SALEEM ABBAS

Ada Bahar, Kot Addu, Punjab, Pakistan; Ph: (+92) 3452379202; Email ID: saleemphysics19@gmail.com

Key Achievements

- **Assistant Professor** at University of Agriculture, Faisalabad, Pakistan.
- Developed a track record of **research publications** within last 5 years.
- Designed and completed **3 novel projects** during PhD (2 independently and 1 in collaboration).
- Achieved **CSC scholarship award** to pursue PhD degree in China.
- Succeeded best education **performance awards** of the year 2016, 2017 and 2018, at Hebei University of Technology, China.

Area of Expertise & Interests

Functional materials, 1D & 2D nanomaterials, boron nitride, graphene, graphene quantum dots, sensors and batteries.

Education

PhD Physics (2016-2020)
Hebei University of Technology, China
Thesis: Low dimensional boron nitride nanomaterials: synthesis and properties.

MPhil Physics (2010-2013)
Quaid-I-Azam University, Pakistan
Thesis: Synthesis and characterization of Y doped CuTl-1223 superconductors.

BS Physics (2005-2009)
Bahauddin Zakariya University, Pakistan

Work Experience

Assistant Professor – University of Agriculture, Faisalabad, Pakistan (Sep 2024 – Present)

- Teaching a requisite number of classes at BS levels.
- Providing guidance and supervision to graduate and postgraduate students.
- Co-supervising 5 Master students in their research projects.
- Attending faculty and departmental meetings and providing suggestions for improvement.

Assistant Professor (visiting) – University of Okara, Pakistan (Mar 2021 – Feb 2022)

- Educated a number of classes at BS, MS and PhD levels.
- Demonstrated laboratory experiments to undergraduate and postgraduate students.
- Co-supervised PhD and Master students in final year research projects.

Assistant Professor (visiting) – University of Education Lahore, Multan Campus (Mar 2021 – Jul 2021)

- Taught several courses on nanomaterials, cosmology and physics.
- Successfully completed a 4-months research projects of 2 Master students.
- Providing demonstrations and supervising laboratory experiments of MSc students.

Research Experience

Sustainable and Large-scale Synthesis of Graphene Quantum Dots from Biowaste for Sensors (2021-2022).

- Systematically examined the biomass conversion into a variety of carbon-based materials
- Tried and conducted various methods to prepare graphene quantum dots from biomass waste.
- Employed these nanomaterials as sensing probe for detecting heavy metal ions.
- Scientifically inspected the development of a selective and sensitive sensor.
- Successfully completed the project, leading to several **high impact publications**.

Synthesis and property studies of Boron Nitride (BN) nanotubes and nanosheets (2018-2020).

- Independently designed this novel project, established the lab, experimented and completed on time.
- For the first time, I investigated the role of precursor in the growth of impurity-free BN nanotubes.
- I designed and developed high purity boron nitride nanotubes using O & C dual free precursor, resulting in a **high impact publication**.
- Achieved the final targets of low-cost, high-yield, controllable synthesis, and super hydrophobicity of 2D BN nanosheets, leading to **2 articles in peer reviewed journals.**

Sustainable synthesis of graphene, carbon nanotubes and activated carbon for energy applications *(collaboration, 2019-2022)*.

- Systematically examined the biomass conversion into a variety of carbon-based materials and successfully produced sustainable graphene, GO, rGO, GQDs, CNTs and activated carbon.
- Employed these materials as electrode in vanadium redox flow batteries and sensors.
- Excellent research experience gained through working in collaboration with a team of scientists across the globe, leading to **5 high impact publications**.

Software & Hardware Skills

- Good experience with Jade, ImageJ, DigitalMicrograph®, Origin, CasaXPS and Microsoft Office.
- Independent working experience with a variety of electrochemical setups, high-pressure reactors, optical spectroscopes, UV/Vis, Zeta prob, DLS, SEM, FTIR and BET analyser.
- Great experience of working in collaboration with XPS, TEM and Raman.

Personal Skills

- Proficient in oral and written English communication.
- Developed excellent communication skills through my experience as Assistant Professor.
- Skilled in clear and concise presentation of data, gained through university reports, research publications and presentations in international conferences.
- Great experience to design innovative research projects, acquired by designing 3 PhD projects.
- Excellent working experience with a team of scientists from diverse backgrounds.
- Accepting challenges and seeking trainings for personal growth, already achieved multiple certificates.
- Creativity, critical thinking and scientific problem-solving traits.

Awards & Achievements

- (2024) Honored with a position as **Assistant Professor** at University of Agriculture, Pakistan.
- (2020) **Graduated** with a PhD in Materials Science and **accomplished 12 research articles.**
- (2016-2020) **Fully funded CSC scholarship award** for pursuing PhD degree.

- (2018) Best education **performance awards** of the year 2016/2017/2018.
- (2017) Spoken Chinese language **competition winning award** of Hebei province, awarded by government of Hebei province.
- (2016) Award of the **star of the recreational and sports activities** at Hebei University of Technology.
- (2008) The **vice chancellor prize** by winning the marathon race in B.Z. University, Pakistan.

Oral Presentations and Conference Proceedings

- Participation in 2nd International Conference on Advances in Materials Science, University of Education, Pakistan (October 2021).
- 4th International scientific spring at National Centre for Physicists (NCP), Pakistan **(**5-9 March 2012).
- Nano-Scale electronics devices and systems, Quaid-i-Azam University, Pakistan **(**21-31 May 2012).
- Annual teacher training workshop of Aga Khan University examination board, Pakistan (July 2009).

Research Publications

I have a track record of publications in high repute international journals, view at my Google Scholar Profile. A few recent publications are listed below.

1 A. Abbas, **Saleem Abbas**, et al. (2024), One-step green synthesis of biomass-derived graphene quantum dots as a highly selective optical sensing probe, Materials Today Chemistry, (under review)

2 A. Abbas, Q. Liang, **Saleem Abbas**, et al. (2022) Eco-friendly sustainable synthesis of graphene quantum dots from biowaste as a highly selective sensor, Nanomaterials, 12, 3696.

3 A. Abbas, **Saleem Abbas**, et al. (2021), Effect of electrode porosity on the charge transfer in vanadium redox flow battery, Journal of Power Sources, 488, p. 229411.

4 **Saleem Abbas**, et al. (2020) The two-dimensional boron nitride hierarchical nanostructures: Controllable synthesis and superhydrophobicity, Materials Chemistry and Physics, 240, p. 122145.

5 **Saleem Abbas**, et al. (2018) Synthesis of boron nitride nanotubes using an oxygen and carbon dual-free precursor, RSC Advances, 8(8), p. 3989-3995.

6 **Saleem Abbas**, et al. (2016) High yield synthesis and optical properties of MgF2 nanowires with highaspect ratios. RSC Advances, 6, p. 29818-29822.

7 A. Abbas, **Saleem Abbas**, et al. (2021), Role of precursor microstructure in the development of graphene quantum dots from biomass, Journal of Environmental Chemical Engineering, 9 (5), p.106154.

Referees

- **Prof. Chengchun Tang,** Distinguished Professor of Materials Science, Dean of Graduate School, Hebei university of Technology, Tianjin, China.
  Email: tangcc@hebut.edu.cn

- **Prof. Nawazish Ali Khan,** Chairman Department of Physics, Quaid-i-Azam University, Pakistan**.**
  Email: nawazishalik2@yahoo.com