

Dr. Abbul Bashar Khan**Assistant Professor**

Department of Chemistry

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Date of Birth : 18 March 1982

Date of Joining JMI : 26 November 2019

**Research Interest**

- Physicochemical properties, micellization and thermodynamics of amphiphilic systems.
- Biomolecule-amphiphile interaction and their thermodynamics.
- Solution composition behavior (e.g. Microemulsions and Solvatochromism).

Research Students (Ph.D.)

S.No.	Name of Student	Title	Status
1.	Sajjad Hussain Parrey	<i>Synthesis and characterization of Ag- and Au- nanoparticles using plant extracts in absence/presence of ionic surfactant</i>	Awarded
2.	Nafseen Ahmad	<i>Tuning of efficient microemulsions with ionic liquids.....</i>	Pursuing

M.Sc. Research Project Students

S.No.	Name of Student	Title	Session
1.	Md. Shakil	Solution and Surface Properties of Amphiphilic Drug - Surfactant Systems	2021-2022 (Pursuing)
2.	Mudabir Rashid	Mixed Micellization of Amphiphilic Drug - Gemini Surfactant Binary Systems and Their Thermodynamics	2021-2022 (Pursuing)
3.	Hisana K	Biogenic Synthesis of Silver Nanoparticles and Their Interaction with Human Serum Albumin	2021-2022 (Pursuing)
4.	Ambika Paul	Mixed Micellization Behavior of Amphiphilic Drug Amitriptyline Hydrochloride in Presence of Various Ionic Liquids: A Review	2020-2021
5.	Somi Ali Akhtar	Study of Folding and Unfolding of water-Soluble Protein Cytochrome c	2020-2021

10.	International Journal of Biological Macromolecules	Elsevier	01	6.953
11.	Process Biochemistry	Elsevier	01	3.757
12.	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	Elsevier	02	4.098
13.	Journal of Biomolecular Structure & Dynamics	Wiley	02	3.549
14.	Luminescence	Wiley	02	2.464
15.	RSC Adv.	Royal Society of Chemistry	01	3.361
16.	Biochemistry & Analytical Biochemistry	Omics	01	2.630
17.	Physics and Chemistry of Liquids	Taylor & Francis	01	1.582
18.	Journal of Dispersion Science and Technology	Taylor & Francis	02	2.262
19.	Journal of Surfactant and Detergents	Taylor & Francis	01	1.894
20.	Journal of Solution Chemistry	Taylor & Francis	01	1.677
21.	Applied Biochemistry and Biotechnology	Springer	01	2.926
22.	Colloid and Polymer Science	Springer	01	
23.	Acta Physico-Chimica Sinica	Chinese chemical society	01	1.106
24.	Tenside Surf. Det.		01	1.020
25.	Chemistry and Chemical Technology		01	
26.	International Journal of Chemical, Nuclear, Materials and Metallurgical Engineering		01	

List of Publications

<i>S.No.</i>	<i>Authors</i>	<i>Title</i>	<i>Journal Name</i>	<i>Year, Vol., Page nos.</i>
1.	<i>Ab Raouf Bhat , Farooq Ahmad Wani, Kamalakanta Behera, Abbul Bashir Khan, Rajan Patel</i>	<i>Formulation of biocompatible microemulsions for encapsulation of anti-rTB drug rifampicin: A physicochemical and spectroscopic study</i>	<i>Colloids and Surfaces A: Physicochem. Eng. Aspects</i>	2022
2.	<i>Dileep Kumar, Mehraj ud din Parray, Farooq Ahmed Wani, Neeraj Dohare, Maroof Ali, Rajan Patel, Abbul Bashir Khan</i>	<i>Deciphering the role of alkyl chain length on interaction study of antidepressant drug-cationic surfactants in imidazolium based ionic liquid</i>	<i>Journal of the Iranian Chemical Society</i>	2022
3.	<i>Abbul Bashir Khan, Farooq</i>	<i>Transition from</i>	<i>Journal of the</i>	2022

	<i>Ahmed Wani, Mehraj ud din Parray, Maroof Ali, Neeraj Dohare, Rajan Patel</i>	<i>antagonistic to synergistic interaction in mixed micellar system by increase in alkyl chain length of alkyl trimethylammonium bromide</i>	<i>Indian Chemical Society</i>	
4.	<i>Abdul Bashir Khan, Ajaya Bhattarai, Zeeshan Haider Jaffari, Bidyut Saha, Dileep Kumar</i>	<i>Role of dimeric gemini surfactant system on kinetic study of alanine amino acid with ninhydrin reaction</i>	<i>Colloid and polymer science</i>	2021
5.	<i>Sajjad Hussain Parrey, Mohsin Maseet, Rabia Ahmad, Abdul Bashir Khan</i>	<i>Deciphering the Kinetic Study of Sodium Dodecyl Sulfate on Ag Nanoparticle Synthesis Using Cassia siamea Flower Extract as a Reducing Agent</i>	<i>ACS Omega</i>	2021, 6, 12155–12167
6.	<i>Neeraj Dohare, Mehraj ud din Parray, Md Abrar Siddiquee, Abdul Bashir Khan, Rajan Patel</i>	<i>Effect of Adephepine hydrochloride on the structure of bovine serum albumin: Spectroscopic and docking study</i>	<i>Journal of molecular structure</i>	2020, 1201, 127168
7.	<i>Md Rabiul Islam, Faiz Warsi, Abdul Bashir Khan, Tasneem Kausar, Imran Khan, and Maroof Ali</i>	<i>Solvatochromism of Binary Mixtures of 2,2,2-Trifluoroethanol + Ionic Liquid [bmim][Tf2N]: A Comparative Study with Molecular Solvents</i>	<i>Journal of Chemical & Engineering Data</i>	2019, 64, 1140–1154
8.	<i>Farooq Ahmad Wani, Abdul Bashir Khan, Abdulmohsen Ali Alshehri, Maqsood Ahmad Malik, Rabia Ahmad, Rajan Patel</i>	<i>Synthesis, characterization and mixed micellization study of benzene sulphonate based gemini surfactant with sodium dodecyl sulphate</i>	<i>Journal of Molecular Liquids</i>	2019, 285, 270–278
9.	<i>Meena Kumari, Upendra Kumar Singh, Abdul Bashir Khan, Maqsood Ahmad Malik & Rajan Patel</i>	<i>Effect of bovine serum albumin on the surface properties of ionic liquid-type Gemini surfactant</i>	<i>Journal of Dispersion Science and Technology</i>	2018, 39:10, 1462-1468
10.	<i>Mehraj ud din Parray, Muzaffar Ul Hassan Mir, Neeraj Dohare, Neha</i>	<i>Effect of cationic gemini surfactant and its monomeric counterpart</i>	<i>Journal of Molecular Liquids</i>	2018, 260, 65-77

	<i>Maurya, Abbul Bashar Khan, Mahendra S. Borse, Rajan Patel</i>	<i>on the conformational stability and esterase activity of human serum albumin</i>		
11.	<i>Jitendra Kumar Maurya, Abbul Bashar Khan, Neeraj Dohare, Anwar Ali and Rajan Patel</i>	<i>Effect of aromatic amino acids on the surface properties of 1-dodecyl-3-(4-(3-dodecylimidazolidin-1-yl)butyl)imidazolidine bromide gemini surfactant</i>	<i>Journal of Dispersion Science and Technology</i>	<i>2018, 39 (2), 174-180</i>
12.	<i>Abbul Bashar Khan, Farooq Ahmed Wani, Neeraj Dohare, Mehraj ud din Parray, Prashant Singh and Rajan Patel</i>	<i>Ionic liquid influenced synergistic interaction between amitriptyline hydrochloride and cetyltrimethylammonium bromide</i>	<i>Journal of Chemical & Engineering Data</i>	<i>2017, 62 (10), 3064-3070</i>
13.	<i>Taruna Sharma, Neeraj Dohare, Meena Kumari, Upendra Kumar Singh, Abbul Bashar Khan, Mahendra S. Borse and Rajan Patel</i>	<i>Comparative effect of cationic gemini surfactant and its monomeric counterpart on the conformational stability and activity of lysozyme</i>	<i>RSC Advances</i>	<i>2017, 7, 16763–16776</i>
14.	<i>Neeraj Dohare, Abbul Bashar Khan, Fareeda Athar, Sonu Chand Thakur, Rajan Patel</i>	<i>An insight into the binding of aceclofenac with bovine serum albumin at physiological condition: A spectroscopic and computational approach</i>	<i>Journal of Biomolecular Structure & Dynamics</i>	<i>2017, 36(2), 398-406</i>
15.	<i>Rajan Patel, Muzaffar Ul Hassan Mir, Upendra Kumar Singh, Ilyas Beg, Asimul Islam and Abbul Bashar Khan</i>	<i>Refolding of urea denatured cytochrome c: Role of hydrophobic tail of the cationic gemini surfactants</i>	<i>Journal of Colloid and Interface Science</i>	<i>2016, 484, 205–212</i>
16.	<i>Muzaffar Ul Hassan Mir, Neha Maurya, Abbul Bashar Khan, Ilyas Beg, Rajan Patel</i>	<i>An insight in to the binding between ester functionalized gemini surfactant and haemoglobin</i>	<i>Colloids and Surfaces A: Physicochem. Eng. Aspects</i>	<i>2016, 507, 36–45</i>
17.	<i>Neha Maurya, Jitendra Kumar Maurya, Abbul Bashar Khan, Ravins and Rajan Patel</i>	<i>Hydrogen bonding assisted interaction between amitriptyline hydrochloride and haemoglobin:</i>	<i>Journal of Biomolecular Structure & Dynamics</i>	<i>2016, 35 (6), 1367-1380</i>

		<i>Spectroscopic and molecular dynamics studies</i>		
18.	<i>Rajan Patela, Meena Kumari, Neeraj Dohare, Abbul Bashar Khan, Prashant Singh and Amit Kumar</i>	<i>Interaction between Pyrrolidinium Based Ionic Liquid and Bovine Serum Albumin: A Spectroscopic and Molecular Docking Insight</i>	<i>Biochemistry & Analytical Biochemistry</i>	2016, 5 (2), 1-8
19.	<i>Rajan Patel, Neeraj Dohare and Abbul Bashar Khan</i>	<i>Interfacial and Wetting Behavior of Cationic, Anionic and Nonionic Surfactant in Presence and Absence of Lysozyme</i>	<i>Chemistry and Chemical Technology</i>	2016, 10 (2), 179-185
20.	<i>Neeraj Dohare, Abbul Bashar Khan, Jitendra Kumar Maurya, Fareeda Athar, Sonu Chand Thakur, Rajan Patel</i>	<i>Urea induced binding between diclofenac sodium and bovine serum albumin: A spectroscopic insight</i>	<i>Luminescence</i>	2016, 31, 945-951
21.	<i>Abbul Bashar Khan, Neeraj Dohare, Rajan Patel</i>	<i>Mixed Micellization Study of Adiphenine hydrochloride with 1-Decyl-3-methylimidazolium chloride</i>	<i>International Journal of Chemical, Nuclear, Materials and Metallurgical Engineering</i>	2015, 9(3), 480-484
22.	<i>Rajan Patel, Muzaffar Ul Hassan Mir, Jitendra Kumar Maurya, Abbul Bashar Khan, and Anwar Ali</i>	<i>Spectroscopic and molecular modelling analysis of the interaction between ethane-1, 2-diyl bis(N, N-dimethyl-N-hexadecylammoniumacet oxy) dichloride and bovine serum Albumin</i>	<i>Luminescence</i>	2015, 30, 1233-1241
23.	<i>Rajan Patel, Abbul Bashar Khan, Neeraj Dohare, Hament Kumar Rajor</i>	<i>Mixed Micellization and Interfacial Properties of Ionic Liquid-Type Imidazolium Gemini Surfactant with Amphiphilic Drug Amitriptyline</i>	<i>Journal of Surfactant and Detergents</i>	2015, 18, 719-728

		<i>Hydrochloride and its Thermodynamics</i>		
24.	<i>Muzaffar Ul Hassan Mir, Jitendra Kumar Maurya, Shahnawaz Ali, Shah Ubaidullah, Abbul Bashar Khan and Rajan Patel</i>	<i>Molecular Interaction of Cationic Gemini Surfactant with Bovine Serum Albumin: A Spectroscopic and Molecular Docking Study</i>	<i>Process Biochemistry</i>	2014, 49, 623–630
25.	<i>Meena Kumari, Jitendra Kumar Maurya, Munazzah Tasleem, Abbul Bashar Khan, Prashant Singh, and Rajan Patel</i>	<i>Spectroscopic and docking studies on the interaction between pyrrolidinium based ionic liquid and bovine serum albumin</i>	<i>Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy</i>	2014, 124, 349–356
26.	<i>Rajan Patel, Meena Kumari, Abbul Bashar Khan</i>	<i>Recent advances in the applications of ionic liquids in protein stability and activity: A Review</i>	<i>Applied Biochemistry and Biotechnology</i>	2014, 172, 3701–3720
27.	<i>Anwar Ali, Maroof Ali, Nisar Ahmad Malik, Sahar Uzair and Abbul Bashar Khan</i>	<i>Solvatochromic Absorbance Probe Behavior within Mixtures of the Ionic Liquid 1-Butyl-3-methylimidazolium Bis(trifluoromethylsulfon-yl)imide + Molecular Organic Solvents</i>	<i>Journal of Chemical & Engineering Data</i>	2014, 59(6), 1755–1765
28.	<i>Abbul Bashar Khan, Maroof Ali, Neeraj Dohare and Rajan Patel</i>	<i>Micellization behaviour of amphiphilic drug phenothiazine hydrochloride with 1-decyl-3-methylimidazolium chloride and its thermodynamics</i>	<i>Journal of Molecular Liquids</i>	2014, 198, 341–346
29.	<i>Abbul Bashar Khan, Maroof Ali, Nisar Ahmad Malik and Rajan Patel</i>	<i>Role of 1-Methyl-3-Octylimidazolium Chloride in the Micellization Behavior of Amphiphilic Drug Amitriptyline Hydrochloride</i>	<i>Colloids and Surfaces B: Biointerfaces</i>	2013, 112, 460-465

30.	<i>Kabir-ud-Din, Abdul Bashar Khan and Andleeb Z. Naqvi</i>	<i>A Study of the Interaction between a Phenothiazine Drug Promazine Hydrochloride with Cationic Surfactants</i>	<i>Journal of Molecular Liquids</i>	2013, 187, 374–380
31.	<i>Kabir-ud-Din, Abdul Bashar Khan and Andleeb Z. Naqvi</i>	<i>Solution and Surface Properties of Amphiphilic Drug – Nonelectrolyte Systems</i>	<i>Physics and Chemistry of Liquids</i>	2012, 50 (4), 478–494
32.	<i>Kabir-ud-Din, Abdul Bashar Khan and Andleeb Z. Naqvi</i>	<i>Mixed Micellization and Interfacial Properties of Nonionic Surfactants with Phenothiazine Drug Promazine Hydrochloride at 30°C</i>	<i>Journal of Solution Chemistry</i>	2012, 41, 1587–1599
33.	<i>Abdul Bashar Khan, Javed Masood Khan, Mohd. Sajid Ali, Rizwan Hasan Khan, and Kabir-ud-Din</i>	<i>Interaction of Amphiphilic Drugs with Human and Bovine Serum Albumins</i>	<i>Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy</i>	2012, 97, 119–124
34.	<i>Mu. Naushad, Zied A. AL-Othman, Abdul Bashar Khan, and Maroof Ali</i> <i>International</i>	<i>Effect of Ionic Liquid on Activity, Stability, and Structure of Enzymes: A Review</i>	<i>International Journal of Biological Macromolecules</i>	2012, 51, 555–560
35.	<i>Abdul Bashar Khan, Javed Masood Khan, Mohd. Sajid Ali, Rizwan Hasan Khan, and Kabir-ud-Din</i>	<i>Spectroscopic Approach of the Interaction Study of Amphiphilic Drugs with the Serum Albumins</i>	<i>Colloids and Surfaces B: Biointerfaces</i>	2011, 87, 447-453
36.	<i>Kabir-ud-Din, Abdul Bashar Khan and Andleeb Z. Naqvi</i>	<i>Micellization Behavior of Amphiphilic Drug Promethazine Hydrochloride–Surfactant System in Aqueous Medium</i>	<i>Acta Phys. - Chim. Sin.</i>	2011, 27 (8), 1900-1906
37.	<i>Kabir-ud-Din, Andleeb Z. Naqvi, Abdul Bashar Khan</i>	<i>Micellization and Interfacial Behaviour of Amitriptyline-Nonionic Surfactant Systems in Aqueous Medium</i>	<i>Tenside Surfactant Detergents</i>	2010, 47 (5), 318-324
38.	<i>Kabir-ud-Din, Abdul Bashar Khan and Andleeb Z. Naqvi</i>	<i>Mixed micellization of antidepressant drug amitriptyline hydrochloride with</i>	<i>Colloids and Surfaces B: Biointerfaces</i>	2010, 80, 206-212

		<i>cationic surfactants</i>		
39.	<i>Kabir-ud-Din, Andleeb Z. Naqvi, Abbul Bashar Khan, Mohammed D. A. Al-Ahmadi, and Mohammad Akram</i>	<i>Energetics of Drug-Additive Systems at the Cloud Point</i>	<i>Journal of Chemical & Engineering Data</i>	2009, 54 (2), 387-391

Grants and Fellowships

05/07/2007 – 31/03/2009	UGC Fellowship, UGC, New Delhi, India.
01/04/2009 – 31/03/2011	As a Project Fellow in UGC-DAE CSR funded project, New Delhi, India.
01/04/2011 – 19/07/2011	Senior Research Fellowships, CSIR, New Delhi, India.
01/04/2012 – 31/03/2014	Research Associate ship, CSIR, New Delhi, India.
01/04/2014 – 31/03/2017	Young Scientist, DST-Fast track, New Delhi, India.

Academic Record

Qualifications	Session	Division	University/Board
Ph.D.	2007-11	Awarded (19/07/2011)	Department of Chemistry, AMU, Aligarh
M.Sc	2005-07	I st	Department of Chemistry, AMU, Aligarh
B.Sc	2002-05	I st	G.F.College, Shahjahanpur, MJPR University, UP
Intermediate	2000	I st	Islamia Inter College, Shahjahanpur, UP

Papers Presented in International Conferences

1. *Biogenic Synthesis of Silver Nanoparticles and their Interaction with Human Serum Albumin*,
Abbul Bashar Khan, Rajan Patel
International Conference on Advances in Nanomaterials and Nanotechnology, 4-5 November 2016, Jamia Millia Islamia, New Delhi.
2. *Mixed Micellization Study of Adiphenine hydrochloride with 1-Decyl-3-methylimidazolium chloride (Oral Presentation)*
Abbul Bashar Khan, Neeraj Dohare, Rajan Patel
“ICC 2015: XIII International Conference on Chemistry” organized by World Academy of Science, Engineering and Technology, held on March 30-31, 2015 in Paris, France.
3. *Mixed Micellization and Interfacial Properties of Nonionic Surfactants with Phenothiazine Drug Promazine Hydrochloride*
Abbul Bashar Khan, Andleeb Z. Naqvi and Kabir-ud-Din
International Conference on Chemistry: Frontiers and Challenges, Dept. of Chemistry, Aligarh Muslim University, Aligarh. 5-6 March, 2011.
4. *Surfactants and Ureas Affect the Cloud Point of Amphiphilic Drug, Clomipramine*

Hydrochloride

*Andleeb Z. Naqvi · Mohammed D. A. Al-Ahmadi, **Abbul Bashar Khan**, Mohd. Akram · Kabir-ud-Din*

International Conference on Green Technologies for Greener Environment, 27-30 Jan, 2010, Dept. of Chemistry, Ch. Charan Singh University, Meerut.

Papers Presented in National Conferences

1. *Surface Properties of Antidepressant Amitriptyline Hydrochloride in Presence of n – Alkanols*
*Kabir-ud-Din, Andleeb Z. Naqvi, **Abbul Bashar Khan**, Suresh Bhat*
Emerging Trends and Advances in Chemical Research, 8-10 Feb, 2009, Dept. of Chemistry, University of Allahabad, Allahabad.
2. *The Effect of Cationic Surfactants on the Solution Properties of Promazine Hydrochloride*
*Kabir-ud-Din, **Abbul Bashar Khan**, A .Z. Naqvi*
14th National Conference on Surfactants, Emulsions and Biocolloids, 28-30 July, 2009, Dept. of Chemistry, University of Kashmir, Kashmir.
3. *Mixed Micelle Formation between Amphiphilic Drug Amitriptyline Hydrochloride and Surfactants (conventional and gemini) at Different Temperatures(293.15 K to 308.15 K)*
*Malik Abdul Rub, **Abbul Bashar Khan**, Andleeb Z. Naqvi, Kabir-ud-Din*
12th CRSI National Symposium in Chemistry & 4th CRSI -RSC Symposium in Chemistry, 4-7 Feb, 2010, IICT & NIPER Hyderabad.
4. *Synergistic behavior of binary mixtures of antidepressant drug amitriptyline hydrochloride with cationic surfactants*
*Kabir-ud-Din, **Abbul Bashar Khan** and Andleeb Z. Naqvi*
National Symposium on Recent Trends in Chemical Sciences, 24-25 Feb, 2010, Dept. of Chemistry, Aligarh Muslim University, Aligarh.
5. *Solution and Surface Properties of Amphiphilic Drugs and Nonelectrolytes Systems*
***Abbul Bashar Khan**, Andleeb Z. Naqvi and Kabir-ud-Din,*
29th Annual Conference, Indian Council of Chemists, Dept. of Chemistry, 19-21 Dec, 2010, Punjab University, Chandigarh.
6. *Role of amino acids on the Micellization study of Amitriptyline hydrochloride and their Thermodynamics*
***Abbul Bashar Khan**, Neeral Dhoore and Rajan Patel*
National Conference on Interdisciplinary Approach in Chemical Sciences, 16 December 2015, Jamia Millia Islamia, New Delhi.