

CURRICULUM VITAE

DR. SUMAIRA NAEEM



HEC Approved Supervisor
Incharge Chemistry/Assistant Professor

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PERSONAL

Name: Dr. Sumaira Naeem
Father's Name: Muhammad Boota Naeem
Date of Birth: 10-09-1982
Domicile: Sheikhpura, Punjab, Pakistan.
N.I.C. No.: 35202-2528319-4
Nationality: Pakistani
Permanent Address: 537-B, Gurunanak pura, Mandi Farooqabad, Sheikhpura
Correspondence Address: Department of Chemistry, Faculty of Science & Technology, Baba Guru Nanak University Nankana Sahib, Nankana (39100), Pakistan.

Position:/Occupation: In-charge Chemistry/ Assistant Professor, Department of Chemistry, Faculty of Science & Technology, Baba Guru Nanak University Nankana Sahib, Nankana Sahib (39100), Pakistan.

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Strengths:

Committed to my work; devoted to my ambition; maximum struggle to achieve my goals; & down to earth personality.

RESEARCH INTERESTS

Liposomal anticancer drug delivery, Encapsulation, Particle Size Analysis, Zeta Potential Measurements, Drug release kinetics, Controlled Drug Delivery, Nanotechnology, Nanoparticles Drug Delivery, Nanoencapsulation, Drug formulation Development, Development and *in vitro* evaluation of targetable anticancer phospholipid drug carriers (liposomes). Machine learning, Photocatalysis, nanocomposites, Solar cells.

ACADEMIC QUALIFICATION

Field of Specialization: Physical Chemistry (Ph.D)
Analytical Chemistry (M.Phil, M.Sc.)

Ph. D Chemistry: (2013-2019): (Awarded **Malaysian Bright Sparks Scholarship**)
Department of Chemistry, Faculty of Science, University of Malaya, 50603 Kuala Lumpur, Malaysia. Specialization: Physical Chemistry (By Research Mode).

M .Phil Chemistry: (2005-2007): (Awarded **Scholarships**), Institute of Chemistry, University of the Punjab, Lahore. Subjects: Inorganic chemistry, Organic chemistry, Analytical chemistry (**1st division**).

M. Sc. Chemistry: (2002-2004): (Awarded **Scholarships, Position Holder**), Institute of Chemistry, University of the Punjab, Lahore. Specialization: Analytical chemistry (Subjects: Analytical Chemistry, Physical Chemistry, Inorganic Chemistry, Applied Chemistry, Biochemistry, Organic Chemistry). Marks: 897/1200 (**1st division**).

B.Sc.: (2000-2002): (**Gold Medalist, Position Holder**), Govt. College for women, Gulberg. Lahore. Subjects: Chemistry, Botany, Zoology, Marks: 561/800 (**1st division**)

F. Sc.: (1998-2000): **Kinnaird College for Women, Lahore**
Subjects: Chemistry, Biology, Physics, Marks: 746/1100 (**1st division**).

Matriculation: (1996-1998): (**Gold Medalist, Position Holder**), Sir Syed Girls High School, Farooqabad, Sheikhpura, Subjects: Chemistry, Biology, Physics, Mathematics Marks: 733/850 (**1st division**)

Research Thesis

1. **Ph.D Project Title:** Research thesis leading to Ph.D degree in Physical Chemistry based on the topic “*Bilayer Membrane Liposome Mimicking Red Blood Cell for Drug Delivery Applications*” from University of Malaya, Kuala Lumpur, 50603, Malaysia (2013-2019).

Supervisor: Prof. Dr. Misni Bin Misran

2. **M. Phil. Project Title:** Research thesis leading to M. Phil degree in Chemistry based on the topic “*A New Method for The Determination of Nitrate Ions by Indirect Atomic Absorption Spectrophotometry*” from University of the Punjab, Lahore, Pakistan (2005-2007).

Supervisor: Prof. Dr. Jamil Anwar Ch.

3. **M. Sc. Project Title:** Research thesis leading to M. Sc. Degree in Chemistry based on the topic “*A New Quantitative Method for The Determination of Iron (II) Using Ordinary Image Scanner*” from University of the Punjab, Lahore, Pakistan (2002-2004).

Supervisor: Prof. Dr. Jamil Anwar Ch.

PROFESSIONAL EXPERIENCE

Public Sector:

Currently working as **Incharge/Assitant Professor (BPS-19)**, Department of Chemistry, Faculty of Natural Science & Technology, **Baba Guru Nanak University Nankana Sahib, Nankana.**

i. Assistant Professor in Chemistry

July 11, 2024 – to date (**Regular BPS-19**)

Department of Chemistry, Faculty of Natural Science & Technology,

Baba Guru Nanak University Nankana Sahib, Nankana

- Purchase of an instrument (a multimeter of Rs. 100,000/-) funded by an international sponsor for Chemistry Department.
- Offer of a scholarship from our International BOS member for a bright student of the Department of Chemistry (which is already under progress)
- Purchase of another instrument for Chemistry department is under progress which will be funded by industries.
- **Ph.D Scholarship**: Bright Sparks Scholarship, University of Malaya, Kuala Lumpur Malaysia
- Conference fund Reward of **RM 7000/-** for publishing Ph.'D article in a Q1 article from University of Malaya.
- Research Grant of **RM 14000/-** against the Ph.D project from University of Malaya.
- **Merit Scholarship** holder in **M. Phil.**
- **Position Holder** in **M. Sc.**
- **Governor's Merit Scholarship** holder in **M. Sc.**
- **Chief Minister's Scholarship** holder in **M. Sc.**
- **Gold Medalist** in **B.Sc.**
- **Position Holder** in **B.Sc.** in **Pre- Medical** group.
- **Roll of Honor** for getting Gold Medal for **Distinction in Science.**
- **Roll of Honor** for getting **First prize in Academics** in **B.Sc.**
- **Gold Medalist** in **Matriculation.**
- **Position Holder** in **Matriculation (Merit Scholarship in Middle)**
- **Sports Coordinator**, Department of Chemistry, University of Gujrat, Gujrat.
- **Chief Organizer**, Sports (2005), Department of Chemistry, University of the Punjab.
- **Badminton Single, Winner** (2005), Sports, Department of Chemistry, University of the Punjab.
- **Game organizer** (2004), Sports, Department of Chemistry, University of the Punjab.
- **Winner**, Tug of War (2004), Sports, Department of Chemistry, University of the Punjab.
- **Best player cricket, Winner** (2004), Sports, Department of Chemistry, University of the Punjab.

PROJECTS/COLLABORATIVE WORK

A. International Research projects in collaboration with Deanship of Scientific Research, Vice presidency for Graduate Studies and Scientific research, **King Faisal University, Saudi Arabia (SA).**
Completed with one paper publication in each project:

1. Project completed with the publication of an article: Electrochemical methodologies for investigating the antioxidant potential of plant/fruit extracts: A Review (2022), *Antioxidants*, 11(6), 1205. (W: 7.675) (ISSN: 2076-3921).
2. Project completed with the publication of an article: Novel Copper-Zinc-Manganese Ternary Metal Oxide Nanocomposite as Heterogeneous Catalyst for Glucose Sensor and Antibacterial Activity (2022), *Antioxidants*, 11(6), 1064. (W: 7.675) (ISSN: 2076-3921).
3. Project completed with the publication of an article: Extraction of Bioactive Compounds for Antioxidant, Antimicrobial, and Antidiabetic Applications (2022), *Molecules*, 27(18), 5935. (W: 4.927) (ISSN: 1420-3049).

4. Project completed with the publication of an article: Novel Nd-N/TiO₂ Nanoparticles for Photocatalytic and Antioxidant Applications using Hydrothermal Approach (2022) *Materials*, 15(19), 6658 (W: 3.748) (ISSN: 1996-1944).
5. 4. Project completed with the publication of an article: Enhanced photocatalytic performance of Ag₃PO₄/Mn-ZnO nanocomposite for the degradation of tetracycline hydrochloride (2022), *Crystals* (X: 2.670) (ISSN: 2073-4352).

Submitted:

1. Submitted on September 30, 2022 under the title, “Fabrication and structural characterization of MoO₃ thin films for sensor applications”. (Waqas Alam Mir (SA), Muhammad Aamir (SA), Insha Nahvi (SA), Fatimah Saeed Aldughaylibi (SA), Amal BaQais (SA), **Sumaira Naeem (Pakistan)**).
2. Submitted on September 30, 2022 under the title, “Effect of Mo doping in NiO for structural modification and its efficiency for antioxidant, antibacterial, catalytic applications”. (Waqas Alam Mir (SA), Insha Nahvi (SA), Fatimah Saeed Aldughaylibi (SA), Amal BaQais (SA), **Sumaira Naeem (Pakistan)**).
3. Submitted on September 30, 2022 under the title, “Influence of surfactant on photocatalytic properties of ZnO nanoparticles: Synthesis, characterization”. (Waqas Alam Mir (SA), Basma Souayeh (SA), Kaffayatullah Khan (SA), Tanveer Ahmad Mir (SA), **Sumaira Naeem (Pakistan)**).
4. Submitted on September 30, 2022 under the title, “Phytochemical fabrication of Cerium Oxide Nanorods for photocatalytic and antimicrobial applications”. (Waqas Alam Mir (SA), Basma Souayeh (SA), Mohd Farhan (SA), **Sumaira Naeem (Pakistan)**, Sheikh Muhammad Usman (Pakistan), Qudsia Kanwal (Pakistan).

B. Research projects Submitted (National and International):

1. **HKUST-1 Derived Ag-Cu Phosphide Nanomaterials for Electrocatalytic CO₂ Reduction Toward Sustainable Fuels and Chemicals**
Submitted on 9 September 2025 in collaboration with **University College London, UK for Research Environment 2025-26 Collaboration Grants, British Council, UK**
2. **Development of Climate Resilient Rainwater Storage Systems from Open Ground Runoff: University Campus Model for Semi-Arid area of Nankana Sahib.**
PARB Theme under which this Project falls: Theme-3: Conserving Resources and Protecting Environment, **PARB Sub-Theme and Issue under which this Project falls:** A. Crop sector, Sub-theme 3A.2: Water use Efficiency, 3A.2.3. Develop rain water harvesting and conservation technologies for rainfed and dry Regions.
Submitted on: 12 Aug 2025
Scope: To establish Baba Guru Nanak University, Nankana Sahib as a **living laboratory for climate-resilient rainwater harvesting and efficient water-use technologies**, generating scalable models for semi-arid rainfed agriculture and sustainable campus water management.

Partner: Civil Engineering Firm
3. **Rainwater Harvesting System for University Campus**
Submitted on 09 May 2025 to the Canada Fund for Local Initiatives (CFLI).

Scope: Design and implementation of a sustainable rainwater harvesting and recharge system for the Baba Guru Nanak University community.

Partner: Civil Engineering Firm

4. **Cancer Biomarker Study in District Nankana**
Submitted on 25 April 2025 to the Health Research Institute, NIH Islamabad.
Purpose: Identification of cancer prevalence and biomarker profiling in the local population.
Clinical Partner: DHQ Hospital, Nankana Sahib.
5. **Liposomal Nanocarriers for Cancer Drug Delivery**
Submitted to the National Research Program for Universities (NRPU) on 16 February 2025.
Objective: Development of advanced targeted liposomal nanocarriers for improved anticancer drug delivery.
Research Partner: NIBGE, Pakistan.
6. **Carbon Dioxide (CO₂) Conversion Catalysts**
Submitted on 30 January 2025 to the Pakistan Science Foundation (PSF).
Title: "Precise Engineering of MOFs and MOF-Derived Metal Phosphides for Efficient CO₂ Conversion."
Objective: To design innovative materials for carbon capture and conversion.
Industry Collaboration: Hunza Sugar Mills (Pvt.) Ltd.
7. **Optimization of Alcohol Production in Distilleries**
Principal Investigator on a project submitted under the 4th Call for Concept Proposals – Product Development through Indigenous Research and Innovation.
Focus: Developing an alternative to sulfuric acid (H₂SO₄) for the pre-treatment of sugarcane molasses to enhance the yield of export-quality A-grade alcohol and reduce impurities in B-grade alcohol.
Industry Partner: Hunza Distillery & CO₂ Plant.
8. **Distillery Wastewater Treatment**
Collaborative project with University of Gujrat and Hunza Sugar Mills (Pvt.) Ltd., submitted on 15 December 2018 under the Pakistan Ethanol Manufacturers Association (PEMA).
Supervision: Prof. Dr. Suleman Tahir (then Dean, University of Gujrat; currently Vice Chancellor, KFUEIT).
Goal: Sustainable wastewater management solutions for distilleries across Pakistan.

OUTREACH VISITS

Organizing Outreach Visits to Industries and Universities for faculty/studnets development:

- Gondal Group of Industries (10-12-2004)
- Hunza Sugar Mills (Pvt.) Ltd. Distillery (08-01-2005)
- Hunza Citrus & Pulp (Pvt.) Ltd. (Planned on 05-02-2025)
- Basfa Textile Mills (Pvt.) Ltd. (in progress)
- Islam Soap Industries (Pvt.) Ltd. (in Progress)
- DG Cement, Choa Saiden Shah Road, Kallar Kahar, Chakwal, Punjab (26-04-2025)

- Reliance Cotton Spinning Mills Ltd., Feroz Wattwan, District Sheikhpura (11-03-2025)

EXTERNAL LINKAGES

- Engaged in industrial collaborative work with chemical, sugar, and distillery industries.
- Engaged in active collaboration with different universities in Pakistan and abroad.
- Organizing/assisting different event of community services.

INDUSTRIAL-ACADEMIA MOU CONVENER

While working on Industrial-Academia Linkages, convened the following MOUs:

- Between Hunza Sugar Mills (Pvt.) Ltd. Distillery & Baba Guru Nanak University Nankana Sahib, Nankana.
- Between Gondal Group of Industries, Gujrat & Baba Guru Nanak University Nankana Sahib, Nankana.

INTERNATIONALIZATION

- Introducing the programs and dynamics of my organization in international universities by participating events like participation in conferences.
- Developing interfaith harmony among the different communities.

EXTERNAL EXAMINER FOR M.SC & M. PHIL THESIS EVALUATION

- University of Karachi, Karachi (M.Phil).
- Government College University, Faisalabad (M. Phil).
- Khwaja Fareed University of Engineering and Information Technology (M. Phil)
- University of the Punjab, Lahore (M.Sc).

NUMBER OF THESIS SUPERVISED

Ph.D (Co Supervision-ongoing): 01 UE; 01 UOL; 01 UOG

M.Phil (Co-Supervision-ongoing): 02 UOG; 02 UOL

M.Sc: 14 (completed)

Research Report Writing (completed): 10 M.Sc, 02 B.S(Hons)

COUNTRIES VISITED

The following countries have been visited for Ph.D and presenting/attending various international conferences:

Malaysia, Australia, Thailand, Qatar, Singapore.

ROLE AS EDITORIAL BOARD MEMBER/REVIEWER

- Associate Editor: 'Ardas' Magazine, BGNU
- Editorial Board Member, the Journal of Cleaner Production .

- Editorial Board Member, Journal of Materials Innovation
- Editorial Board member, EC Pharmacology and Toxicology

JOURNAL REVIEWER

Reviewed a number of research articles for various renowned journals:

- Journal of Food Process Engineering
- New Journal of Chemistry
- Chemistry - A European Journal
- ChemistrySelect
- JOM: The Journal of the Minerals, Metals, and Materials Society
- Journal of Photochemistry & Photobiology, A: Chemistry

MEMBERSHIP

- Joined Chemical Physics Community, by the Royal Society of Chemistry. (from 21-Jan-22 to date)
- Community Member of the American Chemical Society (ACS), MEMBERSHIP NUMBER: 32608370, CATEGORY: Community Member, MEMBER JOIN DATE: 05/28/2021 to date.
- American Oil Chemists' Society (AOCS) (2015-2017)
- Life Time Member of “The Chemical Society of Pakistan”
- Affiliate Member of International Union of Pure & Applied Chemistry (2011-2012)
- Affiliate Member of International Union of Pure & Applied Chemistry (2009-2010)

EXPERIMENTAL SKILLS (ANALYTICAL TECHNIQUES)

Nanotechnology, *In vitro* drug delivery, Liposomal anticancer drug encapsulation and drug delivery, Dynamic light scattering, transmission electron microscopy, scanning electron microscopy, optical polarizing microscopy, flame photometer, densitometer, UV/Vis spectrophotometer, FTIR spectrometer, atomic absorption spectroscopy, column chromatography, high performance liquid chromatography, *In vitro* drug release (dialysis, franz diffusion), hemocompatibility tests (hemolysis, cell aggregation), confocal microscopy, cell cytometry, distillation and extraction, analysis of heavy metals in different samples, purification of extracts, physicochemical characterization of extracts, water pollution analysis, physio-chemical characterization of milk & water, photocatalysis, Nanocomposites, solar cells, machine learning.

BOOK CHAPTERS PUBLISHED (4):

1. Mir Waqas Alam, Jawayria Najeeb, **Sumaira Naeem**, Sheikh Muhammad Usman, Noushi Zaidi, Inas Abdulalim Alabdullah. (2025). Recent Advancements in Smart Hybrid Polymeric Gels for Catalytic Applications. *Specialty Polymers and Materials: Advances, Technologies, Applications, and Future Trends*, 101. eBook ISBN: 9781003561361, pg No. 101-132. Apple Academic Press (20-03-2025)
2. **Sumaira Naeem***, Jawayria Najeeb, Sheikh Muhammad Usman, Hummera Rafique; “Chapter -

- Biodegradable Polymers Challenges”; Published in: “*Handbook of Biodegradable Materials*”; Published by: Springer, Cham; Book ISBN : 978-3-030-83783-9; pg No. 293-317, Publication year: **2023**; DOI: 10.1007/978-3-030-83783-9_14-1.
3. Jawayria Najeeb*, **Sumaira Naeem**; “Chapter - Biodegradable Food Packaging Materials”; Published in: “*Handbook of Biodegradable Materials*”; Published by: Springer, Cham; Book ISBN : 978-3-030-83783-9; Publication year: **2022**; DOI: [10.1007/978-3-030-83783-9_56-1](https://doi.org/10.1007/978-3-030-83783-9_56-1).
 4. **Sumaira Naeem***, Jawayria Najeeb, Sadia Akram, Sheikh Muhammad Usman, Qari Muhammad Kaleem, Nayra Najeeb; “Chapter 6 - Application of biosurfactants for the management of tropical and life-threatening diseases”, Published in: “*Green Sustainable Process for Chemical and Environmental Engineering and Science; Biomedical Application of Biosurfactant in Medical Sector*”; Published by: Academic Press, Elsevier; Book ISBN: 978-0-323-85146-6; Publication year: **2022**; Page number: 131-157; DOI: 10.1016/B978-0-323-85146-6.00001-2.
 5. **Book Chapter (In progress)** (Abstract accepted).: Contribution of a book chapter in The Book entitled, "Smart Technologies in Sustainable Agriculture: Current and Future Prospects", and the book chapter entitled, "11. **Adsorption technique for the Removal of Organic pollutants from Water and Wastewater**". Ms. Jawayria Najeeb, **Dr. Sumaira Naeem**,

PAPER PUBLICATIONS (48):

(Impact Factor: **[187.2 (W:28)]**)

2025

1. Laraib Kiran, **Sumaira Naeem**, Khurram Shahzad, Abdul Haleem, Awais Ahmad, Afrasiab Khan, Uzair Naeem, Abdul Rehman, Muhammad Imran Shahzad, A review on the recent progress of two-dimensional (2D) MXenes and graphene-based anode materials for advanced sodium-ion batteries (In production Feb 16, 2026, Journal: International Journal of Energy Research, **IF: 4.2**)
2. Tahir, Mudassir Hussain, **Sumaira Naeem**), and Ihab Mohamed Moussa. "Designing high electron affinity small molecule acceptors through comprehensive chemical library generation." *Synthetic Metals* (2025): 117986. <https://doi.org/10.1016/j.synthmet.2025.117986> (IF:4.6) (January 2025) (Print ISSN: 0379-6779, Online ISSN: 1879-3290)
3. Mudassir Hussain Tahir, **Sumaira Naeem***, Ihab Mohamed Moussa (2025). Designing high electron affinity small molecule acceptors through comprehensive chemical library generation. *Synthetic Metals*, 117986. **(W: 4.4)** (ISSN: 0379-6779) (06-10-2025) <https://doi.org/10.1016/j.synthmet.2025.117986>
4. Najeeb, Jawayria, Sadia Akram, **Sumaira Naeem**, Hummera Rafique, Muhammad Tayyab, and Zara Mukaddas. (2025). Green synthesized cerium oxide nanorods using Curcuma longa extract for response surface methodology-based photocatalytic degradation application. *Materials Advances*. **(IF: 4.7)** (Q1) (**e-ISSN** is 2633-5409) <https://doi.org/10.1039/d5ma00717h> (15-09-2025)

5. Mudassir Hussain Tahir, Muhammad Haroon, **Sumaira Naeem***, Naflaa A Aldawsari, Safaa N Abdou, Mohamed M Ibrahim (2025). Designing of acceptors for organic solar cells, chemical space generation and power conversion efficiency prediction. *Solid State Communications*, 116154. (IF: 2.4) (Q2) (Online ISSN: 1879-2766, Print ISSN: 0038-1098) <https://doi.org/10.1016/j.ssc.2025.116154> (2025/9/13)
6. Talal M Althagafi, Mudassir Hussain Tahir, **Sumaira Naeem***, Fatimah Mohammed A Alzahrani, MS Al-Buriahi (2025). Prediction of UV/visible absorption maxima of organic compounds in dichloromethane and database generation of organic compounds with red-shifted absorption maxima. *Organic Electronics*, 107304. (IF: 2.6) (Q2) (Print ISSN: 1566-1199, Online ISSN: 1878-5530) <https://doi.org/10.1016/j.orgel.2025.107304> (2025/7/19)
7. **Naeem Sumaira**, Tagir Kadyrov, Norah Salem Alasaiari, and M. S. Al-Buriahi (2025), A faster computational frame work for dye design and screening: A goal to achieve higher ionization ene rgy. *Chemical Physics Letters*, 871(1)142106. (X: 2.719) (ISSN: 0009-2614) (16-07-2025). <https://doi.org/10.1016/j.cplett.2025.142106> (2025/4/18)
8. Khadija Mohammedsaleh Katubi, Norah Salem Alsaari, **Sumaira Naeem***, M.S. Al-Buriahi. (2025). Machine Learning Assisted Designing of Dyes and Oscillator Strength Prediction: Chemical Space generation and visualization. *ChemistrySelect*. 10(17) e202500223. (X: 2.307) (ISSN:2365-6549) <https://doi.org/10.1002/slct.202500223> (29-05-2025)
9. Aftab, Sohail, Farooq Ahmad, Sumaira Naeem, Shaban RM Sayed, and Mahmoud AA Ibrahim. (2025). Examining the Relationship between Synthetic Accessibility and Efficiency in Organic Solar Cells: A Statistical Analysis. *ACS Applied Energy Materials*. (W: 5.4) (ISSN: 2574-0962 (print); 2574-0962 (web))
10. Alzahrani, Fatimah Mohammed A., Norah Salem Alsaari, **Sumaira Naeem**, and M. S. Al-Buriahi. (2025). Machine learning assisted designing of compounds with higher glass transition temperature. Chemical Space Visualization and synthetic accessibility determination. *New Journal of Chemistry*. (W: 2.7) (ISSN: 1144-0546 (print); 1369-9261 (web))
11. Alam, Mir Waqas, Sheikh Muhammad Usman, **Sumaira Naeem**, Noushi Zaidi, Shima Sadaf, and Khalida Naseem. (2025). ON/OFF Switchable Smart Poly (N-isopropylacrylamide) Based Hybrid Nanocatalyst for the Response Surface Methodology Based Catalytic Reduction of 2-Nitroaniline. *ChemistrySelect*, 10(8), e202404485. (X: 2.307) (ISSN:2365-6549)
12. Ejaz Hussain, Mohamed Mohamed Soliman, Salah M El-Bahy, **Sumaira Naeem***, Numan Khan. (2025). Machine learning assisted designing of polymers with lower reorganization energies for the possible use as donor and acceptors for organic solar cells. *Solar Energy*, 286, 113169. (W: 6.0) (Print ISSN: 0038-092X. Online ISSN: 1471-1257) <https://doi.org/10.1016/j.solener.2024.113169>. (15-01-2025)
13. Mudassir Hussain Tahir, **Sumaira Naeem***, Ashraf Y Elnaggar, MHH Mahmoud (2025). Machine learning assisted prediction of absorption maxima in cyclohexene: A

comparison using molecular descriptors and fingerprints. *Chemical Physics*, 588, 112476. (X:2.2)(ISSN:0301-0104) <https://doi.org/10.1016/j.chemphys.2024.112476> (01-01-2025)

2024

14. Zaheer Ahmed Dayo, Jiang Guosong, Mohamed A El-Tayeb, Syed Shoaib Ahmad Shah, **Sumaira Naeem**, (2024). Machine Learning-Assisted Designing and Screening of Polymers with a High Melting Point: Database Visualization and Synthetic Feasibility Assessment, *ACS Omega*, 9(48), 47480-47488. (ISSN 2470-1343) (W: 4.1) <https://doi.org/10.1021/acsomega.4c05878> (21-11-2024)
15. Nadeem Muhammad, Mudassir Hussain Tahir, Mohamed Mohamed Soliman, **Sumaira Naeem***, Anthony MS Pembere, Mohamed H Helal, (2024). Design of polymers with higher atomization energy with help of machine learning and chemical space generation. *Materials Today Communications*, 41, 111045. 108403. (W: 3.8) (ISSN: 2352-4928) <https://doi.org/10.1016/j.mtcomm.2024.111045> (01-12-2024)
16. Hussain, Ejaz, Mudassir Hussain Tahir, A. Alshammari Dalal, **Sumaira Naeem***, and H. El Azab Islam. (2024): "Polymer design with enhanced crystallization tendency aided by machine learning." *Physica B: Condensed Matter* 694, 416437. (X: 2.8) (ISSN: 0921-4526) <https://doi.org/10.1016/j.physb.2024.416437> (01-12-2024) (UOG)
17. Katubi, Khadijah Mohammedsaleh, Syed Shoaib Ahmad Shah, **Sumaira Naeem***, Tayyaba Najam, Z. A. Alrowaili, and M. S. Al-Buriahi. (2024): "A systematic approach to generate polymer library: A search for polymers with high dipole moment." *Chemical Physics Letters* 850, 141450. (X: 2.719) (ISSN: 0009-2614) (01-09-2024) <https://doi.org/10.1016/j.cplett.2024.141450> (UOG)
18. Hassan, A. U., Shah, S. S. A., Abo-Dief, H. M., **Naeem, S***, Khan, N., Alzahrani, E., & El-Bahy, Z. M. (2024). Polymer design using machine learning: a quest for high glass transition temperature. *Synthetic Metals*, 307, 117659. (W: 4.4) (ISSN: 0379-6779) (01-09-2024) <https://doi.org/10.1016/j.synthmet.2024.117659> (UOG)
19. Zhou, Jing, Syed Shoaib Ahmad Shah, **Sumaira Naeem**, Bilal Siddique, Numan Khan, Abrar Ul Hassan, Mohamed A. El-Sheikh, and Hosam O. Elansary. (2024) "Revolutionizing polymer engineering for Photodetectors: A Machine Learning-Assisted paradigm for rapid materials discovery." *Chemical Physics* 582: 112277. (X: 2.2) (ISSN: 0301-0104) (01-06-2024) <https://doi.org/10.1016/j.chemphys.2024.112277> (UOG)
20. Alzahrani, Fatimah Mohammed A., **Sumaira Naeem**, Numan Khan, Bilal Siddique, Muhammad Faizan Nazar, Tagir Kadyrov, Z. A. Alrowaili, and M. S. Al-Buriahi. (2024) "Chemical library generation of polymer acceptors for organic solar cells with higher electron affinity." *Computational Materials Science* 239: 112984. (W: 3.3) (ISSN: 0927-0256) (25-04-2024) <https://doi.org/10.1016/j.commatsci.2024.112984>
21. Alzahrani, F. M. A., Rouf, A. M., Najeeb, J., **Naeem, S.**, Siddique, B., Nazar, M. F., Z. A. Boukhris, A. I., & Al-Buriahi, M. S. (2024). Computational design of new polymers having low exciton binding energy for organic solar cells fabrication: Chemical generation and visualization. *Journal of Photochemistry and Photobiology A: Chemistry*, 450, 115457. (W:

- 4.3** (ISSN: 1873-2666,1010-6030) (01-05-2024)
<https://doi.org/10.1016/j.jphotochem.2024.115457>
22. Mahmood, A., Naeem, S., Javed, A., Shafiq, Z., El-Sheikh, M. A., Elansary, H. O., & Janjua, M. R. S. A. (2024). Chemical similarity-based design of materials for organic solar cells: Visualizing the generated chemical space of polymers. *Materials Today Communications*, 38, 108403. **(W: 3.8)** (ISSN: 2352-4928) (01-03-2024)
<https://doi.org/10.1016/j.mtcomm.2024.108403>
23. Siddique, B., Ahmad, F., Najeeb, J., **Naeem, S.**, Ali, M., Dewidar, A. Z., & El-ansary, H. O. (2024). Machine learning assisted designing of Indacenodithiophene (IDT)-based polymers for future application of photoacoustic imaging. *Journal of Photochemistry and Photobiology A: Chemistry*, 447, 115215. **(W: 4.3)** (ISSN: 1873-2666,1010-6030) (15-01-2024)
<https://doi.org/10.1016/j.jphotochem.2023.115215>
24. **Naeem, S.**, Mubashir, T., Tahir, M. H., Najeeb, J., Dewidar, A. Z., El-ansary, H. O., Lagat, S., & Pembere, A. (2024). Search of electron-rich and electron-deficient building blocks through data mining and library generation for the designing of polymers for organic solar cells. *Journal of Photochemistry and Photobiology A: Chemistry*, 448, 115348. **(W: 4.3)** (ISSN: 1873-2666,1010-6030) (01-02-2024) <https://doi.org/10.1016/j.jphotochem> .
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ROLLS AND RESPONSIBILITY:

1. Baba Guru Nanak University Nankana Sahib (after Joining on July 11, 2024):

- **Focal Person** for “**Local Community Engangement Initiative**”, initiated by the Vice Chancellor, BGNU, from Spring-2026 onwards.
- **Focal person** for “**Each One Teach One**’ Program by HEC as an initiative under the Prime Minister's National Literacy drive.
- Associate Editor: ‘**Ardas**’ Magazine, BGNU.
- Member **Sports Trial Committee**, BGNU.
- Represented BGNU as **Keynote/Invited Speaker** in various international conferences
- Focal Person, Women Development Department, Punjab, compaign for **Financial Inclusion of Women**.
- Focal Person for **Empowering Women & Girls in Universities and Colleges in Punjab** (Women Empowerment Initiatives), HED, Lahore.
- Internal member Assessment Teams (**ATs**) for Psychology Department (21-05-2025), QEC, BGNU.
- Member Relevance Assessment Committee (**RAC**) for Department of Chemistry, QEC, BGNU (10-02-2025).

- Team Leader, Preparation of **Faculty recruitment, development, and support services**, for Institutional Performance Enhancement Report (**IPER**), QEC (20-12-2024), BGNU.
 - Member Departmental SAR, QEC, BGNU (02-10-2024).
 - Arrangements of **National & International Events** as focal person of Department of Chemistry and convener on University level.
 - Arranging **Outreach Visits** to various institutes/industries for development of faculty & Students
 - Convened three **MOUs** with Gondal Group of Industries, Hunza Sugar Mills (Pvt.) Ltd. Distillery and Sundas Foundation while further collaborative work with national & international institutions & industries regarding Fund raising and Outreach visits is under progress.
 - **Incharge/HOD** Chemistry Department, BGNU (11-07-2024 to date)
 - Member **Academic Council**, BGNU (20-03-2025 to date)
 - Member **Board of Studies** (BOS), Department of Chemistry, BGNU
 - Member **Board of Faculty** (BF), Faculty of Science and Technology, BGNU.
 - Member **Admission Committee**, BGNU (25-07-2024 to date)
 - Member **Trials Conducting Committee of Sports and Co-curricular Quota**, BGNU (08-08-2024)
 - Member Institutional Quality Circle (**IQC**), BGNU (08-08-2024 to date)
 - Member Discipline Committee, BGNU (08-08-2024 to date)
 - Member Appellate Body for Appeals against the decision of Inquiry Committee for Redressal of Sexual Harassment Complaints, BGNU (19-08-2024 to date)
 - Convener, Departmental Examination Committee (DECs)/Unfair Means Committee (UMCs), BGNU (20-08-2024 to date)
 - Member University's Sports Gala Committee
 - **Designing of Chemistry Labs** (Undergraduate & Postgraduate) for Main campus of BGNU
- ii. Recognized as an **HEC Approved PhD Supervisor** in the discipline of Physical Sciences (**29-Dec-2020 to date**).

2. University of Gujrat

- Lab In-charge Chemistry Department Spring-2024 (UOG)
- Departmental Deputy Superintendent Examination Fall-2024 (UOG)
- Member Departmental Examination Committee Spring-2024 (UOG)
- Departmental coordinator for Course Registration and WEBUOGIS (UOG)
- Coordinator Jabir Bin Hayan Chemists' Society (2024)
- Coordinator departmental Sports (2024)
- Departmental Course coordinator, 2024 (UOG)
- Departmental Deputy Superintendent Examination Fall 2023 (UOG)
- Departmental Course coordinator, 2023 (UOG)

- Member University's Convocation Proctorial Board (2023)
- Departmental Admission Committee (2021 to 2022)
- Member Faculty Board of Studies (2021 to date)
- Member Departmental Discipline Committee (2017 to date)
- Departmental Covid-19 Vigilance Committee (2021 to date)
- Coordinator Jabir bin Hayan Chemists' Society (Spring-2022 to Fall-2022)
- Deputy Superintendent Examination Fall 2021 (UOG-Sub Campus Rawalpindi (March-April 2022))
- Member Covid-19 Vigilant Committee (2020 to date)
- Member Departmental Board of Studies (BOS) (2019 -2021)
- Member Faculty Board of Studies (2020 to date)
- Member Departmental Board of Studies (2019 to 2020)
- Departmental Deputy Superintendent (2017-2019)
- Paper Setting-Term System (2017-2019)
- Paper Marking-Term System (2017-2019)
- Member Committee Chemical Engineering Department Project on Distillery Wastewater Treatment, in collaboration with Hunza Sugar Mills Private limited distillery Division and Pakistan Ethanol Manufacturing Association (PEMA, (2018)
- Organizer Departmental International and National Conferences/ Symposium, Coordinator Departmental events/Sports (2009-2013)
- Member Departmental Discipline Committee (2008 to 2013)
- Lab In charge (2010-2013), Member Departmental tender/Purchase of lab chemicals, glassware/equipment Committee (2010-2013)
- Coordinator Affiliated Colleges UOG (four year degree program- including curriculum design committee member) 2010-2013.
- UOG Final Term Exam superintendent UOG HH Campus (2010-2012)
- Member of Disciplinary/Proctorial Committee, UOG (2009- to date)
- Representative of Four Years Degree Program, Department of Chemistry (2009 to 2013)

3. Kinnaird College for Women, Lahore

- Supervision of BS Research Students
- Development of lab designs for upgradation of labs

All the other assignments assigned to me during the job period were performed efficiently and sincerely in time.

COMMUNITY ENGAGEMENT:

- ACS associated community member (ACS Member number is: 32608370)
- Delivered talk in different events, Departmental and DSA,

SESSION CHAIRED IN INTERNATIONAL CONFERENCE

- **International Training on Ethanol Technology (Platform Host, Organizer, and Event Coordinator, Session Chair)** (Physical International Conference) by Organized by **Hunza Group of Companies**, Pakistan and **Lallemend Biofuels and Distilled Spirits (USA)** and financed by Hunza Group of Companies (in Pearl Continental, Bhurbhan, Pakistan), on June 19, 2021.

INTERNATIONAL TRAININGS/ CONFERENCES/ WORKSHOPS

Oral Presentations:

1. Trainer: **Casacding of HEC & Britich Council STEM faculty Training**, organized by the Directorate of academics and ORIC, Baba Guru Nanak University Nankana Sahib, 10-09-2025.
2. Invited Speaker: International Conference on Food & Applied Sciences (ICFAS-2025) Okara, on 07-08 April 2025 jointly organized by University of Okara & Evolution Pakistan.
3. Invited Speaker: 7th International Conefernce on Materials Science and Nanotechnology, organized by Department fo Chemistry, GCU Faisalabad, 17-19 February, 2025.
4. Invited Speaker Invitation: 3rd Global Science, Technology & Management Conference (GSTMS-25) Jhang on 20-21 January 2025.
5. Guest of Honour at Concept of Feminism, held on 15-01-2025 and organized by the Departemnt of Islamic Studies, BGNU.
6. Oral Presentation as Invited Speaker: “*Engineering and Physicochemical Characterization of Nanostructured Liposomes based red blood Cells-Mimics as Smart carriers for Drug Delivery Applications*”, 4th International Conference on Recent Advances in Interdisciplinary Sciences, rganized by the Department of Chemistry, **Government College Women University, Faislabad**, December 4-6, **2024**.
7. Oral Presentation as Invited Speaker: “*Smart Catalytic Hybrid Assembly for the Response Surface Methodology based Catalytic Reduction of Pollutant*”, 3rd International Virtual Conference on Applied Chemistry, Organized by the Department of Applied Chemistry, **Government College University, Faisalabad**, November 26-27, **2024**.
8. Oral Presentation as Keynote Speaker, “*Production Of Second-Generation Ethanol From Wheat Straw*”, International Conference on Functional Materials and Emerging Technology (ICFMET-2024), organized by the Department of Chemistry, **University of Agricultural, Faisalabad.**, November 25-26, **2024**.
9. Oral Presentation: *Response surface methodology (RSM) based modeling for optimizing the model reaction of waste-water treatment plant: Catalytic reduction of 4-Nitrophenol carried out by using silver nanostructures* presented on 1st International Conference on Science and Technology, **Baba Guru Nanak University Nankana Sahib**, Nankana, October 24-25, **2024**.

10. Oral Presentation: International E-Seminar on “*Development of Novel Nanocomposites for Food Safety, Food Security, Biomedical, and Catalytic Applications*”, held on 8th August, **2022** and organized and sponsored by Sponsored by Al Bilad Bank Scholarly Chair for Food Security in Saudi Arabia, The Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, **King Faisal University, Saudi Arabia.**
11. Oral Presentation: Kinnaird’s First International Conference on Science, Technology and Innovation, organized by the office of Research, Innovation and Commercialization, 2nd – 4th April, **2019**), **Kinnaird College for Women, Lahore, Pakistan**
12. Oral Presentation: Liposomes as Amphiphilic Carriers: Encapsulation and Stability Aspects, The International Polymer Conference of Thailand (PCT-6), 30 June 2016, Pathumwan Princess Hotel, **Bangkok, Thailand.**
13. Oral Presentation: In vitro blood compatibility of red Blood Cell mimics: surfactant effect on haemolysis, International conference on emerging research in science and Humanities (ERSH-2016), 16 May 2016, Pearl International Hotel, **Kuala Lumpur, Malaysia.**
14. Oral Presentation: A Comparative Approach for the Preparation and Physicochemical Characterization of Lecithin Liposomes using Chloroform and Non-Halogenated Solvents, World Congress on Pharmacology, July 20-22 2015, **Brisbane, Australia..**
15. Oral Presentation: Advanced Pharmaceutical Development in Mimicking Red Blood Cell Carriers and its Applications, International Conference on Nanoscience, Nanoengineering and Applications, 24- 25 April 2015, **Penang, Malaysia.**

Participation in International Trainings/Conferences/ Workshops:

2. Selected for **STEM Faculty Trainings under Pak-UK Education Gateway Project**, a joint initiative between **the British Council and Higher Education Commission** going to be held at Kings College London, UK
3. Attended as invited guest, International Training on “**English Language Teacher Training Workshop**”, organized by **English Access Scholarship Program by American Councilate** in collaboration with University of Education, Faisalabad Campus, on Feb1, 2025.
4. Three-day Training on “**PREE & RIPE**” (Programme Preview for Effectiveness and Enrichment (PREE) and Review of Institutional Performance and Enhancement (RIPE)), held on 30-01-2025 to 01-02-2025, organized by Quality Enhancement Cell, BGNU.
5. Chief Organizer/Focal Person, Two Days International symposium on “**Buidling Sustainable Future: Exploring Strategies on Responsible Consumption and Production for Sustainable Development**” organized by the Department of Chemistry in collaboration with Office of Research, Innovation and Commercialization (ORIC), held on December 18-19, 2024, Baba Guru Nanak University Nankana Sahib, Nankana.

6. Attended an international congress entitled “**Sustainable Aviation Futures (SAF) APAC**”, on November 4-6, 2024, ParkRoyal, Marina Bay, **Singapore**.
7. Organizer/Convener, “**1st International Conference on Applied Sciences and Technology (ICAST-2024)**”, held on October 24-25, 2024, at Baba Guru Nanak University, Nankana Sahib, Punjab, Pakistan,
8. Chief Organizer/Focal Person, One-Day International Seminar on “**Breast Cancer Awareness**”, organized by the Department of Chemistry in collaboration with Office of Research, Innovation and Commercialization (ORIC), held on 16-10-2024, Baba Guru Nanak University Nankana Sahib, Nankana.
9. Attended ACS Science Talks on “Powering Hydrogen’s Progress Via Sustainable Energy Technologies”, held on January 17, 2024, organized by American Society of Pakistan.
10. Attended a fully funded International Training Workshop “**The Alcohol School Concise 2023, Bangkok**”, held on July 18-21, 2023, Facilitated by Hunza Sugar Mills (Pvt.) Ltd. Distillery, and organised by Lallemand Biofuels & Distilled Spirits, USA. (Under the **Industrial-Academia Linkages** Program)
11. One hour Training Session From research to Publication: An overview on IEEE Publication Process, held on 06-12-2023, Manager Client Services for Asia, IEEE.
12. One hour Training Session on Wolters Kluwer OVID Database, held on 22-09-2023 and organized by Higher Education Commission and Wolters Kluwer joint venture.
13. One hour Training Session on Wolters Kluwer OVID Database, held on 21-09-2023 and organized by Higher Education Commission and Wolters Kluwer joint venture.
14. ACS Science Talks "Advances in semiconducting polymer synthesis" **International**/Virtual Webinar held on 20-09-2023 and organized by American Chemical Society.
15. "The Art of Securing Research Funding: Crafting Effective Grant Proposals" **International**/Virtual Webinar held on 28-07-2023, organized by American Chemical Society.
16. Fundamentals of Intellectual Property for Scientists Confirmation, **International**/Virtual Webinar held on 19-07-2023, organized by American Chemical Society.
17. Workshop: Getting started with Design of Experiments, Module based Hands –on Virtual Workshop JMP (Software company, held on 23-05-2023 to 25-05-2023.
18. Nanocatalysis and recent advancements Virtual Event held on 02-05-2023, Borcelle Schwartz Borcelle Online Academy, Spain.
19. “Toxicology 101: Chemicals and their Toxic Effects”, (**International**/Virtual Webinar), March 16, 2023, American Chemical Society (ACS).
20. "Chemistry and the Economy: Break in Case of Emergency, (**International**/Virtual Webinar), December 18, 2022, American Chemical Society (ACS).
21. Participated as **organizer/coordinator** in Computational Webinar on “Rational Drug Design Introduction, Method, and Applications”, held on August 17, 2022, organized by Jabir Bin Hayan Chemist Society, Department of Chemistry, University of Gujrat, Gujrat.
22. "Frontier Fridays: Putting Sustainable Chemistry to Work in Manufacturing", (**International**/virtual event), August 12, 2022, American Chemical Society (ACS).
23. Two days Hands On **Training Workshop** on HPLC, GC Instruments” held on August 17-18, 2022 and organized by Hunza Sugar (Pvt.) Limited Distillery Division, Faisalabad.

24. Participated as **Organizer/coordinator** in “A Seminar on E-Commerce: Online Earning through Amazon” held on July 27, 2022, organized by Jabir Bin Hayan Chemist Society, Department of Chemistry, University of Gujrat, Gujrat.
25. 1-hour **Training Session** on “IEEE Standards: What, Why & How?” (virtual), held on June 22, 2022, organized by IEEE Asia. (**International**)
26. Participated as **organizer/coordinator** in “A Seminar on Antitobacco Awareness Program” held on June 14, 2022, organized by Jabir Bin Hayan Chemist Society, Department of Chemistry, University of Gujrat, Gujrat.
27. One Day **Workshop** on “Patent Drafting & Filing”, held on June 9, 2022, organized by University of Gujrat, Gujrat.
28. 3 Days **Workshop** on APSIM, Decision support tools for Agricultural Systems, Modeling and Simulation, held on 25th – 27th May, 2022 organized by UNESCO and COMSATS University, Islamabad, Wah Cantt, Pakistan.
29. 1-hour **Training Session** on “Research Management with IEEE Xplore: Tips & Practices (virtual)”, held on May 11, 2022, organized by IEEE Asia. **International**
30. Boost your knowledge with ProQuest Dissertation and Thesis Global Database (**Virtual training**) by ProQuest Education in partnership with the Higher Education Commission (HEC) on February 2, 2021.
31. HEC Undergraduate and PhD Program Policy 2021 (**Virtual training**) by Quality Enhancement Cell, University of Gujrat, Pakistan on April 8, 2021.
32. **International Training** on Ethanol Technology (Platform Host, Organizer, and Event Coordinator, Session Chair) (Physical International Conference) by Organized by Hunza Group of Companies, Pakistan and Lallemand Biofuels and Distilled Spirits (USA) and financed by Hunza Group of Companies (in Pearl Continental, Bhurbhan, Pakistan), on June 19, 2020.
33. “Innovations in Vaccine Research and Development”, (**International/Virtual Webinar**), July 6, 2021, LabRoots, California (18340 Yorba Linda Blvd. Suite 107 PMB 427 Yorba Linda, CA 92886).
34. “Elevating Laboratory Leadership: Transforming Your Career and Laboratory Through Collaboration”, (**International/Virtual Webinar**), July 6, 2021,
35. "Artificial Molecular Machines: Going from Solution to Surfaces" (**International/virtual event**), June 25, 2021, American Chemical Society (ACS).
36. "Chemistry and the Economy: Supply Chain Woes and is Industry Sprouting" Green?" (**International/virtual event**), June 03, 2021, American Chemical Society (ACS).
37. Programing and Software Tools for UG courses (**International/Virtual workshop**) by Rajdhani College, University of Dehli, India, on March 19, 2021.
38. Open Access Initiatives, E-Resources and Publishing Processes (**International/Virtual Workshop**) Cambridge University Press, England and Library and Documentation Division, Indra Gandhi National Open University, New Dehli, India, on March 17, 2021.
39. Biocompatible Nanomaterials: Application Trends and technicalities (**Platform Host, Event Organizer**) (**International** Webinar) by Jabir Bin Hayan Chemist Society Department of Chemistry, University of Gujrat, Pakistan on February 25, 21.
40. “An introduction to immuno-oncology at Miltenyi Biotec”, (**International//Virtual Webinar**), February 7, 2021, LabRoots, California (18340 Yorba Linda Blvd. Suite 107 PMB 427 Yorba Linda, CA 92886).

41. Leica Biosystems Multiplex User Meeting, ((**International**/Virtual Webinar), February 6, 2021, LabRoots, California (18340 Yorba Linda Blvd. Suite 107 PMB 427 Yorba Linda, CA 92886).
42. "The State of Science: On the Global Perception of Science and the Need for STEM Advocacy" ((**International**/Virtual Webinar)), February 5, 2021, American Chemical Society (ACS).
43. "I Can Be a Scientist, Too!" How to Create Opportunity in the STEM Classroom", February 3, 2021, American Chemical Society (ACS). ((**International**/Virtual Webinar)
44. Research Methods and Scientific Writing (**International**/Virtual Webinar) by Department of Environmental Sciences, University of Gujrat, Pakistan on February 2, 2021.
45. "Chemistry and the Economy: Supply Chain Woes and is Industry Sprouting" Green? (**International** virtual Webinar) by American Chemical Society (ACS) on January 30, 2021.
46. COVID-19: Biochemical Perspectives and Preventive Measures (**International /Platform Host, Event organizer**) (Internationa Webinar) by Jabir Bin Hayan Chemist Society Department of Chemistry, University of Gujrat, Pakistan on January 27, 2021.
47. Climate Governance: Policy Paradigms to Strengthen SDG 13 (**International /Virtual workshop**) by ENVIPOL (Non-Profit Organization), India on January 25, 2021.
48. Natural Product Research: Trends and Technicalities, (**International/** Virtual webinar), October 29, 2020, Jabir Bin Hayan Chemist Society Department of Chemistry, University of Gujrat, Gujrat, Pakistan.
49. Micro and Nanolipid from Bench Top to Commercial Scale, (**International**/Virtual Webinar), September 23, 2020, Department of Biological Sciences, Basic and Applied Sciences, International Islamic University, Islamabad, Pakistan.
50. Innovative Challenges in the Field of Molecular and Chemical Sciences, 3rd **International** Conference (Virtual)on Chemistry (ICC), September 21, 2020, Lahore Garrison University, Lahore, Pakistan.
51. **International** Virtual Organic and Medicinal Chemistry Symposium (Virtual webinar), September 12. 2020, Department of Chemistry and Chemical Engineering, SBA School of Science and Engineering, Lahore University of Management Sciences (LUMS), Lahore, Pakistan.
52. 1ST International Workshop on "Nano Science & Technology", October 30-31, 2018, by University of Haripur, Haripur, **Khyber Pakhtunkhwa, Pakistan.**
53. 6th International symposium on Biomedical Materials (ISBM) synergizing partnerships, by IRCBM , COMSATS institute of information Technology,held on 16/12/2017-14/12/17, **Lahore, Pakistan.**
54. One day International Symposium on "Developments in Contemporary Chemistry' by University of Gujrat, held on 22/11/2017 - 21/11/2017, **Gujrat, Pakistan.**

Participation in National Trainings/Conferences/ Workshops:

1. Attended an online session on "**IEEE Learning & Research for Pakistan students & researchers: An Overview of IEEE Xplore Digital Library**", held on 24-06-2025.
2. Chief organizer, One-Day seminar on "**Analytical Precision: Chromatographic Approches for Quality Assurance**", organized by Department of Chemistry on 23-06-2025 at Baba Guru Nanak University, Nankana Sahib.

3. Invited to Attend a Two-Day Faculty Development Training Program on “**Use of Artificial Intelligence in Higher Education**” for universities in Punjab, held on May 14-15, 2025, organized by Punjab higher Education Commission at King Edward Medical University, Neela Gumband, Lahore..
4. Chief Organizer, One Day National Symposium on “**Today for Tomorrow: Pursuing Dreams by Conquering Fear Following an Inspirational Leadership**”, organized by the Department of Chemistry in collaboration with Office of Research, Innovation and Commercialization (ORIC), held on 09-10-2024, Baba Guru Nanak University Nankana Sahib, Nankana.
5. Hands-on Training on the Structural Elucidation/Analytical Instruments, held on 19-23 February, 2024, organised by the **University of Karachi, Karachi.**
6. Organizer/Coordinator JBH ,Quiz Competition -2023 Departmental Event, held on 23-02-2023, Department of Chemistry, University of Gujrat, Pakistan.
7. One hour Training Session From research to Publication: An overview on IEEE Publication Process, (**International/virtual**), held on December 06, 2023, organized by **Manager Client Services for Asia, IEEE.**
8. One hour Training Session From research to Publication: An overview on IEEE Publication Process, (**International/virtual**), held on April 05, 2023, organized by **Manager Client Services for Asia, IEEE.**
9. Another Learning experience: Broaden your horizon with IEEE eLearning courses, (**International/virtual**), held on March 08, 2023, organized by **Manager Client Services for Asia, IEEE.**
10. Participated in Multiple Disciplinary Seminar Series-I under MOU between University of Gujrat and University of Karachi, December 11, 2023, Organized by ORIC, University of Gujrat.
11. **ProQuest’s Training:** Introduction to Publishing in Academic Journals-Part 02, December 15, 2020, ProQuest Education in partnership with the Higher Education Commission (HEC), Pakistan
12. **ProQuest’s Training:** Introduction to Publishing in Academic Journals-Part 01, December 08, 2020, ProQuest Education in partnership with the Higher Education Commission (HEC), Pakistan.
13. **ProQuest’s Training :**5 Tips for Getting Published: Maximize Your Chances to Get Your Paper Accepted in Academic Journals! October 27, 2020, ProQuest Education in partnership with the Higher Education Commission (HEC), Pakistan.

14. **ProQuest's Training:** How to Manage Your Reference Using Ref Works, October 26, 2020, ProQuest Education in partnership with the Higher Education Commission (HEC), Pakistan.
15. **ProQuest's Training:** How to Utilize ProQuest Ebooks Collection in Teaching and Research, October 20, 2020, ProQuest Education in partnership with the Higher Education Commission (HEC), Pakistan.
16. **ProQuest's Training:** How to Utilize ProQuest Journals, Dissertations, and Varied Content Types in Teaching and Research, October 19, 2020, ProQuest Education in partnership with the Higher Education Commission (HEC), Pakistan.
17. Two Days Professional Workshop on "Risk Assessment and Emergency Response to Chemical, Biological and Environmental Hazards at Work Place", March 28-29, 2018, Department of Chemistry, University of Gujrat, **Gujrat, Pakistan.**
18. National symposium on Emerging trends in the Extraction of plant Bioactives for Nutra-pharmaceutical Developments National symposium University of Sargodha HEC, University of Sargodha, held on 02/11/2017 - 01/11/2017, **Sargodha, Pakistan.**
19. National Training Workshop on High Performance Liquid Chromatography, April 6&7, 2011, department of Chemistry, Institute of Chemical and Biological Sciences, University of Gujrat, Gujrat, Pakistan (as organizer), **Gujrat, Pakistan.**
20. National Training Workshop on Analytical Laboratory Management, June 23-25, 2010, organized by Department of Biochemistry & Molecular Biology (B & MB), Nawaz Sharif Medical College, University of Gujrat, **Gujrat, Pakistan.**
21. 18th National Chemistry Conference, February 13-15, 2008, Institute of Chemistry, University of the Punjab, **Lahore, Pakistan.**
22. A Workshop on Nano Science & Catalysis jointly organized by The Chemical Society of Pakistan & National Center for Physics, March 24-25, 2008, Quaid-e-Azam University, **Islamabad, Pakistan.**
23. One day workshop on Question Paper Setting in Semester Systems, 2008, **Govt. Kinnaired College for Women, Jail Road, Lahore.**
24. Teacher refresher course in pursue of knowledge, 2007, **Govt. Kinnaired College for Women, Jail Road, Lahore**

CO-CURRICULAR ACTIVITIES

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- Nominated as Focal person by BGNU for Women Development Department, Punjab.
- Focal Person/Event organizer, Department of Chemistry, BGNU

- Event Coordinator with DSA, BGNU
- Member Annual Sports Committee, BGNU
- Member Trials Conducting Committee of Sports and Co-curricular Quota, BGNU
- Coordinator JBH Chemists Society, UOG
- Sports Coordinator, Department of Chemistry, UOG
- Girls Representative of class M. Phil, 2005-2007, Institute of Chemistry, University of the Punjab, Lahore.
- Member of student council committee in M. Phil (2005-2007), Institute of Chemistry University of the Punjab, Lahore.
- Certificate of Distinction for Participation in Departmental Annual Sports 2005 as Game Organizer held in Institute of Chemistry, University of the Punjab, Lahore.
- Member of University toppers committee representative at national and international level (2002-2004).
- Certificate of Distinction for participation in Departmental Annual Sports 2004 as Winner of Tug of war (Captain of girls Team) held in Institute of Chemistry, University of the Punjab, Lahore
- Certificate of distinction for participation in Departmental Annual sports 2004 as Game organizer, held in Institute of chemistry, University of the Punjab, Lahore.
- Girls Representative of class M. Sc. 2002-2004, Institute of Chemistry, University of the Punjab, Lahore..
- Member of student council committee in M. Sc, Institute of chemistry, University of the Punjab, Lahore.
- Participation in Naat competition 2003 and won medal held in Institute of Chemistry, University of Punjab Lahore
- Talent Award of 2002 in university of Punjab Lahore
- Certificate of Participation in “ Azadi quiz” (khawateen time) Aug. 2002, held in Pakistan television corporation limited, television Center, Lahore, as student of Govt. College for women, Gulberg, Lahore.
- Member of Girl guide Association, Sir Syed Girls High school, Farooqabad, Sheikhpura.
- Participated in Annual sports 1997, Sir Syed Girls High School, Farooqabad, sheikhupura, and Won prize in race.

REFERENCES

1. **Prof. Dr. Misni Bin Misran**, Department of Chemistry, Faculty of Science, University of Malaya, Kuala Lumpur 50603, Malaysia (misni@um.edu.my)
2. **Prof. Dr. Jamil Anwar Ch.**, School of Chemistry, University of the Punjab, Lahore, (jamilch@brain.net.pk).
3. **Dr. Kiew Lik Voon**, Associate Professor, Department of Pharmacology, Faculty of Medicine, University of Malaya, Kuala Lumpur 50603, Malaysia (lvkiew@um.edu.my).