

Faculty Resumes

Name	Dr. Bushra Begum
Personal	Email: drbushra@wumardan.edu.pk GoogleScholar: https://scholar.google.com/citations?user=11--PyUAAA&hl=en&oi=ao ORCID: https://orcid.org/0000-0003-1452-4676
Experience	<ul style="list-style-type: none"> ● Lecturer in Physical Chemistry, Department of Chemistry, Women University Mardan, Mardan. Contract (October, 2023 to Till date) ● Lecturer in Physical Chemistry, Department of Chemistry, SBBWU, Peshawar. Visiting (November, 2019 to October 2023) ● Lecturer in Physical Chemistry, Department of Chemistry, SBBWU, Peshawar. Contract (November, 2016 to November, 2019)
Honor and Awards	<ul style="list-style-type: none"> ● Certificate of Appreciation as Coordinator, BS Program, Department of Chemistry, SBBWU, Peshawar (2019-2023) ● RS. 1,40,000/- awarded by National Centre of Excellence University of Peshawar, Peshawar, for M.Phil. Project. ● RS. 1,44,000/- awarded by National Centre of Excellence University of Peshawar, Peshawar, for Ph.D. Project.
Memberships	Nil
Service Activity	<ol style="list-style-type: none"> 1. Coordinator, BS Program, Department of Chemistry, SBBWU, Peshawar (2019-2023) 2. Member of Board of Studies, BS Program, Department of Chemistry, SBBWU, Peshawar (2019-2023) 3. Member of Self-Assessment Report, BS Program, Department of Chemistry, SBBWU, Peshawar (2020)
Brief Statement of Research Interest	Conducting Polymers and Composites; Synthesis, Physical, Chemical, and Electrochemical Characterizations, and Application for Energy Storage Devices, (particularly supercapacitors) and Wastewater Treatment

Research Articles

1. Raina Aman Qazi, Nabi Ullah, Naheed Bibi, Rozina Khattak. Nargis Jamila, **Bushra Begum**, Nargis Aman, Farida Rahayu, Abdunnasser M. Karami, Amine functionalized MWCNTs for the removal of mordant black 11 dye, **2023**, 234, 644. *Water, Air, and Soil Pollution*. (IF: 3.8)
2. Huriya Humayun, **Bushra Begum**, Salma Bilal, Anwar-ul-Haq Ali Shah, Philipp Rose, Polyindole embedded nickel/zinc oxide nanocomposites for high-performance energy storage applications, *Nanomaterials*, **2023**, 13, 618. (IF: 5.719)
3. Iqra, Rozina Khattak, **Bushra Begum**, Raina Aman Qazi, Hajera Gul, Muhammad Sufaid Khan, Sanaullah Khan, Naheed Bibi, Changseok Han, Najeeb Ur Rahman, Green Synthesis of Silver Oxide Microparticles Using Green Tea Leaves Extract for an Efficient Removal of Malachite Green from Water: Synergistic Effect of Persulfate, *Catalysts*, **2023**, 13, 227. (IF: 4.501)
4. **Bushra Begum**, Saba Ijaz, Razia Bibi, Rozina Khattak, Raina Aman Qazi, Preparation and Characterization of Activated Carbon@Polyindole Composite for the Effective Removal of Ionic Dye from Water, *Polymers*, **2022**, 14, 3. (IF: 4.967)
5. **Bushra Begum**, Salma Bilal, Anwar-ul-Haq Ali Shah, Philipp Rose, Synthesis, Characterization and Electrochemical Performance of a Redox-responsive Polybenzopyrrole@nickel Oxide Nanocomposite for Robust and Efficient Faradaic Energy Storage, *Nanomaterials*, **2022**, 12, 513. (IF: 5.719)
6. Asmat Ara, Rozina Khattak, Muhammad Sufaid Khan, **Bushra Begum**, Sanaullah Khan, Changseok Han, Synthesis, Characterization, and Solar Photo-activation of Chitosan modified Nickel Magnetite Bio-composite for degradation of Recalcitrant Organic Pollutants in Water, *Catalyst*, **2022**, 12, 983. (IF: 4.501)
7. **Bushra Begum**, Salma Bilal, Anwar-ul-Haq Ali Shah, Philipp Rose, Physical, chemical, and electrochemical properties of redox-responsive polybenzopyrrole as electrode material for faradaic energy storage, *Polymers*, **2021**, 13, 2883. (IF: 4.967)
8. **Bushra Begum**, Anwar-ul-Haq Ali Shah, Salma Bilal, Tunable electrochemical activity of polyaniline salt by doping anion exchange, *Materials International*, **2020**, 2, 0054-0061.
9. Rozina Khattak, Muhammad Sufaid Khan, Shazia Summer, Rizwan Ullah, Humaira Afridi, Zainab Rehman, Summyia Masood, Hamsa Noreen, Raina Aman Qazi, **Bushra Begum**, Kinetics of the oxidation of iodide by dicyanobis(phenanthroline)iron(III) in a binary solvent system, *International Journal of Chemical Kinetics*, **2020**, 53, 1-12. (IF: 1.5)
10. Salma Bilal, **Bushra Begum**, Salma Gul, Anwar-ul-Haq Ali Shah, PANI/DBSA/H₂SO₄: A promising and highly efficient electrode material for aqueous supercapacitors, *Synthetic Metals*, **2018**, 235, 1-15. (IF: 4.0)

Patents

1. Rozina Khattak, **Bushra Begum**, Iqra, Hybrid photocatalyst based on silver oxide embedded polyindole for wastewater treatment, Intellectual Property Organization, Pakistan, 2023. Patent Application No. **596/2023**. (Filed)
2. Salma Bilal, **Bushra Begum**, Salma Gul, Anwar-ul-Haq Ali Shah, Binder free high-performance supercapacitor electrode based on intrinsically conducting polymer, Intellectual Property Organization, Pakistan, **2021**, Patent No. 143483.
3. Anwar-ul-Haq Ali Shah, Salma Bilal, **Bushra Begum**, Process for synthesis of fused heterocyclic ring conjugated polymer, Intellectual Property Organization, Pakistan, 2021, Patent Application No. **74/2021**. (Filed)
4. Anwar-ul-Haq Ali Shah, Salma Bilal, **Bushra Begum**, Philipp Rose, On-pot synthesis of organic-inorganic hybrid nanocomposites with potential energy storage properties, Intellectual Property Organization, Pakistan, 2021. Patent Application No. **545/2021**. (Filed)

Book Chapters

1. Raina Aman Qazi, Nargis Aman, Hajera Gul, **Bushra Begum**, Nargis Jamila, Naheed Bibi, Nabi Ullah, **Chapter 6**, Nanobiotechnology; Application- & Commercialization-CRC Press/Novel polymer based composite materials using biogenic nanoparticles. **2024**, CRC press taylor & francis group, (Accepted)
2. Naheed Bibi, Ayesha, **Bushra Begum**, Nargis Jamila, Raina Aman Qazi, Nargis Aman, **Chapter 2**, Nanobiotechnology; Application- & Commercialization-CRC Press/Mechanistic insights of natural plants and microbial extracts synthesis of metal nanoparticles and nanocomposites, **2024**, CRC press taylor & francis group, (Accepted)

Research Grants and Contracts.	Nil
Other Research or Creative Accomplishments	<ul style="list-style-type: none"> • Seven years' experience of 16 undergraduate and 3 postgraduate Research Theses supervision while few are in progress (2017-till date). • Invited as a Judge of "Science Exhibition" organized by Frontier College for Women, Peshawar, on 29th November, 2019. • Review contributed to the Journal "Ionics", 2024.
Selected Professional Presentations	<ul style="list-style-type: none"> • Seminar on "Energy Crisis in Pakistan", 17th May, 2023. • "Two-day workshop on Effective Oral and Poster Presentation", 18-19th May, 2022. • "5-Days Training on "The Art of Scientific Writing", 9-13th May, 2022. • "Two-day workshop on Skills Development on Academic and Scientific Writing", 6-7th April, 2022. • "Two day workshop on "Promoting Research Excellence in Academics across Pakistan", 1st and 2nd February, 2022. • "The Importance of Quality & Quantity of Water in our Life, World Water Day Theme 2021: Valuing Water", 12th April, 2021. • Two-day national seminar on "Healthy food: A tool for quality life", April 18-19, 2019. • Two-day workshop on "Thesis/article writing skills and EndNote (a citation management tool)", December 12-13, 2018. • One day seminar on "atmospheric chemistry and health impact of air pollution", 15th March, 2018. • One day seminar on "Quran, chemistry and biomimicry", 6th April, 2017. • Five days training workshop on "inferential and descriptive research analysis through SPSS" from 17th to 21st April, 2017. • Two-day workshop on Entrepreneurship, Innovation and Commercialization July, 2016. • 5th Innovation to invention summit, university of Haripur November, 2015. • Recent advances and new horizons in chemistry April, 2015. • One day workshop on the use of digital library February, 2015. • Two days seminar on research paper writing December, 2014. • One day guiding workshop and panel discussion on M.Phil./Ph.D. admission to completion April, 2014.