

# ANEELA ANWAR

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## Highlights

- Fulbright Postdoctoral Fellow United States
- IDB High Merit PhD Scholar UCL London, UK
- Associate Fellow Higher Education Academy UK
- Fellow Women Leadership Program, Michigan State University, United States
- Kings Award for Excellence in Bionanotechnological Research 2024 London, UK
- Emerging Leader Award 2024 for Outstanding Contributions and Leadership in the field of Education from the US Consul General, Fulbright Pakistan-US Alumni Network.
- Frogh-e-Taleem Gold Medal Award, Governor Punjab, Pakistan
- Official member of the Environment and Energy Interest Group under the Fulbright Pakistan-US Alumni Network to promote a cleaner, greener environment in Pakistan
- Nominated researcher for “Establishing the Pakistan Climate Resilience Research Coordination Network” (PAK-Climate RCN) under HESSA, 3 years Program of USAID and University of Utah, United States
- UK Patent holder on Nanotechnology
- Best PhD Abstract Award from IDB Scholarship at Cambridge University UK.
- Best Presenter Award, International Conference on Nanomaterials at Cambridge UK.
- Women Leadership Award 2023 from International Women Leadership Conference.
- Roll of Honour in Bachelors, distinction in Masters
- Talented Teacher Award, UET, Lahore

- Fulbright Mentorship and Postdoctoral Reviewer
- Official Trainer for Grade 19-20 Teachers in Higher Education
- Founder and Director of Nanofab International
- Council Member Women in Science Foundation
- Convener Standing Committee, Academia-Industry Linkages, Women Chamber of Commerce and Industry
- National Heroes Award as Best Peace Educationist Performer
- 101 Incredible Women of Power Pakistan
- Co-founder of the Akhira Project, supporting deserving students, marginalized communities, and individuals with disabilities through education and empowerment.

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## **EDUCATION**

<b>Sr. No.</b>	<b>Duration</b>	<b>Degree</b>	<b>Titles/Majors</b>
1	2018-2019	Fulbright Postdoctoral Fellowship, USA	Nanotechnology/Environment & Healthcare
2	2011-2014	PhD, UCL, UK	Inorganic/Materials Chemistry
3	2003-2005	M.Phil, UET, Lahore	Organic Chemistry
4	2000-2002	M.Sc, UET, Lahore	Inorganic/Analytical Chemistry
5	1998-2000	B.Sc Queen Mary College, Lahore	Chemistry, Botany, Zoology

## **RELEVANT EXPERIENCE**

### **Fulbright Postdoctoral Fellowship in Nanotechnology, Stevens Institute of Technology, New Jersey, USA**

My Postdoc research work was based on “**Novel Design, Entrepreneurship and commercialization of nanoscale biomaterials for bone cancer treatment and other biomedical applications**” supervised by Prof. Dr. Xiaojun Yu. This research investigates the novel synthesis methodologies for the fabrication and analysis of various green nanoscale biomedical composite materials produced by electrospinning in order to obtain hybrid structures with improved mechanical and biological properties for healthcare and environmental applications. The physical, mechanical, and biological performances of these nanobiomaterials were then assessed and compared with its constituent materials for scale up synthesis.

## **PhD in Inorganic/ Materials chemistry, University College London, UK**

My PhD research work was based on “**Continuous Plastic Flow Synthesis and Characterization of Nanoscale Bioceramics**” supervised by Prof. Dr. Quentin Pankhurst. This particular work investigates novel methodologies for the green synthesis of various high purity nanobiomaterials with remarkably high surface area and small particle size (ever reported) for biomedical applications such as bone graft substitutes, coating on metallic implants, reinforcement in biomedical composites and in bone and dental cements, tooth pastes and radiopaque fillers for dental compositematerials.

- Developed new research methodologies for the ecofriendly synthesis of various nanoscale biomaterials through personal initiative resulting in patent publication
- Synthesis and characterization of silicon and carbonate based nanocomposite biomaterials for various biomedical applications
- Experience in fabrication and handling of various high purity nanomaterials e.g, Titania and Magnetite nanoparticles for waste water treatment
- Detailed studies on Electrophoretic Deposition (EDP) coatings on metallic implants
- *In-Vitro* cell culture analysis of various nonobioceramics for biocompatibility studies
- Detailed study on chemical surface modification for controlled particle growth and stable dispersion using various organic acids
- Expertise in nanomaterial's characterizations using TEM, SEM, AFM, BET, DLS, XPS, TGA, XRD, FTIR, Raman, EDP, NMR, SQUID, DLS, Zeta Potential measurement
- Expertise in patent and paper writing for various high impact journals
- Collaborations with industrial partners during PhD (e.g, Baxter and Accentus UK, Polysciences USA).
- Designed product data sheets for national and international collaborators
- Presented patented work on national and international conferences
- Achieved best PhD abstract award from IDB High Merit Scholarship

## **M.Phil in Organic Chemistry, University of Engineering and Technology, Pakistan**

‘Eco-friendly Monochlorotriazine reactive dyes based on 4,4 Diamino diphenyl amine-2-sulphonic acid’ supervised by Prof. Fazeelat Tahira.

- Experience of designing and synthesis of dye synthesis
- Spectroscopic analysis using FTIR, AAS, UV Visible etc.
- Design of molecules for solubility in different media
- Applications on different fabrics
- Synthesis of various electrophilic and nucleophilic Imine based metal complexes
- Spectroscopic analysis using FTIR, AAS, TGA, DTA etc.
- Applications in dyes

## **M.Sc in Inorganic/Analytical Chemistry, University of Engineering and Technology, Pakistan**

“Effect of electron withdrawing groups on the stability of metal (II, III) complexes with N, O containing chelates” Supervised by Dr. Ayesha Chaudhary

## **B.Sc in Chemistry, Zoology and Botany, Queen Mary College University, Lahore**

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## **UK CERTIFICATIONS**

- AFHEA, Certified Associate Fellow Higher Education Academy, UK
- ECDL (European Computer Driving License), UK
- Pronunciation and public speaking, UK
- Academic writing, UK
- Thesis writing, UK
- Teacher as a facilitator, UK
- Residential courses on Teacher training, UK

## **HONOURS AND AWARDS**

- Fulbright Postdoc Scholarship Award, USA
- IDB High Merit Scholarship award for PhD, UK
- HEC Partial Support award for PhD
- King's Award for Excellence 2024 London
- Official member of the Environment and Energy Interest Group under the Fulbright Pakistan-US Alumni Network to promote a cleaner, green and safer environment in Pakistan
- Best Presenter award, Scientific Symposium, Cambridge University, UK.
- Women Leadership award 2023
- Outstanding Reviewer award, Ceramics International, Elsevier Journal
- HEC Reviewer for NRPUG Grants 2020
- Reviewer for Fulbright Postdoc Fellowship 2023
- Star Performer Award at Forman Christian College, A Chartered University, Lahore
- Talented Teacher Award, UET, Pakistan
- Second Position in M.Phil
- Third Position in M.Sc
- Roll of Honour in B.Sc
- Council Member, Women in Science Organization, Pakistan
- National Heroes Award as Best Peace Educationist Performer
- Ambassador for Fikr e Iqbal Forum, Pakistan

## **PROFESSIONAL MEMBERSHIPS**

- **AFHEA** – Associate Fellow of Higher Education Academy, UK
  - **Associate Member** – Royal Society of Chemistry
  - **Member**-- Environment & Energy Interest Group, Fulbright, Pakistan-U.S. Alumni Network.
  - **Member** – ASPIRE Group Ltd, Pakistan
  - **Council Member** –Women in Science Foundation
  - **Member** --International Review Committee, ICMSN, Cambridge
  - **Member** -- Materials Research Society, United States
  - **Member** – American Chemical Society
  - **Member** – Chemical Physical Society
  - **Member** – European Society of Biomaterials
  - **Member** – Society of Chemical Industry
  - **Life Member** – Chemical Society of Pakistan
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## **POSITIONS**

<b>Sr. No.</b>	<b>Duration</b>	<b>Position</b>	<b>Place</b>	<b>Major Responsibilities</b>
1	2022-present	Professor	University of Engineering and Technology, Lahore	Research and Teaching Managing Environmental, Energy and Healthcare Research projects
2	2021-2022	Professor Chair	University of Engineering and Technology, KSK campus, Lahore	Launched various degree programs in Chemistry, Physics, Mathematics and Environmental Sciences with innovative curriculum design.
3	2016-2020	Associate Professor, Chair	University of Engineering and Technology, KSK campus, Lahore	Research and teaching, Establishment of Environmental Science research labs
4	2007-2016	Assistant Professor	University of Engineering and Technology, KSK campus, Lahore	Research and teaching, Laboratory setup and design of experiments
5	2003-2007	Lecturer	Forman Christian College University, Lahore.	Research, Tutoring and Mentoring
6	2002-2003	Lecturer	GIFT University, Gujranwala.	Teaching and research

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## **PATENTS**

1) Darr, J., Anwar A. "Group 2 metal phosphates" Patent WO2015052495 A1. 16 April, 2015.

2) Aneela Anwar, Amna Shoaib, Process for Making Biofungicides By Encapsulating Titania-HA Nanocomposite Structure, Patent Filed, December 1, 2023

3) Aneela Anwar, Muhammad Sarfaraz, **Advanced Nanoformulation of Antimicrobial Bioceramic Membranes for Sustainable Water Purification and Desalination**, Patent Filed , February 27, 2025

## **JOURNAL PUBLICATIONS**

- 1) **Aneela Anwar**, Ayesha Sadiqa, Azeem Intisar, Amin Ur Rashid, Tabassam Razaq, Samar A. Aldossari, Mohammed Sheikh Saleh Mushab, Dong Yong Park, and Dongwhi Choi, Synergistic Effect of Advanced Hydroxyapatite-Magnetite Nanocomposites in Magnetic Hyperthermia for Bone Cancer Treatment, *Nanotechnology Reviews* 2024; 13: 20230225, IF: 7.4.
- 2) Syeda Saba Batool, **Aneela Anwar**, Amna Shoaib, Shamsa Mubeen, Azeem Intisar, Shahzeb Khan, Mohsin Kazi, Green Synthesis of Silver Nanoparticles from Glycine max Pods: Potential Anti-Cancer Activity Against Hepatocellular Carcinoma, *Int J Med Rev* 2024 December;11(4): 830-841.
- 3) Khalida Naseem, Sana Asghar, Kiky Corneliasari Sembiring, Mohammad Ehtisham Khan, Asima Hameed, Shazma Massey, Warda Hassan, **Aneela Anwar**, Haneef Khan, Faluk Shair, Fabrication of bio-inorganic metal nanoparticles by low-cost lychee extract for wastewater remediation, *Toxicology Research*, 2024, 13, 1–13. IF: 2.283
- 4) Zohaib Waheed, **Aneela Anwar**, Ayesha Sadiqa, Awais Ahmad, Azeem Intisar, Arshad Javaid, Iqra Haider Khan, Bushra Nisar Khan, Shahzeb Khan, Mohsin Kazi, Advancing sustainable agriculture: Metal doped urea hydroxyapatite-hybrid nanofertilizer for agro-industry, *Nanotechnology Reviews*, IF: 7.7
- 5) Muzammal Abbas, Uzma Hanif, Areeba Nasir, Fakiha Zahid, Iram Liaqat, Shaista Ali, Deepak Bhanot, Farid S. Ataya, Aneela Anwar, and Shahab Khan, Green Synthesis and Application of Zinc Oxide (ZnO) Nanoparticles from *Cenchrus setigerus* Vahl in Herbal Handwash as Antimicrobial Reducer, *ChemistrySelect* 2025, 10, e202404733 (1 of 13).
- 6) Arshad Javaid, Malik Firdausi, **Aneela Anwar**, Antifungal Compounds of *Tribulus terrestris* Root for the Control of *Pyricularia oryzae*, the Cause of Rice Blast Disease, *Pakistan Journal of Weed Science Research* (National, HEC-recognized, Y category).
- 7) Muhammad Aqib, Muneerah Alomar, **Aneela Anwar**, Khalida Naseem, Arshad Javaid, Azeem Intisar, Shahzeb Khan, Humayun Ajaz, Iqra Haider Khan, Synthesis, Characterization and Antimicrobial Analysis of Metal-Doped ( $\text{Zn}^{2+}$  and  $\text{Ag}^+$ ) Brushite Powder for Bone Regeneration, *Materials Chemistry and Physics*, Volume 320, 1 July 2024, 129460, IF: 4.6.
- 8) Awais Ahmad, Arshad Noor, **Aneela Anwar**, Saadat Majeed, Safia Khan, Zaib Ul Nisa, Shafaqat Ali, Lalitha Gnanasekaran, Saravanan Rajendran<sup>9</sup>, Hu Li, Support based metal incorporated layered nanomaterials for photocatalytic degradation of organic pollutants, *Environmental Research*, 2024, 119481, IF: 8.431
- 9) Adil Mehboob, Ayesha Sadiqa, Awais Ahmad, **Aneela Anwar**, Sidra Tabassum, Muhammad Arsalan, Mohamed A. Habila, Adnan Raza Altaf, Yonggang Yao, Muftah H. El-Naas, Enhanced activity of electrodeposited  $\text{WO}_3$  thin films as bi-functional electrocatalysts for water splitting, *Results in Engineering* 23 (2024) 102516. IF: 6.0
- 10) Amna Shoaib, Huma Shafique, **Aneela Anwar**, Sidra Javed, Barizah Malik, Samina Mehnaz, Iron-Supplemented Alginate Beads of *Pseudomonas chlororaphis* Improves Charcoal Rot

Disease Resistance and the Productivity in Tomato Plants, Journal of Plant Growth Regulation <https://doi.org/10.1007/s00344-024-11366-z>, IF: 4.

- 11) Muhammad Rafiq, Arshad Javaid, Ammara Kanwal, **Aneela Anwar**, Iqra Haider Khan, Qudsia Kanwal, Chunsong Cheng, GC-MS analysis and antifungal potential of flower extract of *Acacia nilotica* subsp. *indica* against *Macrophomina phaseolina*, <https://doi.org/10.1016/j.micpath.2024.106819>, Microbial Pathogenesis IF: 3.3
- 12) Muhammad Azhar, Bushra Nisar Khan, Khola Andleeb, Arshia Mukhtar, Mah Noor Fatima, Saba Asghar, Muhammad Rizwan Khan, **Aneela Anwar**, Muhammad Talha Mukhtar, Role of vitamin E and Selenium as an Anti-Stressant in Translocation of captive ungulates, volume 7, March 3, 2024.
- 13) Bushra Nisar Khan, Muhammad, Rizwan Khan, Muhammad Azhar, Rida Fatima, Abida Mushtaque, Muhammad Talha Mukhtar and **Aneela Anwar**, Comparative Safety Evaluation of Boma and Chemical Immobilization Techniques Applied for Translocation of Spotted Deer, The Journal of Zoology, <https://doi.org/10.54393/mjz.v5i01.95>, Vol. 5, Issue 1, March 2024.
- 14) Hadia Ahsan, Umer Anayyat, Muhammad Saeed, **Aneela Anwar**, Sabah Haider, Azeem Intisar a, Tasmia Irshad, Nazim Hussain, Muhammad Shahid Riaz Rajoka, Synthesis, characterization and catalytic activity of rGO supported novel hybrid materials for green fuel production, Journal of the Indian Chemical Society, Volume 101, Issue 4, April 2024, 101141. IF: 1.3
- 15) S. Javed, **Anwar A.**, Javaid I., Shoaib A., Aljawdah HM., Prashant K. (2023). Anticancer activity of ethyl-acetate fraction of *Sorbaria tomentosa* and compound identification through HPLC and LC-MS analysis. Journal of King Saud University-Science, Volume 36, Issue 2, February 2024, 103037, IF: 3.80
- 16) H.S. Yaqooba, Shoaib A., **Anwar A.**, Perveen S., Javed S. and Mehnazb S. (2023). Seed bioprimering with *Ochrobactrum ciceri* mediated defense responses in *Zea mays* (L.) against *Fusarium rot*. Physiology and Molecular Biology of Plant, Volume 30, pages 49-66, 2024 IF: 3.50.
- 17) **Aneela Anwar**, Qudsia Kanwal, Ayesha Sadiqa, Tabassam Razaq, Iqra Haider Khan, Arshad Javaid, Safia Khan, ElSayed Tag-Eldin and Mohamed Ouladsmane, Synthesis and Antimicrobial Analysis of High Surface Area Strontium-Substituted Calcium Phosphate Nanostructures for Bone Regeneration, *Int. J. Mol. Sci.* 2023, 24, 14527, IF: 5.6
- 18) Qudsia Kanwal, Mahmood Ahmed, Atiq Ur-Rehman, **Aneela Anwar**, Samiah Shahid, Atif Shahzad, Attaullah Shah Bukhari, Muhammad Ahmad, Numan Yousaf, and Muhammad Muddassar, Hypolipidemic Effect of Chloroform Extract of *Lagenaria siceraria*: Potential Inhibitory Activity of Phytochemicals Targeting the HMG-CoA Reductase Revealed by Molecular Docking and Simulation Studies, Journal of Chemistry, <https://doi.org/10.1155/2023/3010463>, IF: 3.241.
- 19) A. Shoaib, **Anwar A.**, Bukhari S., Fatima Q., U., Fatima Q. and Iqbal N. (2023). Equilibrium studies on biosorption of nickel through filamentous fungi. Journal Plantarum, 2023 (National, HEC-recognized, Y category)
- 20) S. Saddique, Shoaib A., **Anwar A.** and Khan S.N. (2023). Comparative assessment of potential of micronutrients, biofertilizers and chemical fungicides against charcoal rot in sunflower. Journal Plantarum, 2023 (National, HEC-recognized, Y category)

- 21)Khalida Naseem, Khalil Ahmed, **Aneela Anwar**, Zahoor H Farooqi, Jawayria Najeeb, Muhammad Ahmer Iftikhar, Warda Hassan, Ain Ul Batool, Sajjad Haider, Muhammad Saeed Akhtar, Raphanus caudatus biomass powder as potential adsorbant for the removal of crystal violet and rhodamine B dye from wastewater, Zeitschrift fur Physikalische Chemie <https://doi.org/10.1515/zpch-2023-0259>, 2023, IF: 4.315
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- 23)Muhammad Aqib, **Aneela Anwar**, Humayun Ajaz, Samina Akbar, Ahsan Manzoor, Maham Abid, Zohaib Waheed, Qudsia Kanwal, Metal-Doped Brushite Cement for Bone Regeneration, Journal of Bionic Engineering, JBEN-D-23-00042R4, July 24, 2023, IF: 3.275.
- 24)Qudsia Kanwal, Mahmood Ahmed,Muhammad Hamza, Muhammad Ahmad, Atiq-ur-Rehman, Numan Yousaf, Arshad Javaid, **Aneela Anwar**, Iqra Haider Khan and Muhammad Muddassar, Curcumin nanoparticles: physicochemical fabrication, characterization, antioxidant, enzyme inhibition, molecular docking and simulation studies, RSC Adv., 2023, 13, 22268. IF: 4.036
- 25)Arshad Javaid, Iqra Haider Khan, Malik F. H. Ferdosi, **Aneela Anwar** and Mujahid Manzoor, Medically Important Compounds in Ipomoea carnea Flowers, Pakistan Journal of Weed Science, June 27, 2023.
- 26)Qudsia Kanwal, Samia Shahid, Abeel Ahmad, Arif Nazir, Muhammad Yasir, **Aneela Anwar**, Samar Z. Alshawwa, Munawar Iqbal, Sustainable, economical and rapid treatment of multiple lung diseases using therapeutic potential of curcumin nanoparticles, Environmental Research, Volume 233, 15 September 2023, 116477, IF: 8.431
- 27)Khalida Naseem, Muhammad Arif, **Aneela Anwar**, Sajjad Haider, Muhammad Saeed Akhtar, Investigating adsorptive potential of Raphanus caudatus leave biomass for methyl orange dye: isotherm and kinetic study, Zeitschrift fur Physikalische Chemie, <https://doi.org/10.1515/zpch-2023-0255>, June 13, 2023. IF: 4.315
- 28)Laraib Kiran, Mehmet Kadri aydinol, **Aneela Anwar**, Syed Sakhawat Shah, Syed Mustansar Abbas, Dorak Bahityar, Muhammad Siddiq, Abdul Rehman, Mohammad Ouladsmame, Muhammad Imran Shahzad, Mesoporous hybrid Cr<sub>2</sub>O<sub>3</sub>/MWCNTs/PANI nanocomposites as a high performance anode materials for rechargeable lithium ion batteries: An innovative road map towards sustainable energy, Fuel, JFUE-D-23-02716R1, IF: 8.035
- 29)MuhammadSohail Sarwar,Abdul Ghaffar, Qingrong Huang, Miraj Khalid, **Aneela Anwar**, Abdulfatah M. Alayoubi, Muhammad Latif , Controlled drug release contenders comprising starch/poly(allylamine hydrochloride) biodegradable composite films, International Journal of Biological Macromolecules, Vol. 241 (2023) 124598. IF: 8.2
- 30)Umm-i-Kalsoom, Nisar Ali, Shazia Bashir, Samina Akbar, Muhammad Shahid Rafique, Ali Mohammad Alshehri, Narjis Begum, Tanveer Iqbal and **Aneela Anwar**, Nanosecond Laser Induced Surface Structuring of Cadmium after Ablation in Air and Propanol Ambient, Int. J. Mol. Sci. 2022, 23(21), 12749, IF: 6.208
- 31)Samina Akbar, Joanne M. Elliott, Adam M. Squires and **Aneela Anwar**, Use of cubic structure with primitive nanochannels for fabrication of free standing 3D nanowire network of Pt with Pm3m symmetry, Journal of Nanotechnology, Vol. 33, 2022. IF: 3.874



- 32) Arshad Javaid, Iqra Haider Khan, **Aneela Anwar**, Shahbaz Ahmad' and Farman Ahmad Chaudhury, In vitro germination and growth response of parthenium weed to chromium stress, *Pak. J. Weed Sci. Res.*, 28(4): 427-433, 2022
- 33) Arshad Javaid, Halima Qudisia, Iqra Haider Khan, **Aneela Anwar** and Malik F. H. Ferdosi Antifungal Activity Of Senna Occidentalis Root Extract Against *Macrophomina Phaseolina* And Its Gc-Ms Analysis, *Pakistan Journal of Weed Science*, 28(1): 115-122, 2022.
- 34) Aqsa Zafar, Javaid, Iqra Haider Khan, Ejaz Ahmed, Hamza Shehzad, **Aneela Anwar** Synthesis Of 4-Hydroxyazobenzene, A Promising Azo Dye For Antifungal Activity Against *Macrophomina Phaseolina*, *Plant Protection*, 06 (02) 2022. 143-149
- 35) Ayesha Sadiqa, Syeda Rubina Gilani, **Aneela Anwar**, Adil Mehboob, Aimon Saleem, Saima Rubab, Biogenic Fabrication, Characterization and Drug Loaded Antimicrobial Assay of Silver Nanoparticles Using *Centratherumanthalminticum* (L.) Kuntze, "Journal of Pharmaceutical Sciences, 2021. IF: 3.78
- 36) Adil Mehboob, Syeda Rubina Gilani, **Aneela Anwar**, Ayesha Sadiqa, Samina Akbar and Jahangeer Patujo, Nanoscale cobalt oxide electrocatalyst for efficient oxygen evolution reactions in alkaline electrolyte " *Journal of Applied Electrochemistry*, 2021. IF: 2.9
- 37) H. Rehman, Z. Ali, T. G. Shahzady, A. Zahra, H. Hussain, **A. Anwar**, M.S. Latif, Synthesis, characterization of GO-zinc oxide nanocomposites and their use as an adsorbent for the removal of organic dyes in industrial effluents *HcDigest Journal of Nanomaterials and Biostructures*, Vol. 16, No. 4, October-December 2021, p.1547-1555, IF: 0.963.
- 38) Xiqing Zhou, Gan Zhou, Radoslaw Junka, Ningxiao Chang, **Aneela Anwar**, Haoyu Wang a,b , Xiaojun Yu, Fabrication of polylactic acid (PLA)-based porous scaffold through the combination of traditional bio-fabrication and 3D printing technology for bone regeneration, *Colloids and Surfaces B: Biointerfaces*, 197 (2021) 111420. IF: 5.8
- 39) Syeda Basma Raza, Arshad Javaid, Iqra Haider Khan, Ejaz Ahmed, Hamza Shehzad' **Aneela Anwar**, Synthesis Of 1-Phenylazo-2-Naphthol And Evaluation Of Its Fungicidal Potential Against *Sclerotium Rolfsii*, *Mycopath* (2021) 19(2): 81-86
- 40) Alok Kumar, Seyed Mohammad Mir, Ibrahim Aldulijan, Agrim Mahajan, **Aneela Anwar**; Carlos H. Leon, Amalia Terracciano, Xiao Zhao, Tsan-Liang Su, Dilhan M. Kalyon, Sangamesh G. Kumbar, Xiaojun Yu, Load-bearing biodegradable PCL-PGA-beta TCP scaffolds for bone tissue regeneration, *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, DOI: 10.1002/jbm.b.34691, 2020, IF: 3.21
- 41) Nimra Tanvir, Arshad Javaid, Ejaz Ahmed, Iqra Haider Khan, Hamza Shehzad, **Aneela Anwar**, Synthesis Of 4-Phenylazo-1-Naphthol And Its Antifungal Activity Against *Fusarium Oxysporum* F. Sp. *Lycopersici*, *Mycopath* (2021) 19(2): 75-8
- 42) Gan Zhou, Wei Chang, Xiqing Zhou, Yifan Chen, Futao Dai, **Aneela Anwar**, Xiaojun Yu\* Nanofibrous Nerve Conduits with Nerve Growth Factors and Bone Marrow Stromal Cells Pre-Cultured in Bioreactors for Peripheral Nerve Regeneration. *ACS Applied Materials & Interfaces*, 2020. IF: 9.5
- 43) Samina Akbar, Joanne M. Elliott, Adam M. Squires and **Aneela Anwar**. Optimum conditions

for electrochemical deposition of 3-D mesoporous platinum framework, Journal of Nanoparticle Research, 2020, **IF: 2.5**.

- 44) Muhammad Azam Saeed, Muhammad Farooq, **Aneela Anwar**, Muhammad Mujtaba Abbas, Manzoore Elahi M. Soudagar, Farrukh A, Siddiqui, Muhammad Ali Shakir, Abdul-Sattar Nizami, Ijaz Ahmad Chaudhry, Alberto Pettinau, Gordon E. Andrews & Herodotos N. Phylaktou, Flame propagation and burning characteristics of pulverized biomass for sustainable biofuel, Biomass Conversion and Biorefinery (2020), **IF: 4.0**
- 45) Muhammad Nadeem Asghar, **Aneela Anwar**, Hafiz Muhammad Abdur Rahman, Sammia Shahid & Iram Nadeem (2019): Green synthesis and characterization of metal ions-mixed titania for application in dye-sensitized solar cells, Toxicological & Environmental Chemistry, DOI: 10.1080/02772248.2019.1590582. **IF: 1.8**.
- 46) **Aneela Anwar**, Samina Akbar, Mohsin Kazmi, Ayesha Sadiqa, Syeda Rubina Gilani, Novel Synthesis and Antimicrobial Studies of Nanoscale Titania Particles, Ceramics International, 44 (2018) 21170–21175. **IF: 5.532**
- 47) **Aneela Anwar**, Samina Akbar, Novel continuous microwave assisted flow synthesis of nanosized manganese substituted hydroxyapatite Ceramics International, 44 (2018) 10878–10882. **IF: 5.532**
- 48) **Aneela Anwar**, Samina Akbar, Continuous microwave assisted flow synthesis and characterization of calcium deficient hydroxyapatite nanorods, Advanced Powder Technology 29 (2018) 1493–1498 **IF: 5.2**
- 49) Samina Akbar, **Aneela Anwar**, Muhammad Zafar Noon, Joanne M Elliot, Adam M Squires, Platinum as an electrocatalyst: effect of morphological aspects of Pt/Pt-based materials, Materials Science and Technology, 2018.07,1-11. **IF: 1.938**.
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- 53) **Aneela Anwar**, Samina Akbar, Ayesha Sadiqa, Mohsin Kazmi, Novel continuous flow synthesis, characterization and antibacterial studies of nanoscale zinc substituted hydroxyapatite bioceramics, Inorganica Chimica Acta 453 (2016) 16–22. **IF: 2.8**
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of Folic Acid: A short review Analytical Biochemistry, Analytical Biochemistry 510 (2016) 98-105. **IF: 2.9**

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- 57) Mazhar Abbas, M. Afzal Qamar, S. Ehtisham-ul-Haque<sup>3</sup>, M. Kamran Rafique, **Aneela Anwar**, Nasir Masood, M. Asif Tahir, Numrah Nisar, Munawar Iqbal, Influence of Aleyrodidae Fly Population on Cotton Crop Diseases under Different Environmental Conditions, Pol. J. Environ. Stud. Vol. 26, No. 2 (2017), 511-516. **IF: 1.8**
- 58) Saeed Ahmad, Shafqat Nadeem , **Aneela Anwar**, Abdul Hameed, Syed Ahmed Tirmizi, Wiktor Zierkiewicz , Azhar Abbas, Anvarhusein A. Isab, Mshari A. Alotaibi, Synthesis, characterization, DFT calculations and antibacterial activity of palladium(II) cyanide complexes with thioamides, Journal of Molecular Structure 1141 (2017) 204-212. **IF: 3.8**
- 59) Qudsia Kanwala, **Aneela Anwar**, Samina Akbar, Munawar Iqbal, Dure Najaf Iqbal, Numrah Nisar, Ishtiaq Hussain, An eco-friendly approach to control Oxya velox infestation: Mangifera indica exoglucanase and endoglucanase cellulose ingestion inhibition activity, Biocatalysis and Agricultural Biotechnology 10, 2017, 209-215. **IF: 4.0**
- 60) Syed Ahmed Tirmizi, Shafqat Nadeem, Abdul Hameed, Muhammad Hamid Sarwar Wattoo, **Aneela Anwar**, Zameer Ahmed Ansari, and Saeed Ahmad, Synthesis, Spectral Characterization and Antibacterial Studies of Palladium(II) Complexes of heterocyclic thiones. 'Spectroscopy', 00 (2009) 1–8 1, DOI 10. 3233/SPE-2009-0387, IOS Press. **IF: 1.376**
- 61) S. Ahmad, T. Rüffer, H. Lang, S. Nadeem, S. A. Tirmizi, M. Saleem, **A. Anwar**, Synthesis, Crystal structure and Antimicrobial studies of trans-[pd(pph<sub>3</sub>)<sub>2</sub>(imidazolidine-2-thione)<sub>2</sub>]Cl<sub>2</sub> 3.5H<sub>2</sub>O. Russian Journal of Coordination Chemistry. Leninskii prosp.,31, Kurnakov Institute of General and Inorganic Chemistry, 119991 Moscow, Russia. July 2010, Volume 36, 17, pp 520–524. **IF: 1.9**
- 62) **Aneela Anwar**, Khurram Shahzad, Sadiq Hussain, Zohaib Atiq Khan, Zainab Idrees, Mohsin Kazmi, Linear and Non-Linear Regression Analysis On the Biosorption Of Cu(II) by Rice Straw Journal Of Faculty Of Engineering & Technology, Vol 23, No 2 (2016).
- 63) Zohaib Atiq Khan, **Aneela Anwar**, Khurram Shahzad, Sadiq Hussain, Muhammad Tariq, Bio-Sorption Of Nickel On Modified Phoenix Dactylifera L. Seeds, Journal Of Faculty Of Engineering & Technology, Vol 22, No 2 (2015).
- 64) **Aneela Anwar**, Mohsin Kazmi, Zohaib Atiq Khan, Khurram Shahzad, Sadiq Hussain, Synthesis and Characterization of Calcium Deficient Hydroxyapatite Nanocrystals, Journal Of Faculty Of Engineering & Technology, Vol 23, No 2 (2016).
- 65) Muhammad Shahzad Zafar, Syed Waqas Ahmad, Mohsin Ali Kazmi, Shahid Raza Malik, **Aneela Anwar**, Riddance of spent dye from Textile Runoff, Journal of Faculty Of Engineering & Technology, Vol 22, No 1 (2015).

## **ABSTRACTS / CONFERENCE PRESENTATIONS**

- 1) **Aneela Anwar**, Sadaf Ameen, Invited speaker, Advanced Ceramic-Based Nanocomposite Structures For Environmental Protection And Healthcare Applications, 3rd International Chemistry Conference on Emerging Trends in Chemistry (3rd CCUMT-2025) organized by the Department of Chemistry on April 10-12, 2025, University of Management and Technology, Lahore.
- 2) **Aneela Anwar\***, Invited Speaker, Nanotechnology for a Greener Future: Innovations in Environmental and Healthcare Solutions. May 28, 2025 at Institute of Nanotechnology, Gebze Technical University, Turkey.
- 3) **Aneela Anwar**, Sadaf Ameen, Invited speaker, Entrepreneurship and Commercialization of Antimicrobial Nanocomposite Membranes for Sustainable Water and Air Purification, 4th International Conference on Chemical and Pharmaceutical Sciences: Innovation to Commercialization, organized by the Department of Chemistry on January 22-24, 2025, Forman Christian College (A Chartered University), Lahore.
- 4) **Aneela Anwar\***, Invited Speaker and Co-Chair, Low temperature continuous polymeric flow synthesis of nanocomposite materials for environment and healthcare applications at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.
- 5) **Aneela Anwar\***, Invited Speaker, Low temperature continuous polymeric flow synthesis of nanocomposite materials for environment and healthcare applications at 3<sup>rd</sup> International Conference on Trends and Research in Chemistry, 6, 7<sup>th</sup> November 2024, University of Education, Lahore.
- 6) **Aneela Anwar\***, Invited Speaker, Antimicrobial Nanomembrane Innovation: Sustainable Water and Air Purification for Climate Mitigation at International Conference on Addressing Climate Change and Financial Stability: Innovations in Pharmacy Research, November 5, 2024 at Superior University.
- 7) **Aneela Anwar\***, Invited Speaker, Empowering Research Excellence: Proven strategies for securing global grants, October 8, 2024 at University of Management and Technology, Lahore.
- 8) **Muhammad Aqib, Farrukh Raja, Aneela Anwar\***, Synthesis and Characterization of Metal-Doped Brushite Cement for Bone Regeneration at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.
- 9) **Sana Mehreen, Aneela Anwar\***, Nanoceramic Based Antimicrobial Composite Membranes: Sustainable Advances in Water Purification and at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.
- 10) **Uzma Fiaz, Aneela Anwar\***, Innovative titania-based- Nanomembranes: A breakthrough in desalination and antimicrobial applications at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.

- 11) **Syeda Saba Batool , Aneela Anwar\***, Greener synthesis of glycine max derived nanoparticles for evaluation of anti-proliferative and apoptotic effect on hepatocellular carcinoma at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.
- 12) **Muhammad Ahmad, Bisma, Aisha, Aneela Anwar\***, Fabrication of metal-based electrospun nanomembranes for sustainable water purification.at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.
- 13) **Nayab, Hassam, Sana Mehreen, Aneela Anwar\***, Synthesis and characterization of Ecofriendly synthesized EDTA-coated Iron oxide Nanoparticles for removal of heavy metals from Wastewater at International Conference on Research Advancements in Chemistry (ICRA-C 2024)' Friday, 21<sup>st</sup> – 23<sup>rd</sup> August 2024 at Department of Chemistry, SNS-NUST, H-12, Islamabad, Pakistan.
- 14) **Aneela Anwar\***, Keynote Speaker of Public Lecture on, Entrepreneurship and Commercialization of Nanoscale Biomaterials for Environment Healthcare Applications, Universitas Bengkulu, Indonesia, June 4th, 2024.
- 15) **Nayab Raza, Aneela Anwar\***, Mariam Sohail, Furqana Bibi, Synthesis and characterization of Iron Oxide nanoparticles for sustainable and efficient water purification, International Conference on Application of Chemistry in Nanosciences and Biomaterials Engineering, 19-21 June 2024.
- 16) **Aneela Anwar\***, Keynote Speaker, Fabrication of antimicrobial nanocomposite membranes for sustainable water purification, International Conference on Materials Chemistry and Industrial Technologies, Department of Chemistry, University of Lahore, 24-25 April, 2024.
- 17) **Aneela Anwar\***, Invited Speaker at Nanotechnological Solutions for Mitigating Global Carbon Emissions and Climate Change, 17 th Annual Fulbright Alumni Conference Climate Change Marriott Hotel Islamabad, January 12 - 14, 2024
- 18) **Aneela Anwar\***, Invited Speaker, **Ceamic based nanocomposite membrane structures for sustainable development**, organized by PMDFC, Punjab Municipal Development Fund Company on April 3, 2024.
- 19) **Aneela Anwar\***, Invited Speaker, Fabrication and Analysis of HA/PCL/CNT based Nanocomposite Structures for Environment and Healthcare, International Symposium on Environmental Applications of Carbon-Based Nanomaterials on 13<sup>th</sup> December 2023 at FCCU, Lahore.
- 20) **Aneela Anwar\***, Invited Speaker, Ceamic based nanocomposite structures for sustainable development, Conference on sustainable development (CSD), 14<sup>th</sup> December 2023 at Chemical Engineering Department, UET, Lahore.
- 21) **Aneela Anwar\***, Invited Speaker, Indigenous Technology Development for Pilot-scale Production of Water Purification and Desalination Membranes, 3<sup>rd</sup> International conference on "Water, Energy & Environment for Sustainability (IC-WEES) 2023," 16-18 August 2023 at the National University of Sciences and Technology (NUST) in Islamabad, Pakistan.

- 22) **Aneela Anwar\***, Speaker, Biodegradable Calcium Phosphate Based Nanocomposite Scaffolds For Cartilage And Bone Regeneration, 7th International Conference on Materials Sciences and Nanomaterials (ICMSN 2023) Cambridge, United Kingdom during July 11-13, 2023.
- 23) **Aneela Anwar\***, Invited Speaker, Green synthesis and characterization of various nanoscale biomaterials for healthcare, 3<sup>rd</sup> International Conference on Environment & Sustainable Development, on September 13, 2021, GC University Lahore.
- 24) **Aneela Anwar\***, US Socio-Economic Development Strategies in Pakistan, 15TH International American Studies Conference Webinar on June 16th & 17th, 2021
- 25) **Aneela Anwar\***, Xiaojun Yu, Biodegradable PCL-PLGA-Brushite Scaffolds for Bone Tissue Engineering, MRS, Fall meeting and exhibit, December 1-6, 2019, Boston, Massachusetts, United States.
- 26) **Aneela Anwar\***, Xiaojun Yu, Biodegradable calcium phosphate based nanocomposite scaffolds for cartilage and bone regeneration, CHI Symposium, Biomedical Engineering Department, Stevens Institute of Technology, Hoboken, NJ, United States.
- 27) **Aneela Anwar\***, A novel continuous flow route for the synthesis of phase pure brushite calcium phosphate nanoparticles, 5<sup>th</sup> Global Chemistry Congress September, 04-06, 2017 London, UK. Mod Chem Appl, an open access journal Volume 5, Issue 3, ISSN: 2329-6798.
- 28) **Aneela Anwar\***, Novel Microwave Assisted Continuous Flow Synthesis and Characterization of Calcium Deficient Hydroxyapatite Nanoparticles as a poster. 13th International Conference on Materials Chemistry (MC13), 2017, July 10-13 ACC Liverpool, UK
- 29) **Aneela Anwar\***, Low Temperature Synthesis and Surface Modification of Nanoscale Calcium Hydroxyapatite Bioceramics, Oral Presentation, International Conference on Recent Advances in Chemistry-2017, May 13-14.
- 30) **A Anwar\*** and J.A. Darr, Novel continuous flow synthesis and analysis of calcium phosphate nanomaterials for biomedical applications, J Bioengineer & Biomedical Sci 2015, Volume 5 Issue 1 <http://dx.doi.org/10.4172/2157-7013.S1.002>.
- 31) **A Anwar\*** and J.A. Darr, and Q Pankhurst, Synthesis and surface modification of hydroxyapatite nanorods incorporating functionalized surfaces for dental restoration, J Bioengineer & Biomedical Sci 2015, Volume 5, Issue 1 <http://dx.doi.org/10.4172/2157-7013.S1.003>
- 32) **Aneela Anwar\***, Novel continuous flow synthesis and characterization of various nanoparticles for biomedical applications, Oral Presentation, International Conference on Materials Science and Nanotechnology, September 2016, University of Lahore, Pakistan.
- 33) **Aneela Anwar\*** and Jawwad A Darr, Synthesis and surface modification of hydroxyapatite nanorods incorporating functionalized surfaces for dental restoration, Oral Presentation, International Conference on Significant Advances in Biomedical Engineering” during April 27-29, 2015 in Philadelphia, USA
- 34) **Aneela Anwar\*** and Jawwad A Darr, Novel Continuous Plastic Flow Synthesis of Phase Pure Nano-Sized Hydroxyapatite, Oral Presentation, 26th Annual Conference of the European Society for Biomaterials (ESB), Liverpool, UK from 31 August -3 September 2014.
- 35) **Aneela Anwar\*** and Jawwad A Darr, Novel Continuous Plastic Flow Synthesis of Phase Pure,

Doped and Surface Grafted Nano-Sized Calcium Phosphates and Nanocomposites, **Oral Presentation** at 2nd USA International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT-USA), Texas (USA), 19-22 May 2014.

- 36) **Aneela Anwar** and Jawwad A Darr, A novel continuous flow technique for the rapid synthesis of nano-hydroxyapatite and other calcium phosphate bioceramics, Oral Presentaion, IDBSSS 2014, 1st Scientific Symposium, May 22, 2014, in Cambridge, United Kingdom.
- 37) **Aneela Anwar** and Jawwad A Darr, Novel Continuous (Plastic) Flow Synthesis and In-Vitro Analysis of Phase Pure Nano-Sized Hydroxyapatite and other Calcium Phosphates, International Nanomed Conference, University College London, UK, 26-28 February 2014, Oral presentation.
- 38) **Aneela Anwar** and Jawwad A Darr, Novel continuous flow synthesis of nano-sized phase pure HA and other calcium phosphate biomaterials ( $\beta$ -TCP, CDHA and biphasic HA /  $\beta$ -TCP) at (near) ambient conditions, Poster Presentation, International Conference on Significant Advances in Biomedical Engineering" during April 27-29, 2015 in Philadelphia, USA
- 39) **Aneela Anwar** and Jawwad A Darr, Novel continuous flow synthesis and characterization of various nanoparticles for biomedical applications, Poster Presentation, Faraday Discussion: Nanoparticle Synthesis and Assembly, 20-22 April 2015, Chicago, USA.
- 40) **Aneela Anwar** and Jawwad A Darr, Novel continuous plastic flow synthesis and analysis of nanosized group 2 metal phosphate bioceramics for biomedical applications, Royal Society of Chemistry's Younger Member Symposium on 24th June 2014.
- 41) **Aneela Anwar** and Jawwad A Darr, A Novel Continuous Plastic Flow Synthesis and In-vitro Analysis of High Surface Area Nano-Sized Hydroxyapatite and Other Calcium Phosphate Bioceramics, 8th Annual Conference of the RSC Biomaterials Chemistry Group, University of Manchester, UK, 7- 8 January 2014.
- 42) **Aneela Anwar** and Jawwad A Darr, Continuous Plastic Flow Synthesis of Nano-bioceramics; Rapid Particle Sizing and In-vitro Analysis, Chemistry Postgraduate Open, 24th January 2014.
- 43) **Aneela Anwar** and Jawwad A Darr, Rapid and Continuous Plastic Flow Synthesis and In-vitro Analysis of Phase Pure Nano-Sized Hydroxyapatite and Other Calcium Phosphates, 3rd Annual Postgraduate Symposium on Nanotechnology, University of Birmingham, UK, 16<sup>th</sup>, December 2013
- 44) **Aneela Anwar** and Jawwad A Darr, Rapid and Continuous Flow Synthesis of Phase Pure, Doped and Surface Coated Nano-Sized Calcium Phosphates, Postgraduate Poster Session, University College London, UK, 26th June 2013
- 45) **Aneela Anwar** and Jawwad A Darr, Continuous (Plastic) Flow Synthesis (CPFS) of Phase Pure HA and Other Calcium Phosphate Phases ( $\beta$ -TCP, CDHA and Biphasic HA /  $\beta$ -TCP) at (near) Ambient Conditions, International Nanomed Conference, University College London, UK, 7- 9 November 2012.

## **BOOK CHAPTERS**

- 1) Mir, S.; **Anwar, A.**; Dulijan, I.; Kumar, A.; Yu, X. (2020). Protein and peptide nanofiber matrices for the regenerative medicine. Artificial Protein and Peptide Nanofibers: Design,

Fabrication, Characterization and Applications (pp. 327-350). Cambridge, MA: Woodhead Publishing.

- 2) **Aneela Anwar**, Daniel Jerome Petrino Jr, Nicole Van Alstine, Xiaojun Yu, "Biodegradable electrospun nanofibrous scaffolds for bone tissue engineering" in the textbook *Bioengineering Technologies, Methods in Molecular Biology*; 3rd edition." Humana Press of Springer Science (2022)
- 3) Azeem Intisar, Mateen Hedar, **Aneela Anwar**, Muhammad Rizwan Tariq, Muhammad Imran Din, Membranes with Green Nanoparticles, CAC: Applications of Green Nanomaterials in Analytical Chemistry Volume 111, Elsevier, 2024/02/19.
- 4) Mateen Haider, Azeem Intisar, Zeshan Mutahir, Ejaz Ahmad, Ahsan Sharif, **Aneela Anwar**, Green Nanomaterials for chromatographic separation, Elsevier, 2024/03/19.

## **TRAININGS/SEMINARS/WEBINARS**

- 1) Organized one-day workshop on **"Empowering your research: strategies to win competitive grants and maximize impact with AI"**, as Incharge Faculty Development Program, UET, Lahore, June 4, 2025.
- 2) Organized one-day workshop on **"Generative Artificial Intelligence in Research, Teaching and Professional Development"**, as Incharge Faculty Development Program, UET, Lahore, May 08, 2025.
- 3) Organized International Webinar on **"Women Leadership in Higher Education – Empowering Change & Advancing Global Excellence"**, as Incharge Faculty Development Program, UET, Lahore, March 8, 2025.
- 4) Organized one Day Workshop on **"Building the Future: Architecture Under STEM-Nanotechnology's Impact on Sustainable Architecture"**, as Incharge Faculty Development Program, UET, Lahore, March 24<sup>th</sup>, 2025.
- 5) Organized 4-Day Training Workshop, **Holistic Quality Teaching and Enhancing Learning Effectiveness via Social Consciousness**, as Incharge Faculty Development Program, UET, Lahore, February 18-21, 2025.
- 6) Invited guest speaker on **"Rising with Integrity: Women's Leadership and Character Building for a Brighter Future"**, at Queen Mary College Lahore, April 23, 2025.
- 7) Exhibition of UET selected projects at **4<sup>th</sup> Health, Engineering and Mineral Show** under Trading Development Authority Pakistan, Ministry of Pakistan, 17-19 April, 2025
- 8) Invited guest speaker on **"Women's Potential Leadership for a Brighter Future"**, at Chemical Engineering Department, UET, New Campus, Lahore, October 2, 2024.
- 9) Panelist on International Day of **Women and Girls in Science** organized by Exodous Green, February 11, 2024.
- 10) One Day Seminar on **"Be the Change: YOUTH Leadership, Ethics and Character Building for a better Future"**, organized by Department of Mining Engineering UET, Lahore, February 14, 2024.
- 11) Organized and Moderated **USAID Webinar on Sustainable Breakthroughs in Water Purification and Urban Water Management** supported by USAID Higher Education System Strengthening Activity, December 3, 2024.
- 12) Organized One Day International Conference on **Nanotechnology and Natural Products**, Chemistry Department UET, Lahore, November 18, 2024.
- 13) Participation on **4 Day Training Workshop on Strengthening Research Productivity and Relevance at Universities** supported by USAID Higher Education System Strengthening Activity, Fatima Jinnah Women University, Islamabad, December 16-19, 2024.



- 14) Panelist on **International Day of Epidemic Preparedness on Why Climate?** organized by Exodous Green, December 27, 2024.
- 15) Organized International Conference on **Preserving Our Planet: Strategies for environmental conservation and combatting climate change** supported by Pakistan-US Alumni Network, June 12, 2024, UET, Lahore
- 16) Participation in Pakistan-US Alumni Network (PUAN) as a **Mentor in Environmental Mentorship and Leadership session**, June 13, 2024, ITU, Lahore.
- 17) Participation in Pakistan-US Alumni Network (PUAN) Country Project: **Economic Prosperity Through Digital Literacy and Enterprenuership**, May 30<sup>th</sup> 2024, LUMS, Lahore.
- 18) Invited International Guest Speaker at One Day Seminar on **Ceramic based nanocomposite structures for environment and healthcare applications**, Bradford University UK, April 29, 2024.
- 19) Webinar on **International Women's Day 2024** under USAID Higher Education System Strengthening Activity on March 8, 2024.
- 20) Invited guest on **The Impact of Climate Change on Businesses** organized by Lahore Chamber of Commerce, February 23, 2024.
- 21) One Day Seminar on **"Decoding the Riddles of High-Impact Scientific Writing**, organized by Chemistry Department UET, Lahore, February 21, 2024.
- 22) Webinar on **"Water Scarcity Challenges in Pakistan"** under USAID Higher Education System Strengthening Activity, February 27, 2024
- 23) Webinar on **"Advancing Peace through Education: Learning for Lasting Peace"** under USAID Higher Education System Strengthening Activity, January 24, 2024
- 24) Organised 1st National Conference on **"on Evolution of Youth Leadership and Personality Development through Dr. Allama Iqbal's Doctrine"**. "at UET, Lahore on 21-12-2023.
- 25) Webinar on Climate Resilience in Pakistan, **Climate change and Agriculture** under USAID Higher Education System Strengthening Activity, January 23, 2024.
- 26) Invited Speaker at One Day Symposium on UET-ECUST joint Research Venture with Chinese delegation in **Microbial Enhanced Oil Recovery**, VC Conference room, 20<sup>th</sup> December, 2023.
- 27) 3<sup>rd</sup> webinar on **Climate Resilience in Pakistan** organized by USAID's Higher Education System Strengthening Activity (HESSA) December 19, 2023.
- 28) Webinar on **"Disability Inclusion in Higher Education"** under USAID Higher Education System Strengthening Activity, December 06, 2023.
- 29) Invited Speaker at One Day Seminar on **"Revival of Our Commitments With Pakistan Through The Doctrine Of Sir Dr. Allama Mohammad Iqbal"** "at Lahore Chamber Of Commerce and Industry on 13-11-2023.
- 30) Participated in One Day National Conference on **Allam Iqbal: Evolution Of Muslim Nationalism And Iqbal's Ideology For Peace And Stability** At Punjab University On 30-11-2023.
- 31) Selected as **Mentor 2023** for Fulbright Pakistan US Alumni Network
- 32) Invites Speaker at One Day Seminar on **"Character and Personality Buiding"** "at Govt. Jinnah Associate College for women on 03-11-2023.
- 33) Organizer and Speaker at one Day Seminar on **"Educational Philosophy and Pedagogical Insights from the Life of Prophet Muhammad Sallallahu Alaihe Waalaihe Wassalam"** at the Department of Chemistry, UET, Lahore on 18-11-2023.

- 34) Selected in **Five Days Women Leaders In Higher Education Pakistan Program** **Organized by Michigan State University, US** in Collaboration With US Department of State and the US Embassy Pakistan, 9-11, 2023.
- 35) Invited speaker at **Two days Training Workshop on “Data Science with R”**, 27-28<sup>th</sup> September 2023.
- 36) Selected as **Aspiring Women Leader Cohort 2, Michigan State University, United States** for two years Fellowship Program (February 2023-October 2024).
- 37) Organised Periodic Table Week, Department of Chemistry, UET, Lahore, February 20-24<sup>th</sup> February, 2023.
- 38) Nominated researcher for **“Establishing the Pakistan Climate Resilience Research Coordination Network”** (PAK-Climate RCN) under HESSA Program of USAID and University of Utah, United States
- 39) Invited Speaker at Workshop on **“Key Strategies for Securing Research Grants”**, School of Science, UMT, Lahore, August 17, 2023.
- 40) One Day International Symposium on **“Nanotechnology for Green and Sustainable Development”**, sponsored by Fulbright Pakistan-US Alumni Network organized by Chemistry Department UET, Lahore, August 10, 2023.
- 41) One Day International Symposium on **“From Research to Recognition: Strategies for Publishing and Promoting Your Work on the Global Stage”**, March 9, 2023, Department of Chemistry, UET, Lahore.
- 42) Two days International Conference on prevention of trafficking in persons, organized by **Pakistan US Alumni Network**, February 27-28, 2023, Serena Hotel Islamabad.
- 43) Selected for **Mentor Role in Fulbright**, Pakistan-US Alumni Network for Fulbright Scholars Internship Program 2023.
- 44) Two days training on **Environmental and Social Framework**, The World Bank Group in Royal Swiss Hotel, Lahore, Pakistan from October 24-25, 2022.
- 45) Five days **Pak-UK research capacity building training program** under HEC and British Council. Avari Hotel, Lahore, from 9<sup>th</sup> -13<sup>th</sup> May, 2022
- 46) **Youth as Peacebuilders**, Role of Madaris in Promoting Peace and Tolerance, Zoom Webinar, Public Diplomacy Office, June 24, 2022
- 47) **Youth as Peacebuilders**, Role of Youth in Social Cohesion: Core Values & Challenges, Zoom Webinar, Public Affairs Section, US Embassy, April 15, 2022.
- 48) Résumé for Research and Innovation (R4RI), a **Narrative CV Approach**: The what, why and how organisations can engage with it, The Research and Innovation Culture Team, UK Research & Innovation, Monday 21<sup>st</sup> March, 2022.
- 49) Seven days training on **Women in Leadership**, The British Council in collaboration with the Higher Education Commission, Pakistan in Serena Hotel, Islamabad from November 29, 2021 to December 4, 2021.
- 50) **The Climate Action Workshop**, 2021 on Education for climate action: How universities can steer the climate crisis, The British Council in collaboration with the Higher Education Commission, Pakistan at Marriott Hotel, Islamabad on Wednesday, 6<sup>th</sup> October 2021

## **ON GOING ENVIRONMENTAL PROJECTS**

- Indigenous technology development for pilot-scale production of water purification and desalination membranes
- Assessment of Phytofiltration an Eco Friendly Approach for Effective Removal of Heavy Metals from Tanneries Effluent Contaminated Drinking Water
- Green technology development for the large scale production of nanofertilizers and nanopesticides for sustainable agriculture
- .”Sustainable and Eco-Friendly Bio-Adsorbent for the Removal of Drinking Water Pollutants Adjacent to Tannery Industries”
- Fabrication and Analysis of Nanoscale Iron Oxide Particles for Sustainable Water Purification
- Fabrication and evaluation of hydroxyapatite based biodegradable nanocomposite structures for waste water treatment
- Ag, Zn substituted nanoparticles using plant extract and their behavior against photocatalytic degradation of methylene blue
- Nanofabrication of ceramic based biofilters for waste water treatment
- Indigenous synthesis of cu and zn/hydroxyapatite based nanomaterials using chenopodium album for the management of sclerotium rot of chilli
- Bioactive metal doped hydroxyapatite urea hybrid nanofertilizer for controlled release of nutrients

## **ON GOING HEALTHCARE PROJECTS**

- Novel scalable technology for the production of nanoscale biomaterials for healthcare
- Fabrication and characterization of electrospun poly(e-caprolactone)/gelatin biocomposite nanofibrous scaffold for bone tissue engineering
- Biodegradable calcium phosphate based nanocomposite scaffolds for cartilage and bone regeneration
- Biodegradable PCL-PLGA-Brushite Scaffolds for Bone Tissue Engineering
- Novel continuous flow synthesis and antibacterial studies of strontium doped hydroxyapatite nanoscale biomaterials for healthcare applications
- Surface modification of magnetite nanoparticles for Magnetic Hyperthermia applications
- Antimicrobial Studies of Nanoscale Titania Particles made via Green and Chemical Methods
- Fabrication and characterization of electrospun poly(e-caprolactone) /gelatin biocomposite nanofibrous scaffold for bone tissue engineering
- Nanofabrication of the metal oxide- based antimicrobial membrane by employing electrospinning method
- Synthesis and characterization of ultrafine nanofibres of polymethylmethacrylate reinforced nanohydroxy appatite for biomedical applications
- Cultivating Sustainability: A Comparative Study of Hydroxyapatite Nanoparticle Synthesis from Various Green Sources for Biomedical Applications

**GRANTS/FUNDED RESEARCH PROJECTS**

Sr. No.	Project	Funds Allocated Millions Rs.	Funding Agency
1	Indigenous Technology Development for Pilot-scale Production of Water Purification and Desalination Membranes	14.95 M	TTSF (HEC)
2	Hydrogen production and other fuels	0.96 M	OGRA
3	Preserving Our Planet: Strategies for environmental conservation and combatting climate change	0.1 M	PUAN
4	Synthesis of Phosphoric Acid by Using Local Rock Phosphates for Industrial Applications	0.73 M	Industry
5	Development of 3D Mesoporous Metal Oxide Framework: A High Performance Electrocatalyst for Sustainable Energy Production, 16472.	5.9 M	NRPU (HEC)
6	Green Synthesis, Characterization and Comparative Study of Bone Cement for Biomedical Applications	0.56 M	Industry
7	Nanotechnology for Green and Sustainable Development	0.025M	PUAN
8	Fabrication and Performance Evaluation of Biodegradable Biphasic Nanocomposite Scaffolds	5.18 M	NRPU (HEC)
9	HF And Other Fluorinated Compounds Production Using Local Calcium Fluoride	0.66 M	Industry
10	Synthesis of Dicalcium Phosphate from Phosphate Rock for Poultry Applications	0.48 M	Industry
11	Fabrication of pulsating dc magnetron sputter system for the deposition of thin films	1.4 M	UET
12	Novel Synthesis and Evaluation High Purity Calcium Phosphate Nanoceramics For Biomedical Applications	1.5 M	UET

## **TECHNICAL SKILLS**

- X-ray Diffraction Spectroscopy (XRD)
- X-ray Photoelectron Spectroscopy (XPS)
- Scanning Electron Microscopy (SEM)
- Transmission Electron Spectroscopy (TEM)
- UV/Visible Spectroscopy
- FTIR Spectroscopy
- Raman Spectroscopy
- NMR Spectroscopy
- Differential Thermal Analysis (DTA)
- Thermal Gravimetric Analysis (TGA)
- BET Surface Area Analysis
- Electrophoretic Deposition Technique
- Dynamic Light Scattering
- Zeta Potential Measurements
- SQUID Measurements

## **COMPUTER SKILLS**

- ECDL (European Computer Driving License), UK
- Computer Star certificate, Forman Christian College University, Lahore.
- C++ Programming (Basic)
- Coral Draw Graphics Suite 12
- Origin 7.0

## **Administrative Responsibilities**

- Member Board of Studies, Institute of Environmental Engineering and Research UET, Lahore
- Member Environment Safety and Compliance Committee, UET, Lahore
- Member Intellectual Property and Commercialization Committee, UET, Lahore
- Member Sports Committee, UET, Lahore
- Member Academic Council, UET, Lahore
- Member Senate Committee, UET, Lahore
- Member Board of Faculty, UET, Lahore
- Member Funds Investment Committee UET, Lahore
- Member Board of Studies, Chemistry Department, UET, Lahore
- Member Departmental Tenure Review Committee, Chemistry Department, UET, Lahore
- Member Departmental Tenure Review Committee, Chemistry Department, Women University, Sialkot.
- Convener Alumni Reunion Committee, Chemistry Department, UET, Lahore
- Convener Thesis Assessment Committee, Chemistry Department, UET, Lahore
- Convener Industrial Advisory Board, Chemistry Department, UET, Lahore
- Convener, Board of Studies for BS Environmental Science Program, Basic Sciences Department, University of Engineering and Technology.
- Convener Industrial Advisory Board, Environmental Science Program Basic Sciences Department, University of Engineering and Technology.
- Member Board of Studies, Sustainable Development Study Centre, Government College University, Lahore.

- Member Board of Studies, Environmental Management and Policy, Department of Environmental Sciences, Faculty of Life Sciences and Informatics, BUIITEMS, Quetta.
- Council Member, Women in Science Organization, Pakistan
- Ambassador for Fikr e Iqbal Forum

### **CO CURRICULAR ACTIVITIES**

- Head Women sports committee at University of Engineering and Technology
- Debator
- Organizer of events for Speer's Chemical Society
- Won many prizes and Certificates on Quiz Competitions arranged by Queen Mary College Lahore.
- Best Poetess and Compere of Queen Mary and UET.
- Member of Women Sports Committee at Forman Christian College.
- Member of Convocation Committee at Forman Christian College.

### **COMMUNITY SERVICE**

Co-founder of a philanthropic initiative focused on supporting deserving students, marginalized communities, and individuals with disabilities. Actively involved in providing financial, educational, and moral support to help them pursue education, establish small businesses, and lead empowered lives. Dedicated to fostering inclusivity, equality, and positive social change through impactful community service.

### **REFEREES**

Will be provided on demand.