



Shaheed Rajguru College of Applied Sciences for Women
University of Delhi
Faculty Profile

Name	Dr. Anjeeta Rani	
Designation	Assistant Professor	
Email	capricorn.anjeeta24@gmail.com	
Degree	Institution	Year
Ph.D.	University of Delhi, Delhi	2017
M.Sc.	Kurukshetra University, Kurukshetra	2009
B.Sc.	Kurukshetra University, Kurukshetra	2007
Areas of Interest / Specialization		
Physical Chemistry		
Publications Profile		
<u>Research Publications</u> Anjeeta Rani, Pannuru Venkatesu, Insights into the interactions between enzyme and co-solvents: Stability and activity of stem bromelain, <i>Int. J. Biol. Macromol.</i>, 2015, 73, 189-201. Anjeeta Rani, Pannuru Venkatesu, A Distinct Proof on Interplay between Trehalose and Guanidinium Chloride for the Stability of Stem Bromelain, <i>J. Phys. Chem. B</i>, 2016, 120, 8863–8872. Anjeeta Rani, Venkatesu Pannuru, Unanticipated behaviour of sorbitol towards the stability and activity of stem bromelain: An outlook through biophysical techniques, <i>Process Biochemistry</i>, 2016, 51, 1028-1039. Anjeeta Rani, Abhilash Jayaraj, B. Jayaram and Venkatesu Pannuru, Trimethylamine-<i>N</i> oxide switches from stabilizing nature: A mechanistic outlook through experimental techniques and molecular dynamics simulation, <i>Scientific Reports</i>, 2016, 6:23656 DOI: 10.1038/srep23656.		

5. Awanish Kumar, **Anjeeta Rani** and Pannuru Venkatesu, A comparative study of the effects of the Hofmeister series anions of the ionic salts and ionic liquids on the stability of α -chymotrypsin, *New J. Chem.*, 2015, 39, 938-952.
6. Awanish Kumar, **Anjeeta Rani**, Pannuru Venkatesu and Anil Kumar. Quantitative evaluation of the ability of ionic liquids to offset the cold-induced unfolding of proteins, *Phys. Chem. Chem. Phys.*, 2014, 16, 15806-15810.
7. Pannuru Kiran Kumar, **Anjeeta Rani**, Lukman O. Olasunkanmi, Indra Bahadur, Pannuru Venkatesu and Eno E. Ebenso, Probing molecular interactions between ammonium-based ionic liquids and *N,N*-dimethylacetamide: A combined FTIR, DLS and DFT study, *J. Phys. Chem. B*, 2016, 120, 12584-12595.
8. **Anjeeta Rani**, Mohamed Taha, Pannuru Venkatesu and Ming-Jer Lee, Coherent Experimental and Simulation Approach to explore the underlying mechanism of Denaturation of Stem Bromelain in Osmolytes, *J. Phys. Chem. B*, 2017, 121, 6456-6470.
9. Indrani Jha, **Anjeeta Rani** and Pannuru Venkatesu, Sustained stability and activity of lysozyme in choline chloride against pH induced denaturation, *ACS Sustainable Chem. Eng.*, 2017, 5, 8344-8355.
10. Pavani Pannuru, **Anjeeta Rani**, Pannuru Venkatesu and Ming-Jer Lee, The effects of biological buffers TRIS, TAPS, TES on the stability of lysozyme, *Int. J. Biol. Macromol.*, 2018, 112, 720-727.
11. **Anjeeta Rani**, Indrani Jha and Pannuru Venkatesu, Undesirable impact on Structure and Stability of Insulin on Addition of (+)-Catechin Hydrate with Sugar, *Arch Biochem. Biophys.*, 2018, 646, 64-71.
12. Reddicherla Umapathi, P. Madhusudhana Reddy, **Anjeeta Rani** and Pannuru Venkatesu, Influence of additives on thermoresponsive polymers in aqueous media: A case study of poly(*N*-isopropylacrylamide), *Phys. Chem. Chem. Phys.*, 2018, 20, 9717-9744.
13. **Anjeeta Rani** and Pannuru Venkatesu, Changing relations between proteins and osmolytes: a choice of nature, *Phys. Chem. Chem. Phys.*, 2018, 20, 20315-20333.
14. Pannuru Pavani, Krishan Kumar, **Anjeeta Rani**, Pannuru Venkatesu, Ming-Jer Lee, Insight into the interaction between enzymes and biological buffers enhanced thermal stability of stem bromelain, *Journal of molecular liquids*, 2020, 322, 114526.
15. Pannuru Pavani, Krishan Kumar, **Anjeeta Rani**, Pannuru Venkatesu, Ming-Jer Lee, The influence of sodium phosphate buffer on the stability of various proteins: Insights into protein-buffer interactions, *Journal of molecular liquids*, 2021, 331, 115753.
16. **Anjeeta Rani**, Anamika Sindhu, Tzu-Jou Yao, Jia-Cherng Horng and Pannuru Venkatesu, Profiling the Impact of Choline Chloride on the Self-assembly of Collagen Mimetic

Peptides (Pro-Hyp-Gly)₁₀, *Process Biochemistry*, 2022, 121, 26-34.

17. Anjeeta Rani, Anamika Sindhu, Hsuan-Ju Chen, Indrani Jha, Jia-Cherng Horng and Pannuru Venkatesu, Unraveling the interplay between choline chloride and collagen mimetic peptide with facile end modifications: A case study of Gly-Gly-(Pro-Hyp-Gly)₈-Gly-Gly, *Journal of Molecular Liquids*, 2024, 407, 125196.
18. Pannuru Kiran Kumar, Indrani Jha, Ritu Yadav, Anjeeta Rani, Indra Bahadur, Pannuru Venkatesu, Sangeeta Singh and Kaniki Tumba, Biocompatible ionic liquids as stabilizers and dispersing solvents of multi-walled carbon nanotubes: A comparable study of stable composites between imidazolium and cholinium, *Journal of Molecular Liquids*, 2025, 432, 127742.
19. Pannuru Kiran Kumar, Indrani Jha, Anjeeta Rani, Sahil Kohli, Sheldon Sookai, Latifa Negadi, Indra Bahadur and Pannuru Venkatesu, Mechanistic insights into lysozyme interactions with MWCNTs and cholinium-based ionic liquids: a tripartite IL-NP-protein interaction study supported by molecular dynamics simulations, *Phys. Chem. Chem. Phys.*, 2026, 28, 16945–16959.

Oral Presentations in National and International Conferences

1. 9th National Conference on Thermodynamics of Chemical, Biological, Environmental and Non-Conventional Energy Systems-2014, (TCBNES-14), Oct 17-18, 2014, **Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar-388120, Gujarat, India.**
2. 51st Annual Convention of Chemist 2014, December 09-12, 2014, **Department of Chemistry, Kurukshetra University, Kurukshetra-136119, Haryana, India.**
3. 10th National Conference on Thermodynamics of Pharmaceutical, Chemical and Biological Systems on November 20-21, 2015, **University Institute of Pharmaceutical Sciences & Department of Chemistry, Panjab University, Chandigarh, India.**
4. 3rd Indo-Italian Workshop on Electrochemistry for Energy & Health (IIWEc-2015), July 3-4, 2015, **Department of Chemistry, University of Delhi, Delhi-110007, India.**
5. National Conference on Interdisciplinary Approaches in Chemical Sciences, December 16, 2015, **Centre for Interdisciplinary Research in Basic Science, Jamia Millia Islamia, New Delhi, India.**
6. 52nd Annual Convention of Chemist 2015, December 28-30, 2015, **JECRC University, Jaipur-303905, Rajasthan, India.**
7. National Seminar on Biophysics, March 16, 2017, **Centre for Interdisciplinary Research in Basic Science, Jamia Millia Islamia, New Delhi, India.**
8. Indo-US Colloquium on Recent Developments in Interdisciplinary Research, July 2, 2018, **Hansraj College, University of Delhi, Delhi-110007.**

Poster Presentations in National and International Conferences

1. 49th Annual Convention of Chemists, **Indian Chemical Society, National Institute of Technical Teachers' Training and Research, NITTR, 2012**, Bhopal, India.
2. 7th National Conference on Thermodynamics of Chemical, Biological and Environmental Processes (TCBEP-2012), **The Indian Thermodynamics Society and Department of Chemistry, Sri Venkateswara University, 2012**, Tirupati, India.
3. 8th National Conference on Thermodynamics of Chemical, Biological and Environmental systems (TCBES-2013), **Department of Applied Chemistry, School for Physical Sciences, Babasaheb Bhim Rao Ambedkar University, 2013**, Lucknow, Uttar Pradesh, India.
4. 1st International Conference on Recent Advances in Chemical Sciences (Novel Molecules for Diagnosis and Therapeutics), ICRACS-2013, **Department of Chemistry, Arya Post Graduate College, 2013**, Panipat, Haryana, India.
5. 50th Annual Convention of Chemists, **Department of Chemistry and Centre for Advanced Studies in Chemistry, Punjab University, 2013**, Chandigarh, India.
6. Mid-Year Symposium, **Chemical Research Society of India (CRSI), Department of Chemistry, National Institute of Technology Karnataka, 2013**, Surathkal, Mangalore, India.
7. 10th Mid-year symposium, **Chemical Research Society Of India**, July 23-25, 2015, **National Institute of Technology and Bharathidasan University, Tiruchirappalli**, Tamil Nadu, India.
8. National Symposium on Biophysics & Golden Jubilee Meeting of the Indian Biophysical Society, Feb 14-17, 2015, **Centre for Interdisciplinary Research in Basic Science, Jamia Millia Islamia, New Delhi**, India.
9. 20th **Chemical Research Society of India Symposium**, Feb. 3-5, 2016, Department of Chemistry, Gauhati University, India.
10. 6th National conference on **Chemical & Environment Sciences: Emerging Dimensions & Challenges Ahead**, April 1, 2017, Arya Post Graduate College, Panipat, Haryana.
11. **National Science Day**, 28 Feb., 2018, INSA, Delhi, India.

Awards and Distinctions

- **UGC-JRF (June 2011)** in Chemical Sciences and hence awarded **Junior Research Fellowship (2012-2014) and Senior Research Fellowship (2014-2016)** by **University Grants Commission (UGC), Delhi, India**.
- **Best Poster award at Indian Chemical Society Award-2012** in Physical Chemistry section, from **Indian Chemical Society Annual Convention of Chemists, NITTR**,

Bhopal, Madhya Pradesh, India.

- **Best Poster Award**, 6th National conference on **Chemical & Environment Sciences: Emerging Dimensions & Challenges Ahead**, April 1, 2017, Arya Post Graduate College, Panipat, Haryana.
- Awarded a **Certificate of Merit** from Kurukshetra University, Kurukshetra for Securing **highest marks** in **M.Sc. Physical Chemistry**.