CURRICULUM VITAE
Pallavi Debnath

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EDUCATIONAL QUALIFICATIONS

2006	PhD, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, India Thesis advisor: Prof. B. J. Cherayil
2000	M.Sc. in Chemistry, University of Roorkee (presently Indian Institute of Technology-Roorkee), Roorkee, India
1998	B.Sc. in Chemistry, Utkal University, Bhubaneshwar, India

POSITIONS HELD

Mar 2011 - Present	Assistant Professor, Department of Chemistry, Indian Institute of Technology Roorkee, Roorkee, India
2010 - Mar 2011	Postdoctoral Fellow with Prof. S. M. Bhattacharjee at Institute of Physics, Bhubaneswar, India
Sep 2009 - Dec 2009	Postdoctoral Research Associate at Max Planck Institute of Colloids and Interfaces, Potsdam, Germany
Mar 2008 - Aug 2009	Alexander von Humboldt Research Fellow Academic Hosts: Prof. Dr. R. Lipowsky and Prof. Dr. J. Kierfeld Host Institute: Max Planck Institute of Colloids and Interfaces, Potsdam, Germany
Apr 2006 - Jan 2008	Postdoctoral Research Associate with Prof. M. G. Guenza, Department of Chemistry and Institute of Theoretical Science, University of Oregon, Eugene, United States

HONOURS AND DISTINCTIONS

2008-2009 Alexander von Humboldt Research Fellowship
Academic Hosts: Prof. Dr. R. Lipowsky and Prof. Dr. J. Kierfeld
Host Institute: Max Planck Institute of Colloids and Interfaces, Potsdam, Germany

2002-2005 Senior Research Fellow
Council of Scientific and Industrial Research, India

2000-2002 Junior Research Fellow
Council of Scientific and Industrial Research, India

STUDENT SUPERVISON

PhD Rupam Borah
Thesis Title: A Few problems in polymer dynamics
Status: Defended Jan. 2017

Nabi Ahamad
Area of Research: Cooperative Dynamics in Polymer Melts
Status: Ongoing

Prakhar Shukla
Area of Research: Theoretical Chemistry
Status: Ongoing

M.Sc. Anurag Singh
Project Title: Robust implementation of algorithms to characterize topology in DNA
Status: Submitted in Apr. 2017

Rahul Kumar
Project Title: Algorithms of topological invariants for 3_1 and 5_2 knots
Status: Submitted in Apr. 2016

Swati Verma
Project Area: Modelling Polymer under Tension
Status: Submitted in Apr. 2016

Nidhi
Project Title: Characterization of DNA Topology By Topological invariants
Status: Submitted in Apr. 2015

Sourabh Kumar
Project Title: Study of knots and links in polymers
Status: Submitted Apr. 2014

Manasi Roy
Project Title: Electronic structure calculations of sulphur nitrides
Status: Submitted Apr. 2012

M.Tech. Avnish Kumar
Project Title: Synthesis, characterization and catalytic activity of iron oxides
Status: Submitted in Jun. 2013

Subodh Kumar
Project Title: Rupture dynamics in polymers with interconnecting bonds
Status: Submitted in Jun. 2012

LIST OF PUBLICATIONS

Peer–Reviewed

Investigation of Dynamical Heterogeneities in Polymer Melts
R. Borah, N. Ahamad and P. Debnath
in press.

Rupture dynamics of model polymer systems
R. Borah and P. Debnath
Soft Matter, **12**, 4406 (2016)

Cooperative dynamics in polymer melts from the unentangled to the entangled regime
P. Debnath and M. G. Guenza
Phil. Mag. **88**, 4131 (2008)

Multiple time scale fluctuations in a semiflexible polymer: a one dimensional generalized Langevin equation treatment
P. Debnath, W. Min, X. S. Xie, and B. J. Cherayil
J. Chem. Phys. **123**, 204903 (2005)

Dynamics of chain closure: Approximate treatment of nonlocal interactions
P. Debnath and B. J. Cherayil
J. Chem. Phys. **120**, 2482 (2004)

Semiflexible random A–B block copolymers under tension
P. Debnath and B. J. Cherayil
J. Chem. Phys. **118**, 1970 (2003)

Conformational properties of randomly flexible heteropolymers
P. Debnath and B. J. Cherayil
J. Chem. Phys. **116**, 4330 (2002)

CONTRIBUTED TALKS

1. **Contributory Talk**
   Conference on DNA Physics, BITS Pilani, India
   March 9-11, 2017

2. **Invited Talk**
   15th Indian Theoretical Chemistry Symposium, Hyderabad, India
   December 14-17, 2016

3. **Few Problems in Polymer Dynamics**
   Indian Physics Association, Roorkee Chapter, Lecture Series
   April 11, 2014

4. **Polymer Friction: A many-body interaction problem**
   Internal workshop, Theory Division, Max-Planck Institute of Colloids and Interfaces, Potsdam, Germany
   November 16-19, 2009

5. **Polymer Friction by bond rupture**
   Departmental Retreat, Department of Theory and Bio-Systems, Max-Planck Institute of Colloids and Interfaces, Schloss Ringberg, Germany
   March 1-6, 2009

6. **Theory of Sliding Polymer Friction**
   Internal workshop, Theory Division, Max-Planck Institute of Colloids and Interfaces, Potsdam, Germany
   November 2008

7. **Statistical mechanical models of structure and dynamics of macromolecules**
   Thesis Colloquium, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, India
   October 2005

POSTER PRESENTATIONS

1. **Theory of Single Polymer Friction**
   Humboldt Network Meeting, Berlin, Germany
   April 23-25, 2008

2. **Heterogeneous Dynamics in Entangled and Unentangled Polymer Melts**
   Gordon Research Conference on Liquids, Chemistry and Physics Of,
   Holderness School, Holderness, NH, United States
   July 29 - August 3, 2007

3. **Heterogeneous Dynamics in Polymer Melts**
   Graduate Visitation Weekend poster session, Department of Chemistry, University of Oregon, OR, United States
   March 2, 2007

4. **Multiple time scale dynamics of distance fluctuations in a semiflexible polymer**
   Gordon Research Conference on Polymer Physics
   Connecticut College, New London, CT, United States
   July 23-29, 2006