Dr. Waheed Ahmad Khanday

Designation: Assistant Professor

Subject: Chemistry

Area of Specialization: Physical/Inorganic Chemistry

College: Govt. Degree College, Anantnag

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Date of Appointment: 06-04-2017

Academic Qualifications

Examination Passed	Board/ University	Subjects	Year	Division/Grade/Merit
10th	J&K Board	General	2002	1st
12th	J&K Board	Eng, Phy, Che, Bio	2004	1st
B.Sc.	Kashmir University	Eng, Che, Bot, Zoo	2008	2nd
M.Sc.	Jiwaji University	Chemistry	2011	1st
B.Ed	Kashmir University	Core I-IV, TGE, TBS, PED	2016	1st

Research Experience

Research Stage	Tittle of the work/Thesis	University where the work was carried out	Year
Ph.D (Chemistry)	To Study synthesis and characterization of zeolites and their role as catalysts in synthesis of biologically active compounds	Jiwaji University, Gwalior	2011-14
Post-Doctoral Fellowship	Synthesis of zeolites from low cost materials such as oil palm ash, etc, to be used as catalyst for pyrolysis of agricultural waste to bio-fuels	Universiti Sains Malaysia (USM), Malaysia	2016-17

Summary

- After obtaining Master's Degree in Chemistry with 1st division from Jiwaji University, Gwalior, in 2010, Dr. Khanday joined Ph.D program in the same Institution under the supervision of **Prof. Radha Tomar** in the area of surface chemistry and the title of his work was, **"To Study synthesis and characterization of zeolites and their role as catalysts in synthesis of biologically active compounds"** which he successfully completed in June 2014. He carried out most of his lab work at **Protective Device Division, Defense Research Development Establishment (DRDE)**, Gwalior, India where he worked as **Junior Research Fellow (JRF)** between 2011-2013 in connection with the Major Research Project entitled "*Synthesis, Characterization and applications of zeolites*" funded by **Defense Research Development Organization (DRDO)**. During the collaborative project he worked with **Dr. S. Chandrasekhar, Scientist E**, over desorption and kinetics of chemical warfare agents with specific to organophosphorous compounds.
- During his Ph.D., he has synthesized different zeolites, converted them successfully into proton and various metal ion-exchanged catalytic forms and carried out catalytic studies to synthesize biologically active compounds using various ion-exchanged forms of zeolites. Also 'remediations of some environmental problems were studied using zeolites such as adsorption and thermal desorption of DMMP from environment and sorption of toxic metal ions from waste water. He also got acquainted and learnt various techniques like Gas Chromatography, Temperature Programmed Desorption, IR Spectroscopy, Cyclic Voltammetery, BET Surface area analysis, etc.
- He has worked as Post-Doctoral Research fellow in **School Of Chemical Engineering, Universiti Sains Malaysia**, under the supervision of **Prof. Bassim H. Hameed** on **"Synthesis of zeolites from low cost materials such as oil palm ash etc to be used as catalyst for pyrolysis of agricultural waste to bio-fuels"** .
- Dr. Khanday has published more than **25 research articles** in high quality ISI indexed journals (**almost all Q1**). He had also delivered paper and poster presentations in more than **05 national and international Conferences**. He is also reviewer of more than **20 journals of Elsevier publication** like catalysis communication, microporous and mesoporous materials, material engineering A, B & C being few among them.
- His area of research interest is synthesis of porous materials particularly zeolites, activated carbon, composites, mica minerals, etc. He also focuses on surface science and modification of these materials for various applications especially in surface catalysis, adsorption and detoxification of environment. He is also interested to work on organic synthesis under green technology using heterogeneous catalysts.

Workshops, Seminars, Symposia and Conferences attended

1) Paper Presentation at International Conference on Chemistry and Materials Prospects and Perspectives-2012 at Babasaheb Bhimrao Ambetkar University Lukhnow (U.P.) (14-16 Dec., 2012)
2) Paper Presentation at National Conference on Recent Advances in Chemical Sciences; Emphasis on Healthy Life at ITM University Gwalior (M.P) (21 & 22 Sep., 2012)
3) Paper presentation at National Conference on Advances in Electroanalytical Chemistry at S.O.S in Environmental chemistry Jiwaji University, Gwalior (23-24 Dec., 2011)
4) Paper presentation at National Symposium on Recent advances in Chemical Sciences at Kota University, Kota (Rajasthan) (7-8 Jan., 2011)
5) Paper presentation at National seminar on Ecological Imbalance & Effect of Global Warming On Environment at Dr. Bhagwat Sahai Govt. College Gwalior (M.P.) (18-19 Dec., 2010)

Research Publications

S. No	Name of authors, title, year, Vol. No. and Page Nos.	Journal and Publisher	ISSN No.	Impact Factor
1	Single-Step pyrolysis of phosphoric acid-activated chitin for efficient adsorption of cephalexin antibiotic 280 (2019) 255-259	*Bioresource Technology* Elsevier	0960-8524	6.669
2	Box-Behnken optimization of glycerol transesterification reaction to glycerol carbonate over calcined oil palm fuel ash derived catalyst P.U. Okoye, S. Wang, **W.A. Khanday**, S. Li, T. Tang, L. Zhang 146 (2020) 2676-2687	*Renewable Energy* Elsevier	0960-1481	5.439
3	Zeolite-hydroxyapatite-activated oil palm ash composite for antibiotic tetracycline adsorption **W.A. Khanday,** B.H. Hameed 215 (2018) 499-505	*Fuel* Elsevier	0016-2361	5.128
4	Biodiesel byproduct glycerol upgrading to glycerol carbonate over lithium–oil palm ash zeolite **W.A. Khanday**, P.U. Okoye, B.H. Hameed* *151(2017) 472-480*	*Energy Conversion and Management* Elsevier	0196-8904	7.181
5	Dynamic cum batch adsorption of a vesicant CWA (2-chloroethyl ethyl sulfide) over synthetic erionite **Waheed Ahmad Khanday*** *244 (2017) 15-20*	*Microporous and Mesoporous Materials* Elsevier	1387-1811	4.182

6	Catalytic pyrolysis of oil palm mesocarp fibre on a zeolite derived from low-cost oil palm ash **Waheed Ahmad Khanday**, G. Kabir, B.H. Hameed* *127 (2016) 265-272*	*Energy Conversion and Management* Elsevier	**0196-8904**	**7.181**
7	Cross-linked beads of activated oil palm ash zeolite/chitosan composite as a bio-adsorbent for removal of methylene blue and acid blue 29 dyes **W.A. Khanday**, A. Asif, B. H. Hameed* *95(2017) 895–902*	*International Journal of Biological Macromolecules* Elsevier	**0141-8130**	**4.784**
8	Mesoporous zeolite-activated carbon composite from oil palm ash as an effective adsorbent for methylene blue **W.A. Khanday**, F. Marrakchi, B. H. Hameed***** *70 (2017) 32–41*	*Journal of the Taiwan Institute of Chemical Engineers* Elsevier	**1876-1070**	**3.834**
9	Polypyrrole and its composites with various cation exchanged forms of Zeolite X and their role in sensitive detection of Carbon monoxide Rawoof A. Naikoo*, Sami U. Bhat, Muzzaffar A. Mir, Radha Tomar, **Waheed A. Khanday**, P. Dipak & Dinesh C Tiwari 6 (2016) 99202-99210	*RSC Advances* RSC	**2046-2069**	**3.108**
10	Cross-linked chitosan/sepiolite composite for the adsorption of methylene blue and reactive orange 16 F. Marrakchi, **W.A. Khanday**, A. Asif, B.H. Hameed* *93 (2016) 1231–1239*	*International Journal of Biological Macromolecules* Elsevier	**0141-8130**	**4.784**
11	Mesoporous-activated carbon prepared from chitosan flakes via single-step sodium hydroxide activation for the adsorption of methylene blue. F. Marrakchi, Muthanna J. Ahmed, **W.A. Khanday**, M. Asif, B.H. Hameed* *98 (2017) 233–239*	*International Journal of Biological Macromolecules* *Elsevier*	**0141-8130**	**4.784**
12	Mesoporous activated coconut shell-derived hydrochar prepared via hydrothermal carbonization-NaOH activation for methylene blue adsorption Md. Azharul Islam, M.J. Ahmed, **W.A. Khanday**, M. Asif, B.H. Hameed* 203 (2017) 237–244	*Journal of Environmental Management* *Elsevier*	**0301-4797**	**4.865**
13	High-surface-area and nitrogen-rich mesoporous carbon material from fishery waste for effective adsorption of methylene blue F. Marrakchi, M. Auta, **W.A. Khanday**, B.H. Hameed* 321 (2017) 428–434	*Powder Technology* *Elsevier*	**0032-5910**	**3.413**
14	Mesoporous activated carbon prepared from NaOH activation of rattan (*Lacosperma secundiflorum*) hydrochar for methylene blue removal Md. Azharul Islam , M.J. Ahmed , **W.A. Khanday**, M. Asif, B.H. Hameed* *138 (2017) 297–285*	*Ecotoxicology and Environmental Safety* Elsevier	**0147-6513**	**4.527**

15	Mesoporous carbonaceous material from fish scales as low-cost adsorbent for reactive orange 16 adsorption F. Marrakchi, Muthanna J. Ahmed, **W.A. Khanday**, M. Asif, B.H. Hameed *71 (2017) 47–54*	*Journal of the Taiwan Institute of Chemical Engineers* Elsevier	**1876-1070**	**3.834**
16	Nanoporous activated carbon prepared from karanj (Pongamia pinnata) fruit hulls for methylene blue adsorption Md. Azharul Islam, S. Sabar, A. Benhouria, **W.A. Khanday**, M. Asif, B.H. Hameed *74 (2017) 96–104*	*Journal of the Taiwan Institute of Chemical Engineers* Elsevier	**1876-1070**	**3.834**
17	Application of Optimized Large Surface Area Date Stone (Phoenix Dactylifera) Activated Carbon for Rhodamin B Removal: Box-Behnken Design Approach M. Danish*, **W.A. Khanday**, R. Hashim, N. Syuhada, M.N. Akhtar, M. Nizami *139 (2017) 280–290*	*Ecotoxicology and Environmental Safety* Elsevier	**0147-6513**	**4.527**
18	Optimization of banana trunk-activated carbon production for methylene blue-contaminated water treatment Mohammed Danish, Tanweer Ahmad, W. N. A. W. Nadhari, Mehraj Ahmad, **Waheed Ahmad Khanday**, Lou Ziyang, Zhou Pin 8 (2018) 9	Applied Water Science Springer	**2190-5495**	**Not Computed yet**
19	Conversion of zeolite–A in to various ion-exchanged catalytic forms and their catalytic efficiency for the synthesis of benzimidazole. **Waheed Ahmad Khanday***, Radha Tomar *43 (2014) 141–145*	*Catalysis Communications* Elsevier	**1566-7367**	**3.674**
20	Dynamic adsorption of DMMP over synthetic zeolite-Alpha **Waheed Ahmad Khanday***, Sheikh Abdul Majid, S. Chandra Shekar, Radha Tomar *7 (2014) 115–123*	*Arabian journal of chemistry* Elsevier	**1878-5352**	**3.298**
21	Synthesis and characterization of various zeolites and study of dynamic adsorption of dimethyl methyl phosphate over them **Waheed Ahmad Khanday*,** Sheikh Abdul Majid, S. Chandra Shekar, Radha Tomar *48 (2013) 4679–4686*	*Materials Research Bulletin* Elsevier	**0025-5408**	**3.355**
22	Study of sorption of Pb^{2+}, Cd^{2+}, Zn^{2+} and Cu^{2+} from waste water on synthetic analogues of clintonite **W.A. Khanday**, S.K. Singh, J. Bhaudoriya, S.A. Majid, S.S. Tomar, and Radha Tomar* *2012, Vol. 74, No. 5, pp. 573–581. 2012.*	*Colloid Journal* Springer	**1061-933X (Print)** **1608-3067 (Online)**	**0.966**
23	Synthesis of 1, 5-Benzodiazepine and Its Derivatives by Condensation Reaction Using H-MCM-22 as Catalyst Sheikh Abdul Majid, **Waheed Ahmad Khanday** and Radha Tomar* *Volume 2012, Article ID 510650, 6 pages doi:10.1155/2012/510650*	***Old name:*** *Journal of Biomedicine and Biotechnology* **New name:** BioMed Research International Hindawi	**2314-6133 (Print)** **2314-6141 (Online)**	**2.197**

24	Study of sorption of metal oxoanions from waste water on surfactant modified analog of laumontite Preeti Gupta, **Waheed Ahmad Khanday***, Sheikh Abdul Majid, Vandna Kushwa, S.S. Tomar, Radha Tomar *1 (2013) 510–515*	*Journal of Environmental Chemical Engineering* Elsevier	**2213-3437**	**Not Computed yet**
25	Synthesis of benzimidazole derivatives by condensation reaction using H-alpha zeolite as catalyst **Waheed Ahmad Khanday**, Sheikh Abdul Majid, Radha Tomar* *Vol.17 (3) March (2013) pp 40-45*	*Research Journal of Chemistry and Environment*	**2278-4527**	**0.636**
26	An efficient synthesis of tetrahydrocarbazole using solid acid catalyst Sheikh Abdul Majid, **Waheed Ahmad Khanday**, Radha Tomar* *Vol.17 (7) July (2013) pp 62-67*	*Research Journal of Chemistry and Environment*	**2278-4527**	**0.636**

Date: 04-02-20

Place: Anantnag, Kashmir

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