



### السيرة الذاتية

محمد طيب

الصين

دكتوراه من جامعة تسينغها / الصين

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الاسم

الجنسية

المؤهل العلمي

التخصص

الدرجة العلمية

المؤسسة العلمية التابع لها

البريد الإلكتروني

رقم الهاتف

المواقع الإلكترونية

**Google Scholar link- :** <https://scholar.google.com/citations?user=09CfTfIAAAAJ&hl=en>

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**Web of Science ResearcherID:** <https://www.webofscience.com/wos/author/record/ABA-4372-2021>

### أولاً / المؤهلات العلمية:

#### Graduate study

East China University of Science and Technology  
Shanghai, People's Republic of China - 2016

#### Postgraduate (MSc)

M.Phil in Chemistry (18 Years of Education)  
University of Gujrat, Punjab, (Pakistan) - 2018

#### From

#### Postgraduate study

PhD in Chemistry

#### (PhD) From

East China University of Science and Technology  
Shanghai, People's Republic of China - 2023

### PROFESSIONAL EXPERIENCE

#### الخبرات العلمية

Postdoc at Tsinghua Shenzhen International Graduate School, Shenzhen, China (September ~ 2023present).

Research Associate at Tsinghua Shenzhen International Graduate School, Shenzhen, China (July 2023 ~ August 2023)

Research Associate at East China University of Science and Technology, Shanghai, China (September 2019 ~ May 2023).

Research Assistant at University of Gujrat, Punjab, Pakistan (May 2018 to May 2019).

## Publications المنشورات

- (1) **Muhammad Tayyab**, Seemal Mansoor, Zeeshan Akmal, Mazhar Khan, Liang Zhou, Juying Lei and Jinlong Zhang. A binary dumbbell visible light driven photocatalyst for simultaneous hydrogen production with the selective oxidation of benzyl alcohol to benzaldehyde. *Journal of Colloid and Interface Science*, 2024, 665, 911-921. (IF: 9.965) (Q1)
- (2) **Muhammad Tayyab**, Yujie Liu, Zhiguo Liu, Zehong Xu, Wenhui Yue, Liang Zhou, Juying Lei and Jinlong Zhang. A new breakthrough in photocatalytic hydrogen evolution by amorphous and chalcogenide enriched cocatalysts. *Chemical Engineering Journal*, 2023, 455, 140601. (IF: 16.744) (Q1)
- (3) **Muhammad Tayyab**, Yujie Liu, Zhiguo Liu, Lihan Pan, Zehong Xu, Wenhui Yue, Liang Zhou, Juying Lei and Jinlong Zhang. One-pot *in-situ* hydrothermal synthesis of ternary In<sub>2</sub>S<sub>3</sub>/Nb<sub>2</sub>O<sub>5</sub>/Nb<sub>2</sub>C Schottky/S-scheme integrated heterojunction for efficient photocatalytic hydrogen production. *Journal of Colloid and Interface Science*, 2022, 628, 500-512. (IF: 9.965) (Q1)
- (4) **Muhammad Tayyab**, Yujie Liu, Shixiong Min, Rana Muhammad Irfan, Qiaohong Zhu, Liang Zhou, Juying Lei and Jinlong Zhang. Simultaneous hydrogen production with the selective oxidation of benzyl alcohol to benzaldehyde by a noble-metal-free photocatalyst VC/CdS nanowires. *Chinese Journal of Catalysis*, 2022, 43(4), 1165-1175. (IF: 12.92) (Q1)
- (5) **Muhammad Tayyab**, Umme Kulsoom, Yujie Liu, Seemal Mansoor, Mazhar Khan, Zeeshan Akmal, Asim Mushtaq, Muhammad Arif, Umair Shamriaz, Liang Zhou, Juying Lei and Jinlong Zhang. Visible light-driven photocatalytic H<sub>2</sub> evolution and dye degradation by electrostatic self-assembly of CdS nanowires on Nb<sub>2</sub>C MXene. *International Journal of Hydrogen Energy*, 2024, 51, 1400-1413. (IF: 7.200) (Q1)
- (6) **Muhammad Tayyab**, Yujie Liu, Zehong Xu, Summan Aman, Wenhui Yue, Rana M. Irfan, Liang Zhou, and Jinlong Zhang. Integration of Redox Cocatalysts for Photocatalytic Hydrogen Evolution. **Book Chapter**, [10.1002/9783527837991.ch7](https://doi.org/10.1002/9783527837991.ch7). Wiley.
- (7) **Muhammad Tayyab**, Umme Kulsoom, Hummera Rafique, Ehsan Ullah Mughal, Summan Aman, Asim Mushtaq, Laila Noureen. Emerging MXene-Derived Photocatalysts for Harvesting Solar Energy into Chemical Energy. **Book Chapter**, [10.1201/9781003364825-8](https://doi.org/10.1201/9781003364825-8). Taylor & Francis Group.
- (8) Yujie Liu, **Muhammad Tayyab**, Wenkai Pei, Liang Zhou, Juying Lei, Lingzhi Wang, Yongdi Liu, and Jinlong Zhang. The Precision Defect Engineering with Nonmetallic Element Refilling Strategy in g-C<sub>3</sub>N<sub>4</sub> for Enhanced Photocatalytic Hydrogen Production. *Small*, [10.1002/smll.202208117](https://doi.org/10.1002/smll.202208117). (IF: 15.153) (Q1)
- (9) Seemal Mansoor, **Muhammad Tayyab**, Mazhar Khan, Zeeshan Akmal, Liang Zhou, Juying Lei, Masakazu Anpo, and Jinlong Zhang. Recent advancement in Se- and Te-enriched cocatalysts for boosting photocatalytic splitting of water to produce hydrogen. *Research on Chemical Intermediate*, 2023, 49, 3723-3745. (IF: 3.300) (Q2)

(10) Yujie Liu, Qiaohong Zhu, **Muhammad Tayyab**, Liang Zhou, Juying Lei and Jinlong Zhang. Single-Atom Pt Loaded Zinc Vacancies ZnO–ZnS Induced Type-V Electron Transport for Efficiency Photocatalytic H<sub>2</sub> Evolution. *Solar RRL*, 2021, 5(11), 2100536.

(IF: 9.173) (Q1)

(11) Wenhui Yue, Zehong Xu, **Muhammad Tayyab**, Lingzhi Wang, Ziwei Ye and Jinlong Zhang. Schottky Junction Enhanced H<sub>2</sub> Evolution for Graphitic Carbon NitrideNiS Composite Photocatalysts. *Journal of Colloid and Interface Science*, 2024, 657,

133-141. (IF: 9.965) (Q1)

(12) Ziwei Ye, Wenhui Yue, **Muhammad Tayyab**, Jungang Zhang, and Jinlong Zhang. Simple one-pot, high-yield synthesis of 2D graphitic carbon nitride nanosheets for photocatalytic hydrogen production. *Dalton Transactions*, 2022, 51, 18542-18548. (IF: 4.569) (Q1)

(13) Guanhong Liu, Meiyun Feng, **Muhammad Tayyab**, Jianqiu Gong, Meng Zhang, Mingyang Yang and Kuangfei Lin. Direct and efficient reduction of perfluorooctanoic acid using bimetallic catalyst supported on carbon. *Journal of Hazardous Materials*,

2021, 412, 125224. (IF: 14.224) (Q1)

(14) Yujie Liu, Yifan Zheng, **Muhammad Tayyab**, Summan Aman, Liang Zhou, Juying Lei and Jinlong Zhang. Internal Electric Field Enhances B Refilling and Carbon Vacancy Double Modulation to Promote Photocatalytic Hydrogen Evolution. *Catalysis Letter*, 2023, 154, 798-807. (IF: 2.936) (Q2)

(15) Seemal Mansoor, Zixu Hu, Yifan Zheng, **Muhammad Tayyab**, Mazhar Khan, Zeeshan Akmal, Liang Zhou, Juying Lei and Jinlong Zhang. Comparative study of photocatalytic H<sub>2</sub> production by nickel chalcogenides<sub>1+x</sub> based Zn<sub>3</sub>In<sub>2</sub>S<sub>6</sub> photocatalytic system.

*Separation and Purification Technology*, 2025, 353(A), 128357.

(16) Mazhar Khan, Zeeshan Akmal, **Muhammad Tayyab**, Seemal Mansoor, Adnan Zeb, Ziwei Ye, Jinlong Zhang, Shiqun Wu, and Lingzhi Wang. MOFs materials as photocatalysts for CO<sub>2</sub> reduction: Progress, challenges and perspectives. *Carbon Capture Science & Technology*, 2024, 11, 100191.

(17) Rana Muhammad Irfan, Muhammad Kashif Zaman, Mudassir Hussain Tahir, Ashfaq Ahmad, **Muhammad Tayyab**, Tanveer Ahmad, Majid Hussain, Ifzan Arshad, and Muhammad Ashraf Shaheen. Highly Efficient Photocatalytic Syngas Production from Formic Acid Using Iron-Porphyrins as Catalysts Integrated with CdS/CNTs

Heterojunctions under Visible Light. *ACS Applied Energy Materials*, 2023, 6(3), 18341844. (IF: 6.951) (Q1)

(18) Urooj Fatima, Hummera Rafique, Sadia Akram, Season Si Chen, Khalida Naseem, Jawayria Najeeb, and **Muhammad Tayyab**. Facile green synthesis of Phyllanthus emblica extract based Ag-NPs for antimicrobial and response surface methodology based catalytic reduction applications. *Journal of Cleaner Production*, 2024, 434, 140003. (IF: 11.1) (Q1)

- (19) Muhammad Danish, **Muhammad Tayyab**, Arusa Akhtar, Ataf Ali Altaf, Samia Kausar, Shafiq Ullah and Muhammad Iqbal. Effect of soft template variation on the synthesis, physical, and electrochemical properties of Mn<sub>3</sub>O<sub>4</sub> nanomaterials. *Inorganic and Nano-Metal Chemistry*, 2021, 51(3), 359-365. (IF: 1.700)
- (20) Maqzia Bashir, Maria Batool, Nayab Arif, **Muhammad Tayyab**, Yu-Jia Zeng, Muhammad Nadeem Zafar. Strontium-based nanomaterials for the removal of organic/inorganic contaminants from water: A review. *Coordination Chemistry Review*, 2023, 492, 215286. (IF: 20.6)
- (21) Asim Mushtaq, Xuehua Ma, Jabeen Farheen, Xiaoqing Lin, **Muhammad Tayyab**, M. Zubair Iqbal, Xiangdong Kong. Facile synthesis of metformin loaded Mn<sub>3</sub>O<sub>4</sub>-HAp magnetic hydroxyapatite nanocomposites for T<sub>1</sub>-magnetic resonance imaging guided targeted chemo-phototherapy *in vitro*. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 2023, 674, 131911. (IF: 5.2)
- (22) Syed Shoaib Ahmad Shah, Muhammad Altaf Nazir, Karim Khan, Iftikhar Hussain, **Muhammad Tayyab**, Saleh S. Alarfaji, Ahmed M. Hassan, Manzar Sohail, Muhammad Sufyan Javed, Tayyaba Najam. Solar energy storage to chemical: Photocatalytic CO<sub>2</sub> reduction over pristine metal-organic frameworks with mechanistic studies. *Journal of Energy Storage*, 2023, 75, 109725. (IF: 9.4)
- (23) Iqra Shakoor, Uzma Jabeen, Iqbal Ahmed, Saba Riaz, **Muhammad Tayyab**, Asad Syed, Ali H. Bakhi, Musarat Riaz, Rustem R. Zairov, Muhammad Nadeem Zaffar. ZnS and Fe-doped ZnS photocatalysts for improved visible light driven photocatalytic degradation of methylene blue. *Inorganica Chimica Acta*, 2023, 560, 121837. (IF: 2.8)
- (24) Muhamamd Hamza, Ataf Ali Altaf, Samia Kausar, Shahzad Murtaza, Amen Shahpal, Muhammad Hamayun, **Muhammad Tayyab**, Komal Rizwan, Hamza Shoukat and Anum Maqood. Mesoporous Cu-doped Manganese Oxide Nano Straws for photocatalytic Degradation of Hazardous Alizarin Red Dye. *ACS Omega*, 2023, 39(8), 35956-35963. (IF: 4.100)
- (25) Sheeza Masud, Hira Munir, Muhammad Irfan, and **Muhammad Tayyab**. Allium cepa-based zinc oxide nanoparticles: synthesis, characterization and biochemical potentials. *Bioinspired, Biomimetic and Nanobiomaterials*, 2023, 12(2), 82-93. (IF: 1.732)
- (26) Sumayyah Ihsan, Hira Munir, Zihui Meng, **Muhammad Tayyab**, Nadia Zeeshan, Ajwa Rehman, Sawaira Nadeem, Muhammad Irfan. Tragacanth gum-based copper oxide nanoparticles: Comprehensive characterization, antibiofilm, antimicrobial and photocatalytic potentials. *International Journal of Biological Macromolecules*, 2024, 268, 131600. (IF: 8.2)
- (27) Muhammad Naseem, Hummera Rafique, **Muhammad Tayyab**, Aamer Saeed, and Amara Mumtaz. Design, Synthesis, QSAR studies, and Molecular Modeling of Some Novel Bis Methyl 2-[3-(benzo[d]thiazol-2-yl)-2-terephthaloyl-bis-4-oxo-thiazolidin-5-ylidene] acetates and Screening of their Antioxidant and Enzyme In-hibition Properties. *Current Organic Synthesis*, 10.2174/1570179421666230905094559. (IF: 2.800)
- (28) Arshi Abbas, Syed Salman Shafqat, Muhammad Faizan Nazar, Hafeez Ullah Khan,

Asma Mukhtar, **Muhammad Tayyab**, Asad Syed, Muhammad Nadeem Zafar, Syeda Amna Masood, and Kashif Kamran. Molecular interaction of nonsteroidal antiinflammatory prodrug nepafenac with ionic surfactants. **International Journal of Chemical Kinetics**, 2024, 56, 417-431. (IF: 1.5)

(29) Ehsan Ullah Mughal, Hafiz Umar Farooq, Amina Sadiq, Hummera Rafique, Sajjad Hussain Sumrra, Muhammad Naveed Zafar, Nighat Fatima, Syed Aun Muhammad, Abdul Manan, Chaudhary Omer Javed and **Muhammad Tayyab**. An Efficient Protocol for the Synthesis, Biological Screening and Molecular Docking Study of 3,4Dihydropyrimidine-2-one/thione Derivative. **Litter in Drug Design & Discovery**, 2020, 17, 330-340. (IF: 1.099)

(30) Hummera Rafique, Aamer Saeed, Fouzia Perveen, Naghmana Kausar, Zaman Ashraf, Sadia Akram, Muhammad Naveed Zafar, **Muhammad Tayyab** and Ulrich Florke. Design, Synthesis, Crystal Structure, Fluorescence, Molecular Docking and DFT Studies of 3,6-Dinitro-N-octylcarbazole. **Current Organic Chemistry**, 2019, 23, 1681-1687. (IF:

2.600)

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Conferences/Seminars/Workshops/Symposia, Organized/Attended:

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23. October 19 Fundamental and Applied Problems of Modern Physics, Tashkent, 21, 2023 Uzbekistan

22. July 25-28, The 4<sup>th</sup> International Workshop Advances on Photocatalysis including  
2023 Environmental and Energy Applications AdvPhotoCat-EE2023, HMU Heraklion, **Greece**

21. September Chinese Academy of Sciences-International Training Course on Solar  
-17, 2023 Thermal Power Technology, Beijing, **China**

20. November 4<sup>th</sup> Chinese Symposium on Photocatalysis Materials, Shanghai, **China** 19-21, 2021

19. October 101<sup>st</sup> Japan-China Symposium on Catalysis (1<sup>st</sup> JCSC) 12, 2021

18. April 9-10, Two Days National Workshop on “Material Modeling and Simulation” 2019 Department of  
Physics, University of Gujrat, Gujrat, **Pakistan**

17. February Three Day International Conference on “Materials Science and 18-20, 2019 Nanotechnology  
2019” Department of Physics, Government College University Faisalabad, Faisalabad, **Pakistan**

16. January 29 Three Day Conference “Nanomaterials: New Trends in Development and  
31, 2019 Application” at Forman Christian College Lahore (A Chartered University), Lahore, **Pakistan**

15. November First International Conference on Nanoscience and Nanotechnology 1-2, 2018 (ICONN 2018) at  
NUST, Islamabad, **Pakistan**

14. October 22 “International Conference on Modern Trends in Chemistry & Energy  
23, 2018 Technologies” The Nishat Hotel, Lahore. COMSATS University Islamabad, Lahore Campus,  
**Pakistan**

13. September One Day 1<sup>st</sup> International Symposium on “Sensors and Biosensors” 11, 2018 COMSATS  
University Islamabad, Lahore Campus, **Pakistan**

12. August 16 Two Days Workshop on “Advanced Material Characterization

- 17, 2018 Techniques” At Hotel Elites, Nathiagali by National Centre of Excellent in Physical Chemistry, University of Peshawar, **Pakistan**
11. June 25, One Day International Symposium on “Advanced Energy Materials; 2018 Production to Storage” COMSATS University Islamabad, Lahore Campus, **Pakistan**
10. March 28 Two Days Workshop on “Risk Assessment and Emergency Response to 29, 2018 Chemicals, Biological and Environmental Hazards at Work Place” University of Gujrat, Gujrat, **Pakistan**
9. March 12, One Day Technical Workshop on “Endnote X8 and Mendeley” 2018 University of Gujrat, Gujrat, **Pakistan**
8. November Two Days International Symposium on “Developments in Contemporary 21-22, 2017 Chemistry” University of Gujrat, Gujrat, **Pakistan**
7. September One Day 10<sup>th</sup> Technical Workshop on “Endnote X8 and Statistical 17, 2017 Analysis” University of Sargodha, Women Campus Faisalabad, **Pakistan**
6. September One Day 9<sup>th</sup> Technical Workshop on “Spectroscopic Techniques” 10, 2017 University of Sargodha, Women Campus Faisalabad, **Pakistan**
5. May 22-23, Two Days Hands on Training Workshop on “Statistic Data Analysis and 2017 Experiments Design in SPSS” University of Gujrat, Gujrat, **Pakistan**
4. June 4, One Day Symposium “Chemistry-A Need of the Hour” 2015 University of Gujrat, Gujrat, **Pakistan**
3. March 11 Organized Two Days Workshop “Dye Sensitized Solar Cells Theory and 12, 2015 Fabrication” University of Gujrat, Gujrat, **Pakistan**
2. September Organized Five Days National Workshop “Training of the Trainers, 16-20, 2013 Research Design and Practical Handling” University of Gujrat, Gujrat, **Pakistan**
1. September Organized one day workshop on Basics of “Health Safety and 10, 2013 Environment” University of Gujrat, **Pakistan**