Dr Harjinder Singh

Qualification: Ph.D.
Designation: Assistant Professor
Department: Department of Chemistry
Specialization: Heterogeneous catalysis, Hydrogen Storage and CO_2 reduction

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Subjects Taught	
U.G	CY 1110: Environmental Chemistry
	CY 1125: Chemistry Practical
P.G	CY 24521: Physical Chemistry II (Chemical Kinetics and Surface Chemistry)
	CY MS 516: Inorganic Chemistry Lab I
	CY MS 611: Electrochemistry
	CY MS 616: Inorganic Chemistry Lab III

Teaching Experience				
Organization	**Start Date**	**End Date**	**Designation**	**Nature of Work**
Maulana Azad National Institute of Technology, Bhopal	29-Dec-2023	Present	Assistant Professor	Permanent

Ph.D. Supervised/Ongoing			
Name of the Student	**Topic**	**Year of Award**	**Co-supervisor (if any)**
Ms. Alka Rani (DoJ: 02-08-2024)	Fabrication of metallic nanoparticles incorporated transition metal chalcogenide		

	nanostructures for electrocatalytic water splitting		
Ms. Verma Janvi Ravindra (DoJ: 15-07-2025)	To be decided		
Ms. Saiyma khan (DoJ: 16-07-2025)	To be decided		

Lab Details		
Device or Software	**Utilization**	**Small Picture**

Sponsored Research Projects (Completed/Ongoing)				
Title	**Sponsoring Agency**	**Duration**	**Amount**	**Co-PI (if any)**

Major Consultancy Projects				
Title	**Sponsoring Agency**	**Duration**	**Amount**	**Co-Investigator (if any)**

Publication						
Authors	**Title**	**Journal**	**Vol. No. Page No.**	**Year**	**SCI/ Scopus**	**Impact Factor**
Harjinder Singh, Rathindranath Biswas, Imtiaz Ahmed, Pooja Thakur, Avinava Kundu, Abhishek Ramachandra Panigrahi, Biplab Banerjee, Krishna Kamal Halder, Jouko Lahtinen, Krishnakanta Mondal, and Krishna Kanta Haldar	Dumbbell-Shaped Ternary Transition-Metal (Cu, Ni, Co) Phosphate Bundles: A Promising Catalyst for the Oxygen Evolution Reaction.	ACS Applied Materials & Interfaces	14, 6570–6581	2022	Yes	9.5
Harjinder Singh, Imtiaz Ahmed, Rathindranath Biswas, Shouvik Mete, Krishna Kamal Halder, Biplab Banerjee and Krishna Kanta Haldar	Genomic DNA-mediated formation of a porous Cu2(OH)PO4/Co3(PO4)2.8H2O rolling pin shape bifunctional electrocatalyst for water splitting reactions.	RSC Advances	12, 3738	2022	Yes	3.9

Rathindranath Biswas, **Harjinder Singh**, Biplab Banerjee, and Krishna K. Haldar	Zn(II) Di-isobutyldithiocarbamate Complex Enabled Efficient Synthesis of Au/ZnS Nanocomposite Core-shell in One Pot	Chemistry Select	4, 4003-4007	2019	Yes	2.1
Rathindranath Biswas, Shouvik Mete, Manajit Mandal, Biplab Banerjee, **Harjinder Singh**, Imtiaz Ahmed, and Krishna Kanta Haldar	Novel Green Approach for Fabrication of Ag2CrO4/TiO2/Au/r-GO Hybrid Biofilm for Visible Light-Driven Photocatalytic Performance.	The Journal Physical of Chemistry C	124, 3373−3388	2020	Yes	3.7
Rathindranath Biswas, Pooja Thakur, Gagandeep Kaur, Shubham Som, Monochura Saha, Vandna Jhajhria, **Harjinder Singh**, Imtiaz Ahmed, Biplab Banerjee, Deepak Chopra, Tapasi Sen, and Krishna Kanta Haldar	Interfacial Engineering of CuCo2S4/g-C3N4 Hybrid Nanorods for Efficient Oxygen Evolution Reaction.	Inorganic Chemistry	60, 12355–12366	2021	Yes	4.6
Imtiaz Ahmed, Rathindranath Biswas, Ranjit A. Patil, Krishna Kamal Halder, Harjinder Singh, Biplab Banerjee, Bhupender Kumar, Yuan-Ron Ma, and Krishna Kanta Haldar	Graphitic Carbon Nitride Composites with MoO3-Decorated Co3O4 Nanorods as Catalysts for Oxygen and Hydrogen Evolution.	ACS Applied Nano Materials	4, 12672–12681.	2021	Yes	5.9
Arindom Halder, Rathindranath Biswas, Prem Prakash Kushwaha, Krishna Kamal Halder, Imtiaz Ahmed, **Harjinder Singh**, Shashank Kumar and Krishna Kanta Haldar	Green Synthesis of Bimetallic Au/Ag Nanostructures Using Aqueous Extract of Eichhornia crassipes for Antibacterial Activity.	BioNanoScience	1-10	2022	Yes	2.7
Imtiaz Ahmed, Rathindranath Biswas,	Mechanism of Iron	Energy Fuels	36, 2160–12169	2022	Yes	5.3

Saptarshi Ghosh Dastider, **Harjinder Singh**, Shouvik Mete, Ranjit A Patil, Monochura Saha, Ashok Kumar Yadav, Sambhu Nath Jha, Krishnakanta Mondal, Harishchandra Singh, Yuan-Ron Ma, Krishna Kanta Haldar	Integration into $LiMn_{1.5}Ni_{0.5}O_4$ for the Electrocatalytic Oxygen Evolution Reaction.					
Imtiaz Ahmed, Rathindranath Biswas, Harjinder Singh, Ranjit A. Patil, Rohit Varshney, Debabrata Patra, Yuan-Ron Ma and Krishna Kanta Haldar	Green Synthesis of Hybrid Papain/$Ni_3(PO_4)_2$ Rods Electrocatalyst for Enhanced Oxygen Evolution Reaction	New Journal of Chemistry	46, 22237-22245.	2022	Yes	3.3
Amit Dubey, P. B. Gourav and **Harjinder Singh**	Esterification of methacrylic acid with epichlorohydrin over syringic acid functionalized mesoporous silica nanocomposites	Reaction Kinetics, Mechanisms and Catalysis	138,1439–1451	2025	Yes	

Patents				
Title	**Year**	**Agency**	**Co-Investigator(if any)**	**Published/Granted**

Event Organized/News		
Programme	**Duration**	**Coordinators**

Citations			
	h-index	**i-10 index**	**Total Citations**
Google Scholar	10	10	352

Outreach Activities: Give Details (if any)

Outreach Activities			
Sl. No.	**Activities Name**	**Date**	**Details**
1.	National Workshop (Short Term Course), Interpretation of Instrumentation Methods in Sciences and Engineering (IIMSE-2025) **Convener:** Prof. Amit Dubey **Coordinators:** Dr. Rampal Pandey, Dr. **Harjinder Singh** and Dr. Soumya Mukherjee	March 24-28, 2025	The national workshop IIMSE-2025 organized by the Department of Chemistry, MANIT, Bhopal from 24th to 28th March 2025 covered the basic principles and workability of Fourier Transform – Raman Spectroscopy, Field Emission Scanning Electron Microscopy, BET Adsorption Instrument, and many others as well as several computational techniques. Eight lectures and five hands-on sessions have been arranged. Close to **170 participants** from different academic and research institutes, namely, VIT Bhopal University, Central University of Punjab, Bathinda, Manipal University Jaipur, and many others have attended the event, among which almost 80 participants have participated in-person.
2.	Hands on Training in national workshop (short term course), IIMSE-2025	March 24, 2025	Hands on Training on the Electrochemical workstation.
3.	Hands on Training in national workshop (short term course), AMRIT-2025	July 25, 2025	Hands on Training on the Electrochemical workstation.
4.	Resource person	July 26, 2025	Delivered lecture on “Applicability of Fundamentals of Electrochemistry in Its Instrumentation Techniques”