

# Ashish Lele



## Contact Information:

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## Current Interests

- Rheology of complex fluids and polymer dynamics.
- Hydrogels and associating polymers.
- Structure-property relations in complex fluids.

## Education

- PhD, Chemical Engineering, University of Delaware, USA, 1993.
- B. Chem. Eng., University of Bombay, Department of Chemical Technology (UDCT), 1988

## Experience

- 1993-present: Leading industrial sponsored research projects at NCL; driving product development activities; engaged in fundamental research on rheology of complex fluids and polymer dynamics.
- 2000-02: Research Associate at the Department of Chemical Engineering, University of Cambridge, UK; worked with a large team of researchers from academia and industry on a consortium project titled “Microscale Polymer Processing”
- 1988-1993: Research Assistant at the University of Delaware leading to a Ph.D. in chemical engineering. Developed an understanding about the formation of metastable morphologies during Rapid Expansion of Supercritical Solutions of polymers.

## Achievements

- Shanti Swaroop Bhatnagar Award in Engineering Sciences, 2006
- Fellow Indian National Academy of Engineering, 2004
- UICT Young Scientist Award, 2003
- Indian National Science Academy (INSA) Young Scientist Award, 1996
- CSIR Young Scientist Award, 1994
- G. I. Kane Gold Medal, University of Bombay, 1988
  
- Publications in peer-reviewed international journals: 45
- Product technologies transferred: 2

## Recent Publications

- Iyer, B. V. S.; Shanbaugh, S.; Juvekar, V. A. and Lele, A. K., Self-diffusion coefficient of ring polymers in semi-dilute solutions, *J. Polym. Sci.: Part B: Polym. Phys.*, **46**, 2370-2379 (2008).
- Iyer, B. V. S.; Lele, A. K.; Shanbaugh, S, What is the size of a ring polymer in a ring-linear blend? *Macromolecules*, **40**, 5995-6000 (2007).
- Ganvir, V.; Lele, A.; Thakkar, R and Gautham B P, Simulation of viscoelastic flows of polymer solutions in abrupt contractions using an arbitrary Lagrangian-Eulerian (ALE) based finite element method, *J. Non-Newtonian Fluid Mech.*, **143**, 157-169 (2007).
- Iyer, B. V. S.; Lele, A. K. and Juvekar, V. A., Flexible ring polymers in an obstacle environment: Molecular theory of linear viscoelasticity, *Physical Review E*, **74**, 021805 1-12 (2006).
- Ray, S.; Galgali, G.; Lele, A. and Sivaram S., In situ polymerization of ethylene with bis(imino)pyridine iron (II) catalysts supported on clay: The synthesis and characterization of polyethylene-clay nanocomposites, *J. Polym. Sci.: Part A: Polym. Chem.*, **43**, 304-318 (2005).