

Dr. Jagannath Pal

M.Sc., Ph.D.

Assistant Professor

Midnapore City College



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Academic Details:

| Sl. No. | Degree | Subjects | University/Institution | Year of passing |
|---------|---------------------|--------------------|--------------------------------------|-----------------|
| 1. | Ph.D. | Physical Chemistry | Indian Institute of Technology Patna | 2021 |
| 3. | Master of Science | Chemistry | Vidyasagar University | 2011 |
| 2. | Bachelor of Science | Chemistry | Calcutta University | 2009 |

Ph.D. Details:

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| PhD Thesis Title: | Gas-Phase Reaction Kinetics of Radical-Molecule Reactions; and Thermodynamic and Optical Properties of Molecular Clusters |
| Guide's Name: | Dr. Ranga Subramanian, Associate professor, Department of Chemistry, Indian Institute of Technology Patna, Bihar, India, Pin-801106 |
| Institute: | Indian Institute of Technology Patna, Bihar, India, Pin-801106 |
| Date of Award: | August 6, 2021 |

Teaching Experience:

As an Assistant Professor in Chemistry, Department of Pure & Applied Sciences, Midnapore City College, Kuturiya, Bhadutala, Paschim Medinipur – 721129, West Bengal from December 16, 2020 till date.

Achievements:

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1. Graduate Aptitude Test in Engineering (GATE), February 2015
 2. CSIR NET, December 2014

Skills:

Basic Computer skills: Microsoft Office
Quantum Chemistry Program Package: GAUSSIAN, MOLPRO, GAMESS, ORCA
Computer Program for the Calculation of Chemical Reaction Rates: POLYRATE, MULTIWELL
Other Chemistry Program: Avogadro, ChemDraw, Origin
Programming Languages: Python

Research Interests:

Physical Chemistry, Computational Chemistry, Ab Initio Calculations, DFT Calculations, Atmospheric Chemistry, Reaction Kinetics, Aerosol Chemistry.

Publications:

1. Thermodynamic properties of forming methanol-water and ethanol-water clusters at various temperatures and pressures and implications for atmospheric chemistry: A DFT study, **Jagannath Pal**, A. Patla and R. Subramanian *Chemosphere*, **2021**, 272, 129846 DOI:10.1016/j.chemosphere.2021.129846
2. Sodium and lithium ions in aerosol: thermodynamic and Rayleigh light scattering properties, **Jagannath Pal**, Pulagam Sai Teja, Ranga Subramanian, *Theor. Chem. Acc.* **2020**, DOI:10.1007/s00214-020-02683-z
3. Theoretical studies of hydrogen abstraction from H₂X and CH₃XH (X = O, S) by trichloromethyl radicals, **Jagannath Pal** and Ranga Subramanian, *Phys. Chem. Chem. Phys.*, **2019**, 21, 6525-6534, DOI: 10.1039/C8CP07677D.
4. Theoretical investigation of N (²D) + HOX (Cl, Br) reaction, **Jagannath Pal** and Ranga Subramanian, *Mol. Phys.*, **2018**, 117, 2, 228-240, DOI: 10.1080/00268976.2018.1508779.
5. Amplified fluorescence of Mg²⁺ selective red-light emitting carbon dot in water and direct evaluation of creatine kinase activity S Mandal, **Jagannath Pal**, R Subramanian, P Das, *Nano Research*, **2020**, 13,10, 2770-2776, DOI: 10.1007/s12274-020-2927-1
6. Rapid synthesis of polysubstituted phenanthridines from simple aliphatic/aromatic nitriles and iodo arenes via Pd(II) catalyzed domino C–C/C–C/C–N bond formation, Yogesh Jaiswal, Yogesh Kumar, **Jagannath Pal**, Ranga Subramanian, and Amit Kumar, *Chem. Commun.*, **2018**, 54, 7207, DOI: 10.1039/c8cc03556c.

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7. Multicomponent Reactions of Arylglyoxal, 4-Hydroxycoumarin, and Cyclic 1,3-C,N-Binucleophiles: Binucleophile Directed Synthesis of Fused Five and Six Membered N-Heterocycles. Md.Lokman H. Choudhury, Richa Mishra, Anoop Kumar Panday, **Jagannath Pal**, Ranga Subramanian, and Ajay Verma, Eur. J. Org. Chem. **2017**, 10.1002/ejoc.201700115.
 8. Primary Amide Directed Regioselective ortho-C–H-Arylation of (Aryl)Acetamides, Yogesh Jaiswal, Yogesh Kumar, Rima Thakur, **Jagannath Pal**, Ranga Subramanian, and Amit Kumar, J. Org. Chem., **2016**, 81, 12499–12505, DOI: 10.1021/acs.joc.6b02353.

Conference Presentations:

1. Theoretical Study of Structural and Optical properties of $\text{Li}^+(\text{H}_2\text{O})_n$ Clusters, **16th Indian Theoretical Chemistry Symposium, BITS Pilani**, February 2019.
2. Theoretical Investigation of $\text{N}(^4\text{S}) + \text{HOX} (\text{Cl}, \text{Br})$ Reaction, **15th Indian Theoretical Chemistry Symposium, Hyderabad**, December 2016.

Personal Details:

Date of Birth: 24/01/1987

Blood Group: A+ve

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(Dr. Jagannath Pal)