# Dr. Fozia Shaheen

## Personal Profile

**Assistant Professor, Department of Physics**

**Government College University, Lahore**

**Date of Birth** **20 April, 1984**

**Religion** **Islam**

**Nationality** **Pakistani**

**Marital Status** **Married**

Phone +923347037981

E-mail: foziashaheen@gcu.edu.pk

Current Address: Department of Physics, **Government College University, Lahore**

## Research Objective

My obsession is to explore, to seek a position in a prestigious institution, where I can contribute to the latest research projects and to pull off the assigned tasks. I will try my best to exploit the knowledge and skills lying within me.

## Career & Job Experience

***Assistant Professor, 2019-continued***

***Department of Physics, Government College University, Lahore***

***Lecturer***

***(2012-2019)***

***Department of Physics, Government College University***

***Research Assistant***

**University of Engineering and Technology, Lahore**

***year 2011-2012***

## Educational Qualification

- **PhD (2014 -2019)**

  Fabrication and characterization of Metal incorporated graphene
- **M. Phil Applied Physics** (2011)
  University of Engineering and Technology, Lahore.

  **Research and Thesis**

**"**Fabrication and characterization of ferromagnetic nanotubes"

- **M. Sc Physics** (2006)
  The Islamia University Bahawalpur.

  **Specialization:**
  "Advanced Electronics"

- **B. Sc (Math A, Math B, Physics)** (2004)
  The Islamia University Bahawalpur.

- **F. Sc Pre–Medical** (2002)
  Board of Intermediate and Secondary Education Bahawalpur.

- **Matriculation** (2000)
  Board of Intermediate and Secondary Education Bahawalpur.

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## Research Interest

- Fabrication and characterization of hybrid supercapacitors and electrochemical sensors
- Different Cellular models Morphological analysis
- Photodynamic therapy (PDT)

## Working Experience with Techniques and Equipment

Synthesis and Application of Nanoparticles

Synthesis and Characterization Techniques for metal oxides, Carbon based materials and polymers

Scanning Electron microscopy (SEM), Atomic force microscopy (AFM), XRD, PL, UV spectroscopy,XPS, BET

Command on electrochemical workstation, to perform supercapacitors, OER, HER reaction and electrochemical sensors.

## .List of Publications

**List of Publications**

**1)** Ehtisham Umar, **Fozia Shaheen*,** M. Waqas Iqbal, Mohammed T. Alotaibi, Amel Ayari-Akkari, Ali Akremi, and Eman Kashita. "Plate-Like NiCo2O4 Integrated with g-C3N4 Nanostructures for Hybrid Supercapacitors and Green Energy Technologies." *Progress in Solid State Chemistry* (2025): 100546.

2) Ehtisham Umar, M. Waqas Iqbal, **Fozia Shaheen***, Hameed Ullah, Rizwan Wahab, and Rizwan Ul Hassan. "Synergistic effect of redox-active SrMnO3/g-C3N4 electrode materials for supercapattery hybrid energy storage devices and electrochemical sensing of hydroquinone." *Journal of Power Sources* 640 (2025): 236761.

3) Nimra Mansoor, Hafiz Muhammad Fahad, **Fozia Shaheen*,** Riaz Ahmad, Manawwer Alam, Muhammad Naveed Anjam, Suleman Ahmad, Muhammad Hammad Aziz, Muhammad Kashif Raza, and Syed Mansoor Ali. "A novel ternary Ag@ MnCo-NGO-PVP hybrid composite for high performance asymmetric supercapacitors." *Journal of Energy Storage* 112 (2025): 115509.

4) Ehtisham Umer, M. Waqas Iqbal, **Fozia Shaheen*,** Hameed Ullah, and Rizwan Wahab. "Faradically dominant pseudocapacitive graphitic carbon nitride nanosheets decorated with strontium tungstate nanospheres for supercapattery device and hydrogen evaluation reaction." *Electrochimica Acta* 510 (2025): 145339.

5) Misbah Latif, Mahvish Fatima, Muhammad Asif, Iffat Naz, Taimoor Naeem, Ahsan Sarwar Rana, Farruh Atamurotov, **Fozia Shaheen**"Tetracycline (TC-HCl) antibiotic photodegradation using MgFe2O4/MXene/NiO nanocomposites as potent photocatalysts for environmental remediation." *Materials Letters* (2025): 139032.

6) Ehtisham Umer, M. Waqas Iqbal, **Fozia Shaheen*,** Hameed Ullah, and Rizwan Wahab. "2D-Graphitic Carbon Nitride Nanosheet/Silver Molybdate Nanocomposites: Highly Sensitive Electrochemical Sensor for Sulfamethazine in Real Sample Analysis." *Electrochimica Acta* (2024): 145518.

7) Hassan Shabbir, Hafiz Muhammad Fahad, Rehana Sharif, Annam Butt, Sehar Fatima, **Fozia Shaheen**, Rajan Jose et al. "Synergistic effect of 3D porous tri-metallic MOF based electrode materials for highly stable asymmetric supercapacitors." *Materials Science in Semiconductor Processing* 186 (2025): 109036.

8) Sehar Fatima, Hassan Shabbir, Rehana Sharif, Hafiz Muhammad Fahad, Jin Yang, **Fozia Shaheen*,** Rizwan Wahab, Samina Akbar, and Veeradasan Perumal. "A novel binary composite of CuCoNi-MOF/MoO3 with exceptional capacitance as electrode material for supercapacitors." *Journal of Energy Storage* 99 (2024): 113300.

9) Muhammad Hammad Aziz, Misbah Latif, Muhammad Asif, **Fozia Shaheen,** Hafiz Muhammad Fahad, Jin Yang, Rizwan Wahab, Manawwer Alam, and Qing Huang. "Investigating the potential use of ZnFe2O4/NiO/GO nanocomposite for photocatalytic and next-generation energy applications." *Journal of Energy Storage* 98 (2024): 113000.

10) Umm E Ruman,.Arif Khan, Hafiz Muhammad Fahad, MuhamAsif, **Fozia Shaheen*,** Muhammad Hammad Aziz, Riaz Ahmad, Manawwer Alam, Sadia Sharif, and Saad Afzal. "Biogenic-ecofriendly synthesized SnO2/CuO/FeO/PVP/RGO nanocomposite for enhancing energy density performance of hybrid supercapacitors." *Journal of Energy Storage* 89 (2024): 111643

11) Asma Riaz, **Fozia Shaheen**, Manawwer Alam, Muhammad Tanveer, Qurat-ul Aain, and Ghulam Nabi. "Controlled transformations by Zn-doped Co (OH) 2 dandelions as a novel electrode material for pseudocapacitors." *Materials Science in Semiconductor Processing* 176 (2024): 108311.

12) Snudia Aslam, **Fozia Shaheen***, Riaz Ahmad, Syed Mansoor Ali, and Qing Haung. "Promising AgNiO/rGO/PANI electrodes for uric acid detection and an ideal electroactive material for high performance supercapacitors." *Journal of Energy Storage* 85 (2024): 111065.

13) Muhammad Ahsan Shafique, Ghulam Farid, **Fozia Shaheen**, Zeeshan Zaheer, G. Murtaza, Sadia Sharif, and Riaz Ahmad. "Optimizing energy storage: Carbon implantation in NiO matrix unveils C–NiO's hybrid capacitive and battery-like behavior with enhanced electrochemical performance." *Chemical Physics Letters* 842 (2024): 141213.

14) Hafiz Muhammad Fahad, **Fozia Shaheen*,** RAhmad A. Ifseisi, Muhammad Hammad Aziz, Qing Huang (2024), A 3D hydrangea-like $NiMoO_4$/rGO/PANI hybrid composite for high performance asymmetric supercapacitor, Electrochimi EctaImpact factor 6.6

15) Muhammad Habib, Zahir Muhammad, Yasir Abdul Haleem, Sajid Farooq, Raziq Nawaz, Adnan Khalil, **Fozia Shaheen**, Hamza Naeem, Sami Ullah, and Rashid Khan. "Bridging the gap: An in-depth comparison of the CVT-grown layered transition metal dichalcogenides for supercapacitor application." *Materials Advances* (2024).

16) Misbah Latif, Muhammad Hammad Aziz***, Fozia Shaheen***, Syed Mansoor Ali, Muhammad Asif, and Qing Huang. "Enhanced photocatalysis activity of Co0. 5Mg0. 5Fe2O4/rGO nanocomposites for tetracycline antibiotic degradation." *Materials Letters* 360 (2024): 135756.

17) Fatima noor, Muhammad Hammad Aziz, **Fozia Shaheen*,** Mukhtar Ahmed, Syed Mansoor Ali, and Qing Huang. "Architecture of GO/CoFe2O4/ZnO nanocomposite for efficient fluoride removal: An approach using RSM, ANN and GRU modeling." *Surfaces and Interfaces* 43 (2023): 103583.

18) Hafiz Muhammad Fahad, Riaz Ahmad*, **Fozia Shaheen*,** Syed Mansoor Ali, and Qing Huang. (2023)"Architecture of hybrid electrode by the composition of CoMoO4/rGO/PANI for asymmetric supercapacitors." *Electrochimica Acta* 471: 143393.

19) Muhammad Hammad Aziz , Arif Khan , Hafiz Muhammad Fahad , **Fozia Shaheen *** , Riaz Ahmad , Khurram Mehboob , Qing Huang ,*(2023) NiZrSe3/rGO modulated porous architecture for hybrid featured asymmetric supercapacitors, Journal of energy storage, 63,106982

20) Arif Khan, **Fozia Shaheen*,** Muhammad Roman, Riaz Ahmad, Khurram Mehboob, Muhammad Hammad Aziz Khan, (2023). Highly redox active mesoporous Ni/Co-organic framework as a potential battery type electrode material for high energy density supercapattery. *Journal of Energy Storage*, *58*, 106317.

21) Muhammad Hammad Aziz**, Fozia Shaheen*,** Riaz Ahmad, Arif Khan, Sadia Sharif, Hafiz Muhammad Fahad, and Qing Huang (2023). Facile hydrothermal synthesis of NGO/NiWO3/PANI nanocomposite for durable and high performance hybrid supercapacitors. *Materials Letters*, *333*, 133658.

22) Abdul Raouf Malik, Sadia Sharif, **Fozia Shaheen**, Mansoor Khalid, Yasir Iqbal, Abrar Faisal, Muhammad Hammad Aziz (2022). Green synthesis of RGO-ZnO mediated Ocimum basilicum leaves extract nanocomposite for antioxidant, antibacterial, antidiabetic and photocatalytic activity. *Journal of Saudi Chemical Society*, *26*(2), 101438.

23) **Fozia Shaheen**, Riaz Ahmad, Sadia Sharif, Muhammad Habib, Rehana Sharif, Mahvish Fatima, Changda Wang (2021), "Polyaniline effect on rGO@NiPbTiO3 for enhanced supercapacitor performance", Materials Letters, 284, 129031

24) Muhammad Hammad Aziz, Muhammad Fakhar-e-Alam, Muhammad Atif, Mahvish Fatima, Riaz Ahmad, Atif Hanif (2017). An in vitro study of the photodynamic effectiveness of GO-ag nanocomposites against human breast Cancer cells. *Nanomaterials*, *7*(11), 401.

25) **Fozia Shaheen**, Muhammad Hammad Aziz, Mahvish Fatima, Muhammad Ajmal Khan, Faisal Ahmed, Riaz Ahmad, Muhammad Ashfaq Ahmad (2018). In Vitro cytotoxicity and morphological assessments of GO-ZnO against the MCF-7 Cells: Determination of singlet oxygen by chemical trapping. *Nanomaterials*, *8*(7), 539.

26) Mohamad S AlSalhi., Muhammad Hammad Aziz, M. Atif, Mahvish Fatima, **Fozia Shaheen**, Sandhanasamy Devanesan, and W. Aslam Farooq (2020). Synthesis of NiO nanoparticles and their evaluation for photodynamic therapy against HeLa cancer cells. *Journal of King Saud University-Science*, *32*(2), 1395-1402.

27) Khadija Tul Kubra, Atif Javaid, Rehana Sharif, Ghulam Ali, Fauzia Iqbal, Ayesha Salman, **Fozia Shaheen**, Annam Butt, and Faiza Jan Iftikha (2020). Facile synthesis and electrochemical study of a ternary hybrid PANI/GNP/MnO 2 as supercapacitor electrode material. *Journal of Materials Science: Materials in Electronics*, *31*, 12455-12466

28) Fatima Ibraheem, Muhammad Hammad Aziz, Mahvish Fatima, **Fozia Shaheen**, Syed Mansoor Ali, and Qing Huang (2019). In vitro cytotoxicity, MMP and ROS activity of green synthesized nickel oxide nanoparticles using extract of Terminalia chebula against MCF-7 cells. *Materials Letters*, *234*, 129-133

29) Rizwan Ali, Muhammad Hammad Aziz, Shuang Gao, Muhammad Imran Khan, Fenfen Li, Tahira Batool, **Fozia Shaheen**, and Bensheng Qiu (2022). Graphene oxide/zinc ferrite nanocomposite loaded with doxorubicin as a potential theranostic mediu in cancer therapy and magnetic resonance imaging. *Ceramics International*, *48*(8), 10741-10750

30) Sadia Sharif, G. Murtaza, **Fozia Shaheen**, A. N. Akhtar, M. A. Shafique, M. I. Piracha, and S. Atiq (2021). Effect of Y ions incorporation on structural, morphological and magnetic properties of Bi 1− x Dy x FeO 3 for ferromagnetic applications. *Bulletin of Materials Science*, *44*, 1-12

31) M. Sultan Irshad, Muhammad Hamamd Aziz, Mahvish Fatima, Saif Ur Rehman, M. Idrees, Saba Rana, **Fozia Shaheen**, Ashfaq Ahmed, Muhammad Qasim Javed, and Qing Huang (2019). Green synthesis, cytotoxicity, antioxidant and photocatalytic activity of CeO2 nanoparticles mediated via orange peel extract (OPE). *Materials Research Express*, *6*(9), 0950a4.

32) Sadia Sharif, Ghulam Murtaza, Turgut Meydan, Paul I. Williams, Jerome Cuenca, Shaikh H. Hashimdeen, **Fozia Shaheen**, and Riaz Ahmad (2018). Structural, surface morphology, dielectric and magnetic properties of holmium doped BiFeO3 thin films prepared by pulsed laser deposition. *Thin Solid Films*, *662*, 83-89.

33) Muhammad Hammad Aziz, Mahvish Fatima, Syed Mansoor Ali, M. Atif, Zobia Noreen, Imran Ahmad, **Fozia Shaheen** (2018). In vitro cytotoxicity of magnetic spinel nanoferrites (CoMgFe2O4) against HepG2 cells. *Journal of Nanoelectronics and Optoelectronics*, *13*(2), 251-257

34) Hammad Aziz, Muhammad, M. Fakhar-e-Alam, Mahvish Fatima, **Fozia Shaheen**, Seemab Iqbal, M. Atif, Muhammad Talha (2016). Photodynamic effect of Ni nanotubes on an HeLa cell line. *PloS one*, *11*(3), e0150295.

35) Muhammad Hammad Aziz, Mahvish Fatima, **Fozia Shaheen**, Muhammad Fakhr-e-Alam, Muhammad Afzal, Gerhard Glatting, and Frederik Wenz. (2013). Estimation of Second Cancer Risk after IORT, APBI, m-IMRT and VMAT using NCRP Report 116 for Breast Cancer.International Journal of Scientific and Engineering Research 4(10):540-548

36) Rehana Sharif, Shamaila Shahzadi, **Fozia Shaheen,** Shahzad Naseem, J. Y. Chen, M. Khaleeq-ur-Rahman, Khandim Hussain, and X. F. Han (2013). Nanotube wall thickness dependent magnetization reversal properties of NiFe nanotubes. *Journal of Applied Physics*, *113*(2), 024315

37) Rehana Sharif, Shamaila Shahzadi, **Fozia Shaheen**, Shahzad Naseem, J. Y. Chen, M. Khaleeq-ur-Rahman, Khandim Hussain (2013). Bloch law for ferromagnetic nanotubes. *Applied Physics Letters*, *102*(1), 013114.

**Acadmic Skills**

Supervising 15 M.Phil and 5 PhD students

**M.Phil Thesis**

"Fabrication and characterization of ferromagnetic nanotubes"
**Supervised by: Dr. Rehana Shahid,**
**Professor, Department of Physics UET Lahore.**

**Computer Skills**

- ✓ Microsoft Windows XP and Vista
- ✓ Microsoft Office (MS-Word, Power Point and Excel etc.)
- ✓ C/C++ Language

**Conferences**

- ✓ Life time member of PIP (Pakistan Institute of Physics).
- ✓ Attended the PIP (Pakistan Institute of Physics) International Conference held in Marc
- ✓ h 2011, in UET Lahore.

**Extra-Curricular Activities**

**Responsibilities:** Manage the programmes, Seminars and workshops organized by the society at the Department of Physics, GC University, Lahore

**References**

**Prof. Dr. Shahid Rafique**
**Dean of Science and engineering**
**University of Engineering and Technology (UET)**
**Lahore**

**Prof. Dr. Hassan Shah**
**Professor**

**FC University Lahore, Lahore**

**Dr. Rehana Shahid**
**Professor**
**Department of Physics,**
**University of Engineering and Technology (UET)**
**Lahore**