

PULAK NASKAR



Designation : SACT – I

Affiliation : Dept. of Chemistry, Mrinalini Datta Mahavidyapith, Birati, Kolkata - 700051

Date of Joining : 01 – Jan – 2020

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Educational Qualification:

Examination	University/Institute	Year	Marks
B.Sc. (Chemistry Hons.)	Derozio Memorial College (under West Bengal State University)	2012	55.75 %
M.Sc. (Specialisation in Physical Chemistry)	Ramakrishna Mission Vivekananda Centenary College (under West Bengal State University)	2014	70.00 %
Ph.D.	University of Calcutta	2019	–

Research Background:

Type of Research	Supervisor	University/Institute	Topic	Duration
Ph.D.	Prof. Pinaki Chaudhury	Department of Chemistry, University of Calcutta	Quantum-Chemical Studies Of Selected Problems Using Evolutionary Algorithms	16-Oct -2014 To 18-Dec-2019

Current Research Interest(s) : Computational and theoretical chemistry

(Google scholar link : <https://scholar.google.co.in/citations?user=WyaLEEOAAAAJ&hl=en>)

Other Important Awards/Achievements :

- **Qualified NET** (National Eligibility Test), December 2013 and awarded **CSIR-JRF fellowship** by CSIR-UGC (Govt. of India) (AIR 95)
- **Qualified GATE**, 2022

Teaching experience :

- **SACT-I**, Department of Chemistry, Mrinalini Datta Mahavidyapith, Kolkata (01-Jan-2020 to present)
- **Guest teacher**, Department of Chemistry, Mrinalini Datta Mahavidyapith, Kolkata (28-Oct-2017 to 31-Dec-2019)

Project Students guided :

- Ms. Mili Naskar, Bidhannagar Govt. College, 2 month - M.Sc. project , 2019.
- Ms. Sahin Nisha, Acharya Prafulla Chandra College, 2 month - M.Sc. project , 2019.
- Ms. Bidisha Banerjee, Acharya Prafulla Chandra College, 2 month - M.Sc. project , 2020.
- Ms. Sayantika Basu, Acharya Prafulla Chandra College, 2 month - M.Sc. project , 2020.
- Ms. Sudipta Saha, Acharya Prafulla Chandra College, 2 month - M.Sc. project , 2021.

Symposium / Seminar / Workshop :

- Recent Trends In Macromolecular Chemistry, International Seminar, Activity: Poster Presentation, Date: 10-Jan-2018.
- Current Perspectives in Chemical Research, National Seminar, Activity: Participate, Date: 30-Mar-2016
- Facets Of Chemistry In Biology, National Seminar, Activity: Poster Presentation, Date: 22-Feb-2016 to 23-Feb-2016
- Perspective in Teaching & Research in Physical Chemistry – 2015, National Seminar, Activity: Poster Presentation, Date: 21-Aug-2015 to 22-Aug-2015
- Electronic Structure, Atomistic and Statistical Modelling in Chemistry, Materials and Life Sciences, National Workshop, Activity: Participate, Date: 20-Oct-2014 to 22-Oct-2014
- Modern Trends in Chemistry, State level Seminar, Activity: Participate, Date: 09-Jan-2013

Research Publications :

1. Dissociation of HF molecule in position and momentum representation by an optimally controlled polychromatic field : study in the dual space using simulated annealing ; Dipayan Seal , Pulak Naskar , Pinaki Chaudhury and Subhasree Ghosh*, *Mol. Phys.* , 2022 , DOI : 10.1080/00268976.2022.2131645 , e2131645 , ISSN : 0026-8976 (Print) ; 1362-3028 (Web) .
2. A two state model study of photo-detachment dynamics driven by an optimally designed polychromatic field: A simulated annealing based optimisation; Srijeeta Talukder, Dipayan Seal, Pulak Naskar, Pinaki Chaudhury and Subhasree Ghosh*, *Int. J. Quantum Chem.*, 2021, **121**, e26676. ISSN : 0020-7608 (Print) ; 1097-461X (Web).
3. An investigation on the structure, spectroscopy and thermodynamic aspects of $\text{Cl}_2^{(-)}(\text{H}_2\text{O})_n$ clusters: A combined Parallel tempering and DFT based study; Sankar Ghorai, Pulak Naskar and Pinaki Chaudhury*, *Int. J. Quantum Chem*, 2020, **120**, e26270. ISSN : 0020-7608 (Print) ; 1097-461X (Web).
4. Construction of elementary reaction paths of pure and mixed Argon-Xenon clusters : A Parallel tempering based study; Sankar Ghorai, Pulak Naskar and Pinaki Chaudhury*, *Struct. Chem.*, 2020, **31**, 1429 - 1439. ISSN : 1040-0400 (Print) ; 1572-9001 (Web).
5. Structural transformation in $(\text{MgO})_n$ clusters using a gradient only strategy and its comparison with a full Hessian based calculation; Rijaul Haque Mirdha, Pulak Naskar and Pinaki Chaudhury*, *Indian J. Phys.*, 2019, **95**, 561 – 570 . ISSN : 0973-1458 (Print) ; 0974-9845 (Web).
6. Constructing transformation paths for conformational changes in $(\text{MgF}_2)_n$ clusters using a stochastic procedure; Rijaul Haque Mirdha, Pulak Naskar and Pinaki Chaudhury*, *Mol. Phys.*, 2020, **118**, e1645368. ISSN : 0026-8976 (Print) ; 1362-3028 (Web).
7. Controlling the isomerisation dynamics of iodide acetonitrile dimer complex by optimally designed electromagnetic field: a wave packet based approach; Pulak Naskar, Srijeeta Talukder, Subhasree Ghosh and Pinaki Chaudhury*, *Int. J. Quantum Chem.*, 2019, **119**, e25927. ISSN : 0020-7608 (Print) ; 1097-461X (Web).
8. Structural and spectroscopic aspects of $\text{SCN}^{(-)}(\text{H}_2\text{O})_n$ clusters and the temperature dependency of the isomers: a parallel tempering based approach; Pulak Naskar, *Mol. Phys.*, 2019, **117**, 575 - 589. ISSN : 0026-8976 (Print); 1362-3028 (Web).
9. The effect of stochastic barrier fluctuation on semiclassical transmission probability and Shannon entropy of a symmetric double well potential; Pulak Naskar, Srijeeta Talukder, Pinaki Chaudhury and Subhasree Ghosh*, *Int. J. Quantum Chem*, 2018, **118**, e25667. ISSN : 0020-7608 (Print) ; 1097-461X (Web).
10. Role Of Vibrational Contribution In Coulomb Explosion Of Dicationic Neon Gas Clusters : A Parallel Tempering Based Study; Sankar Ghorai, Pulak Naskar and Pinaki Chaudhury*, *Phys. Chem. Chem. Phys.*, 2018, **20**, 22379 - 22386. ISSN : 1463-9076 (Print) ; 1463-9084 (Web).
11. Structural, spectroscopic and thermodynamic aspects of azide-water clusters: an approach using a conjugated prescription of stochastic and quantum chemical methods; Pulak Naskar*, Rituparna Roy, Srijeeta Talukder and Pinaki Chaudhury*, *Mol. Phys.*, 2018, **116**, 2172 - 2186. ISSN : 0026-8976 (Print) ; 1362-3028 (Web).
12. Mapping out reaction paths for conformational changes in $(\text{MgO})_n$ clusters: a study based on a stochastic procedure; Rijaul Haque Mirdha, Pulak Naskar, and Pinaki Chaudhury*, *Struct. Chem.*, 2018, **29**, 523 - 532. ISSN : 1040-0400 (Print) ; 1572-9001 (Web).
13. An adaptive mutation simulated annealing based investigation of Coulombic explosion and identification of dissociation patterns in $(\text{CO}_2)_n^{2+}$ clusters; Pulak Naskar, Srijeeta Talukder* and Pinaki Chaudhury*, *Phys. Chem. Chem. Phys.*, 2017, **19**, 9654 - 9668. ISSN : 1463-9076 (Print) ; 1463-9084 (Web).
14. An investigation on the structure, spectroscopy and thermodynamic aspects of $\text{Br}_2^{(-)}(\text{H}_2\text{O})_n$ clusters using a conjunction of stochastic and quantum chemical methods; Pulak Naskar and Pinaki Chaudhury*, *Phys. Chem. Chem. Phys.*, 2016, **18**, 16245 - 16257. ISSN : 1463-9076 (Print) ; 1463-9084 (Web).
15. Structural and spectroscopic studies of iodine dimer radical anion hydrated clusters: an approach using a combination of stochastic and quantum chemical methods; Pulak Naskar* and Pinaki Chaudhury*, *RSC Adv.*, 2016, **6**, 12315 - 12325. ISSN : 2046-2069.

03-Dec-2022
Pulak Naskar