

Faculty Profile

Name: Dr. **Utpal Sarkar**

Designation: Assistant Professor

Department/Centre: Physics

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Educational Qualifications: M.Sc in Physics, **Visva Bharati University** (1999); Ph.D in Chemical Physics, **Indian Institute of Technology Kharagpur** (2005); Post-doctorate, **Regensburg University**, Germany (2005); **McMaster University** Canada (2006); **CEA-Grenoble**, France (2007); Post-doctorate, **University of Science and Technology of Lille**, France (2008).

Areas of Interest: Density Functional Theory, Non-linear Dynamics; Nanostructure Simulation; Molecular Dynamics; Molecular Electronics.

Work Experience: [In chronological order with the recent one at the last.]

Name of the Organization	Designation	Period		Nature of Post (permanent/temporary/Ad-hoc/ contractual etc.)
		From	To	
Assam University	Assistant Professor	2009	Till date	Permanent

Awards and Honours (if any): [Maximum upto 5]

[In chronological order with the recent one at the last.]

Award Details	Awarding Agency	Year	Remark (if any)
NET JRF Fellowship	CSIR	2000	
GATE Fellowship	MHRD	1999	
DAAD Fellowship	German Academic Exchange Service	2005	
INSA visiting fellowship		2013-2014	
Regular Associateship	International Centre for Theoretical Physics (ICTP), Trieste, Italy	2013-2019	

Publications in Peer Reviewed Journals/Book Chapters (Maximum 5)

Authors	Title of the Paper/Chapter	Name of the Journal/Book	Journal/Book details	ISSN/ISBN
Pratim Kumar Chattaraj, Utpal Sarkar	Effect of spherical confinement on chemical reactivity	Journal of Physical Chemistry A	Y-2003, V-107, Issue-24, P-4877-4882	ISSN: 1089-5639
Pratim Kumar Chattaraj, Utpal Sarkar , Debesh Ranjan Roy	Electrophilicity index	Chemical Reviews	Y-2006, V-106 Issue-6, p-2065-2091	ISSN: 0009-2665
Utpal Sarkar , Steven A Blundell	Structure and thermodynamics of Fe ₅₅ , Co ₅₅ , and Ni ₅₅ clusters supported on a surface	Physical Review B	Y-2009, V-79, Issue-12, P-125441(1-7)	ISSN: 2469-9950
Utpal Sarkar , Munmun Khatua, Pratim Kumar Chattaraj	A tug-of-war between electronic excitation and confinement in a dynamical context	Physical Chemistry Chemical Physics	Y-2012, V-14, Issue-5, p-1716-1727	ISSN: 1463-9076
Barnali Bhattacharya, Ngangbam Bedamani Singh, Rajkumar Mondal, Utpal Sarkar	Electronic and optical properties of pristine and boron-nitrogen doped graphyne nanotubes	Physical Chemistry Chemical Physics	Y-2015, V-17, Issue-29, p-19325-19341	ISSN: 1463-9076

Peer Reviewed Publications in Proceedings of National/International Conference/Workshop/Symposium:

Authors	Title of the Paper	Name of the Program and Organizer	Publisher Details	ISBN/ISSN
Ngangbam Bedamani Singh, Utpal Sarkar	A computational study of armchair nanotube	Name of the Program- International Workshop on Functional Materials (IWFMM-2011) Organized By: National Institute of Science and Technology Palur Hills, Berhampur-761008, Orissa, India	Publisher- AIP Publishing, Y- 2012	ISSN: 0094-243X
Barnali Bhattacharya, Ngangbam	Tuning of band gap due to fluorination of graphyne and	Name of the Program- 5th Young Researcher Meeting in SISSA, 2014	Publisher- IOP Publishing, Y-214	ISSN: 1742-6596

Bedamani Singh, Utpal Sarkar	graphdiyne	Organized By: SISSA, Trieste, Italy.		
Barnali Bhattacharya, Ngangbam Bedamani Singh, Utpal Sarkar	Tuning the magnetic property of vacancy defected Graphyne by transition metal absorption	Name of the Program- 59th DAE Solid State Physics Symposium 2014 Organized By: Bhabha Atomic Research Centre Trombay, Mumbai-400085, and VIT University, Vellore-632014	Publisher- AIP Publishing, Y- 2015	ISSN: 0094-243X
Rajkumar Mondal, Utpal Sarkar	Electron Transport Property of Cobalt-centered Porphyrin-Armchair Graphene Nanoribbon (AGNR) Junction	Name of the Program- 59th DAE Solid State Physics Symposium 2014 Organized By: Bhabha Atomic Research Centre Trombay, Mumbai-400085, and VIT University, Vellore-632014	Publisher- AIP Publishing, Y- 2015	ISSN: 0094-243X
Ngangbam Bedamani Singh, Barnali Bhattacharya, Utpal Sarkar	Density Functional Study of Transition Metal Trapping on Graphene	Name of the Program- Emerging Materials: Characterization & Application (EMCA-2014) Organized By: National Institute of Technology, Durgapur and CSIR-Central Glass & Ceramic Research Institute Jadavpur, Kolkata	Publisher- American Scientific Publishers, Y-2016	ISSN: 1936-6612

Details of Ph.D degree awarded (Under the supervision of the faculty):

Name of the Scholar	Title of the Thesis	Year of award	Remark (if any)
Dr. N. Bedamoni Singh	Studies On Structural Properties of Few Selected Metal Clusters Using Density Functional Theory	2015	