



# DR. MEHBOOB HASSAN

*HEC Approved Ph.D Supervisor*

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Chemistry, University of Narowal,  
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## WORK HISTORY

Assistant Professor, 21/12/2020 - Current  
University of Narowal, Narowal, Punjab

Manager, Research and Development (ORIC), 12/2021 - Current  
University of Narowal, Narowal, Punjab

Ex-Officer In Charge/Coordinator of Department, 12/2021 – 9/1/2025  
University of Narowal, Narowal, Punjab

Member Quality Enhancement Cell, 02/2021 - Current  
University of Narowal, Narowal, Punjab

## EDUCATION

Northeast Normal University, Changchun, PR. China, 2019

Ph.D.: Analytical Chemistry (CGPA 4.0)

**Research Interest:** Research focuses on nanomaterial synthesis, environmental analysis, photocatalysis and electrocatalysis, sustainable energy conversion and storage systems, wastewater treatment, and advanced sensing technologies.

Hazara University, Mansehra, KPK 05/2012-2016

Master of Science / Philosophy (M.Sc. and MPhil.): Inorganic/Analytical Chemistry (CGPA 3.6)

• Research in the Spectroscopic study of shilajit found in Gilgit-Baltistan.

F.G.D.C, Skardu, 2009-2012

Intermediate and Bachelor of Science (FSC/B.Sc.): Science

Career Guidance Public School, Skardu, Gilgit-Baltistan, Pakistan, 2007

Secondary school certificate (SSC): Matriculation

1. Ahmad Umair, Mirza Mahmood Baig, Sheraz Yousaf, Muhammad Touqeer, **Mehboob Hassan**, Ali Ahmad, Joon Kim, Hyuntae Ju, Seung Goo Lee, Multiferroic YSn co-doped BiFeO<sub>3</sub> 2D nanoplates for enhanced photocatalytic degradation of cationic dyes: Synthesis, chemistry and mechanisms, *Journal of Water Process Engineering*, Volume 70,2025, 107019,2214-7144, **2025, (IF 6.3)**.
2. MGREEN SYNTHESIS OF CuO NPS UTILIZING EUPHORBIA MILII FOR ENHANCED CRYSTAL VIOLET DYE REMOVAL. Umme Javeria, , Sumayya Mumtaz, Kinza Batool ,**Mehboob Hassan\***, 10, 75-87.**2025**.
3. uhammad Usama Arif, Mirza Mahmood Baig, Muhammad Touqeer, Abdul Saboor, **Mehboob Hassan\***, Imran Shakir, LaxNiy Mn<sub>2</sub>-(x+y)O<sub>3</sub>/g-C<sub>3</sub>N<sub>4</sub> composite: A multifunctional material for photocatalytic and adsorptive removal of pollutants with statistical evaluation, *journal of Desalination and Water Treatment*, Volume 320, 2024, 100725, ISSN 1944-3986, . **2024, (IF 2.2)**.
4. Shan, A., Baig, M. M., Kamran, U., Jamal, H., Arif, M. U., **Mehboob Hassan\***, Kale M., Javed, T., Fawy, K. F., & Lee, S. G. (2024). New Y<sub>0.045</sub>Ni<sub>0.045</sub>Fe<sub>2.91</sub>O<sub>4</sub> nanow decorated over mesoporous silica for crystal violet removal: Response sur methodology optimization, kinetics, and isothermal studies. *Ceramics Internatio* j.ceramint.2024.02.177. **2024, (IF 5.2)**.
5. Hanif, S., Rehmat, S., **Hassan, Mehboob.**, Majeed, F., Islam, A., & Rafi Ullah Khan. (2024). Stimuli-responsive Crosslinked Chitosan/Polyethylene glycol/3-Glycidyloxypropyltrimethoxy silane-based Hydrogels for Biomedical Applications. *BME Horizon*, 2(1). **2024**.
6. Amina, H., Arif, M. U., Baig, M. M., Zulfiqar, S., Butt, M. A., Ahmad, **Mehboob Hassan\*** & Lee, S. G. (2024). Biogenic synthesis of MoO<sub>3</sub> nanoparticles using extract of Lactuca Serriola plant of Asteraceous flora: palynomorphological studies and environmental remediation applications. *Journal of Taibah University for Science*, 18(1), 2292322, **2024, (IF 3.2)**.
7. Rasool, M., Baig, M. M., Kaleem, **Mehboob Hassan**, M., Riaz, L., Warsi, M. F., & Lee, S. G. (2024). Photocatalytic and adsorption behavior of a new efficient LaxNiyMn<sub>3</sub>-(x+ y) O<sub>4</sub>/SiO<sub>2</sub> composite for environmental remediation application. *Ceramics International*, 50(3), 4790-4809, **2023, (IF 5.2)**.
8. M Fatima, S Rehmat, **Mehboob Hassan\***, MM Baig, T Shazad, F *Majeed*, Cestrum Nocturnum Leaf Extract Assisted Biogenic Synthesis of CoO Nanoparticles and their Application in Cationic Dyes Photodegradation *JOURNAL OF FACULTY OF ENGINEERING & TECHNOLOGY* 27 (1), XX **2023**.
9. F Majeed, S Rehmat, **Mehboob Hassan\***, MM Baig, HA Ahmad, A Razaq, MU Arif, Facile Synthesis of New CuS/Activated Kaolinite Composite for Photo-Fenton Degradation of Textile Dyes *JOURNAL OF FACULTY OF ENGINEERING & TECHNOLOGY* 27 (1), XX. **2023**.
10. **Mehboob Hassan\***, Mirza Mahmood Baig, Sheraz Yousaf, Muhammad Faheem, Aftab Hussain, Basit Niaz, Farhan Ahmed Khan, Saba Aziz, Yameen Ahmed, Khalid Hussain Shah, Seung Goo Lee, Efficient water splitting catalyst: Low-temperature selenization of Co and Ni hydroxide nanosheets on carbon cloth for enhanced electro-catalytic activity, , *Diamond and Related Materials*, 139, 2023,110298, 0925-9635, **2023, (IF 4.1)**.
11. Muhammad Zeeshan Asghar, Khadijah Mohammedsaleh Katubi, **Mehboob Hassan\***, Z.A. Alrowaili, Muhammad Usama Arif, Memoona Qammar, M.S. Al-Buriah, Muhammad Shahid Mahmood, Mirza Mahmood Baig, A new Y-Zr/g-C<sub>3</sub>N<sub>4</sub> nanoflakes anchored mesoporous silica composite for efficient environmental

- remediation applications, *Diamond and Related Materials*, Volume 135, 109850, ISSN 0925-9635, 2023, (IF 4.1).
12. Mohsin Rasool, Mirza Mahmood Baig, Muhammad Kaleem, **Mehboob Hassan**, Luqman Riaz, Muhammad Farooq Warsi, Seung Goo Lee, Photocatalytic and adsorption behavior of a new efficient  $\text{LaxNiyMn}_{3-(x+y)}\text{O}_4/\text{SiO}_2$  composite for environmental remediation application *Ceramics International*, 2023, ISSN 0272-8842 2023, (IF 5.3).
  13. Aftab Hussain, Ahmad Irfan, Farah Kanwal, Mohamed Hussien, **Mehboob Hassan**, Saifedin Y. DaifAllah, Wang Jing, Muhammad Abdul Qayyum, Shamsa Bibi, Aijaz Rasool Chaudhry, Jingping Zhang, Exploration of high-performance triptycene-based thermally activated delayed fluorescence materials via structural alteration of donor fragment, *Heliyon*, Volume 9, Issue 12, 2023, e21571, ISSN 2405-8440. 2023, (IF 4.2).
  14. Aftab Hussain, Farah Kanwal, Ahmad Irfan, **Mehboob Hassan**, and Jingping Zhang Exploring the Influence of Engineering the Linker between the Donor and Acceptor Fragments on Thermally Activated Delayed Fluorescence Characteristics *ACS Omega* 8 (17), 15638-15649. 2023(IF4.4).
  15. Mirza Mahmood Baig, **Mehboob Hassan\***, Tanveer Ali, Hafiz Muhammad Asif, Ayesha Asghar, Sana Ullah, Ibrahim A. Alsafari, Sonia Zulfiqar, Green 2D simonkolleite/zinc-based nanostructures for superior antimicrobial and photocatalytic applications, *Materials Chemistry and Physics*, 126292, 2022, (IF 4.8).
  16. **Mehboob Hassan**, Mirza Mahmood Baig, Khalid Hussain Shah, Aftab Hussain, Syeda Aqsa Hassan, Arshad Ali, MOF-based bimetallic diselenide nanospheres as bifunctional efficient electrocatalysts for overall water splitting, *Journal of Physics and Chemistry of Solids*, 0022-3697, 167, 110780, 2022(IF 4.4).
  17. Synthesis, enzyme inhibition and docking studies of 1,2,4-triazoles derived from aliphatic esters. Rifat Sultana, Obaid Ur Rahman Abid, Nighat sultana, Wajid Rehman, Mohsan Nawaz, Abdul Wadood, Asma Sardar, Saima Sardar, **Mehboob Hassan**, Zain Ul Wahab, Ali Bahadar, Farid Mena. (Rev. Roum. Chim., 2021, 66(8-9), 771–*Romanian Journal of Chemistry*. 2021 (IF 0.3).
  18. Saif Ullah, Rooh Ullah\*, Rasha M.K. Mohamed, Gang Hu\*, Ateeq ur rehman, Muhammad Yasir Nawabi, Asif Hayat, **Mehboob Hassan**, and Jimei Song. Quantitative Determination of Kaempferol by using a novel B-Z Chemical Oscillating system Catalyzed by a Cu (II)-tetraazamacrocyclic Complex, *International Journal of Electrochemical Science*, 15 (2020) 12318 – 12328, (IF 2.2).
  19. **Mehboob Hassan**, Tingting Lu Xiangjie Bo\* and Ming Zhou Cobalt-doped carbon nitride supported on ordered mesoporous carbon as noble metal-free oxygen reduction electrocatalysts., *Journal of Physics and Chemistry of Solids*, 2019. (IF 2.7).
  20. H Liu, **Mehboob Hassan**, X Bo, L Guo, Fumarate-based metal-organic framework/mesoporous carbon as a novel electrochemical sensor for the detection of gallic acid and luteolin, *Journal of Electroanalytical Chemistry* 849, 113378(2019). (IF 3.1).
  21. N Wang, Y Hei, J Liu, M Sun, T Sha, **M Hassan**, X Bo, Y Guo, M Zhou. Low-cost and environment-friendly synthesis of carbon nanorods assembled hierarchical meso-macroporous carbons networks aerogels from natural apples for the electrochemical determination of ascorbic acid and hydrogen peroxide. *Analytica chimica acta* 1047, 36-44, 2019. (IF 5.3)
  22. **Mehboob Hassan**, Y Jiang, X Bo, M Zhou, Sensitive non-enzymatic detection of hydrogen peroxide at nitrogen-doped graphene supported-CoFe nanoparticles, *Talanta* 2018. (IF 4.7).

23. *Liang Jingwen, Mehboob Hassan, Dongsheng Zhu, Liping Guo, and Xiangjie Bo.* Cobalt nanoparticles/nitrogen-doped graphene with high nitrogen doping efficiency as noble metal-free electrocatalysts for oxygen reduction reaction." *Journal of Colloid and Interface Science* (2016). (I.F 4.8).
24. *T Liu, M Li, C Jiao, Mehboob Hassan, X Bo, M Zhou, HL Wang,* Design and synthesis of integrally structured Ni<sub>3</sub>N nanosheets/carbon microfibers/Ni<sub>3</sub>N nanosheets for efficient full water splitting catalysis, *Journal of Materials Chemistry A* 5 (19), 9377-9390. (I.F 8.8).
25. *A Salah, M Hassan, J Liu, M Li, X Bo, JC Ndamanisha, L Guo,* Pt nanoparticles supported on nitrogen-doped porous graphene for sensitive detection of Tadalafil, *Journal of colloid and interface science* 512, 379-388. (I.F 4.6).
26. *X Li, H Li, T Liu, Y Hei, M Hassan, S Zhang, J Lin, T Wang, X Bo, HL Wang,* The biomass of ground cherry husks derived carbon nanoplates for electrochemical sensing, *Sensors and Actuators B: Chemical* 255, 3248-3256. (I.F 5.1).
27. *C Xu, Y Hei, J Liu, M Sun, T Sha, N Wang, Mehboob Hassan, X Bo, M Zhou* Synthesis of a three-dimensional interconnected carbon nanorod aerogel from wax gourd for amperometric sensing, *Microchimica Acta* 185 (10), 482.(I.F 5.5).
28. *J Lin, Mehboob Hassan, X Bo, L Guo,* Synthesis of iron-based metal-organic framework@ large mesoporous carbon composites and their electrocatalytic properties, . *Journal of Electroanalytical Chemistry* 801, 373-380. (I.F 3.2).
29. *Y Hei, X Li, X Zhou, J Liu, Mehboob Hassan, S Zhang, Y Yang, X Bo, HL Wang,* Cost-effective synthesis of three-dimensional nitrogen-doped nanostructured carbons with hierarchical architectures from the biomass of sea-tangle for the amperometric, *Analytica Chimica Acta* 1029, 15-23,1.2018. (I.F 5.3).
30. *C Jiao, M Hassan, X Bo, M Zhou,* Co<sub>0.5</sub>Ni<sub>0.5</sub>P nanoparticles embedded in carbon layers for efficient electrochemical water splitting, *Journal of Alloys and Compounds* 2018. (I.F 3.7).
31. *Z Li, Mehboob Hassan, A-Sun, X Bo, M Zhou,* Crab Shell-Templated Fe and N Co-Doped Mesoporous Carbon Nanofibers as a Highly Efficient Oxygen Reduction Reaction Electrocatalyst, *ChemistrySelect* 3 (13), 3722-3730, 2018. (I.F 1.8).

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**M.PHIL.  
THESIS  
DETAIL AS  
CO-  
SUPERVISOR**

*1. Maida Naeem*

22-UON-1193, Synthesis and characterization of Copper manganese oxide and copper cobalt oxide and their energy storage applications

*2. Samar Fatima*

22-UON-1199, Synthesis and characterization of Nickel ferrite and Calcium Manganese Oxide for applications in energy storage devices

*3. Samreen Mushtaq*

22-UON-1201, Synthesis and characterization of Cobalt iron oxide and zinc tin oxide for solar cell applications.

*4. Sawara Kramat*

22-UON-1202, Synthesis and Characterization of Copper Ferrite for Energy Storage Device Applications.

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## PROJECTS

1. SRGP-HEC, a project of one million Ref.No 483/IPFP-II(Batch-I)/NAHE/HEC/2020/301 “*Selenide based Cobalt Nickel doped electrocatalysts for Overall water splitting*”. **(Completed)**

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## AWARDS AND ACHIEVEMENTS

1. *Prime Minister Laptop Scheme Phase#II* for the excellent students **(2016)**.
2. Winner of the *Chinese government scholarship 2016*.
3. Got “*First prize as an outstanding researcher*” at Northeast Normal University in **2018**.

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## CONFERENCES AND WORKSHOPS

1. Delivered an **Oral talk** and participated in the *Pre-Conference Workshop* and at the *4<sup>th</sup> ASEAN-Pakistan International Conference on Materials Science* held on 5- 8 May 2025 in NUST Islamabad.
2. Delivered a **Lecture as a Guest Speaker** in the “*3<sup>rd</sup> International Conference on Recent Trends in Physics*” held on 9-11 April 2025 at the Forman Christian College University, Lahore.
3. completed a two-day training on ‘*Use of Generative Artificial Intelligence in Higher Education*’ organized by Punjab Higher Education Commission on 23-24 May 2024.
4. Completed two days of Training ‘**OIC SESAME USERS MEETING**’ on 26th - 27th Jan 2024 at COMSETECH center, Islamabad.
5. Delivered an **Online Talk as a Speaker** in the “*4th International Conference on Advances in Material Science*” held on 29-30 November 2023 at the University of Education Lahore.
6. **Poster presentation** “*17th National Symposium on Frontiers in Physics*” (*Material science*) held on 01-03 Dec 2022 at Government College University, Lahore, Punjab.
7. Participated in ‘*The International Conference on Chemical and Material Sciences*’ at University of Lahore on 21st May 2022.
8. Four weeks ‘**National Faculty Development Program (NFDP-2020)**’ for fresh *Ph. D.s* organized by the National Academy of Higher Education (NAHE-HEC)2020.

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## AFFILIATIONS AND MEMBERSHIP

- Member of *American Chemical Society*(ACS-4345341) since 10 Dec 2022.
- Member of the *Chinese Chemical Society*(CCS-221010321) since October 2022.
- Event member of the *Society of Chemical Industry*(SCI-232664).1. 1.

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## ACADEMIC SERVICES

- Reviewer of *Journal of Chemical Physics Letters* (**Elsevier**).
- Reviewer *Journal of Inorganic and Organometallic Polymers and Materials*(**Springer**).
- Reviewer *Journal of Ionics*(**Springer**).
- Reviewer of *Journal of Environmental Technology and Innovation* (**Elsevier**).

## REFERENCES

1. *Prof Dr-Zhou Ming (Ph.D. Supervisor), School of Chemistry, Northeast Normal University, Jilin PR China.*  
Email: [zhoum739@nenu.edu.cn](mailto:zhoum739@nenu.edu.cn)
2. *Dr-Basit Niaz (M.Phil. supervisor), Associate Professor, Department of Chemistry, Hazara University, Mansehra, Pakistan*  
Email: [basitniaz172@yahoo.com](mailto:basitniaz172@yahoo.com)