Curriculum Vitae

Dr. Saba Jamil, PhD

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PROFESSIONAL EXPERIENCE

Current Position
Assistant Professor of Physical Chemistry (TTS) **02 February 2015 -- Till Date**
University of Agriculture Faisalabad Pakistan

Post Doc
Fulbright Post Doc Fellow at Cornell University, Ithaca, New York, USA **10 March 2020- 9 March 2021**
Assistant Professor of Physical Chemistry (IPFP) **22 October 2013 - 21 October 2014**
Department of Chemistry, **University of Sargodha** (Pakistan)

EDUCATION

1. **PhD**, Physical Chemistry/Material Science **2009-2013**
   Harbin Engineering University (Harbin, Heilongjiang, China)
   Advisor: Prof. Jing Xiaoyan
   Thesis**: Morphologically controlled fabrication, characterization and applications of metal (cobalt, iron and zinc) oxide micro and nanomaterials**

2. **MSc**, Physical Chemistry **2005 – 2007**
   University of Sargodha (Pakistan)
   Advisor: Prof. Dr. Muhammad Ali
   Thesis: **The synthesis and kinetic studies of ferric complexes with benzoic acid and its derivatives**

3. **BSc (Major Chemistry, Botany and Zoology)** **2003– 2005**
   University of Sargodha, Government College for Women (Sargodha, Pakistan)

4. **FSc Pre-Medical** **2001–2003**
   Board of Intermediate & Secondary Education (Sargodha, Pakistan)
5. **SSC, Science Group**
   Board of Intermediate & Secondary Education (Sargodha, Pakistan) 1**999-2001**

FELLOWSHIPS

Fulbright Post Doc Fellowship Award
2019-2020

CSC PhD Scholarship by the Chinese Scholarship Council 2009 – 2013

RESEARCH AND DEVELOPMENT GRANT FUNDING

1. "Preparation and commercialization of coated micronutrients and control release fertilizers for improving yield and quality of crops" research grant of Rs. 44.947/- millions by Punjab Agriculture Research Board (PARB Project No 20-419) (Team leader 1) (In progress)
2. "Fabrication of New Generation of Novel Intelligent Nano-Supplements (Nano Fertilizers) For the Crops: The Future of Agriculture" Fulbright Post Doc Research Grant of $ 38,295/- at Cornell University for research, Ithaca, New York, USA from March 10 2020 to March 9, 2021. **(Completed)**
3. "Synthesis of metal oxide nanoparticles, their surface modification (CTAB and PEG) and applications in sustained drug delivery" of amount Rs. 0.39/- million, funded by HEC. **(Completed) (Principal Investigator)**
4. "Synthesis and biological activities of novel bio-inspired drug-oriented compounds via regio selective cross coupling reactions" of amount Rs. 12.3/- million by HEC under NRPU Program **(In Progress) (Co-principal investigator)**
5. Higher Education Commission (HEC), Pakistan funding for financial assistance of sample characterization under Access to Scientific Program (ASIP, Award Letter No. 20-2(14)/ASIP/R&D/ HEC/18/000914(NTU, Fbd)/32) of amount 70,000 rupees by HEC "Access to Scientific Instrumentation" program. **(Completed)**

Patents

1. Methods for catalytically reducing a nitro compounds, **US Patent, US20230201807A1, status, Published online.**

2. Dumbbell-shaped calcium hydroxide nanoparticles, an enhanced fuel comprising the nanoparticles, and a method for making, , **US Patent, US11613472B2, Patent date: 28 March 2023, status: active.**

3. Morphologically controlled synthesis of ferric oxide nano/micro particles, **US Patent, US11628423B2, Patent date: 18 April 2023, Status: Active**

4. Method for making mesoporous magnesium hydroxide nanoplates, an antibacterial composition, and a method of reducing nitroaromatic compounds, **US Patent, US20220144656A1, Patent date: 12 May 2022, Status: active**

5. Graphene oxide and cobalt tin oxide nanocomposite and method of use , **US Patent, US10882029B1, January 5, 2021. Status: Active**

6. Cobalt hydroxystannate nanocube fuel additive, **US Patent, 10808193B2, October 20, 2020. Status: Active**

RESEARCH PUBLICATIONS

1. **Saba Jamil**, Rabia Afzal, Shanza Rauf Khan, Mehwish Shabbir, Norah Alhokbany, Songnan Li and Muhammad Ramzan Saeed Ashraf Janjua, Photocatalytic degradation of indigo carmine dye by hydrothermally synthesized graphene nanodots (GNDs): investigation of kinetics and thermodynamics, **RSC Advances**, 2024, 14, 23973–23986. (IF = 3.9)
2. Sania Sarwar, Sarmed Ali, Shanza Rauf Khan, **Saba Jamil**, Sidra Farooq, Touseef Jafar, Muhammad Jamshed Latif & Hamza Shehroz, Marriage of Green Technology and Chemistry – bismuth-based nanoparticles: aremarkable combination, **Environmental Technology Reviews**, 2024, 13, 544–571. (IF = 6.9)
3. Muhammad Jamshed Latif, Sarmed Ali, **Saba Jamil**, Shamsa Bibi, Touseef Jafar , Ammara Rasheed, Sadia Noreen, Arslan Bashir, Shanza Rauf Khan, Comparative catalytic reduction and degradation with biodegradable sodium alginate based nanocomposite: Zinc oxide/N-doped carbon nitride/sodium alginate, **International Journal of Biological Macromolecules**, 2024, 254, 127954. (IF = 7.7)
4. Muhammad Tariq Aziz, Waqas Amber Gill, Muhammad Kaleem Khosa, **Saba Jamil** and Muhammad Ramzan Saeed Ashraf Janjua, Adsorption of molecular hydrogen (H_2) on a fullerene (C_{60}) surface: insights from density functional theory and molecular dynamics simulation, **RSC Advances**, 2024, 14, 36546–36556. (IF = 3.9)

5. Ammara, Sadia Noreen, Sarmed Ali, **Saba Jamil**, Shamsa Bibi, Muhammad Jamshed Latif, Shanza Rauf Khan, CuO/PANI nanocomposite: an efficient catalyst for degradation and reduction of pollutants, **Polymer Bulletin**, 2024, 81:15153–15182. (IF = 3.1)
6. Asima Saif, Sarmed Ali, **Saba Jamil**, Tahseen Kamal, Muhammad Jamshed Latif, Shanza Rauf Khan, Comparison of Catalytic Applications of CaO-Ag Bimetallic Nanoparticles and Its Composite: CaO-Ag/Na-alg/PANI, **Journal of Inorganic and Organometallic Polymers and Materials**, (2024). https://doi.org/10.1007/s10904-024-03460-2 (IF = 3.9)
7. Hamza Shehroz, Sarmed Ali, Guria Bibi, Tahreem Khan, **Saba Jamil**, Shanza Rauf Khan, Muhammad Hashaam and Saman Naz, Comparative investigation of the catalytic application of α/β/γ- MnO_2 nanoparticles synthesized by green and chemical approaches, **Environmental Technology,** 2024, 45(6) 1081–1091 (IF = 2.2)
8. Pai Wang, Zitong Wang, Peisen Wang, Aadil Nabi Chishti, Hongxu Zhang, Jianhang Shi, Lubin Ni, **Saba Jamil**, and Yongge Wei, Supramolecular self-assembly of polyoxometalates and cyclodextrin: Progress and perspectives, **Polyoxometalates**, 2024, 3, 9140047.
9. Shanza Rauf Khan, Sajid Ali, Wardah Burhan, Sarmed Ali, **Saba Jamil**, Shamsa Bibi, Naila Bilal, Sabahat Naseem, Muhammad Jamshed Latif, Comparison effects of gelation on sodium alginate–iron oxide nanocomposites for efficient catalytic degradation of organic dyes, **Applied Nanoscience**, 2024, 14, 875–889.
10. **Saba Jamil**, Shanza Rauf Khan, Sarmed Ali, Shamsa Bibi, Rais Ahmad Khan, Waqas Amber Gill, MRSA Jannjua, Synthesis of calcium-bismuth layered double hydroxide (LADH) nanoparticles: Applications as photo-catalyst and fuel additive, **Inorganic Chemistry Communications,** 2023, 157, 111331. (IF=3.8)
11. **Saba Jamil**, Afaaf Rahat Alvi, Shamsa Bibi, Nazish Jahan, Syed Ali Raza Naqvi, Shanza Rauf Khan, Khalid Mahmood Zia, MRSA Janjua, Synthesis, characterization, and applications of cobalt bismuth layered double hydroxide nanoparticles: Physical insights towards a potential material as fuel additive and photocatalyst, **J Phys Org Chem**. 2023;e4500. (IF=2.155)
12. **Saba Jamil,** Ghulam Zahra, Muhammad Ramzan Saeed Ashraf Janjua, Morphologically controlled synthesis, characterization, and applications of molybdenum oxide (MoO_3) nanoparticles, **Journal of Physical Organic Chemistry, Early View** , e4477 (IF=2.155)
13. Songnan Li, Tianyu Mo, Lei Chen, Feng Zhang, Saba Jamil, Yuli Lu, Qinghai Ca, Hierarchical MgAl-layered double hydroxide growth on porous MgO template for pollution removal, **Environmental Progress & Sustainable Energy,** 2022, 41, 6 e13907. (IF=2.824)

14. H Iqbal, N Jahan, KU Rahman, **Saba Jamil**, Formulation and characterisation of *Azadirachta indica* nanobiopesticides for ecofriendly control of wheat pest *Tribolium castaneum* and *Rhyzopertha dominica,* **J Microencapsul.** *2022 Dec 15:1-16. doi: 10.1080/02652048.2022.2149870.* (IF=4.034)
15. Iqra Shahbaz, **Saba Jamil**, Shamsa Bibi, Shanza Rauf Khan, MRSA Janjua ,Recent advances in morphologically controlled synthesis of graphene oxide-based nanocomposite as catalyst and fuel additive, **Journal of Physical Organic Chemistry**,2022, 35, 10, e4409 (IF=2.155)
16. G Bibi, S R Khan, S Ali, **Saba Jamil**, S Bibi, H Shehroz, *Role of capping agent in the synthesis of zinc–cobalt bimetallic nanoparticles and its application as catalyst and fuel additive***, Applied Nanoscience**, 2022,12, 2169–2181. (IF= **3.869**)
17. M B Zeshan, N Sultana, MI Tariq, **Saba Jamil**, MRSA Janjua, *Physicochemical insights and in silico designing of new fullerene-free acceptor molecules for highly efficient and stable organic solar cells*, **Journal of Physics and Chemistry of Solids** , 169, 2022, 110842. (IF=**4.383**)
18. H Shehroz, S Ali, G Bibi, T Khan, **Saba Jamil**, SR Khan, M Hashaam, S Naz, *Comparative investigation of the catalytic application ofα/β/γ-MnO2nanoparticles synthesized by green and chemicalapproaches,* Environmental Technology, 2022, https://Doi.Org/10.1080/09593330.2022.2137437(IF=**3.475**)
19. M Hashaam, S Ali, T Khan, M Salman, SR Khan, A I Aqib, T Zaheer, S Bibi, Saba Jamil, M S. Al-Sharif, Samy F. Mahmoud and W Yao, *Assembly of Smart Microgels and Hybrid Microgels on Graphene Sheets for Catalytic Reduction of Nitroarenes***, Catalysts**, 2022, 12, 1172. https://doi.org/10.3390/catal12101172. (**IF=4.501**)
20. Qurat Ul Ain, Sarmed Ali, **Saba Jamil**, Shamsa Bibi, Shanza Rauf Khan, Shafiq Ur Rehman, Guria Bibi, Tahreem Khan, Hamza Shehroz, Muhammad Hashaam, MRSA Janjua, Comparison of catalytic and fuel additive properties of bimetallic nanoparticles and its composite: $FeMnO_3$ and PANI-$FeMnO_3$, **Materials Science in Semiconductor Processing**, 144, 2022, 106630. (IF=4.644)
21. Shafiq Ur Rehmana, Makhvela Anwer, Shamsa BiBi, **Saba Jamil**, Muhammad Yasin, Shanza Rauf Khan, Raziya Nadeem, Sarmed Ali, Ran Jia, DFT analysis of different substitutions on optoelectronic properties of carbazole-based small acceptor materials for Organic Photovoltaics, **Materials Sciencein Semiconductor Processing**, 140, 2022, 106381. (IF=4.644)
22. Saman Naz, Guria Bibi, **Saba Jamil**, Shafiq Ur Rehman, Shamsa Bibi Sarmed Ali, Tahreem Khan, Shanza Rauf Khan, MRSA Janjua, Preparation of manganese-doped tin oxide nanoparticles for catalytic reduction of organic dyes, Chemical Physics Letters, 802, 2022, 139768. (IF=2.719)
23. M Y Mehboob, R Hussain, F Younas, **Saba Jamil**, M MA Iqbal, K Ayub, N Sultana, MRSA Janjua, Computation Assisted Design and Prediction of Alkali-Metal-Centered B12N12 Nanoclusters

for Efcient H2 Adsorption: New Hydrogen Storage Materials, **Journal of Cluster Science,** 2022, https://doi.org/10.1007/s10876-022-02294-7 (IF=3.447)

24. SJUH Shah, **Saba Jamil**, S Ali, S R Khan, and MRSA Janjua, *Synthesis of Rod Like Chromium/Manganese Layer Double Hydroxide and Applications*, **Russian Journal of Physical Chemistry A**, 2022, 96, 1215–1227**. (IF=0.791)**

25. M Haroon, **Saba Jamil** , M B Zeshan, N Sultana, M I Tariq and MRSA Janjua, *Photovoltaic properties of hole transport materials for organic solar cell (OSC) applications: physiochemical insight and in silico designing*, **Australian Journal of Chemistry***,* 75(6) 399-411 https://doi.org/10.1071/CH22029. **(IF=1.22)**

26. M Y Mehboob, R Hussain, **Saba Jamil,** M Ahmed, M U Khan, M Haroon, MRSA Janjua, Physical-organic aspects along with linear and nonlinear optical properties of benzene sulfonamide compounds: Insilico analysis, **Journal of Physical Organic Chemistry,** 2022, 35, e4313. (IF=2.155)

27. Fatiqa Zafar, Nazish Jahan, Shaukat Ali, **Saba Jamil**, Riaz Hussain and Saba Aslam, Enhancing pharmaceutical potential and oral bioavailability of Allium cepa nanosuspension in male albino rats using response surface methodology, **Asian Pacific Journal of Tropical Biomedicine**, 2021, 12(1), 26-38. **(IF=1.72)**

28. Shanza Rauf Khan, Sarmed Ali, Burhan Ullah, **Saba Jamil,** Tanzeela Zanib, Synthesis of iron nanoparticles in poly(N-isopropylacrylamide-acrylic acid) hybrid microgels for catalytic reduction of series of organic pollutants: A first approach, **Journal of Nanoparticle Research** 2020, 22:192. DOI: 10.1007/s11051-020-04924-5 **(IF=2.533)**

29. **Saba Jamil**, T. Tariq, S. R. Khan, M. A. Ehsan, A. Rehman & MRSA. Janjua, Structural Characterization, Synthesis and Application of Zincite Nanoparticles as Fuel Additive, Journal of Cluster Science, 2021, DOI: 10.1007/s10876-021-02047-y (Cat: X, ISSN: 1572-8862,1040-7278, (IF=3.447)

30. MRSA Janjua, M. U. Khan, M. Khalid, N. Ullah, R. Kalgaonkar, K. Alnoaimi, N. Baqader, **Saba Jamil,** Theoretical and Conceptual Framework to Design Efficient Dye Sensitized Solar Cells (DSSCs): Molecular Engineering by DFT Method, Journal of Cluster Science, 2021, 32, 243–253. (Cat: X, ISSN: 1572-8862,1040-7278, (IF=3.447)

31. **Saba Jamil,** Z. Ahmad, M. Ali, S. R. Khan, S. Ali, M. A. Hammami, M. Haroon, T. A. Saleh, MRSA. Janjua. Synthesis and characterization of polyaniline/nickel oxide composites for fuel additive and dyes reduction. Chemical Physics Letters, 2021. 776, 138713, 1-11. (Cat: X, ISSN: 0009-2614,(IF=2.8)

32. S. Ali, S. J. H. Shah, **Saba Jamil**, S. Bibi, M. U. Shah, A. I. Aqib, T. Zaheer, S. R. Khan, MRSA. Janjua. Zirconium nanoparticles-poly (N-isopropylacrylamide-methacrylic acid) hybrid microgels decorated graphene sheets for catalytic reduction of organic pollutants. Chemical Physics Letters, 2021. 780, 13915, 1-8. (Cat: X, ISSN: 0009-2614, ,(IF=2.719)

33. N. Sultana, M. I. Tariq, U. Siddique, M. Farooq, M. U. Khan, **Saba Jamil**, MRSA. Janjua, Theoretical Investigation of Jack-in-the-Box Electro-Optical Compounds: In-Silico Design of Mixed-Argon Benzonitriles Towards the Template of Clusters, Journal of Cluster Science, 2021, In Press. (Cat: X, ISSN: 1572-8862,1040-7278, IF=3.447)

34. B. Ullah, S. R. Khan, S. Ali, **Saba Jamil,** Synthesis, Parameters, Properties and Applications of Responsive Molecularly Imprinted Microgels: A Review, Reviews in Chemical Engineering, 2020, Manuscript # revce.2020.0030.R3 (Cat: W, ISSN: 0167-8299,2191-0235, (IF=8.742)

35. B. Ullah, S. R. Khan, S. Ali, **Saba Jamil** and MRSA. Janjua, 4-Nitrophenol Imprinted Core-Shell Poly(N-isopropylacrylamide-acrylic acid)/Poly(acrylic acid) Microgels Loaded with Cadmium Nanoparticles: A Novel Catalyst, Materials Chemistry and Physics, 2020, 260, DOI: 10.1016/j.matchemphys.2020.124156. (Cat: W, ISSN: 0254-0584, IF=4.778)

36. **Saba Jamil,** F. Farooq, S. R. Khan and MRSA. Janjua, Synthesis of WSe2 nano-rods by selenium powder precursor for photocatalytic application and fuel additive, Journal of Cluster Science, 2020, DOI: 10.1007/s10876-020-01874-9 (Cat: X, ISSN: 1572-8862,1040-7278, IF=3.447)

37. S. R. Khan, S. Ali, G. Zahra, **Saba Jamil**, MRSA. Janjua, Synthesis of monetite micro particles from egg shell waste and study of its environmental applications: Fuel additive and catalyst, Chemical Physics Letters 2020, 755, 137804. DOI:10.1016/j.cplett. 2020.137804 (Cat: X, ISSN: 0009-2614, IF=2.719)

38. S. R. Khan, S. Ali, B. Ullah, **Saba Jamil**, and T. Zanib. Synthesis of Iron Nanoparticles in Poly (N-Isopropylacrylamide-Acrylic Acid) Hybrid Microgels for Catalytic Reduction of Series of Organic Pollutants: A First Approach. Journal of Nanoparticle Research 2020, 22:192. DOI: 10.1007/s11051-020-04924-5 (Cat: X, ISSN: 1388-0764,1572-896X, IF=2.533)

39. N. F. Zubair, **Saba Jamil**, S. Fatima, S. R. Khan, M. U. Khan, MRSA. Janjua, Synthesis of needle like nano composite of rGO-Mn2O and their applications as photo-catalyst, Chemical Physics Letters 2020, 757, 137874. DOI:10.1016/j.cplett.2020.137874 (Cat: X, ISSN: 0009-2614, IF=2.719)

40. I. Mukhtar, S. Ali, **Saba Jamil**, S. U. Rehman, S. R. Khan, Engineering of Cobalt Sulfide (Co5S2) Microcubes for Selective Catalytic Hydrogenation of Nitroarenes and Enhanced Calorific Value of Fuel, 2020, Chemical Physics Letters. DOI: 10.1016/j.cplett.2020.137649 (Cat: X, ISSN: 0009-2614, IF= 2.719)

41. Shanza Rauf Khan, **Saba Jamil,** Shamsa Bibi, Sarmed Ali, Tanzila Habib & Muhammad Ramzan Saeed Ashraf Janjua, A Versatile Material: Perovskite Bismuth Ferrite Microparticles as a Potential Catalyst for Enhancing Fuel Efficiency and Degradation of Various Organic Dyes, **Journal of Inorganic and Organometallic Polymers and Materials**, 2020**,** 30, 3761–3770 (**IF=3.518**)

42. S. R. Khan, S. Kanwal, M. Hashaam, **Saba Jamil**, B. Ullah and MRSA. Janjua, Investigation of catalytic and fuel additive applications of copper/ copper(I) oxide/copper(II) oxide (Cu/CuO/Cu2O) microspheres synthesized by hydrothermal method using sucrose as template, Materials Research Express, 2020, 7, 025036. (Cat: X, ISSN: 2053-1591, IF=2.025)

43. **Saba Jamil**, S. R. Khan, A. R. Alvi, F. Kausar, S. Ali, S. A. Khan, M. Naim, A. Malik, MRSA. Janjua, Morphologically controlled synthesis, characterization and application of zinc-aluminum layered double hydroxide nano needles, Chemical Physics, 2020, 528, 110530. (Cat: X, ISSN: 0301-0104, IF = 2.552)

44. S. R. Khan, **Saba Jamil**, M. Mustaqeem, MRSA. Janjua, Template Free Synthesis of Calcium-Tin (CaSn3) Bimetallic Micro Cubes: Characterization, Catalytic Activity, Adsorption and Additive Properties, Chemical Physics Letters, 2020, 739, 136917. (Cat: X, ISSN: 0009-2614, IF = 2.719)

45. S. R. Khan, **Saba Jamil,** S. Ali, S. A. Khan, M. Mustaqeem, MRSA. Janjua, Synthesis and struture of calcium-tin hybrid microparticles from egg shell and investigation of their thermal behavior and catalytic application, Chemical Physics, 2020, 530, 110613. (Cat: X, ISSN: 0301-0104, IF = 2.552)

46. M. U. Khan, R. Hussain, M. Y. Mehboob, M. Khalid, Z. Shafiq, M. Aslam ,A. A. Al-Saadi, **Saba Jamil**, MRSA. Janjua, In Silico Modeling of New "Y-Series"-Based Near-Infrared Sensitive Non-Fullerene Acceptors for Efficient Organic Solar Cells, ACS Omega, 2020, 5, 24125−24137. (Cat: W, ISSN: 2470-1343, IF=4.132)

47. S. R. Khan, A. Naeem, **Saba Jamil,** A. I. Aqib, MRSA. Janjua, Synthesis of Manganese-Tin Oxide Microparticles by Solvothermal Method and Study of Application as Catalyst and Additive, Environmental Technology, 2019, DOI: 10.1080/09593330.2019.1660414 (Cat: X, ISSN: 1479-487X,0959-3330, (IF=3.475)

48. N F Zubair, **Saba Jamil**, H N Bhatti, M Shahid, *A comprehensive thermodynamic and kinetic study of synthesized rGO-ZrO2 composite as a photocatalyst and its use as fuel additive*, **Journal of Molecular Structure**, 1198 (2019) 126869. **(IF=3.841)**

49. M. Shoaib, SU. Rehman, S. Bibi, I. Ullah, **Saba Jamil**, J. Iqbal, Asma A. U Saeed and F. Q. Bai, Theoretical Investigation of Perylene Diimide derivatives as Acceptors to Match with Benzodithiophene based Donors for Organic Photovoltaic Devices, Zeitschrift für Physikalische

Chemie, 2019, 1451. DOI: 10.1515/zpch-2019-1451 Online ISSN: 2196-7156 (Cat: X, ISSN: 0942-9352, IF=4.315)

50. S. R. Khan, **Saba Jamil**, H. Rashid, S. Ali, S. A. Khan, MRSA. Janjua, Agar and egg shell derived calcium carbonate and calcium hydroxide nanoparticles: Synthesis, characterization and applications, Chemical Physics Letters, 2019, 732, 136662. (Cat: X, ISSN: 0009-2614, IF = 2.719)

51. **Saba Jamil**, A. R. Alvi, S. R. Khan, MRSA. Janjua, Layered double hydroxides (LDHs): Synthesis & applications, Progress in Chemistry, 2019, 31 (2/3), 394-412. (Cat: Y, ISSN: 1005-281X, IF = 1.17)

52. S. Sarfraz, S. Ali, S. A. Khan, K. H. Shah, S. Amin, M. Mujahid, **Saba Jamil,** MRSA. Janjua, Phase diagram and surface adsorption behavior of benzyl dimethyl hexadecyl ammonium bromide in a binary surfactant-water system, Journal of Molecular Liquids, 2019, 285, 403-407. (Cat: W, ISSN: 1873-3166,0167-7322, IF=6.633.

53. M. U. Khan, M. Ibrahim, M. Khalid, **Saba Jamil,** A. A. Al-Saadi, MRSA. Janjua, Quantum chemical designing of indolo [3,2,1-jk] carbazole-based dyes for highly efficient nonlinear optical properties, Chemical Physics Letters, 2019, 719, 59-66. (Cat: X, ISSN: 0009-2614, IF=2.719)

54. S. R. Khan, M. Batool, **Saba Jamil,** S. Bibi, S. Abid, MRSA. Janjua, Synthesis and characterization of Mg–Zn bimetallic nanoparticles: Selective hydrogenation of p-nitrophenol, degradation of reactive carbon black 5 and fuel Additive, Journal of Inorganic and Organometallic Polymers and Materials, 2019, DOI: 10.1007/s10904-019-01202-3 (Cat: X, ISSN: 1574-1443,1574-1451, IF=3.518

55. S. R. Khan, S. Abid, **Saba Jamil**, A. I. Aqib, M. N. Faisal, and MRSA. Janjua, Layer by layer assembly of zinc oxide nanotubes and nanoflowers as catalyst for separate and simultaneous catalytic degradation of dyes and fuel additive, ChemistrySelect, 2019, 4, 5548-5559. (Cat: X, ISSN: 2365-6549, IF=2.307)

56. S. R. Khan, **Saba Jamil,** M. Zahid and M. Shahid, Investigation of role of urea in morphologically controlled synthesis of calcium-bismuth bimetallic nanoparticles from chicken egg shells and its catalytic and fuel additive applications, Journal of the Chinese Chemical Society, 2019, DOI:10.1002/jccs.201900076. (Cat: X, ISSN: 0009-4536,2192-6549, IF=1.753)

57. U. Kamran, H. N. Bhatti, M. Iqbal, **Saba Jamil**, M. Zahid, Biogenic synthesis, characterization and investigation of photocatalytic and antimicrobial activity of manganese nanoparticles synthesized from Cinnamomum verum bark extract, Journal of Molecular Structure, 2019, 1179, 532-539. (Cat: X, ISSN: 0022-2860, IF= 3.841

58. SR Khan, Saba Jamil, S Li, and A Sultan, *Acrylic Acid and Methacrylic Acid Based Microgel Catalysts for Reduction of 4-Nitrophenol,* **Russian Journal of Physical Chemistry A**, 2018, 92, 13, 2656–2664**(IF=0.791)**

59. M. Hanif, M. Rafiq, M. Saleem, M. Mustaqeem, **Saba Jamil**, MRSA. Janjua, Chromogenic and Fluorogenic Detection of Copper Ions in the Solution and Intracellular Media, Journal of the Chinese Chemical Society, 2018, 66, 500-505. (Cat: X, ISSN: 0009-4536,2192-6549, IF=1.753)

60. F. Shahid, N. Jahan, K. Rahman, B. Sultana, **Saba Jamil**, Identification of Hypotensive Biofunctional Compounds of Coriandrum sativum and Evaluation of their Angiotensin Converting Enzyme (ACE) Inhibition Potential, Oxidative Medicine and Cellular Longevity, 2018, 4643736, 1-11. (Cat: W, ISSN: 1942-0994,1942-0900, IF=7.310)

61. **Saba Jamil**, H. Ahmad, S. Rehman, S. R. Khan, MRSA. Janjua, The first morphologically controlled synthesis of 4a nanocomposite of graphene oxide with cobalt tin oxide nanoparticles, RSC Advances, 2018, 8, 36647-36661. (Cat: W, ISSN: 2046-2069, IF=4.036)

62. S. Hayat , S. Muzammil, M. H. Rasool, Z. Nisar, **Saba Jamil,** In vitro antibiofilm and anti-adhesion effects of magnesium oxide nanoparticles against antibiotic resistant bacteria, Microbiology and Immunology, 2018, 62(4), 211-220. (Cat: Y, ISSN: 0385-5600,1348-0421, IF=2.962)

63. **Saba Jamil**, S.R. Khan, MRSA. Janjua. Synthesis and structural analysis of mesoporous magnesium hydroxide nanoparticles as efficient catalyst. Journal of the Chinese Chemical Society, 2018. 1-9. (Cat: X, ISSN: 0009-4536,2192-6549, IF=1.753)

64. S Li. J Zhang, **Saba Jamil**, Q Cai, S Zang, *Synthesis and adsorption properties of flower-like layered double hydroxide by a facile one-pot reaction with an eggshell membrane as assistant*, **Functional Materials Letters**, 11, 1 ,2018, 1850014 . **(IF=2.17)**

65. S. R. Khan, **Saba Jamil** and MRSA. Janjua, Radiation assisted synthesis of dumb bell shaped calcium hydroxide nanostructures from egg shells and study of its thermal and catalytic applications, Chemical Physics Letters 2018, 710, 45–53. (Cat: X, ISSN: 0009-2614, IF = 2.719)

66. **Saba Jamil**, S. R. Khan, B. Sultana, M. Hashmi, M. Haroon, MRSA. Janjua, Synthesis of saucer shaped manganese oxide nanoparticles by co-precipitation method and the application as fuel additive. Journal of Cluster Science, 2018, 29 (6), 1099–1106. (Cat: X, ISSN: 1572-8862,1040-7278, IF=3.447)

67. S. R. Khan, M. U. Khalid, **Saba Jamil**, A. Mujahid, MRSA. Janjua, S. Li, Photocatalytic degradation of reactive black 5 on the surface of tin oxide microrods, Journal of Water and Health, 2018, 16(5),773-781. (Cat: X, ISSN: 1477-8920, IF = 2.264)

68. **Saba Jamil**, MRSA. Janjua, S. R. Khan, Synthesis and structural investigation of polyhedron Co3O4 nanoparticles: Catalytic application and as fuel additive. Materials Chemistry and Physics. 2018, 216, 82-92. (Cat: W, ISSN: 0254-0584, IF =4.778

69. **Saba Jamil,** S. R. Khan, H. Ahmad, MRSA. Janjua, First synthetic study of cube-like cobalt hydroxystannate nanoparticles as photocatalyst for drimarene red K-4BL degradation and fuel additive, Journal of Cluster Science, 2018, 29, 685-696. (Cat: X, ISSN: 1572-8862,1040-7278, IF=3.447)
70. S. Li, J. Zhang, **Saba Jamil,** Q. Cai, S. Zang. Conversion of eggshells into calcium titanate cuboid and its adsorption properties. Research on Chemical Intermediates, 2018, 44, 3933–3946. (Cat: X, ISSN: 0922-6168,1568-5675, IF=3.134)
71. **Saba Jamil,** MRSA. Janjua, S. R. Khan. Synthesis of self-assembled Co3O4 nanoparticles with porous sea urchin-like morphology and their catalytic and electrochemical applications. Australian Journal of Chemistry. 2017, 70, 908-916. (Cat: X, ISSN: 1445-0038,0004-9425, IF=1.22)
72. **Saba Jamil,** MRSA. Janjua, S. R. Khan, N. Jahan. Synthesis, characterization and catalytic application of polyhedron zinc oxide microparticles. Materials Research Express. 2017, 4, 015902. (Cat: X, ISSN: 2053-1591, IF=2.025)
73. M U Khalid, S R Khan, **Saba Jamil,** Morphologically Controlled Synthesis of Cubes like Tin Oxide Nanoparticles and Study of its Application as Photocatalyst for Congo Red Degradation and as Fuel Additive, J Inorg Organomet Polym, 2018, 28, 168–176 **(IF=3.518)**
74. **Saba Jamil,** MRSA, Janjua. Synthetic study and merits of Fe3O4 nanoparticles as emerging material. Journal of Cluster Science, 2017, 28, 2369-2400. (Cat: X, ISSN: 1572-8862,1040-7278, IF=3.447)
75. MRSA. Janjua, **Saba Jamil**, N. Jahan; S. R. Khan, S. Mirza. Morphologically controlled synthesis of ferric oxide nano/micro particles and their catalytic application in dry and wet media: A new approach. Chemistry Central Journal, 2017, 11, 49. (Cat: W, ISSN: 1752-153X, IF = 4.095)
76. R. Mahmood, MRSA. Janjua, **Saba Jamil.** DFT molecular simulation for design and effect of core bridging acceptors (BA) on NLO response: First theoretical framework to enhance nonlinearity through BA. Journal of Cluster Science. 2017, 28, 3175-3183. (Cat: X, ISSN: 1572-8862,1040-7278, IF=3.447)
77. S. R. Khan, **Saba Jamil**, MRSA. Janjua, R. A. Khera, Synthesis of ferric oxyhydroxide nanoparticles and ferric oxide nanorods by reflux assisted coprecipitation method and comparative study of their thermal properties, Materials Research Express, 2017, 4 (11) 1-13. (Cat: X, ISSN: 2053-1591, IF=2.025)
78. MRSA. Janjua, Z. H. Yamani, **Saba Jamil**, A. Mahmood, I. Ahmad, M. Haroon, M. H. Tahir, Z. Yang, S. Pan. First principle study of electronic and non-linear optical (NLO) properties of triphenylamine dyes: Interactive design computation of new NLO compounds. Australian Journal of Chemistry, 2016. 69(4), 467-472. (Cat: X, ISSN: 1445-0038,0004-9425, IF=1.22)
79. MRSA. Janjua, **Saba Jamil,** A. Mahmood, A. Zafar, M. Haroon; H. N. Bhatti. Solvent-dependent nonlinear optical properties of 5,5′-disubstituted-2,2′-bipyridine complexes of ruthenium (II): A

quantum chemical perspective. Australian Journal of Chemistry, 2015, 68, 1502-1507. (Cat: X, ISSN: 1445-0038,0004-9425, IF=1.22)

80. Y Song, MRSA Janjua, **Saba Jamil**, M Haroon, S Nasir, Z Nisar, A Zafar, N Nawaz, A Batool, A Aziz, The NLO properties of hybrid materials based on molybdate/ hexamolybdate derivatives: A theoretical perspective for electro-optic modulation, ***Synthetic Metals***, **2014**, *198*, 277–284 **(IF = 3.266)**

81. **Saba Jamil,** MRSA Janjua, T. Ahmad, The synthesis of flower shaped microstructures of Co_3O_4 by solvothermal approach and investigation of its catalytic activity, ***Solid State Sciences***, **2014,** *36*, 73–79. **(IF = 4)**

82. **Saba Jamil,** MRSA Janjua, T Ahmad, SN Li, XY Jing, Zinc oxide Hollow Micro Spheres and Nano Rods: Synthesis and Applications in Gas Sensor***, Materials Chemistry and Physics*****,** **2014**, *147(1–2),* 225–231. (IF = 4.778)

83. MRSA Janjua, **Saba Jamil,** T Ahmad, Z Yang, A Mahmood, S Pan, Quantum Chemical Perspective of Efficient NLO Materials Based on Dipolar Trans-tetraammineruthenium (II) Complexes with Pyridinium and Thiocyanate Ligands: First Theoretical Framework, ***Computational and Theoretical Chemistry***, **2014**, *1033, 6–13.* ***(*****IF = 2.292)**

84. **Saba Jamil**, X Jing, J Wang, S li, The Synthesis of Porous Co_3O_4 Micro Cuboid Structures by Solvothermal Approach and Investigation of its Gas Sensing Properties and Catalytic Activity***, Materials Research Bulletin***, **2013**, *48*, 4513–4520. **(IF = 5.6)**

85. S Lu, X Jing, J Liu, J Wang, Q Liu, **Saba Jamil**, M Zhang, L Liu, Synthesis of porous sheet-like Co3O4 microstructure by precipitation method and its potential applications in the thermal decomposition of ammonium perchlorate***, Journal of Solid State Chemistry***, **2013**, *197*, 345-351. **(IF = 3.656)**

86. S Li, F Wang, X Jing, J Wang, **Saba Jamil**, Synthesis of layered double hydroxides from eggshells, ***Materials Chemistry and Physics***, **2012**, *132(1)*, 39–43. **(IF = 4.778)**

87. X Jing, S Song, J Wang , **Saba Jamil**, Q Liu, Solvothermal synthesis of morphology controllable $CoCO_3$ and their conversion to Co_3O_4 for catalytic application***, Powder Technology***, **2012**,*217*, 624–628 **(IF = 5.64)**

88. S Li, J Wang, X Jing, Q Liu, **Saba Jamil**, T Mann, Conversion of Calcined Eggshells into Flower-Like Hydroxyapatite Agglomerates by Solvothermal Method Using Hydrogen Peroxide/N,N-Dimethylformamide Mixed Solvents, ***Journal of the American Ceramic Society***, **2012**,*95(*11), 3377–3379. **(IF = 4.186)**

89. J Wang, X Jing, J Wang, L Ge, **Saba Jamil,** *A facile and green synthesis route to C@LaCO3OH core-shell microspheres using colloidal carbonaceous spheres as template and its by-products as carbon source,* **Solid State Sciences,** 12 (2010) 1934e1940. **(IF=3.752)**

90. L Ge, X Jing, J Wang, **Saba Jamil**, Trisodium citrate assisted synthesis of ZnO hollow spheres via a facile Precipitation route and their application as gas sensor, ***Journal of Materials Chemistry***, **2011**, *21*, 10750-10754. **(IF = 6.626)**

91. **Saba Jamil**, X Jing, J Wang, L Ge, Microwave assisted solvothermal synthesis of magnetic Fe_3O_4 micro spheres and spherical aggregates at low temperature, ***Integrated ferroelectrics***, **2011,***127*, 193–198**. (IF = 0.836)**

92. L Ge, X Jing, J Wang, **Saba Jamil**, Q Liu, D Song, J Wang, Y Xie, P Yang, M Zhang**,** Ionic Liquid-Assisted Synthesis of CuS Nestlike Hollow Spheres Assembled by Microflakes Using an Oil−Water Interface Route***, Crystal Growth and Design***, **2010**, *10(4),* 1688–1692. **(IF = 4.010)**

BOOK/ BOOK CHAPTERS

1. A book entitled "**Nanomaterials and Nanochemistry**" by "**Saba Jamil** and Haq Nawaz Bhatti" has been published by The Caravan Book House, Pakistan
2. Chapter entitled "**Applied Chemistry by Saba Jamil"** Has been published in Book GRE Chemistry (The Caravan Book House, Pakistan).
3. Chapter entitled "**Industrial ecology and environmental chemistry**" by "**Saba Jamil** and Haq Nawaz Bhatti" has been published as Chapter 9 in Book "Principles of Environmental Chemistry for Graduate and Post Graduate Students" (The Caravan Book House, Pakistan).
4. Chapter entitled "**Industrial ecology, waste minimization and utilization**" by "**Saba Jamil**" has been published as Chapter 10 in Book "Principles of Environmental Chemistry for Graduate and Post Graduate Students" (The Caravan Book House, Pakistan)
5. Chapter entitled "**Toxicological chemistry**" by "**Saba Jamil**" has been published as Chapter 11 in Book "Principles of Environmental Chemistry for Graduate and Post Graduate Students" (The Caravan Book House, Pakistan)
6. Chapter entitled "**Environmental analysis and legislation**" by "Haq Nawaz Bhatti and **Saba Jamil**" has been published as Chapter 12 in Book "Principles of Environmental Chemistry for Graduate and Post Graduate Students" (The Caravan Book House, Pakistan).

STUDENTS SUPERVISION

Ph D Students (Degree Completed)

Reg. No.	Name of Student	Title of Thesis	Status
2008-ag-804	Naila Zubair Khan	Fabrication of graphene metal nano composite and its applications	Completed
2015-ag-4255	Shanza Rauf Khan	Synthesis, Characterization and applications of nano/micro Calcium oxide derivatives by using egg shells as calcium source	Completed

M.Phil Students Supervised (Degree completed)

Sr. No.	Degree Awarding year	Degree	Name of Student, Reg. No. and Title of Research Thesis

YEAR 2023-24			
1	2022-ag-1785	Munaza Shah Din	Machine Learning Assisted Designing of Small Molecule Acceptor with Multiple Terminal Electron-Deficient Groups and Performance Prediction
2	2022-ag-1862	Abdul Ahad	Synthesis of Polyoxometalates Based Ionic Liquid Hybrid Nanocomposite Material
3	2022-ag-1867	Allah Mafi	Synthesis and Coating of Bimetallic Zinc Borate Nanoparticles on Urea Fertilizer For Controlled Release to Crops
4	2022-ag-1849	Umer Azeem	A Hybrid Organic/Inorganic Nanocomposite composed of Polyoxometalate Based Ionic Liquid
5	2022-ag-1750	Muhammad Shahbaz Shafiq	Synthesis and Characterization of Dendrimer Based Metallic Nanocomposite and their Application in Catalysis
6	2022-ag-1818	Ayesha Saleem	Characterization and Study of Mechanical Properties of Shape Memory Alloys
7	2022-ag-1831	Muhammad Nouman Sarwar	Extraction and Characterization of Fullerenes and its Composites with Metal Oxides
8	2022-ag-1934	Musarat Perveen	Synthesis and Characterization of Boron-Based Controlled Release Urea Fertilizer
9	2022-ag-1791	Bushra Nawaz	Multiple Terminal Groups Structural Strategy to Design Organic Semiconductors with Higher Dipole Moment: A Systematic Approach
10	2022-ag-1775	Aliya Noreen	Fullerenes and its Metal Derivatives: Extraction, Synthesis and Applications
11	2022-ag-1918	RIDA	Preparation of Reduced Graphene Oxide Based Composite and its Application in Industrial Waste Water
12	2022-ag-1920	Javaria Aziz	Synthesis Characterization and Investigate the Catalytical Properties of Graphene Nanodots
13	2022-ag-1825	Hamna Saeed	Synthesis of Carbon Nanodots, Characterization and its Application In Photocatalysis
14	2022-ag-1925	Aisha Khalid	Synthesis and Doping of Carbon Nanodots

15	2022-ag-1924	Umar Mushtaq	Synthesis of Nano Zinc Coated Urea and its controlled Release For Fodder Crops (MAIZE AND SORGHUM)
16	2022-ag-1717	Kinza Batool	Investigating the Influence of Silver on Microstructure and Performance of Cu-Al-Zn- Alloy
YEAR 2021-22			
1	2018-ag-730	Nimra Ghazal	Synthesis and Study of Release of Boric Acid Coated Urea
2	2020-ag-1161	Saneela Tariq	Synthesis Of Slow Released Fertilizer By Coating Boron Nano-Particles And Studied Its Effect On Fodder Crops
3	2020-ag-1136	Noman Akhtar	Study of controlled release zinc oxide nanoparticles coated urea and its effect on growth of fodder crop
4	2020-ag-1193	Adeel Ahmad	The Study Of The Effects Of Controlled Release Cobalt Ferrite Nanoparticles Coated Urea On Fodder Crops
5	2020-ag-1178	Sohail Nawaz	Development Of Nano Zinc Coated Urea And Its Controlled Release For Fodder Crop
6	2020-ag-1196	Muqeet ur Rehman	Synthesis of Bimetallic Zinc-Borate Nanoparticles and Its Coating on Urea Fertilizer For Controlled Release
YEAR 2018-19			
1.	2015-ag-955	Asma Naz	Fabrication of Graphene based metalic nano size materials and their applications
2.	2017-ag-3295	Jawad Munir	Bimetallic nanoparticles (BMNPs): Preparation, characterization properties and applications
3.	2015-ag-2453	Rabia Majeed	Nanocomposites of Graphene and Graphene Oxides: Controllable Synthesis, Characterization and Application in photocatalysis
4.	2015-ag-1384	Aneeza Nawaz	Synthesis, Characterization and Applications of Graphene Oxide based Polymer Nanocomposites
5.	2015-ag-3035	Zill-e-huma	Morphologically Controlled Synthesis and applications of bimetallic nanoparticles

6.	2015-ag-2441	Maira Saleem	Graphene based Production Properties and Applications in Polymer Composites
7.	2017-ag-3238	Saba Sehar	Synthesis of Graphene oxide (GO) and Graphene based metal nanocomposites
8.	2015-ag-3034	Iqra Safdar	Synthesis, characterization and applications of bimetallic nanoparticles
9.	2017-ag-3144	Sana Rasheed	Synthesis, Characterization and Applications of Bimetallic Nano composite
10.	2015-ag-1522	Hummayun Rashid	Synthesis characterization and applications of polymer reinforced bimetallic nano particles
YEAR 2017-18			
1.	2016-ag-509	Nasaiba Sana	Synthesis of bimetallic nanoparticles and their catalytic applications
2.	2016-ag-977	Nida Javed	Polymer hybrid nanocomposite containing graphene and lithium synthesis and application
3.	2016-ag-1292	Afaaf Rahat Alvi	Synthesis, characterization and applications of bimetallic layered double hydroxide
4.	2016-ag-2705	Fiza Farooq	Fabrication, structural elucidation and applications of nano semiconductor selenides
5.	2016-ag-2708	Hira Karamat	Biological synthesis of metal (Sr and Li) nanoparticles using *Ocimum basilicum* leaf extract
6.	2016-ag-731	Iqra Raza	Synthesis, characterization and applications of layered double hydroxides (LDHs)
7.	2016-ag-637	Iqra Shahbaz	Preparation of graphene oxide/ metallic nanocomposites their characterization and applications in catalysis
8.	2008-ag-666	Riasat Ali	Synthesis, characterization and application of iron-nickel bimetallic (Fe-Ni) nanoparticles
YEAR 2016-17			

	2013-ag-641	Bilqees Awan	Morphologically controlled synthesis, characterization and applications of iron carbide (Fe_3C) nanoparticles
2.	2015-ag-242	Farhana Kausar	Morphologically controlled synthesis, characterization and applications of Zn-Al layered double hydroxide nanoparticles
3.	2015-ag-1612	Ghulam Zahra	Morphologically controlled synthesis, characterization and applications of molybdenum oxide (MoO_3) nanoparticles
4.	2015-ag-1935	Kunza Tehreem	Synthesis of nano $Cd_xZn_{1-x}S$ by precipitate/hydrothermal method and its photocatalytic activities
5.	2015-ag-1940	Syeda Maria Hashmi	Morphologically controlled synthesis, characterization and applications of manganese oxide nanoparticles
6.	2013-ag-749	Talbia Tariq	Morphologically controlled synthesis, characterization and applications of iron/zinc bimetallic (Fe-Zn) nanoparticles
7.	2013-ag-1308	Zia-ul-Qamar	Morphologically controlled synthesis and characterization and applications of black titanium dioxide (TiO_2) nanoparticles
YEAR 2015-16			
6.	2014-ag-8108	Maryam Sayab	Synthesis and characterization of graphene zirconium oxide (GZO) nano composite
7.	2014-ag-2638	Ghazanfar Iqbal	Ionic liquid assisted synthesis of MnS nanoparticles by using oil water interference route
8.	2014-ag-2908	Javeria Riaz	Morphologically controlled synthesis characterization and applications of zirconium oxide (ZrO_2) nanoparticles
9.	2014-ag-2639	Rukhsila Kiran	Ionic Liquid assisted synthesis of ZnS and its catalytic activity
10.	2012-ag-1156	Laiba Khan	Morphologically controlled synthesis, characterization and application of magnesium oxide nanoparticles

M.Phil Students (Co- Supervised)

Sr.no	Degree Awarding year	Degree	Name of student/Reg. No. and title of research thesis
1	2016	MPhil	Mahvish Hina (2014-GCUF-011066) Government Collage University Faisalabad. Antibacterial and antibiofilm activities Magnesium oxide nanoparticles against indigenous drug resistant gram positive and gram negative bacteria
2	2016	MPhil	Zonaira Nisar (2014-GCUF-011068) Government Collage University Faisalabad. Antibacterial and antibiofilm activities Zirconium oxide nanoparticles against indigenous drug resistant gram positive and gram negative bacteria

Technical Reports Supervised (Degree Completed = 27)

Sr. no	Degree awarding year	Degree	Name of student, Reg. No. and title of technical report
Year 2017-18			
1.	2017	MSc	Saira Akram (2015-ag-1417) Actuators
2.	2017	MSc	Zahoor Abbas Kaifi (2015-ag-3667) Mechanical properties of nanoparticles
3.	2017	MSc	Anam Asifa (2015-ag-2253) Transmission electron microscopy and sample preparation
4.	2017	MSc	Zeeshana Bibi (2015-ag-1325) Incorporation of semiconductor oxides in photovoltaic devices
5.	2017	MSc	Perwasha Bashir (2015-ag-3327) Use of graphene as supercapacitors
6.	2017	MSc	Hafiza Mamoona Baig (2015-ag-2645) Hydroxyapatite
7.	2017	MSc	Sobia Akram (2015-ag-484) Biodegradable alloys
8.	2017	MSc	Sumbal Mariam (2015-ag-2173) Tailoring of 3D layered double hydroxide
9.	2017	MSc	Sidra Ameer Ali (2015-ag-3272) Hybrid metallic nanoparticles
10.	2017	MSc	Nazima Sarwar (2015-ag-2499) Mechanical properties of nanomaterials

Year 2016-17			
11.	2016	MSc	Munazzah Sajid (2014-ag-1750) Introduction to semiconductors nanomaterials
12.	2016	MSc	Aroosha Arshad (2014-ag-2862) Two dimensional nanomaterials
13.	2016	MSc	Iqra Ashraf (2014-ag-9187) Designing of fuel cell
14.	2016	MSc	Kajal Yousaf (2014-ag-1663) Introduction, properties and of ionic liquids
15.	2016	MSc	Muhammad Abdullah (2014-ag-2124) A comprehensive study of nano-composites
16.	2016	MSc	Nimra Khalil (2014-ag-1959) Introduction, fabrication and applications of zero dimensional nanomaterials
17.	2016	MSc	Rida Yaqoob (2014-ag-635) Effect of solvent on nonlinear optical properties of materials
18.	2016	MSc	Sana Bakhtawar (2014-ag-8725) Responsive nano applications scale optical systems and their applications
19.	2016	MSc	Shumail Afzal (2014-ag-2747) Introduction, characteristics and applications of quantum dots
20.	2016	MSc	Tayyab Ahmad (2014-ag-1519) Introduction to nonlinear optical materials
21.	2016	MSc	Zarwa Triq (2014-ag-771) Introduction to graphene metal based nano composites
22.	2016	MSc	Maryam Rafiq (2014-ag-2593) An introduction to theoretical / computational chemistry
Year 2015-16			
23.	2015	MSc	Zia-ul-Qamar (2013-ag-1308) Non linear optical nano composite and hybrid properties and synthesis
24.	2015	MSc	Farkhanda Shaheen (2013-ag-1563) In vitro corrosion behavior of magnesium and magnesium alloys
25.	2015	MSc	Hira Saleem (2013-ag-1564) Carbon nanotubes
26.	2015	MSc	Saima Amir Hamza (2013-ag-1160) Morphologically controlled synthesis of metal silicide and applications
27.	2015	MSc	Fareeha Ijaz (2013-ag-864) Properties, synthesis and applications of ionic liquids

ABSTRACTS OF PAPER/POSTERS PRESENTED IN CONFERENCES

1. Abstract entitled "Zinc-magnesium bimetallic nanoparticles: Synthesis, characterization and catalytic application" published as oral presentation in "International Symposium on Technologies and Materials for Renewable Energy, Environment and Sustainability" held at Department of Chemistry, University of Agriculture, Faisalabad dated **Feb 6-7, 2019**.
2. Abstract entitled "Bean like calcium carbonate microparticles: A new morphology for catalytic and fuel additive applications" published as oral presentation in 5th International Conference on Environmental Horizon (ICEH 2019) held at Department of Chemistry, University of Karachi, Karachi, Pakistan on **January 11-13, 2019.**
3. Abstract entitled "Growth of zinc oxide nanoflowers from layer by layer assembly of nanorods and study of its application as fuel additive and cement additive" published as oral presentation in 5th International Conference on Environmental Horizon (ICEH 2019) held at Department of Chemistry, University of Karachi, Karachi, Pakistan on **January 11-13, 2019.**
4. Abstract entitled "Cadmium nanoparticles fabricated P(NIPAM-AAc)/P(AAc) core shell imprinted microgels for catalytic reduction of dyes and nitroarenes derivatives" published as oral presentation in Three Day Conference on Nanomaterials: New Trends in Development and Applications held at Department of Chemistry, Forman Christian College (A Chartered University), Lahore, Pakistan on **January 29-31, 2019.**
5. Paper entitled "Synthesis, characterization and catalytic application of zinc-magnesium bimetallic nanoparticles" accepted for oral presentation in 1st National Conference on Medicinal Plants Research (1st NCMPR 2018) held at Department of Chemistry, Karakoram International University Gilgit, Pakistan on August 29-31, 2018.
6. Paper entitled "Synthesis and characterization of hollow spheres of copper oxide nanoparticles and its fuel additive application" accepted for oral presentation in 1st National Conference on Medicinal Plants Research (1st NCMPR 2018) held at Department of Chemistry, Karakoram International University Gilgit, Pakistan on August 29-31, 2018.
7. Paper entitled "Synthesis of lithium based nanoparticles using extract of Ocimum basillicum and its use as fuel additive" accepted for oral presentation in 1st National Conference on Medicinal Plants Research (1st NCMPR 2018) held at Department of Chemistry, Karakoram International University Gilgit, Pakistan on August 29-31, 2018.
8. Oral presentation entitled "Synthesis and Characterization of Ferric Oxide Nanorods and Study of its Thermal Properties" in in "28th National and 16th International Chemistry Conference – Global Challenges and Chemistry" organized at Federal Urdu University of Arts, Sciences and Technology, Karachi on November 6-8, **2017** (abstract published).
9. Oral presentation entitled "Synthesis and Characterization of Tin Oxide Nanocubes and its Application as Fuel Additive" in in "28th National and 16th International Chemistry Conference – Global Challenges and Chemistry" organized at Federal Urdu University of Arts, Sciences and Technology, Karachi on November 6-8, **2017** (abstract published).
10. Oral presentation entitled "Adaptation in Radical Scavenging and Antimutagenic Potential of *Linum usitatissimum* Root Exudates in Response to Nutrient Deprivation" in "1st

National Conference on Bioactivity of Phytochemicals (NCBP) **2017**" organized at University of Lahore, Lahore on October 4-6, **2017** (abstract published).

11. Poster presentation entitled "Synthesis, characterization and Catalytic applications of zinc oxide micro particles" in "27th National and 15th International Chemistry Conference" organized at University of Malakand, Malakand on August 22-25, **2016** (abstract published).
12. Oral presentation entitled "Fabrication of flower like hydrozincite by hydrothermal method and its application in adsorption" in "International Conference of Biochemistry, Biotechnology and Biomaterials (ICBBB-**2016**)" organized at University of Agriculture, Faisalabad on February 22-24, **2016** (abstract published).
13. Oral presentation entitled "Catalytic reduction of 4-nitrophenol using differentially crosslinked silver-poly(N-isopropylacrylamide-co-acrylic acid) hybrid microgels" has been presented in "International Conference of Biochemistry, Biotechnology and Biomaterials (ICBBB-**2016**)" organized at University of Agriculture, Faisalabad on February 22-24, **2016** (abstract published).
14. Oral and poster presentation in "4th Invention to Innovation Summit **2015**" in the Exhibition on Technologies having Potential for Commercialization, March 04-05, **2015** at University of the Punjab, Lahore.
15. Synthetic strategies: Fabrication Methodologies of nano and Micro Particles of different Metals and Their Applications**.** The 10th China International Conference on Nanoscience and Nanotechnology and Nanotechnology Product Exposition Hangzhou China **2011**.

PARTICIPATION IN SEMINARS/CONFERENCES ETC.

1. Participated in National Conference entitled 1st National Conference on Medicinal Plants Research (1st NCMPR 2018) held at Department of Chemistry, Karakoram International University Gilgit, Pakistan on **August 29-31, 2018**.
2. Participated in International Conference entitled Current Research in Chemical & Pharmaceutical Sciences held at Forman Christian College, Lahore, Pakistan on **January 18-20, 2017**.
3. Participated in "27th National and 15th International Chemistry Conference" held at University of Malakand, Malakand, Pakistan on **August 22-25, 2016**.
4. Participated in International Conference of Biochemistry, Biotechnology and Biomaterials held at University of Agriculture, Faisalabad, Pakistan on **February 22-24, 2016**.
5. Participated in 25th National and 13th International Chemistry Conference 2014 held at Institute of Chemistry, University of the Punjab Lahore on **October 20-22, 2014**.
6. Participated in a Seminar entitled "Intellectual Property Rights" held at Office of Research, Innovation and Commercialization (ORIC), University of Agriculture, Faisalabad on November 1, **2017**.
7. Participated in Seminar entitled "11th National Seminar for Capacity Building of CAM Practitioners" held at Department of Biochemistry, University of Agriculture, Faisalabad on October 10, **2017.**
8. Participated in conference entitled "National Conference on Bioactivity of Phytochemicals (NCBP)" held at Institute of Molecular Biology and Biotechnology

(IMBB) and Center for Research in Molecular Medicine (CRiMM), The University of Lahore, Lahore on October 4-6, **2017**.

9. Participated in "Science Editors Meeting" held on November 18, **2016** at Pakistan Academy of Sciences, Pakistan.
10. Participated in "Organic Food and Health: Avenues of Innovation and Entrepreneurship" held at University of Management and Technology, Pakistan on August 29, **2016**.
11. Participated in "One day International Workshop on Biomass Energy" held at University of Agriculture, Pakistan on July 25, **2016**.
12. Participated in "International Conference of Biochemistry, Biotechnology and Biomaterials (ICBBB-**2016**)" held at University of Agriculture, Pakistan on February 22-24, **2016**.
13. Participation in consultative meeting on "Prioritization of Researchable Topics" held at University of Agriculture, Faisalabad on January 7, **2016**.
14. Oral and poster presentation in "4th Invention to Innovation Summit **2015**" in the Exhibition on Technologies having Potential for Commercialization held at University of the Punjab, Lahore on March 4-5, **2015**.

OTHER FORMAL EDUCATIONAL WORKSHOPS AND TRAININGS

1. Organized One-Day Seminar "**Breast Cancer Awareness and Self Examine Program**" at Community College, Post Agricultural Research Station (PARS), University of Agriculture, Faisalabad dated **Feb 19, 2019**.
2. Organized a two days symposium "**International Symposium on Technologies and Materials for Renewable Energy, Environment and Sustainability**" at Department of Chemistry, University of Agriculture, Faisalabad dated **Feb 6-7, 2019**.
3. Participated in a Workshop entitled "Advanced Chemical Techniques in Natural and Applied Sciences" held at Department of Chemistry, University of Agriculture, Faisalabad on September 18-20, **2017**.
4. Participated in workshop entitled "Workshop on Advanced Spectroscopic Techniques for Characterization of Organic Compounds" held at Department of Chemistry, University of Agriculture, Faisalabad on August 15-16, **2017**.
5. Participated in Three days Training Program entitled "Statistical Methods for Researchers using R" held at Department of Mathematics and Statistics, University of Agriculture, Faisalabad on August 9-11, **2017**.
6. Participated in a Capacity Building Workshop entitled **"**Biosafety Measures in Agriculture**"** at Office of Research, Innovation and Commercialization (ORIC), University of Agriculture, Faisalabad on February 20-21, **2017**.
7. International five months training entitled "Long Distance Training Course on Grain Storage Technology for Managers and Supervisors from Developing Countries" sponsored by Henan University of Technology from March 6 to July 30, **2016,** People's Republic of China, through GSR Long-Distance Education Platform of Henan University of Technology (Mid and Final terminal reports submitted and evaluated with distinction).

8. One month training on "Crystal Structure Determination by X-ray Crystallography" held at University of Agriculture, Pakistan on November 7-December 2, **2016**.
9. Participation in Training workshop on "Advanced Chemical Techniques in Natural and Applied Sciences" held at University of Agriculture, Faisalabad on September 10-12, **2015**.
10. Participation in "Grant Writing workshop under Competitive Grants Program" held at University of Agriculture, Faisalabad on June 1, **2015**.

MPhil THESIS EVALUATION AND VIVA VOCE EXAMINATION

Sr. no	Degree Awarding year	Degree	Name of student, Reg. No. and title of technical report
Year 2016-17			
1.	2016	MPhil	**Saba Sultan** (University of Sargodha, Sargodha) First principle quantum chemistry computation of NLO compounds
2.	2016	MPhil	**Saima Zafar** (University of Sargodha, Sargodha) Time dependent density functional theory (TDDF), modeling of organic-inorganic hybrid compounds
3.	2016	MPhil	**Zeshan Bilal** (University of Sargodha, Sargodha) First principle designed organic building blocks in material science
4.	2016	MPhil	**Waqas Amber Gill** (University of Sargodha, Sargodha) Density functional theory (DFT) study of heteroaromatically functionalized hexamolybdate
Year 2015-16			
5.	2015	MPhil	**Asma Batool Mirza** (University of Sargodha, Sargodha) Prediction of new nonlinear optical functional materials: A DFT study
6.	2015	MPhil	**Atifa Zafar** (University of Sargodha, Sargodha) Solvent- Dependent nonlinear optical properties of 5,5'-disubstituted 2,2'-bipyridine complex of ruthenium (II) A quantum chemical perspective
7.	2015	MPhil	**Abdul Aziz** (University of Sargodha, Sargodha) Different frameworks of various structural systems as novel NLO material: prediction and quantum design
8.	2015	MPhil	**Nadia Nawaz** (University of Sargodha, Sargodha) The quantum design of donor (Amino)-acceptor compounds as second order nonlinear optical material

GRADUATE AND POSTGRADUATE COURSES TAUGHT

Sr. #	Course Code	Course Title	Credit Hr	Degree
1.	Chem-302	Environmental Chemistry and Biochemistry	4(3-1)	BS (Hons)

2.	Chem-307	Organic Chemistry	3(2-1)	BS (Hons)
3.	Chem-405	Photoactive Materials and their Characterization	3(2-1)	BS (Hons)
4.	Chem-605	Physical Chemistry-II	3(3-0)	MSc
5.	Chem-604	Analytical Chemistry-I	4(3-1)	MSc
6.	Chem-610	Physical Chemistry-III	3(3-0)	MSc
7.	Chem-702	Physical Chemistry-II	3(3-0)	MSc
8.	Chem-705	Physical Chemistry-II	3(3-0)	MSc
9.	Chem-707	Applied Chemistry	2(2-0)	MSc
10.	Chem-710	Physical Chemistry-III	3(3-0)	MSc
11.	Chem-710	Advance Physical Chemistry-II	3(3-0)	MSc
12.	Chem-711	Physical Chemistry-IV	3(2-1)	MSc
13.	Chem-720	Seminar	1(1-0)	MSc
14.	Chem-721	Technical Report	3(0-3)	MSc
15.	Chem-722	Exit Examination	3(3-0)	MSc
16.	Chem-747	Technical Report	3(0-3)	MSc
17.	Chem-748	Exit Examination	3(3-0)	MSc
18.	Chem-701	Nanochemistry	3(3-0)	PhD & MPhil
19.	Chem-719	Special problem	1(1-0)	PhD & MPhil
20.	Chem-723	Nanochemistry	3(3-0)	MPhil
21.	Chem-737	Advanced Chemical Kinetics	3(3-0)	MPhil

ADVISORY, ADMINISTRATIVE AND COMMUNITY SERVICES

1. **Student's advisor** for MSc (session **2015**-17).
2. **Co-Tutor** of tutorial group **Molana Hasrat Mohani-II**, University of Agriculture, Faisalabad. Taking 1 credit hour class every week to interact with group students.
4. Working as "**Assistant Superintendent**" at Working Women Hostel, University of Agriculture, Faisalabad.
5. **Secretary of Board of Studies** at Department of Chemistry, University of Agriculture, Faisalabad.
6. Working as member of **Combined Working Group on Nanomaterials** and Participated in various meetings with Vice Chancellor and Group Leader.
7. **"In-charge of Physical Chemistry Laboratory"** at Department of Chemistry, University of Agriculture, Faisalabad.
8. Developed a **Laboratory of Super Light Materials and Nanotechnology** at Department of Chemistry, University of Agriculture, Faisalabad.
9. Organized an Outreach Activity titled "Capacity Building of CAM Practitioners" as a member of Registration Committee on October 10, **2017** at Department of Biochemistry, University of Agriculture, Faisalabad.
10. Organized a Workshop entitled "Advanced Chemical Techniques in Natural and Applied Sciences" on September 18-20, **2017** at Department of Chemistry, University of Agriculture, Faisalabad.

11. Organized a workshop entitled "Workshop on Advanced Spectroscopic Techniques for Characterization of Organic Compounds" on August 15-16, **2017** at Department of Chemistry, University of Agriculture, Faisalabad.
12. Participated in the meeting for Strengthening the tutorial group activities held.
13. Duty as co-tutor for the guidance and attestation of documents to admission seekers on August 8, **2017**.
14. New Courses Designed

a. Content of following courses (Chem-408, Chem-508, Chem-601, Chem-613, Chem-615, Chem-616, Chem-632, Chem-614, Chem-617, Chem-629, Chem-630 and Chem-631) of BS (Hons) Chemistry program has been designed.
b. Content of Course Chem-625 has been designed.

15. Developed collaboration with Department of Chemistry, King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Kingdom of Saudi Arabia.
16. Organized a workshop entitled "Training on Crystal Structure Determination by X-ray Crystallography" held on November 7-December 2, **2016**.
17. Hall management duty during movie show on November 24, **2016** at Iqbal Auditorium.
18. Participated in the meeting for Strengthening the tutorial group activities help on October 1, **2016** at Iqbal Auditorium, University of Agriculture, Faisalabad.
19. Duty as co-tutor for the guidance and attestation of documents to admission seekers on August 2, **2016**.
20. Attended meetings of all tutors and co-tutors along with respective TGM students about Social Media: A New Dimension Violence held on April 26, **2016** and May 3, **2016** at Iqbal Auditorium, University of Agriculture, Faisalabad.
21. Performed duty on the Stall of Department of Chemistry in Rabi Festival and Science Exhibition held from November 4-7, **2016**.
22. On the nomination of Vice Chancellor, participated as **Chinese Alumni Member** during the visit of delegation from Fujian Agriculture and Forestry University (FAFU) from October 9-11, **2016**.
23. Performed duty on the Stall of Department of Chemistry in Kisan Mela and Science Exhibition held from February 29 to March 10, **2016**.
24. Postgraduate Advisor for MSc Evening, Department of Chemistry, University of Agriculture, Faisalabad.
25. Member of the Environmental Chemistry research group, Department of Chemistry, University of Agriculture, Faisalabad
26. Member of workshop organizing team in "Training Workshop on Advanced Chemical Techniques in Natural and Applied Sciences" September 10-12, **2015**, Organized by Department of Chemistry University of Agriculture Faisalabad.
27. Duty at the Information Desk for the guidance to admission seekers, August 25, **2015**, FM building, University of Agriculture, Faisalabad.
28. Duty at the Chemistry Stall during Spring Festival, March 20-23, **2015**, Exhibition Centre, University of Agriculture, Faisalabad
29. Duty at Exhibition Stall of Chemistry Department During Kisan Mela, February 29 to March 10, **2015**, University of Agriculture, Faisalabad.
30. Worked as Deputy Superintendent on the Entry Test Examination of Undergraduate Degree Programs.

31. Member of various purchase and tender committees.
32. Other assignments allotted from the Chairman.

LITERARY SOCIETY MEMBERSHIPS

1. Life Time member of Chemical Society of Pakistan (Membership No. P0625)
2. Member of BIT Congress Inc, (Certificate No. BITM20160725160)
3. Member of Board of Studies, Department of Chemistry, University of Agriculture, Faisalabad

SUMMARY OF INTERPERSONAL SKILLS

Communication

- Good writing skills gained by writing numerous technical reports and research publications and presentations throughout my career.
- Strong presentation skills and confidence demonstrated by giving presentation on various topics in international symposium and conferences during my academic career.

Team Work and Leadership

- Excellent ability to work as a part of team and outstanding capability to lead a team

Problem Solving:

- Gained good problem solving skills while solving various technical problems during research project during Masters and Ph.D studentship.
- Developed extensive problem solving skills by working under pressure.

Information Technology Skills

- Have more than considerable practical knowledge on working with Origin Pro8, Corel draw, Photoshop, MDI Jade 5.0, Match, TOPAZ.
- Chemistry software like Chemsketch, GAMMES Vigyan, Scifinder Scholar

Initiative and Adaptability

- Successful study in China demonstrates my ability to adapt and thrive in a new environment and culture.

Instrument Handled

- X-ray Diffraction Spectrophotometer (**XRD**), Scanning Electron Microscopy (**SEM**), Transmission Electron Microscopy (**TEM**), UV/Vis Spectrophotometer, Fourier Transform Infrared Spectrophotometer (**FTIR**), Thermogravimetry Differential Scanning Calorimeter (**TG-DSC**), Gas Sensor System, Atomic Absorption Spectroscopy, Flame Photometer, **BET & BJH** Analysis.

Studentship award

	Title	Chinese government scholarship for Ph.D.
1	Organization/Duration	Harbin Engineering University. People's Republic of China (2009 to 2013)
2.	Title	Lecturer for the Chemistry
	Organization	Punjab public service commission Pakistan (2009)
3.	Title	Best student award for the subject of Pakistan studies
	Organization	Government Post Graduate Collage for Women Sargodha Pakistan
4.	Title	Best student award
	Organization/Duration	Book Club of Pakistan (2001)
5.	Title	Extempore Speech Competition /Second Position
	Organization/Duration	Sargodha District Extempore Speech Competition (2000)
6.	Title	Extempore Speech Competition /Third Position
	Organization/Duration	Inter Districts of all Punjab Extempore Speech Competition (2000)
7.	Title	Civil Defense Military Training Award
	Organization/Duration	Civil Defense Pakistan (2000)
8	Title	Hostel Management (Indigenous on campus training program under modern university governance program)
	Organization/Duration	HEC Training Program (September 15-19,2014)

REFERENCES

Prof. Dr. Muhammad Shahid
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