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Profile

- Highly self-motivated researcher with demonstrated research expertise in material synthesis for multiple applications.
- Rich experience in synthesis of functionalized controlled shaped metal (oxide) nanoparticles.
- Data analysis and interpretation.
- Scientific writing and presentation.
- Strong interpersonal skills
- Teamwork and collaboration.

Education

- 2019 Ph.D. Materials Science
Shanghai Jiao Tong University, Shanghai, China
- 2013 M. Phil. Physics
Bahauddin Zakariya University, Multan, Pakistan
- 2007 B.S. Physics
Bahauddin Zakariya University, Multan, Pakistan

Thesis Title (PhD)

Alginate-Derived One-Step Synthesis of Carbon Coated Metal Nanoparticles with Controlled Morphologies for Electrochemical Sensing Applications

Experience

Working as Assistant Professor at Bahauddin Zakariya University, Multan, Pakistan

- Working as research supervisor of Ph. D. and Master students.
- Teaching Physics courses to undergraduate and graduate level.
- Receiving positive feedback from students on supervision and teaching style and effectiveness.

Awards

- SJTU International Scholarship for Ph. D.
- Excellent International Student Award from School of Material Science and Engineering, Shanghai Jiao Tong University, Shanghai, China

References

Prof. Jiajun Gu gujiajun@sjtu.edu.cn

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List of Publications

1. **Waseem Abbas**, Naeem Akhtar, Qinglei Liu, Tengfei Li, Imran Zada, Lulu Yao, Raheela Naz, Wang Zhang, Muhammad Ehsan Mazhar, Di Zhang, Dongling Ma, Jiajun Gu, "Facile green synthesis of 3D nano-pyramids Cu/Carbon hybrid sensor electrode materials for simultaneous monitoring of phenolic compounds", *Sensors and Actuators B: Chemical*, 282(2019) 617-25.
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2. **Waseem Abbas**, Qinglei Liu, Naeem Akhtar, Muhammad Ehsan Mazhar, Tengfei Li, Imran Zada, Lulu Yao, Raheela Naz, Muhammad Imtiaz, Wang Zhang, Ali Amjad, Di Zhang, and Jiajun Gu, "Electrochemical Determination of urinary dopamine from neuroblastoma patients based on Cu nanoplates encapsulated by alginate-derived carbon", *Journal of Electroanalytical Chemistry*, 853(2019) 113560.
<https://www.sciencedirect.com/science/article/abs/pii/S1572665719308288>
3. **Waseem Abbas**, Muhammad Ehsan Mazhar, Javed Ahmad, Sohail Ahmad, Hassan M Khan, Imran Khan, Imran Zada...., "Study of the Electrical Properties and Electrochemical Sensing Efficiency of Hydrothermally Synthesized Sr Doped Nickel Oxide Nanomaterials" *Physica Scripta* 97(2022), 075004.
<https://iopscience.iop.org/article/10.1088/1402-4896/ac74ed>
4. **Waseem Abbas**, Ishtiaq Ahmad, M. Kanwal, Ghulam Murtaza, Ihsan Ali, Muhammad Azhar Khan, Majid Niaz Akhtar, Mukhtar Ahmad, "Structural and magnetic behavior of Pr-substituted M-type hexagonal ferrites synthesized by sol-gel autocombustion for a variety of applications", *Journal of Magnetism and Magnetic Materials*, 374(2015) 187-191.
<https://www.sciencedirect.com/science/article/abs/pii/S0304885314007173>
5. Raheela Naz, **Waseem Abbas**, Qinglei Liu, Sameera Shafi, Sehrish Gull, Suleman Khan, Tahir Rasheed, Guofen Song, Jiajun Gu, "Covalent functionalization of electrochemically exfoliated 1T-MoS₂ nanosheets for high-performance supercapacitor electrode," *Journal of Alloys and Compounds*, 951(2023): 169944.
<https://www.sciencedirect.com/science/article/abs/pii/S0925838823012471>
6. Zeeshan Ajmal, Asif Hayat, Muhammad Qasim, Anuj Kumar, Atef El Jery, **Waseem Abbas**, Muhammad Bilal Hussain.... "Assembly of a novel Fe₂TiO₅-impregnated donor- π -acceptor conjugated carbon nitride for highly efficient solar water splitting". *Sustainable Materials and Technologies*, 36(2023): e00594.
<https://www.sciencedirect.com/science/article/abs/pii/S2214993723000295>
7. Basmah H Alshammari, Qasim Ali Raniha, Sohail Ahmad, **Waseem Abbas**, Sana Ullah Asif, Fahim Ahmed, Fatma A Ibrahim, Mohamed S Hamdy, Sayed M Eldin "Structural and magnetic conduct in Sm and Al substituted Ba_{0.9}Sm_{0.1}Fe₁₀Al₂O₁₉ M-type hexaferrites at different sintering temperatures." *Physica Scripta* 98(2023) 065905.
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8. Muhammad Ehsan Mazhar, Muhammad Bilal, Abdul Waheed, Javed Ahmad, Imran Khan, **Waseem Abbas**, ..., "Improved electrical properties of hydrothermally synthesized pure and Fe doped nanocrystalline La₂Mo₂O₉," *Physica Scripta* 96 (2021) 125822.
<https://iopscience.iop.org/article/10.1088/1402-4896/ac237b/pdf>
9. H. M. Khan, S. Mumtaz, A. Waheed, J. Ahmad, M. E. Mazhar, **W. Abbas**, ..., "Enhanced structural and electrical properties of Ca-Ba rare earth substituted m-type hexaferrites", *Journal of Ovonic Research* 17(2021), 165 – 173
https://www.chalcogen.ro/165_KhanHM.pdf
10. Awais Siddique Saleemi, Muhammad Hafeez, Aqsa Munawar, Naeem Akhtar, **Waseem Abbas**, Muhammad Ehsan Mazhar, Zahid Shafiq, Anthony P. Davis and Shern-Long Lee, "Synthesis and Sensing Efficiency of Bioinspired CN Wrapped ZnFe₂O₄ Microspheres-

Ionic Liquid Composite Towards Ultra-High Sensitivity Arsenic(III) Monitoring of Ground Drinking Water", Journal of Material Chemistry C (2020)

<https://pubs.rsc.org/en/Content/ArticleLanding/2020/TC/D0TC01913E#!divAbstract>

11. Muhammad Junaid, Jolly Jacob, Mubashar Nadeem, Muhammad Azhar Khan, Skindar Hayat, Alina Manzoor, Sajjad Ahmad, Sara Musaddiq, **Waseem Abbas**, A. Ali, K. Mahmood & S. Hussain, "Structural, Spectroscopic, Dielectric, and Magnetic Properties of Cu-Co-Co-substituted Manganese Soft Ferrites." Journal of Superconductivity and Novel Magnetism (2020): 1-7.
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12. Muhammad Azhar Khan, Muhammad Qamar uz Zaman, Abdul Majeed, Majid Niaz Akhtar, **Waseem Abbas**, "Structural, spectral, dielectric and magnetic properties of $Sr_2Cu_xNi_{2-x}Fe_{28-x}Cr_xO_{46}$ ($0 \leq x \leq 0.5$) ferrites synthesized via micro-emulsion route", Journal of Materials Chemistry and Physics, 259 (2021): 124066.
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13. Muhammad Imtiaz, Zhixin Chen, Chengling Zhu, Raheela Naz, Imran Zada, Hui Pan, Dawei Wang, **Waseem Abbas**, Salma Nigar, Yao Li, Shenmin Zhu, "Three-dimensional aerogel based on in-situ growth of 1T-MoS₂ on functionalized hierarchical porous carbon/reduced graphene oxide for energy storage", Journal of Applied Surface Science, 506(2020) 144811.
<https://www.sciencedirect.com/science/article/abs/pii/S016943321933627X>
14. Raheela Naz, Qinglei Liu, **Waseem Abbas**, Muhammad Imtiaz, Imran Zada, Javed Ahmad, Tengfei Li, and Jiajun Gu, "One-pot Hydrothermal Synthesis of Ternary 1T-MoS₂/Hexa-WO₃/Graphene Composites for High-Performance Supercapacitors", Chemistry - A European Journal 25(2019): 16054-16062.
<https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/chem.201903336>
15. Raheela Naz, Muhammad Imtiaz, Qinglei Liu, Lulu Yao, **Waseem Abbas**, Tengfei Li, Imran Zada, Yang Yuan, Wenshu Chen, Jiajun Gu, "Highly defective 1T-MoS₂ nanosheets on 3D reduced graphene oxide networks for supercapacitors", Carbon, 152(2019), 697-703.
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16. Tengfei Li, Xudong Yan, Lujun Huang, Jinghan Li, Lulu Yao, Qianying Zhu, Weiqiang Wang, **Waseem Abbas**, Raheela Naz, Jiajun Gu, Qinglei Liu, Wang Zhanga and Di Zhang, "Fluorine-free Ti₃C₂T_x (T = O, OH) nanosheets (~50–100 nm) for nitrogen fixation under ambient conditions", Journal of Materials Chemistry A, (2019).
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17. Lulu Yao, Jiajun Gu, Weiqiang Wang, Tengfei Li, Dongling Ma, Qinglei Liu, Wang Zhang, **Waseem Abbas**, Ashkan Bahadoran, Di Zhang, "Ce⁴⁺ as a facile and versatile surface modification reagent for templated synthesis in electrical applications", Nanoscale, 11(2019) 2138-42.
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23. Ghulam Abbas Ashraf, Lanting Zhang, **Waseem Abbas**, Muhammad Ajmal, Ghulam Murtaza, Mukhtar Ahmad, "Structural, Optical, Dielectric, and Magnetic Characteristics of Nd Ions Substituted $BaFe_{11}(Sn_{0.5}Mg_{0.5})xO_{19}$ M-Type Hexaferrite via Co-precipitation", Journal of Superconductivity and Novel Magnetism, (2019).
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