing-Process Intensification, 175, 108909, (2022)

30. Synthesis of magnetically recoverable Ru/Fe₃O₄ nanocomposite for efficient photocatalytic degradation of methylene blue

Avvaru Praveen Kumar, **Faheem Ahmed**, Shalendra Kumar, G Anuradha, Kalla Harish, Begari Prem Kumar, Yong-Ill Lee

Journal of Cluster Science, 33, 853-865, (2022)

31. Construction of nickel cobalt-layered double hydroxide/functionalized-halloysite nanotubes composite for electrochemical detection of organophosphate insecticide

Thangavelu Kokulnathan, Tzyy-Jiann Wang, Elumalai Ashok Kumar, **Faheem Ahmed**

Chemical Engineering Journal, 433, 133639, (2022)

32. Tailored Construction of One-Dimensional TiO₂/Au Nanofibers: Validation of an Analytical Assay for Detection of Diphenylamine in Food Samples

Thangavelu Kokulnathan, Ramakrishnan Vishnuraj, Shen-Ming Chen, Biji Pullithadathil, **Faheem Ahmed**, P.M.Z. Hasan, Anwar L. Bilgrami, Shalendra Kumar

Food Chemistry, Accepted (2022)

33. Synergistic Effect of Hexagonal Boron Nitride-Coated Separators and Multi-Walled Carbon Nanotube Anodes for Thermally Stable Lithium-Ion Batteries

Faheem Ahmed, Shalendra Kumar, Nagih Mohammed Shaalan, Osama Saber, Sarish Rehman, Abdullah Aljaafari, Hatem Abuhimd, Mohammad Alshahrani

Crystals, 12 (2), 125, (2021)

34. Studies on Synthesis and Characterization of Fe₃O₄@ SiO₂@ Ru Hybrid Magnetic Composites for Reusable Photocatalytic Application

Avvaru Praveen Kumar, Dinesh Bilehal, Tegene Desalegn, Shalendra Kumar, **Faheem Ahmed**, HC Murthy, Deepak Kumar, Gaurav Gupta, Dinesh Kumar Chellappan, Sachin Kumar Singh, Kamal Dua, Yong-Ill Lee

Adsorption Science & Technology, 2022, 1-18, (2022)

35. Structural, Magnetic, and Electrical Properties of CoFe₂O₄ Nanostructures Synthesized Using Microwave-Assisted Hydrothermal Method

Shalendra Kumar, Faheem Ahmed, Nagih M Shaalan, Rajesh Kumar, Adil Alshoaibi, Nishat Arshi, Saurabh Dalela, Fatima Sayeed, Sourabh Dwivedi, Kavita Kumari

Materials, 15, 7955 (2022)

36. Structural, Morphological, Optical and Magnetic Studies of Cu-Doped ZnO Nanostructures

Shalendra Kumar, Faheem Ahmed, Naushad Ahmad, Nagih M Shaalan, Rajesh Kumar, Adil Alshoaibi, Nishat Arshi, Saurabh Dalela, Fatima Sayeed, Kavita Kumari

Materials, 15, 8184 (2022)

37. Structural, Morphological, Optical and Magnetic Studies of Cu-Doped ZnO Nanostructures

Shalendra Kumar, Faheem Ahmed, Naushad Ahmad, Nagih M Shaalan, Rajesh Kumar, Adil Alshoaibi, Nishat Arshi, Saurabh Dalela, Fatima Sayeed, Kavita Kumari

Materials, 15, 8184 (2022)

38. Anticancer potential of gold nanoparticles (AuNPs) using a battery of in vitro tests

NO Alafaleq, A Alomari, MS Khan, GM Shaik, A Hussain, F Ahmed

Nanotechnology Reviews 11 (1), 3292-3304

Year (2021)

39. Construction of Nickel Cobalt-Layered Double Hydroxide/Functionalized–Halloysite Nanotubes Composite for Electrochemical Detection of Organophosphate Insecticide

Thangavelu Kokulnathan, Tzyy-Jiann Wang, Elumalai Ashok Kumar, *Faheem Ahmed*

Chemical Engineering Journal (IF: 13.2), 133639 (2021)

40. An Experimental and Theoretical Study on the Effect of Silver Nanoparticles Concentration on the Structural, Morphological, Optical, and Electronic Properties of TiO₂ Nanocrystals

Faheem Ahmed, Mohammed Benali Kanoun, Chawki Awada, Christian Jonin, Pierre-Francois Brevet

Crystals, 11 (12), 1488, (2021)

41. Integrating graphene oxide with magnesium oxide nanoparticles for electrochemical detection of nitrobenzene

T Kokulnathan, AI Jothi, SM Chen, G Almutairi, *F Ahmed*, N Arshi

Journal of Environmental Chemical Engineering 9 (6), 106310, (2021)

42. Electrochemical Behavior of Three-Dimensional Cobalt Manganate with Flowerlike Structures for Effective Roxarsone Sensing

T Kokulnathan, V Rajagopal, TJ Wang, SJ Huang, *F Ahmed*

Inorganic Chemistry, (2021)

43. Construction of two-dimensional molybdenum carbide based electrocatalyst for real-time monitoring of parathion-ethyl

T Kokulnathan, TJ Wang, *F Ahmed*

Journal of Environmental Chemical Engineering, 106537, (2021)

44. Electronic structure and electrochemical properties of La-doped BiFeO₃ nanoparticles

S Kumar, G Srivastava, G Almutairi, *F Ahmed*, NM Shaalan, S Dalela

Journal of Electron Spectroscopy and Related Phenomena, 147138, (2021)

45. Structural, Optical, Electrical and Antibacterial Properties of Fe-Doped CeO₂ Nanoparticles

Shalendra Kumar, Suliman Yousef AlOmar, Kavita Kumari, Fadwa Albalawi, Rajesh Kumar, *Faheem Ahmed*,

Naushad Ahmad, Sourabh Dwivedi, Parvez Ahmad Alvi

Crystals 11 (12), 1594, (2021)

46. One-Step Multi-Doping Process for Producing Effective Zinc Oxide Nanofibers to Remove Industrial Pollutants Using Sunlight

O Saber, NM Shaalan, *F Ahmed*, S Kumar, A Alshoaibi

Crystals 11 (10), 1268, (2021)

47. Role of Bi-excess on structural, electrical, optical, and magnetic properties BiFeO₃ nanoparticles

A Kumari, K Kumari, *F Ahmed*, MM Ahmad, J Sharma, A Vij, S Kumar

Journal of Materials Science: Materials in Electronics 32 (19), 23968-23982, (2021)

48. Synthesis of Magnetically Recoverable Ru/Fe₃O₄ Nanocomposite for Efficient Photocatalytic Degradation of Methylene Blue

AP Kumar, *F Ahmed*, S Kumar, G Anuradha, K Harish, BP Kumar, YI Lee

Journal of Cluster Science, 1-13, (2021)

49. Microwave Mediated Fast Synthesis of Silver Nanoparticles and Investigation of Their Antibacterial Activities for Gram-Positive and Gram-Negative Microorganisms

Faheem Ahmed, Suliman Yousef AlOmar, Fadwa Albalawi, Nishat Arshi, Sourabh Dwivedi, Shalendra Kumar, Nagih Mohammed Shaalan and Naushad Ahmad

Crystals 11(6), 666, (2021)

50. Growth of Defect-Induced Carbon Nanotubes for Low-Temperature Fruit Monitoring Sensor

Nagih M. Shaalan, Osama Saber, Faheem Ahmed, Abdullah Aljaafari, Shalendra Kumar

Chemosensors, 9, 131, (2021)

51. Amperometric determination of ecotoxic N-methyl-p-aminophenol sulfate in photographic solution and river water samples based on graphene oxide/CeNbO₄ nanocomposite catalyst

Bhuvanenthiran Mutharani, Praveen Kumar Gopi, Shen-Ming Chen, Hsieh-Chih Tsai, Faheem Ahmed, Ahmed S Haidyrah, Palraj Ranganathan

Ecotoxicology and Environmental Safety, 220, 112373, (2021)

52. Structural and Magnetic Properties Study of Fe₂O₃/[NiO]/Ni₂FeO₄ Nanocomposites

Zakia Alhashem, Chawki Awada, Faheem Ahmed, Ashraf H. Farha

Crystals, 11, 613, (2021)

53. CdO–ZnO nanorices for enhanced and selective formaldehyde gas sensing applications

Ahmad Umar, Ahmed A Ibrahim, Rajesh Kumar, Hassan Algadi, Hasan Albargi, Mabkhoot A Alsairi, Mohsen AM Alhmami, Wen Zeng, Faheem Ahmed, Sheikh Akbar

Environmental Research, 111377, (2021)

54. Biosynthesis of CeO₂ Nanoparticles Using Egg White and Their Antibacterial and Antibiofilm Properties on Clinical Isolates

Shalendra Kumar, Faheem Ahmed, Nagih M. Shaalan, Osama Saber

Crystals, 11, 584, (2021)

55. Enhancement of Optical Activity and Properties of Barium Titanium Oxides to Be Active in

Sunlight through Using Hollandite Phase Instead of Perovskite Phase

Adil Alshoaibi, Osama Saber, Faheem Ahmed
Crystals, 11(5), 550, (2021)

56. Rational Confinement of Yttrium Vanadate within Three-Dimensional Graphene Aerogel: Electrochemical Analysis of Monoamine Neurotransmitter (Dopamine)

Thangavelu Kokulnathan, Faheem Ahmed, Shen-Ming Chen, Tse-Wei Chen, PMZ Hasan, Anwar L Bilgrami, Reem Darwesh

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