Priti Xavier

PhD. Candidate, Department of Materials Engineering
Indian Institue of Science

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Education

2015 **Ph.D., Materials Engineering**, *Indian Institue of Science*.
Mapping the transient morphologies and the demixing behavior in PS/PVME blends in presence of nanoparticles. Advisor: Suryasarathi Bose

2010 **MSc, Chemistry**, *Loyola College, Madras University*.

2008 **BSc, Chemistry**, *St. Joseph's College, Calicut University*.

Awards & Honors

2013–2014 UGC-Basic Science Research fellowship for the year

2013 Travel award, International Workshop on Advanced Materials Ras Al Khaima Centre for Advanced Materials, UAE.

2011 Qualified Lectureship [UGC-National Eligibility Test] (all India rank 29) in Chemical Sciences

2010 Best paper CHEMISTRY: CURRENT FOCUS, Madras Christian College, Chennai

Skills

Laboratory Instruments
- Rheology
- Haake Minilab micro compounder, Injection moulding, Compression moulding
- Vector Network Analyzer, Impedance analyzer, LCR meter
- Polarizing Optical Microscopy
- SEM, TEM, AFM
- DSC, TGA, DMA
- FTIR spectroscopy, UV-Visible spectroscopy

Softwares ImageJ, Origin, Atom, Shape, ChemSketch

Programming C/C++, Matlab, LaTeX, Linux

Languages English (fluent), Hindi (conversational), Malayalam (mother tongue)

Publications

Peer Reviewed Conference & Journal Papers

[1] G P Kar, A Bharati, **Priti Xavier**, Giridhar Madras, and Suryasarathi Bose. The key role of polymer grafted nanoparticles in the phase miscibility of an LCST mixture. In *Phys. Chem. Chem. Phys*, 2015. 17, 868-877.

[2] A. Bharati, **Priti Xavier**, G.P. Kar, G. Madras, and Suryasarathi Bose. Nanoparticle Driven Intermolecular Cooperativity and Miscibility in Polystyrene/Poly(vinyl methyl ether) Blends. In *J. Phys. Chem. B*, 2014. 118, 2214.

[3] G P Kar, **Priti Xavier**, and Suryasarathi Bose. Polymer-grafted-multiwall carbon nanotubes functionalized by nitrene chemistry: effect on cooperativity and phase miscibility. In *Phys. Chem. Chem. Phys.*, 2014. 16, 17811-17821.

[4] **Priti Xavier**, Avanish Bharati, Giridhar Madras, and Suryasarathi Bose. Unusual demixing behavior in PS/PVME blends in presence of nanoparticles. In *Phys. Chem. Chem. Phys*, 2014. 16, 21300-21309.

[5] **Priti Xavier** and Suryasarathi Bose. Electromagnetic shielding materials and coatings derived from gelation of multiwall carbon nanotubes in an LCST mixture. In *RSC Adv,*, 2014. 4,55341-55348.

[6] **Priti Xavier** and Suryasarathi Bose. Non-equilibrium segmental dynamics driven by multiwall carbon nanotubes in PS/PVME blends. In *Phys. Chem. Chem. Phys*, 2014. 16 (20), 9309-9316.

[7] **Priti Xavier**, K Sharma, E Kolanthai, K Vasu, A Sood, and Suryasarathi Bose. Reduced graphene oxide induced phase miscibility in polystyrene/poly(vinyl methyl ether) blends. In *RSC Advances*, 2014. 24, 12376.

[8] **Priti Xavier** and Suryasarathi Bose. Multiwall Carbon Nanotubes Induced Miscibility In Near Critical PS/PVME Blends: Assessing Through Concentration Fluctuation And Segmental Relaxation. In *J Phys Chem B*, 2013. 117, 8633.

[9] **Priti Xavier** and S Bose. Multiwall carbon nanotubes induced miscibility in PS/PVME blends. In *Rangotsav, Advances in polymers and Coatings, ICT*, Mumbai, February 15-16 2013. 17, 868-877.

Special Issues, Book Chapters, Articles

[10] **Priti Xavier** and Suryasarathi Bose. In René Muller Sabu Thomas and Jiji Abraham, editors, *Rheology and Processing of Polymer Nanocomposites*, Unusual phase separation in PS rich blends with PVME in presence of MWNTs, chapter 17. John Wiley & Sons, Inc., 2015. in press.