

Name:

Muhammad Sadiq

Designation:

Associate Professor (Tenured)
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Specialization/Research:

Physical Chemistry/Heterogeneous Catalysis

Publications						
No	Authors	Title	Journal	Vol	Page	Year
1	I. Khan, K. Saeed, N. Ali, I. Khan, B. Zhang, M. Sadiq	<i>Heterogeneous Photodegradation of Industrial Dyes: An Insight to Different Mechanism and Rate Affecting Parameters,</i> Doi.org/10.1016/j.jece.2020.104364	Journal of Environmental Chemical Engineering			2020
2	I. Khan, A. A. Khan, I. Khan, M. Usman, M. Sadiq , F. Ali, K. Saeed	<i>Investigation of Photocatalytic Potential Enhancement of Silica monolith decorated Tin oxide Nanoparticles through Experimental and theoretical study,</i> doi.org/10.1039/D0NJ0096B	New Journal of Chemistry			2020
3	Z. Iqbal, S. Sadiq, M. Sadiq , M. Ali, K. Saeed, N. Rehman, M. Ilyas, S. Ullah, S. U. Jan, I. Ahmad, M. H. Shah	<i>Synergetic Effect of Calcium Doping on Catalytic Activity of Manganese Ferrite: DFT Study and Oxidation of Hydrocarbon</i> doi:10.3390/cryst10040335	Crystals	10	335	2020
4	S. Sadiq, M. Sadiq , K. Saeed, N. Rehman, Q. Ali	<i>Correlation of Thermal Conductivity with Catalytic Activity of Nanoparticles: Oxidation of Benzyl Alcohol,</i> DOI 10.1007/s11144-020-01784-x	Reaction Kinetics, Mechanisms and Catalysis	130	289	2020
5	T. Shah, M. Sadiq , K. Saeed	<i>Synthesis and characterization of graphene nanoplates supported silver nanoparticles with enhanced photocatalytic activity</i> https://doi.org/10.1007/s10854-019-02560-x	<i>Journal Materials Science: Materials in Electronics</i>	31	560	2020
6	M. A. Motin, M. Sadiq , C. M. Kim	<i>Reaction of CH₃CH₂OH and H on a ZnO Single Crystal Surface,</i> https://doi.org/10.1002/bkcs.11890	Bulletin of the Korean Chemical Society	40	1226	2019
7	Z. Iqbal, S. Sadiq, M. Sadiq , I. Ullah, Z. Fazal, D. Khan, N. Bibi, K. Saeed, A. A. Khan, F. Mabood, M. Ali	<i>Extending the Hierarchy of Heterogeneous Catalysis to Substituted Derivatives of Benzimidazole Synthesis: Transition Metals Decorated CNTs,</i> doi:10.3390/catal9121000	Catalysts	9	1000	2019
8	R. Aman, S. Sadiq, M. Ali, M. Sadiq , J. Gul, K. Saeed, A. A. Khan, S. H. Shah	<i>Facile Route for Green Synthesis of N-Benzylideneaniline Over Bimetallic Reduced Graphene Oxide: Chemical Reactivity of 2,3,4 Substituted Derivatives of Aniline</i> DOI :10.1007/s11164-019-03772-w	Research on Chemical Intermediates	45	2947	2019
9	I. Khan, M. Sadiq , I. Khan, K. Saeed,	<i>Manganese dioxide nanoparticles/activated carbon composite as efficient UV and visible-light photocatalyst</i> https://doi.org/10.1007/s11356-018-4055-y	Environmental Science and Pollution Research	26	5140	2019
10	R. Aman, A. Clearfield, M. Sadiq , Z. Ali	<i>HKUST-1 Supported on Zirconium Phosphate as an Efficient Catalyst for Solvent Free Oxidation of Cyclohexene: DFT Study</i> https://doi.org/10.3390/catal8110546	Catalysts	8	546	2018
11	K. Saeed, N. Zada, I. Khan, M. Sadiq	<i>Synthesis, Characterization and Photodegradation Application of Fe-Mn and F-MWNTs supported Fe-Mn nanoparticles</i> doi: 10.5004/dwt.2018.22010	Desalination and Water Treatment	108	362	2018
12	K Saeed, M Sadiq, I Khan, S Ullah, N Ali, A Khan	<i>Synthesis, characterization, and photocatalytic application of Pd/ZrO₂ and Pt/ZrO₂,</i> DOI: 10.1007/s13201-017-0535-3	Applied Water Science	8	60	2018
13	M. Sadiq , M. Khan, R. Aman, S. Sadiq, M. S.	<i>Thermodynamic and kinetic studies of adsorptive removal of toluidine blue by activated carbon from</i>	Desalination and Water Treatment	78	292	2017

	Ahmad, M. Ali, R. Ali	<i>olive pit</i>				
14	M. Sadiq , M. Khan, R. Aman, S. Hussain, M. S. Ahmad, S. Sadiq, M. A. Zia, H. Rashid, R. Ali	<i>Tuning of activated carbon for solvent-free oxidation of cyclohexane</i> doi.org/10.1155/2017/5732761	Journal of Chemistry	--	--	2017
15	M. Sadiq , M. Khan, K. Saeed, S. Sadiq	<i>Liquid phase oxidation of cinnamyl alcohol to cinnamaldehyde using multiwall carbon nanotubes decorate d with zinc-manganese oxide nanoparticles</i>	Journal of Applied Catalysis A: General	539	97	2017
16	K Saeed, I Khan, T Gul, M Sadiq	Efficient photodegradation of methyl violet dye using TiO ₂ /Pt and TiO ₂ /Pd photocatalysts DOI 10.1007/s13201-017-0535-3	Applied Water Science	7	3841	2017
17	H. Rashid, M. S. Ahmad, M. Sadiq , R. Aman	<i>Potent Heterogeneous Catalyst for Low Temperature Selective Oxidation of Cyclohexanol by Molecular Oxygen</i> doi.org/10.1155/2016/1254796	Journal of Chemistry	--	--	2016
18	H. Rashid, M. Sadiq , M. A. Zia, S. Sadiq, M. S. Ahmad, R. Aman, M. Humayun, R Ali	<i>Photooxidation of Toluene: Correlation of Noble Metal Loading on Titania and Activation Energy</i> doi.org/10.1155/2016/4231467	Journal of Chemistry	--	--	2016
19	M. N. Umar, M. Shoaib, M. Sadiq , M. Ayaz, S. Miskeen, I. Shah, I. Khan, H. Rahid, I. Iahi, S. W. Khan	<i>Synthesis and pharmacological properties of 1,3-bis[(s)phenylethyl]imidazolidine-2-thion</i>	Pharmaceutical Chemistry Journal	50	382	2016
20	S. Hussain, M. Sadiq	Liquid Phase Aerobic Oxidation of Cinnamyl Alcohol to Cinnamaldehyde: Effect of Different Solvents DOI: 10.2174/2211544705666160805125241	Current Catalysis	5	236	2016
21	K. Saeed, I. Khan, M. Sadiq	<i>Synthesis of Graphene supported bimetallic nanoparticles for the sunlight photodegradation of basic green 5 dye in aqueous medium</i>	Separation Science and Technology	51	1421	2016
22	S. Saima, A. Zahid, A. Iftikhar, K Imad, R. Gul, M. Sadiq , R. Najeeb	<i>Structural, Mechanical and Magneto-Electronic Properties of the Ternary Sodium Palladium and Platinum Oxides</i>	Z. Naturforsch	70	815	2015
23	M. Sadiq , M. Ali, A. Razia, R. Haroon, M. N. Umar.	<i>Kinetic Study of Selective Gas-Phase Oxidation of Isopropanol to Acetone Using Monoclinic ZrO₂ as a Catalyst</i>	Quim. Nova	38	891	2015
24	M. Sadiq , M. Ali, R. Iqbal, K. Saeed, A. Khan, M. N. Umar, H. Rashid	<i>Efficient Aerobic Oxidation of Cyclohexane to KA Oil Catalyzed by Pt-Sn Supported on MWCNTs</i> DOI 10.1007/s12039-015-0877-z	Journal of Chemical Science	127	1167	2015
25	M. Ilyas, M. Saeed, M. Sadiq , M. Siddique	<i>Mixed-valence manganese oxide catalyzed oxidation of benzyl alcohol and cyclohexanol in the liquid phase</i>	Progress in Reaction Kinetics and Mechanism	39	375	2014
26	M. Sadiq , M. Ilyas, S. Alam, H. Khaliq	<i>Zirconia Supported Iron as an Efficient Green Catalyst for the Selective Liquid Phase Solvent Free Oxidation of Alcohol with Molecular Oxygen</i>	Tenside Surf. Det	50	125	2013
27	M. Sadiq , M. Ilyas, S. Alam	<i>Investigating the Catalytic Activity of Monoclinic Zirconia; Oxidation of Benzyl Alcohol in Aqueous Medium at Mild Conditions</i>	Tenside Surf. Det	49	37	2012
28	S. Alam, A. Ullah, M. Khan, M. Sadiq , H. Zahid, A. Noor	<i>Removal of Lead from Aqueous Solution by an Efficient Low Cost Biosorbent</i>	Tenside Surf. Det	50	100	2012
29	M. Sadiq , S. Alam, F. Mabood, F. K. M. Ilyas	<i>Investigating the Activity of Zirconia as a Catalyst and a Support for Noble Metals, in Green Oxidation of Cyclohexane</i>	Tenside Surf. Det	49	32	2012
30	S. Alam. F. Mabood, M. Sadiq , A. Noor, F. K. Bangash	<i>Removal of Triphenylmethane Dye from Aqueous Solution by Carbonaceous Adsorbent</i>	Tenside Surf. Det	48	134	2011
31	F. Mabood J. Shah, R. Jan, R. Jabeen, S. Alam. M. Sadiq	<i>Catalytic conversion of waste inner tube rubber (isobutylene isoprene) into valuable products</i>	Journal of the Chemical Society of Pakistan	32	767	2010
32	S. Alam, F. Mabood, M. Sadiq F. K. Bangash	<i>Adsorption of Azo dye on Activated Carbon Prepared from Waste Wood: 2. Equilibrium</i>	Journal of the Chemical Society of Pakistan	32	695	2010
33	M. Sadiq , M. Ilyas	<i>Pt/ZrO₂: An Efficient Catalyst for Aerobic Oxidation of Toluene in Aqueous Solution</i>	Chinese Journal of Chemistry	28	2216	2010
34	M. Ilyas, M. Sadiq	<i>Oxidation of Toluene to Benzoic Acid Catalyzed by Platinum Supported on Zirconia in the Liquid Phase-Solvent Free Conditions</i>	Catalysis Letter	128	337	2009
35	M. Ilyas, M. Sadiq	<i>Kinetics of Heterogeneous Solvent-free Liquid</i>	Chinese Journal of	26	941	

		<i>Phase Oxidation of Alcohol Using ZrO₂ Catalyst with Molecular Oxygen</i>	Chemistry			2008
36	M. Ilyas, M. Sadiq	<i>Liquid Phase Aerobic Oxidation of Benzyl Alcohol Catalyzed by Pt/ZrO₂</i>	Chemical Engineering and Technology	30	1391	2007
37	M. Ilyas, M. Sadiq , K. Imdad	<i>Liquid-Phase Oxidation of Alcohols Catalyzed by ZrO₂ under Solvent Free Conditions</i>	Chinese Journal of Catalysis	28	413	2007

Professional Experience

S.No	Designation	Duration	Institute	Funding Agency
1	Res. Associate (MPhil)	2years	NCE in Physical Chemistry, University of Peshawar	NCE in Physical Chemistry
2	Res. Associate (PhD)	3years	NCE in Physical Chemistry, University of Peshawar	NCE in Physical Chemistry
3	Res. Associate	6 months (2008-2009)	BMC, Uppsala University, Sweden	HEC, Pakistan
4	Assistant Professor	Feb, 2010- June, 2017	Department of Chemistry, University of Malakand	University of Malakand
5	Professor Collaborator	1 month (2017)	Department of Chemistry, Kyungpook National University, South Korea	HEC, Pakistan
6	Associate Professor	June, 2017- Cont..	Department of Chemistry, University of Malakand	University of Malakand
7	Visiting Research Professor	Jan - April, 2019	Department of Chemistry, Kyungpook National University, South Korea	University of Malakand

List of Awards

S.No	Name of Award	Year	Awarding Agency
1	Productive Scientist Award	2009	Ministry of Science and Technology Islamabad, Pakistan
2	Productive Scientist Award	2010	Ministry of Science and Technology Islamabad, Pakistan
3	Productive Scientist Award	2011 - 2012	Ministry of Science and Technology Islamabad, Pakistan
4	1 st Research Award for the completion of Project (20-1604/R&D/092198)	2015	Office of Research, Innovation & Commercialization, University of Malakand
5	1 st Research Award for the completion of Project (PSF/Res/F-UM/Chem (434)	2015	Office of Research, Innovation & Commercialization, University of Malakand

List of Projects

No	Funding Agency	Title	Role	Project No	Worth/ million
1	HEC, Pakistan	<i>Green oxidation of alcohols in the liquid phase with oxygen catalyzed by reduced and unreduced iron supported on zirconia</i>	PI	20-1604/R&D/09219 8	5.7
2	HEC, Pakistan	<i>Preparation and characterization of catalytically efficient activated carbon for liquid phase aerobic oxidation of alcohol</i>	PI	20-1897/NRPU/R&D/HEC/116806	2.8
3	HEC, Pakistan	<i>Highly efficient and recoverable catalysts adsorbed on zirconia for carbon carbon bond connecting reactions</i>	Co. PI	PM-IPFP/HRD/HEC/2011/373	0.47
4	HEC, Pakistan	<i>Preparation of graphene nanoplates supported silver nanoparticles and its application for the photodegradation of organic dyes</i>	Co. PI	203430/NPPU/R&D/HEC	3.5
5	PSF, Pakistan	<i>Efficiency of iron supported on porous material (prepared from peanut shells) for liquid phase aerobic oxidation of alcohol</i>	PI	PSF/Res/F-UM/Chem(434)	1.2
6	University of Malakand	<i>Synthesis and characterization of iron oxide nanoparticles supported on zirconia and its application in the gas phase oxidation of cyclohexanol to cyclohexanone</i>	PI	UOM/Fin/14/897	0.1

MPhil/PhD Students Supervised

No	Name	Program	Thesis Title	Year
1	R. Aman	PhD	<i>Probing the surface activity of activated carbon; oxidation of cycloalkanes in the protocol of green chemistry</i>	2018
2	Z. Iqbal	PhD	<i>Cost Effective Catalysts for the Synthesis of Benzimidazole Derivatives from Cinnamaldehyde: DFT Descriptors for Molecular Reactivity of Substituted Cinnamaldehydes</i>	2020
3	H. Khaliq	MPhil	<i>Oxidation of cyclohexanol, with oxygen catalyzed by reduced and unreduced iron supported on zirconia, in the liquid phase; solvent free conditions</i>	2012
4	G. Zamin	MPhil	<i>Synthesis and characterization of iron oxide nanoparticles supported on zirconia and its application in the gas-phase oxidation of alcohol</i>	2014
5	S. Hussain	MPhil	<i>Efficiency of iron supported on porous materials (prepared from peanut shell) for oxidation of alcohol</i>	2014
6	R. Iqbal	MPhil	<i>Surface modification and characterization of multi walled carbon nanotubes with tin and platinum as a green and sustainable catalyst</i>	2014
7	H. Kamal	MPhil	<i>Investigating the Catalytic activity and selectivity of phosphated zirconia for Aza-Michael reactions</i>	2014
8	K. Badshah	MPhil	<i>Kinetic study of selective gas-phase oxidation of isopropanol to acetone using monoclinic ZrO₂ as a catalyst</i>	2014
9	M. S. Ahmad	MPhil	<i>Catalytic activity of the platinum doped zirconia in the selective oxidation of cyclohexyl alcohol</i>	2017
10	S. Hussain	MPhil	<i>Comparative study of noble metals supported on titania for oxidation of styryl carbinol</i>	2017
11	S. Jabeen	MPhil	<i>Palladium supported zirconia based catalytic degradation of organic dyes from waste water</i>	2017
12	J. Gul	MPhil	<i>Bimetallic graphene oxide as an efficient catalyst for one pot synthesis of N-benzalideneaniline</i>	2017
13	S. H. Shah	MPhil	<i>The effect of substituted aniline on imination reactions catalyzed by Mn-Co/rGO</i>	2018
14	M. H. Shah	MPhil	<i>Effect of calcium doping on the efficiency of manganese ferrite for the oxidation of cycloalkanes</i>	2019
15	S. Qazi	MPhil	<i>Investigation of catalytic activity and selectivity of mica supported palladium nanocubes for Heck reaction</i>	2020
16	T. Mahmood	MPhil	<i>Probing the redox properties of octahedral palladium nanocrystals supported on mica</i>	2020
17	R. Ullah	MPhil	<i>Designing of Reactor for Catalytic Conversion of CO₂ to Methanol Using Magnetic Nanoparticles</i>	2020

Presentation in Conferences

S.No	Conference	Venue	Date
1	12 th International Conference of the Pacific Basin Consortium for Environment & Health Sciences	Beijing University, China	26-29 October, 2007
2	1 st National Symposium on Analytical, Environmental and Applied Chemistry	Shah Abdul Latif University, Khairpur, Sindh, Pakistan	24-25 October, 2008
3	18 th National Chemistry Conference Institute of Chemistry	University of Punjab, Lahore Pakistan	25-27 February, 2008
4	National Symposium on Kinetics and Catalysis	University of Peshawar Summer Campus, Baragali, Abbottabad	26-28 September, 2011
5	10 th International and 22 nd National Chemistry Conference	Department of Chemistry and Bio Chemistry, University of Agriculture Faisalabad	21-23 November, 2011
6	International Conference on Physical and Environmental Chemistry	NCE in Physical Chemistry, University of Peshawar	9-11 September, 2013
7	26 th National and 14 th international Chemistry Conference	The Islamia University of Bahawalpur, Pakistan.	05-08 October, 2015
8	5 th Invention to Innovation Summit	University of Haripur	3-4 November, 2015
9	Second UAE Conference on Pure and Applied Chemistry	American University of Sharjah, UAE	1-3 March, 2016
10	3 rd International Turkic World Conference on Chemical Sciences & Technologies	Azerbaijan State Oil and Industrial University, Azerbaijan	10-13 September, 2017
11	30 th National & 18 th International Chemistry Conference on Recent Trends in Chemistry	Department of Chemistry, University of Management & Technology, Lahore, Pakistan	27-29 November, 2019
12	E-meeting on Catalysis and Chemical Engineering	Organized by United Scientific Group, USA	11 May, 2020

Conference/Workshop/Seminar Organized			
S.No	Conference/Workshop/Seminar	Venue	Date
1	HEC Workshop on, "Innovation in Chemical Education"	University of Malakand	Jun 4-7, 2012
2	27 th National and 15 th International Chemistry conference	University of Malakand	2016
3	Session (Technologies for active pharmaceutical intermediates "API"), 2 nd Invention to Innovation Summit KP	UET Peshawar	2016
4	Session (Technologies for active pharmaceutical intermediates "API"), 3 rd Invention to Innovation Summit, KP	UET Peshawar	2017
5	UOM Sponsor Seminar on, "Electrochemical Sensors for Detection of Proteins" Speaker, Professor Dr. Muhammad Rasul Jan, Vice Chancellor University of Malakand	University of Malakand	08/12/2010
6	HEC Sponsor Seminar on, "Studies on the Molecular Treatment of Epilepsy, Diabetes and Multidrug Resistance (MDR) Infection" Speaker, Prof. Muhammad Iqbal Choudhary, HEJ Research Institute of Chemistry, University of Karachi	University of Malakand	06/07/ 2011
7	UOM Sponsor Seminar on, "Random Thoughts on Education" Speaker, Prof. Fida Mohammad, Ghulam Ishaq Khan Institute of Engineering Sciences & Technology, Swabi,	University of Malakand	April 28, 2011
8	UOM Sponsor Seminar on, "Design, Synthesis and Characterization of Supramolecular Nano pores" Speaker, Dr. M. Raza Shah, HEJ Research Institute of Chemistry, University of Karachi,	University of Malakand	June 17, 2011
9	UOM Sponsor Seminar on, "The Use of End Note in Scientific Writing" Speaker, Dr. Mumtaz Ali, Department of Chemistry, University of Malakand	University of Malakand	03/03/2011
10	UOM Sponsor Seminar on, "Conversion of Low-Cost Precursors into Useful Products and its Use for the Waste Water Treatment" Speaker, Dr. Sultan Alam, Department of Chemistry, University of Malakand	University of Malakand	02/02/2011
11	UOM Sponsor Seminar on, "Complexation, Characterization and Biological Activities of NPS donor ligands with Palladium" Speaker, Dr. Hizbullah, Department of Chemistry, University of Malakand,	University of Malakand	19/01/2011
12	UOM Sponsor Seminar on, "New Picolylamine Template Organo-Catalyst for Enantioselective Aldol Reactions" Speaker, Dr. Muhammad Naveed Umar, Department of Chemistry, University of Malakand	University of Malakand	22/12/2010
13	UOM Sponsor Seminar on, "Combination of 1,2- Hydroboration and 1,1 organoboration, an Efficient route for the synthesis of Spirosilanes" Speaker, Dr. Ezzat Khan, Department of Chemistry, University of Malakand	University of Malakand	05/01/2011
14	UOM Sponsor Seminar on, "Zirconia Catalyzed Liquid Phase Organic Oxidation Reactions in Solvent Free Conditions" Speaker, Dr. Mohammad Sadiq, Department of Chemistry, University of Malakand	University of Malakand	02/03/2011
15	UOM Sponsor Seminar on, "Carbon Nanotubes/ Polymer Nanocomposites and their Electrospun Membrane" Speaker, Dr. Khalid Saeed, Department of Chemistry, University of Malakand	University of Malakand	16/03/2011