
Resume



Dr. KHALID TALHA, (Ph.D.)

Personal motivation: "Hard work is the alchemy for a prosperous, healthy and happy life".



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Work Experience

- ✧ **Postdoc Researcher** University of University of Modena and Reggio Emilia, Modena Italy
Oct, 2023-Till date
- ✧ **Assistant Professor (Visiting)** University of Okara, Okara Pakistan.
Sep, 2022-July, 2023

Education:

- ✧ **Ph.D.**(Applied Chemistry) College of Environmental and Energy Engineering Beijing University of Technology China **Session: 2017-2022**
- ✧ **M.S.** (Inorganic Chemistry) Department of Chemistry, Government College University, Faisalabad Pakistan. **Session 2012-2014**
- ✧ **B.S.** (Industrial Chemistry) Department of Chemistry, Government. College University, Lahore Pakistan.
Session 2006-2008

Research projects:

- ✧ **Synthesis of Chiral MOFs and their application in water splitting**
- ✧ **Synthesis of targeted linkers for Chiral MOFs**
- ✧ **Construction of three-dimensional MOFs by post synthetic modification (Sequential Linker Insertion) of two-dimensional MOF via Single-crystal to single-crystal transformation**
- ✧ **Application of MOFs in detection/sensing of Cu²⁺, Fe³⁺ and Cr (VI) ions in water by Fluorescence sensing**
- ✧ **MOF as adsorbent for the removal of antibiotics from water**
- ✧ **Application of in photocatalytic degradation of dyes**

Research interests:

- ✧ Synthesis and functionalization of stable cost effective and environmentally benign MOFs.
- ✧ Application of MOFs in photocatalysis and as adsorbents for wastewater treatment
- ✧ Special focus on removal and detection of pharmaceutical and personal care products (PPCPs) and pesticides.
- ✧ Construction of MOF based materials/composites of MOFs for energy storage/conversion.

Publications:

1. **Talha, K.**, He, T., Xie, L.-H., Wang, B., Zhao, M.-J., Zhang, Y.-Z., Chen, Q., Li, J.-R., 2020. A three-dimensional metal-organic framework with high performance of dual cation sensing synthesized via single-crystal transformation. *New Journal of Chemistry* 44(27), 11829-11834. (IF= 3.92)
2. Talha, K., Alamgir, A., Ahamd, N., Xie, L.-H., Zhang, X., Li, J.-R., 2021. Construction of Zeolite A Type Multivariate Metal-Organic Framework for Selective Sensing of Fe³⁺ and Cr₂O₇²⁻. *CrystEngComm*. (IF=3.75)
3. **Talha, K.**, Li, J.-R., 2022. Efficient Detection of Fe³⁺ and Cr₂O₇²⁻ Ions in Water by Zn-Tetrazolate-Based Two-Dimensional Metal-Organic Framework: A Comparative Study. *Engineering Proceedings* 12(1), 95. (Conference paper)

4. K. Talha, J. R. Li, X. Zhang, A. Alamgir, N. Ahmed, M. J. Iqbal and M. S. Riaz. 2022. A Zn based two-dimensional metal-organic framework as a dual ion sensor in aqueous media. *Journal of Engineering Research*. (0.68)
5. Alamgir, **Talha, K.**, Wang, B., Liu, J.-H., Ullah, R., Feng, F., Yu, J., Chen, S., Li, J.-R., 2020. Effective adsorption of metronidazole antibiotic from water with a stable Zr (IV)-MOFs: Insights from DFT, kinetics and thermodynamics studies. *Journal of Environmental Chemical Engineering* 8(1), 103642 (IF= 7.96).
6. Alamgir, **Talha, K.**, Wang, Y.-J., Ullah, R., Wang, B., Wang, L., Wu, W., Chen, S., Xie, L.-H., Li, J.-R., 2021. Construction of a mixed ligand MOF as “green catalyst” for the photocatalytic degradation of organic dye in aqueous media. *RSC Advances* 11(38), 23838-23845. (IF=4.03)
7. Alamgir, **Talha, K.**, Zhang, Xin., Li, J.-R., (2021). An interpenetrated anionic In(III) metal-organic framework for selective sensing of Fe³⁺ in water. *Chinese Journal of Inorganic Chemistry*. Accepted (IF = 0.68)
8. Yaqoob, L., Noor, T., Iqbal, N., Nasir, H., Zaman, N., **Talha, K.**, 2021. Electrochemical synergies of Fe–Ni bimetallic MOF CNTs catalyst for OER in water splitting. *Journal of Alloys and Compounds* 850, 156583.(IF = 6.37).
9. M. J. Iqbal, M. S. Riaz, K. Talha, R. Shoukat, S. Mahmood, M. Ammar and H. Li., Synthesis and Transformation of Calcium Carbonate Polymorphs with Chiral Purine Nucleotides, *New Journal of Chemistry*, 2022

Professional skills:

- ✧ **Languages** (level): **English** (Excellent), **Urdu** (Mother tongue), **Mandarin** (beginner),
- ✧ **Software**: Diamond3, Crystal Maker, CCDC Mercury, Conquest, Origin, MS-Office, Vesta
- ✧ **Lab**: First hands operation of experimental and analytical tools such as: autoclave, SEM, Single XRD, FTIR, TGA, BET, PXRD, organic synthesis etc.

Awards

- ✧ Special Contribution award from Beijing university of Technology for the year **2020**
- ✧ Science and technology award from Beijing university of Technology for the year **2020**

Conferences

- Certification of participation for presented paper at International Conference on Energy, Power and Environment (ICEPE-2021) at University of Gujrat, **11-12 November 2021**.
- Certificate of Participation for the oral contribution of paper in the 19th international conference on Emerging Trends in Chemistry at University of Management and Technology, **December 16-18 2021**.

Group activities:

- ✧ Adept at managing multiple tasks simultaneously such as presentations, lectures and assignments.
- ✧ Believe in team work with the willingness to work beyond the call of duty.
- ✧ I helped Chinese Lab fellows for the improvement of their English language in the research papers.
- ✧ Active participation in group discussions, meetings and preparation of projects.

Hobbies:

- ✧ Fervent cricket player, likes cycling, hiking, cooking, current affairs, social media.
- ✧ **Referees: Prof. Jian-Rong Li (PhD Advisor)** (Dean/Professor Beijing University of Technology)

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- ✧ **Referees: Prof. Lin Hua Xie (PhD Co-Advisor)** (Associate Professor Beijing University of Technology)

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