

## Dr Salma Parveen

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### Academic Qualification:

- **Doctorate of Philosophy (Ph.D.) in Computational/Physical Chemistry**-North Eastern Hill University- Central Government University, Shillong, India, 2010.
- *Ph. D. Topic: Quantum Chemical Studies on Hydrogen Bonding Interactions and Its Consequences on Bond Properties*
- **Master of Science (M.Sc.) in Physical Chemistry** -North Eastern Hill University- Central Government University, India, 2006.
- **Bachelor of Science (B.Sc.) in Chemistry main with Physics and Mathematics**- North Eastern Hill University, India, 2004

### Work Experiences:

- 2006-2010: **Research Fellow**, Department of Physical Chemistry, North Eastern Hill University Shillong, India.
- 2011–2018: **Assistant Professor**, Department of Chemistry, Jazan Medical College – University of Jizan , KSA
- 2019 – Present: **Assistant Professor**, Department of Chemistry, Umshyrpi College, Shillong, India.

### Other Experiences:

- Conducted lectures, recitation sessions and office hours for Physical Chemistry courses.
- Designed new laboratory experiments and procedures for Chemical Concepts taught for non-science majors.
- Involved in preparing exams, quizzes and assignments and held full responsibility for preparing answer keys and grading.
- Supervised students in Independent Study projects.

### Research Publications

- Chandra, A, K; **Parveen, S**; and **Zeegers, T, H**; “Anomeric Effects in the Symmetrical and Asymmetrical Structures of Triethylamine. Blue shifts of the C-H Stretching Vibrations in Complexed and Protonated Triethylamine”. J. Phys. Chem. A. 2007, 111, 36, 8884-8891.

- Chandra, A, K; **Parveen, S**; and Zeegers, T, H; “Blue Shifts of the C-H Stretching Vibrations in Hydrogen-bonded and Protonated Trimethylamine. Effect of Hyperconjugation on Bond Properties”. *J. Comput. Chem.* 2008, 29, 1490-1496.
- **Parveen, S**; Das, S; Chandra, A., K; and Zeegers, T, H; “Theoretical Studies of Hydrogen Bonding Interaction between Trimethylamine and Substituted Phenol. Influence of the Substituents on the Hydrogen Bond Properties and Vibrational Spectrum”. *J. Theor. Comput. Chem.* 2008, 7, 1171-1186.
- **Parveen, S**; Chandra, A, K; “Theoretical Studies on Kinetics and reactivity of the Gas-Phase Addition and H-abstraction Reactions of Pyridine with Atomic Chlorine”. *J. Phys. Chem. A.* 2009, 113, 177-183.
- **Parveen, S**; and Chandra, A, K; “Theoretical Investigation of the Interaction between Fluorinated Dimethyl Ethers ( $n_F= 1-5$ ) and Water: Role of the Acidity and Basicity on the Competition between  $\text{OH} \cdots \text{O}$  and  $\text{CH} \cdots \text{O}$  Hydrogen Bonds”. *J. Phys. Chem. A.* 2009, 113, 6182–6191.
- Jogeshwari, K; **Parveen, S**; and Chandra, A, K; “Theoretical studies on the Kinetics and Reactivity of the Gas-Phase Addition and H-abstraction Reactions of Methylpyridine with Atomic Chlorine”. *J. Mol.Struct.THEOCHEM*2009, 9101-7.
- Jogeshwari, K; **Parveen, S**; and Chandra, A, K; “Theoretical studies on the Kinetics and Reactivity of the Gas-Phase Addition and H-abstraction Reactions of 4-Picoline with OH Radical”. *Phys.Lett.*2009, 480, 161-167.
- **Parveen, S**; Chandra, A. K. and Zeegers-Huysken, T; “Theoretical Investigation of the Hydrogen Bonding Interaction between Substituted Phenols and Simple O- and N-bases”. *J. Mol. Struct.* 2010, 977, 258.
- Sutradhar. D; Bhattarai. S; **Parveen, S**; and Chandra. A. K.; ‘Comparison Between Chlorine-Shared and  $\pi$  – Hydrogen Bonds Involving Substituted Phosphobenzene and ClF molecules.’ *ACS Omega* 2020,5, 24095 -24105.

### Seminars Attended

- 2<sup>nd</sup> CRSI Mid-year national symposium organized by Chemical Research Society of India, held at Indian Institute of Technology Guwahati on 21<sup>st</sup> July, 2007.
- 96<sup>th</sup> Indian Science Congress, International Seminar held at North Eastern Hill University, Shillong-22 on January 03-07, 2009.
- Workshop on “High Performance Computing” organized by Centre for Development of Advanced Computing, Pune on March 03-05, 2009.
- National Symposium on “Recent Trends and Developments in Computational Chemistry” organized by department of Chemistry, NEHU, Shillong-22 on March 12-13, 2010.

## **Awards & Recognition**

- Prestigious Research Fellowship in Sciences for Meritorious Students (RFSMS) of **University Grants Commission, Government of India.**
- Prestigious Junior research fellowship, Department of Science and Technology, Government of India.
- Best poster paper presentation award, 2<sup>nd</sup> CRSI Mid-year symposium, Indian Institute of Technology, Organized by **Chemical Research Society of India (CRSI)** Guwahati.
- Department of Science and technology research grant on “Studies on the kinetics and mechanism of hydrogen abstraction reactions of hydrocarbons with OH radicals and Cl atoms”.