

Dr. MANDHAKINI MOHANDAS

Assistant Professor

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Research Areas : Polymer composites with specialization in Tribology, Conducting epoxy composites, Blends, Mechanical properties of Polymers, Self-healing polymer composites, Carbon based nanomaterials and Supercapacitors.

ACHIEVEMENTS/PRIZES

- Awarded SRF from CSIR HRDG Delhi in 2012
- Qualified GATE 2009 in Engineering Sciences (XE)

PUBLICATIONS

- Mandhakini, M., Chandramohan, A., Vengatesan, M.R. and Alagar, M. "Synthesis and characterization of linseed vinyl ester fatty amide-modified epoxy layered silicate nanocomposites", High Performance Polymers, Vol. 23, No. 5, pp. 403-412. 2011.
- Mandhakini, M., Devaraju and Alagar, M. "Linseed vinyl ester fatty amide toughened unsaturated polyester-bismaleimide composites", High Performance Polymers, Vol. 24, No. 3, pp. 237-244, 2012.
- A. Chandramohan, Mandhakini, M., K. Dinakaran and M. Alagar. "Synthesis and Characterization of Bismaleimide Modified Vinyl Ester Monomer-Unsaturated Polyester Intercrosslinked Hybrid Matrices". Polymers & Polymer Composites, Vol. 21, No. 4, 2013
- Chandramohan, A., Mandhakini, M., Dinakaran, K., Alagar, M. "Preparation and Characterization of Vinyl Ester Monomer-Toughened Epoxy- Clay Hybrid Nanocomposites: Thermal and Morphological Properties", International Journal of Polymer Analysis and Characterization, Vol. 17, No. 7, pp. 477-484, 2012.
- Chandramohan, A., Mandhakini, M., Dinakaran, K., Alagar, M. "Thermal, electrical and morphological properties of DGEBA/DDM and TGDDM/DDM epoxies modified by a flexible diepoxide and octaphenylamine POSS", Journal of reinforced plastics and composites . 32(9) 602-611

- Mandhakini, M., Chandramohan, A and Alagar, M. "Nanoindentation studies of nano alumina reinforced ether linked bismaleimide toughened epoxy based nanocomposites". *Polymer-Plastics Technology and Engineering* , Volume 53, 975-989 , Issue 10, 2014
- Mandhakini, M., Lakshmikanthan,T and Alagar, M. "Effect of nano alumina on the tribology performance of ether linked bismaleimide toughened epoxy Nanocomposites." *Tribology Letters* (2014) 54:67–79
- Mandhakini, M., Jayanthi, and Alagar, M. "Carbon black reinforced C8 ether linked bismaleimide toughened electrically conducting Epoxy composites". (*Materials & Design*, Volume 64, December 2014, Pages 706–713).

Book Chapter

- Anandakumar, K., Alagar,M and Mandhakini M. Book Chapter "Concise Encyclopedia of High Performance Silicones", WILEY-Scrivener Publisher, USA.
- Mandhakini M. and Alagar, M "Study On Viscoelastic and Tribological Behavior of Al₂O₃ Reinforced Toughened Epoxy Hybrid Nanocomposites", Book title *Applied Nanoindentation in Advanced Materials*, WILEY.
- Mandhakini M. and Alagar. M "Synergistically C8 ether linked bismaleimide toughened and electrically conducting Carbon black epoxy nanocomposites" , Book title "Eco friendly nano-hybrid materials.....applications" Apple Academic Press, CRC Press, a Taylor & Francis Group.

PRESENTATION

- Mandhakini, M and Alagar, M. "Effect of nano alumina on the tribology performance of ether linked bismaleimide toughened epoxy nanocomposites", Fourth International Conference on Recent Advances in Composite Materials (ICRACM-2013), International Centre, Goa, India. February 18-21, 2013.
- Mandhakini, M. and Subramshu.S.Bhattacharya. "Flame reactor synthesis of high temperature stable titania nanoparticles co-doped by gadolinium", Indian Institute of Metals NMD ATM. 52nd National Metallurgists Day and Annual Technical Meet, College of Engineering, Pune (COEP). November 12-15, 2014.

