

Tirtha Chatterjee

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Professional Experiences

University of California, Santa Barbara 2008-present
Post Doctoral Associate, Materials Research Laboratory (MRL)

National Institute of Standard and Technology May-August 2007
Guest Researcher, NIST Center for Neutron Research, NIST, Gaithersburg, MD

Education

Ph.D. in Chemical Engineering: **University of Houston**, Houston, TX 2003-2008
M.S. in Chemical Engineering: **Indian Institute of Technology-Kanpur**, India 2001-2003
B.S. in Chemical Engineering: **Jadavpur University**, Kolkata, India 1996-2000

Honors

- Student Scholarship: Society of Plastic Engineers, 2008
- Best speaker award, 22nd Graduate symposium, 2007
Department of Chemical and Biomolecular Engineering, University of Houston
- Frank Padula Memorial Scholarship: Society of Plastic Engineers, 2006
- Stella Ehahardt University Fellowship, University of Houston, 2003-2005
- Best poster award, Division of Functionalized Nanomaterials, TiiMS Meeting, 2005
- Dr. H.L. Roy Memorial Award, Department of Chemical Engineering, Jadavpur University, 1999

Teaching Experience

- Teaching Assistant (2003-2007) Department of Chemical Engineering, University of Houston
Undergraduate and graduate courses including *Chemical Engineering Thermodynamics, Fluid Mechanics, Unit Operations*

Research Interests

- Advanced Materials for Energy Applications
- Dynamics of Polymer Nanocomposites
- Soft Materials: Structure-Processing-Property Relationship
- Colloidal Networks and their Applications

Patent:

US Patent Application, May 2005, Nanocomposites of poly(ethylene oxide) with single walled carbon nanotubes (*Pending*)

Publications

- 1) Sivanandan, V.; **Chatterjee, T.(co-first author)**; Treat, N.; Kramer, E.J.; Hawker, C.J.; "High surface area poly(3-hexylthiophenes) thin film from cleavable graft copolymers" (*submitted to Macromolecules*)
- 2) **Chatterjee, T.**; Krishnamoorti, R.; "Isothermal crystallization of poly(ethylene oxide) in single walled carbon nanotube based nanocomposites" (*submitted to Macromolecules*)

- 3) Granstrom, J.; Villet, M.; **Chatterjee, T.**; “High performance encapsulation structures utilizing Russian doll architectures” (*submitted to Thin Solid Films*)
- 4) Granstrom, J.; Villet, M.; **Chatterjee, T.**; Gerbec, J.A.; Jerkunica, E.; Roy, A.; “Multilayer barrier films comprising nitrogen spacers between free-standing barrier layers”, *Applied Physics Letters* 95, 093306 (2009)
- 5) **Chatterjee, T.**; Krishnamoorti, R.; “Steady shear response of carbon nanotube networks dispersed in poly(ethylene oxide)”, *Macromolecules* 41, 5333 (2008)
- 6) **Chatterjee, T.**; Jackson, A.J.; Krishnamoorti, R.; “Hierarchical structure of carbon nanotube network”, *Journal of the American Chemical Society* 130, 6934 (2008) (**Research highlight, NCNR, NIST 2008**)
- 7) **Chatterjee, T.**; Mitchell, C.A.; Hadjiev, V.G.; Krishnamoorti, R.; “Hierarchical polymer-nanotube composites”, *Advanced Materials* 19, 3850 (2007)
- 8) **Chatterjee, T.**; Krishnamoorti, R.; “Dynamic consequences of the fractal network of nanotube-poly(ethylene oxide) nanocomposites”, *Physical Review E* 75(5), 050403 (2007)
- 9) Goel, V.; **Chatterjee, T.**; Bombalsky, L.; Yurekli, K.; Matyjaszewski, K.; Krishnamoorti, R.; “Viscoelastic properties of silica-grafted poly(styrene-acrylonitrile) nanocomposites”, *Journal of Polymer Science, Part B: Polymer Physics* 44, 2014 (2006)
- 10) **Chatterjee, T.**; Yurekli, K.; Hadjiev, V.G.; Krishnamoorti, R.; “Single walled carbon nanotubes dispersion in poly(ethylene oxide)”, *Advanced Functional Materials* 15, 1832 (2005)
- 11) **Chatterjee, T.**; Saraf, D.N.; “On-line estimation of product properties for crude distillation units”, *Journal of Process Control* 14, 61 (2004)

Selected Presentations

- **Chatterjee, T.**; Sivanandan, V.; Hawker, C.J.; Kramer, E.J.; APS March Meeting, Pittsburgh, PA, March 16-20, 2009
- **Chatterjee, T.**; Krishnamoorti, R.; APS March Meeting, New Orleans, LA, March 10-14, 2008
- **Chatterjee, T.**; Krishnamoorti, R.; APS March Meeting, Denver, CO, March 5-9, 2007
- **Chatterjee, T.**; Mitchell, C.A.; Hadjiev, V.G.; Krishnamoorti, R.; APS March Meeting, Baltimore, MD, March 13-17, 2006
- **Chatterjee, T.**; Yurekli, K.; Bahr, J.L.; Hadjiev, V.G.; Krishnamoorti, R.; AIChE annual meeting, Austin, TX, November 7-12, 2004
- **Chatterjee, T.**; Yurekli, K.; Hadjiev, V.G.; Krishnamoorti, R.; Gordon Research Conference on Composites, Ventura, CA, January 8-13, 2006 (*poster*)

Professional Services

- **Peer Reviewer** : Langmuir, Advanced Materials, Macromolecules
- **Proposal reviewer** for small angle and ultra small angle neutron scattering experiments at NCNR, NIST, Gaithersburg, MD
- **Member:** AIChE, APS, SPE
- **Student vice president**, Society of Plastic Engineers, University of Houston Chapter, 2006-2008
- **Student Secretary**, Organization of Chemical Engineering Graduate Students, University of Houston, 2004-2005

References will be made available on request