

Dr. AMNA KHATOON

Designation

Assistant Professor

Office Address

Department of Environmental Science
Faculty of Engineering & Technology
Jamia Millia Islamia (A central University)
New Delhi, 110025

E-mail id

akhatoon2@jmi.ac.in
amnanaseer.amu@gmail.com

Contact no.

7417315922

Google Scholar ID

XT9AAAAAJ

Scopus ID

54420176200

Vidwaan ID

304935

Research Area

- Heavy metal Removal
- Adsorptive Dye removal
- Chemical and physical activation of biomass
- Material synthesis and characterization
- Process optimization

Research publications

20

h-index

9

i10-index

9

Citations

307

Conferences

13

Workshops and seminars

5

ACADEMIC

Educational Qualification

Course	University/Institute	Subjects	Year of Passing	Percentage
Ph.D.	Aligarh Muslim University	Applied Chemistry	2018	-----
M.Phil.	Aligarh Muslim University	Applied Chemistry	2014	79.4
M.Sc.	Aligarh Muslim University	Industrial Chemistry	2012	86.67 (Gold Medal)
B.Sc.	Aligarh Muslim University	Industrial Chemistry	2010	82.13 (II nd Rank)
Intermediate	Aligarh Muslim University	PCB	2007	75.25
High School	Aligarh Muslim University	Science, S.S.T, Maths, English, Urdu, Hindi	2004	74.6

Research Details

Ph.D. Topic	Adsorption Studies On Some Natural And Modified Adsorbents And Their Possible Use In the Removal Of Toxic Metals From Water And Wastewater.
Date of completion	July 9, 2018
Supervisor	Prof. Rifaqat A.K. Rao
University	Aligarh Muslim University (A.M.U.) INDIA
M.Phil. Topic	Adsorption Studies On Some Natural Biosorbents: Removal Of Toxic Metals From Water.
Date of completion	Nov. 2014
Supervisor	Prof. Rifaqat A.K. Rao
University	Aligarh Muslim University (A.M.U.) INDIA

ACHIEVEMENTS

1. Qualified National Eligibility Test for Assistant Professor (**NET**) Examination, India, 2017.
2. Senior Research Fellow under Maulana Azad National Fellowship Scheme (**SRF-MANF**), India, 2015-Till date.
3. Junior Research Fellow under Maulana Azad National Fellowship Scheme (**JRF-MANF**), India, 2013-2015.
4. Qualified Graduate Aptitude Test In Engineering(**GATE**)Examination, India, 2013.
5. Received University **Gold Medal** and certificate of Rank for standing First in M.Sc., 2012
6. Received University certificate of Rank for holding **Second Position** in B.Sc., 2010.
7. Certificate of Appreciation for being organizing member in Club for Short Evening Courses (C.SEC.), GEC, AMU, Aligarh (2010).
8. Certificate of excellence for "*Soft Skills Enhancement Programme and Various Lectures*" from C.SEC, GEC, AMU, Aligarh (2009-10).
9. Member of Club for Short Evening Courses (C.SEC.), GEC, AMU, Aligarh (2008-09).
10. Model presentation on National Science Day Programme, organized by interdisciplinary Biotechnology Unit, AMU, Aligarh (2004).
11. Certificate for passing National Level Science Talent Search Examination (NSTSE- 2002).

SOFTWARE SKILLS

1. Response Surface Methodology (RSM) for process optimization using MINITAB 16.
2. Expertise in Non-linear kinetic and isotherm model analysis using Origin 9.1 Data Analysis and Graphing Software.
3. Experience in using several scientific programs (WSxM 5.0 Develop 8.5, Chem Draw, Chem Sketch, MathType etc).

EXPERIMENTAL SKILLS

1. Detection and analysis of metal concentration in aqueous solution using Atomic Absorption Spectrophotometer (AAS)(GBC 902Scientific, Australia).
2. Organic pollutant analysis in aqueous solution using UV-Visible spectrophotometer (Perkin Elmer Life and Analytical Sciences,CT, USA).
3. Functional group analysis of samples using Fourier transform infrared spectrometer (FTIR) [Perkin Elmer (1730; USA)].

WORKSHOPS, SHORT TERM COURSE & TRAINING

S.No.	Title	Organisation	Duration
1.	Data analysis/SPSS & R/MINITAB	UGC Human Resource Development Centre Aligarh Muslim University, Aligarh,	August 5-11, 2016
2.	Research Tools & Techniques	Department of Petroleum Studies, Z.H. College of Engineering & Technology, Aligarh Muslim University, Aligarh	August 27-31, 2016
3.	Thesis writing, Referencing and Plagiarism	Department of Applied Mathematics, Z.H. College of Engineering & Technology, Aligarh Muslim University, Aligarh	March 8-9, 2016

4.	Introduction to Molecular Modelling using WINGAMESS	Department of Chemical Engineering, Z.H. College of Engineering & Technology, Aligarh Muslim University	April 29, 2015
5.	Advances in Polymeric Materials	Department of Applied Chemistry Under DST-PURSE Program, Z.H. College of Engineering & Technology, Aligarh Muslim University, Aligarh	September 21-22, 2013
6.	Cementation and Cement Slurry Design	Oil and Natural gas Corporation Limited (ONGC), Dehradun, India.	June 10 - July 8, 2011

PUBLICATIONS

RESEARCH PAPERS

S. No.	Paper Details	Year	Listed in
1.	M.Danish, K.B.Ansari, M.Danish, Amna Khatoon , R.A.K.Rao, S. Zaidi, R.A. Aftab(2022)" Acomprehensive investigation of external mass	2022	UGC Care list

	transfer and intraparticle diffusion for batch and continuous adsorption of heavy metals using pore volume and surface diffusion model” separation and purification Technology 292, 117 (Elsevier). IF: 9.136		
2.	Amna Khatoon , R.A.K., Rao, Abu Nasar (2020) “Preparation and characterization of Epichlorohydrin treated <i>Putranjiva roxburghii</i> seeds as a novel adsorbent : Removal of Ni(II) from the artificial and real electroplating wastewater” Separation Science And Technology (Taylor and Francis) IF: 1.24	2020	UGC Care list
3.	Amna Khatoon , R.A.K., Rao (2019) “Efficient Cu(II) adsorption from aqueous medium using organic-inorganic nanaocomposite material”, Groundwater for Sustainable Development1, 1-9 (Elsevier). IF: 4.9	2019	Scopus
4.	Amna Khatoon , M.K., Uddin, R.A.K., Rao. “Adsorptive remediation of Pb(II) from aqueous media using <i>Schleichera oleosa</i> bark”, Environmental Technology & Innovation, 11, 1-14 (Elsevier). IF: 7.758	2018	UGC Care list
5.	R.A.K. Rao, Amna Khatoon “Aluminate treated Casuarina equisetifolia leaves as potential adsorbent for sequestering Cu(II), Pb(II) and Ni(II) from aqueous solution”, Journal of Cleaner Production 165,1280-1295 (Elsevier). IF: 11.072	2017	UGC Care list

6.	R.A.K Rao, Amna Khatoon (2017) "Sorption studies for Cd(II) sequestration from aqueous solution on chemically modified Albizia lebbeck", Separation Science And Technology, 52, 435-446 (Taylor and Francis). IF: 1.24	2017	UGC Care list
7.	R.A.K Rao, Amna Khatoon (2016) "Adsorption characteristics of chemically modified Caryota urens seeds for the removal of Cu(II) from aqueous solution: Isotherms and kinetic studies". Groundwater for Sustainable Development, 2-3, 42-52. (Elsevier) IF: 1.24	2016	Scopus
8.	R.A.K Rao, Amna Khatoon , A. Ashfaq (2015) "Application of Terminalia arjuna as potential adsorbent for the removal of Pb(II) from aqueous solution: Thermodynamics, kinetics and process design". Desalination and Water Treatment, 57,17808-17825 (Taylor & Francis). IF: 1.0	2015	UGC Care list
9.	A. Ashfaq, Amna Khatoon . "Evaluating toxicological effects, pollution control & wastewater management in pharmaceutical industry". International Journal of Current Research and Academic Review, 2, 54-65. ISSN No: 2347-3215, IF: 0.45 .	2014	Peer reviewed
10.	A. Ashfaq, Amna Khatoon . "Environmental assessment for management of waste through energy conversion technologies" International Journal of Current Research and Academic Review. 2, 66-78. ISSN No: 2347-3215, IF: 0.45 .	2014	Peer reviewed

11.	A. Ashfaq, Amna Khatoon . "Environmental Impacts and Assessment of Electronic Waste Management". International Journal of Current Microbiology & Applied Sciences. 3, 772-779. ISSN No: 2319-7706. IF: 1.594 .	2014	Peer reviewed
12.	A. Ashfaq, Amna Khatoon . "Waste management of textiles: A Solution to Environmental Pollution". International Journal of Current Microbiology & Applied Sciences. 3, 780-787., ISSN No: 2319-7706. IF: 1.594 .	2014	Peer reviewed
13.	A. Ashfaq, Amna Khatoon . "Hazards, Regulatory responses and Analytical Tools for Electronic Waste Management". International Journal of Applied Engineering and Technology. 4, 132-138. ISSN No: 2277-212X. Index Copernicus Value (ICV) = 5.18.	2014	Peer reviewed
14.	A. Ashfaq, Amna Khatoon . "Evaluation of waste minimization approaches through energy conversion as treatment & recovery methods". International Journal of Basic and Applied Chemical Sciences. 4, 49-52. ISSN No: 2277-2073. Index Copernicus Value (ICV) = 5.21.	2014	Peer reviewed
15.	A. Ashfaq, Amna Khatoon . "Pollution minimization potentials in Dyeing Industry: Environmental issues and its impacts". International Journal of Basic and Applied Chemical Sciences. 4, 53-57. ISSN No: 2277-2073. Index Copernicus Value (ICV) = 5.21.	2014	Peer reviewed

16.	A. Ashfaq, Amna Khatoon . "Pollution hazards of municipal waste and analytical tools for sustainable development". International Journal of Geology, Earth & Environmental Sciences. 4, 98-102. ISSN No: 2277-2081. Index Copernicus Value (ICV) = 5.16.	2014	Peer reviewed
17.	A. Ashfaq, Amna Khatoon . "Advanced methods and current technologies for treatment of wastewater from dye Industries". Asian Journal of Biological and Life Sciences. 3, 149-151. ISSN No: 2278-5957.	2014	Peer reviewed
18.	A. Ashfaq, Amna Khatoon . "Effluent treatment technologies for handling high strength aqueous streams generated from pharma industries". Asian Journal of Biological and Life Sciences. 3, 152-155. ISSN No: 2278-5957.	2014	Peer reviewed
19.	A. Ashfaq, Amna Khatoon . "Prevention of environmental degradation by means of solid waste management". International Journal of Industrial Pollution Control, 29, 57-60. ISSN No: 0970-2083, NAAS Rating: 4.60, Scopus-H-Index: 9.0.	2013	Peer reviewed
20.	A. Ashfaq, Amna Khatoon "Utilization of wind power as a renewable source of energy for conservation of environment". International Journal of Ecology, Environment and Conservation, 17, 531- 534. ISSN No: 0971-765X, NAAS Rating: 5.02, Scopus-H-Index: 8.0.	2011	Peer reviewed

INTERNATIONAL CONFERENCES

S. No.	Conference Details	Year
1.	Amna Khatoon, R.A.K. Rao. “Application of nano-composite solid phase adsorbent for abatement of Pb(II) from aqueous solution” International Conference on medical biological and pharmaceutical sciences (ICMBPS). Organized by Industrial Electronics & Electrical Engineers forum, December 17.	2017
2.	Amna Khatoon, R.A.K. Rao “Adsorption characteristics of nanocomposite material for removing Cd(II) from aqueous media” International Conference on Advances in Polymer science and Technology. Organized by Asian Polymer Association, November 23-25.	2017
3.	Amna Khatoon, R.A.K. Rao. “Utilization of alkali treated biomass as a potential adsorbent for the Cd(II) removal from aqueous solution” International Conference on Emerging Areas of Environmental science and Engineering. Organized by Department of Environmental Science and Engineering, Guru Jambheshwar University of Science and Technology, Hisar, February 16-18.	2017
4.	Amna Khatoon, R.A.K Rao “Sequestration of Cu(II) from aqueous media using nano composite material as solid phase adsorbent” 2nd International conference on Recent Advances in Nanoscience and Technology-2016. Organized by Special Centre	2016
5.	Amna Khatoon, R.A.K Rao. “Biosorption of Cu(II) from aqueous solution by chemically modified Biomass” International	2016

	conference on Recent Advances in Chemical sciences. Organized by Department of Chemistry, Aligarh Muslim University, Aligarh, March 29-30.	
6.	R.A.K Rao, Amna Khatoon . “Utilization of agricultural waste based adsorbent for the removal of Pb(II) and Ni(II) from aqueous solution: kinetic and isotherm studies” International conference on Recent Trends in engineering & Material Sciences. Organized by School of Engineering, Jaipur National University, Jaipur, March 17-19.	2016
7.	R.A.K Rao, Amna Khatoon () “Adsorption studies of Terminalia arjuna nut for Cd(II) sequestration from aqueous solution” International conference on Nanotechnology & STEM-ER. Organized by Centre of Excellence in Materials Science (Nanomaterials), Department of Applied Physics, Aligarh Muslim University, Aligarh, March 12-15.	2016
8.	Ahmad Ashfaq, Amna Khatoon “Degradation of Environment due to air pollution and sustainable development of Environment by means of Geothermal Energy” International conference on Population Dynamism and Sustainable Resource Development. Organized by Department of Geography, Aligarh Muslim University, Aligarh, March 25-27.	2012

NATIONAL CONFERENCES

S. No.	Conference Details	Year
1.	Amna Khatoon, R.A.K. Rao. “Performance Of Chemically	2017

	Modified Biomass For The Remediation Of Pb(II) From Aqueous Solution” National Conference on Recent Advances in Chemical Sciences . Organized by Department of Chemistry, Aligarh Muslim University, Aligarh, March 25-26.	
2.	Amna Khatoon, R.A.K. Rao. “Adsorption characteristics of agricultural waste based adsorbent for heavy metal removal from aqueous solution” National Seminar on Natural Resources Management . Organized by Bharat Vikas Parishad, Abhinav (Vikas Ratna) Shakha, Meerut and Department of Environmental Science, CCS University, Meerut (UP), January 29.	2017
3.	Participated in National Conference on Hydrocarbon, Energy and Environment (HEEcon-2015) . Organized by Department of Petroleum Studies, Aligarh Muslim University, Aligarh, April 25,.	2015
4.	Ahmad Ashfaq, Amna Khatoon. “Waste minimization techniques in dye industry for conservation of Environment.” National Seminar on Plant Sciences: New Technologies, Conservation and Environment . Organized by Department of Botany, Aligarh Muslim University, Aligarh, February 23-24.	2013
5.	Ahmad Ashfaq, Amna Khatoon. “Role of Wind Energy for the Conservation of Environment” National Conference on Hydrocarbon, Energy and Environment . Organized by Department of Petroleum Studies, Aligarh Muslim University, Aligarh, February 25.	2012

REVIEWER OF RESEARCH JOURNALS

S.No	Journals
1.	Journal of Polymers and the Environment
2.	Scientific Reports

Courses taught

At post graduate level

S.No.	Courses
1.	Environmental Chemistry
2.	Physicochemical treatment processes
3.	Environmental instrumentation and techniques
4.	Health safety and Risk Analysis
5.	Environmental monitoring lab

M.Sc. Dissertation guided

S.No.	Title	Student	Year
1.	Removal of arsenic from water by natural adsorbent	Faizan Qualbi	2023
2.	Emerging Contaminants in water: Evaluating the impact of diclofenac and techniques for its removal	Ibtisam Jan	2023
3.	Utilization of Sugarcane bagasse for the removal of heavy metals	Shumialla	2023
4.	Removal of Methylene blue by adsorption: Review	Suksham suri	2023
5.	Removal of lead from wastewater by utilizing biomass	Tahir Azeem	2023

6.	Arsenic remediation via adsorption	Aziz fatima	In Progress
7.	Assessment of polycyclic aromatic hydrocarbons in water and riverine sediment of critically impacted Delhi stretch of Yamuna river	Basit Ali Khan	In Progress
8.	Effect of Arsenic on Human health: A review	Afifa Maryam	In Progress
9.	Effect of Mercury on Human health: A review	Waqar Amanullah	In Progress

Administrative post held

- Warden Begum Hazrat Mahal Hostel
- Incharge GCR, F/o Engg. & Tech.