Engr. Dr. Waheed Ahmad



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SUMMARY OF QUALIFICATION

- Ph.D in Engineering 2021
  (Materials Science and Engineering)
  Hanyang University, South Korea
- Masters in Engineering 2012
  (Metallurgical and Materials Engineering)
  University of Engineering & Technology, Lahore, Pakistan
- Bachelors in Engineering 2006
  (Metallurgical & Materials Engineering)
  University of Engineering & Technology, Lahore, Pakistan

WORK EXPERIENCE

Total experience: **More than 19 years**

- Working as ***Assistant Professor*** of ***Metallurgy and Materials Engineering*** at the ***Institute of Advanced Materials, Bahauddin Zakariya University, Multan, Pakistan,*** since **7th August, 2013** to-date
- Worked as ***Lecturer*** at ***Institute of Advanced Materials, Bahauddin Zakariya University, Multan, Pakistan*** from **20th July 2007** to **6th August, 2013.**
- Worked as ***Production Engineer*** at ***Mughal Steel, Sheikhupura Road, Lahore, Pakistan*** from **April 2006 to March 2007.**

ADMINISTRATIVE ASSIGNMENTS

- Performing duties of the **Director (being the Senior Most Teacher)** Institute of Advanced Materials, Bahauddin Zakariya University, Multan w.e.f. **27th May 2024** to **date**.
- Performed duties of the **Director (being the Senior Most Teacher)** Institute of Advanced Materials, Bahauddin Zakariya University, Multan from **3rd March 2022** to **10th February 2023**.

RESEARCH INTERESTS

- Materials engineering, oxide based semiconductor nanocomposites, photocatalytic materials, chemical synthesis of nanocomposites, smart thin films by atomic layer deposition, thermal properties of materials, effective removal of toxic pollutants from waste water, applications of nano-materials as energy materials

TECHNICAL CREDENTIALS

- **Softwares:** Microsoft office tools, Origin Lab, EndNote

- **Experimental:** Chemical synthesis of oxide nanoparticles; surface depositions by SILAR process; thin film coatings by ALD process; structural, optical and thermal analysis of nanocomposites
- **Course on Ultrasonic Flaw Detection in Welds**
  2 Weeks training course on Ultrasonic Flaw Detection at NCNDT Islamabad

AWARDS AND ACHIEVEMENTS

- Awarded with HEC's scholarship **"HRDI Program for Faculty Development of UESTPs" for PhD studies** at Hanyang University, South Korea

RESEARCH PUBLICATIONS

1. Mukhtar Ahmad, Ihsan Ali, Faiza Aen, M.U. Islam, Muhammad Naeem Ashiq, Shabbar Atiq, **Waheed Ahmad**, M.U. Rana, "Effect of sintering temperature on magnetic and electrical properties of nano-sized Co_2W hexaferrites", *Ceramics International 38 (2012) 1267–1273* (IF: 6.0)
2. Shazia Naheed, Farzana Mehmood, Hafiz Badaruddin Ahmad, **Waheed Ahmad**, Ghulam Zakaria, "Synthesis of novel Schiff base doped sol-gel silicas", *J Sol-Gel Sci Technol (2013) 68:294–301* (IF: 4.2)
3. Mukhtar Ahmad, Muhammad Ahmad, Ihsan Ali, **Waheed Ahmad**, Ghulam Mustafa, Majid Niaz Akhtar, Akbar Ali, Ghazanfar Abbas, Mazhar ud-Din Rana, "Temperature dependent structural and magnetic behavior of Y-type hexagonal ferrites synthesized by solegel autocombustion" *Journal of Alloys and Compounds 651 (2015) 749-755* (IF: 6.7)
4. Muhammad Ali, Ehsan Ul Haq, Muhammad R. Abdul Karim, Sajjad Ahmed, Ather Ibrahim, **Waheed Ahmad**, Waqas M. Baig, "Effect of leaching with 5–6 N H_2SO_4 on thermal kinetics of rice husk during pure silica recovery" *Journal of Advanced Research (2016) 7, 47-51* (IF: 17.1)
5. Khair-u-Nisa, Ejaz Ahmed, Waheed Ahmad, "Novel alkali-niobic bismuth germinate glass system" *Journal of Thermal Analysis and Calorimetry 128 (3), 1527-1534, 2017* (IF: 4.1)
6. Aqsa Amir, Shabbar Atiq, **Waheed Ahmad**, Ayisha Saleem, Hafiza Haseebah, "Development and Characterization of $Ni_{55}Ti_{45}$ Shape Memory Alloy for Biomedical Applications" *Physical and Computational Sciences 54 (1): 89–93 (2017)* (IF: 0.16)
7. Summal Zoha, Muneeb Ahmad, Syed Jazib Abbas Zaidi, Muhammad Naeem Ashiq, **Waheed Ahmad**, Tae Joo Park, Muhammad Abdul Basit, "ZnO-based mutable Ag_2S/Ag_2O multilayered architectures for organic dye degradation and inhibition of *E. coli* and *B. subtilis*" *Journal of Photochemistry and Photobiology A: Chemistry 394, 112472, 2020* (IF: 4.4)
8. Zeeshan Tariq, Saira Zahid, **Waheed Ahmad**, Tae Joo Park, Muhammad Abdul Basit, "Strategic separation of metal sulfides from residual wet-chemical precursors for synchronous production of pure water and nanostructured photocatalysts" *Applied Nanoscience 10 (7), 2303-2314, 2020* (IF: 3.14)
9. **Waheed Ahmad**, Muhammad Abdul Basit, Muhammad Saad Khan, Ijaz Ali, Tae Joo Park, "Superior atomic layer deposition of conformal ZnO

shell on spherical SiO_2 particles for enhanced photocatlytic activity" *Physica-E: Low-dimensional Systems and Nanostructures 124,114308, 2020* (IF: 2.5)

10. A. Ibrahim, M. Ali, M. A. Siddiqui, M. Shakeel, **W. Ahmad**, S. Jameel, S. Hayat, M. J. Afzal, A. S. Sheikh, M. A. Imam, and M. A. Arshad, "Microstructural Features and Corrosion behaviour of $Al_{0.5}FeCrNiTi_{0.25-x}Si_x$ High-Entropy Alloys" *Physics of Metals and Metallography, 2021, Vol. 122, No. 10, pp. 1000–1006* (IF: 0.9)
11. Minji Lee, **Waheed Ahmad**,[#] Dae Woong Kim, Kyu Moon Kwon, Ha Yeon Kwon, Han-Bin Jang, Seung-Won Noh, Dae-Ho Kim, Syed Jazib Abbas Zaidi, Hwiyeol Park, Heung Chan Lee, Muhammad Abdul Basit, and Tae Joo Park, "Powder Coatings via Atomic Layer Deposition for Batteries: A Review" *Chemistry of Materials 2022, 34, 8, 3539–3587* (IF: 7.1) (**# 1st author with equal contribution**)
12. Gohar Ali, **Waheed Ahmad,** Navaj Mullani, Muhammad Abdul Basit, Tae Joo Park, "Contrasting photocatalytic performance of quantum-dot sensitized p-type and n-type TiO_2 hierarchical nanocomposites under visible light" *Materials Chemistry and Physics 308 (2023) 128233* (IF: 5.2)
13. Naveed, A., Bukhari, S. M. A., Husnain, N., Balouch, N., Noor, S., **Ahmad, W.**, Sarfraz, S., Wajahat, N., & Siddiqui, F. A. (2024). "Structural Integrity and Cost Analysis of a Connecting Rod for Articulated Robotic Arm using various Stainless Steel and Aluminium Alloys" *Technical Journal, 29(02), 24-34*
14. Asghar Nazir, Sundas Rani, Muhammad Arif, Syed Imran Abbas Shah, Imen Safra, Kiran Tahir, **Waheed Ahmad**, "Three-electrode study and asymmetric device fabrication of $CuZrO_3$/rGO nanohybrid for high performance supercapacitor" *Diamond and Related Materials 156, 2025, 112427* (IF: 5.2)
15. **Waheed Ahmad**, Ijaz Ali, Gohar Ali, Ameer Ali, Syed Jazib Abbas Zaidi, Muhammad Abdul Basit, Tae Joo Park, "Simplified two-step wet-chemical route for the development of visible light efficient TiO_2-SnO photocatalysts" *Applied Physics A, 2026* (IF: 3.0)
16. Asghar Nazir, Sundas Rani, Mahrukh Sadaf, Sara Jameel, **Waheed Ahmad**, "Development of bifunctional SnO_2/V_2O_5 heterostructures for supercapacitor energy storage and water splitting application" *Journal of Materials Science, 2026* (IF: 4.4)
17. Ajmal Shah, Ahmad Raza, Hamdy Khamees Thabet, Farhan Zafar, Muhammad Irfan, Naeem Akhtar, Muhammad Ali Khan, **Waheed Ahmad,** " Machine learning-assisted engineering of dual-metal chalcogenide-MXene based composite for enhanced supercapacitor application" *Journal of Energy Storage, 182, 2026 124995*(IF: 10.7)

OTHER DETAILS

Date of Birth	March 1984
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