Zeena Cherian

Senior Staff Scientist
Ashland Inc.
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Education

M. S., Materials Science and Engineering
New Jersey Institute of Technology, U.S. A
Master's Thesis: "Melt Hydro-peroxidation by reactive extrusion of Polypropylene with potential applications in pollution control"

- Recipient of Hoechst Celanese Excellence Award for innovative research& academics, New Jersey Institute of Technology

M. Tech., Polymer Technology
University of Science &Technology, Cochin, India
Master's Thesis: "Stress-whitening of Polypropylene Co-Polymers"

B. Tech., Polymer Science & Rubber Technology
University of Science & Technology, Cochin, India

Areas of primary interests

- Paints, coatings, polymers
- Rheology of dispersions and melts
- Dynamic mechanical analysis
- Mechanical properties
- Polymer processing

Career Profile

Ashland Inc. 2016-present
Senior Staff Scientist

- Application and product development of new rheology modifiers for water-based paints.

- Establishing structure-property performance of coatings via rheology, diffusive wave spectroscopy and mechanical properties.

- Developing new quantitative analytical tools to characterize paints.

Arkema Inc. 2006-2016
Senior Research Engineer

- Rheological characterization of polymer melts, emulsions, dispersions and composites by strain and stress rheometers
- Mechanical property testing and analysis of performance polymers
- Micro-processing (melt spinning, extrusion, injection molding) and testing of polyamide, PEKK, PMMA, PVDF
- ASTM Technical contact for dynamic mechanical analysis testing standards
- Study of film formation and drying kinetics of coatings.

Rutgers University, New Brunswick, New Jersey 2004-2006
Staff Scientist
Department of Materials Engineering

- Led the project on the effects of adhesive type and polystyrene concentration on the shear strength of immiscible polymer blends.
- Led the project on melt spinning of immiscible polymer fibers.
- Mentored and trained undergraduate and graduate students in polymer processing equipment and test instruments.

University of Medicine and Denstistry, Newark, New Jersey 1999-2003
Research Associate
Department of Biomaterials

- Lab-in-charge of material characterization laboratory
- Supervised lab technicians and trained students.
- Research project on composites used in dental applications

Key scientific patents/ publications

"Enhanced Melt Strength Thermoplastic Formulation" WIPO Patent Application WO/2017/165746

"Energy production from the treatment of organic waste material comprising immiscible polymer blend membrane" WO 2006031757 A1
WO 2006031757 A1

"Melt-Spinning of Nano-Structured Immiscible Polymer Blends of Polymer Polystyrene/High Density Polyethylene".
Journal of Applied Polymer Science, Vol.103, pp 1616-1625, 2007

"Effects of Adhesive Type and Polystyrene Concentration on the Shear Strength of Bonded Polystyrene/ High Density Polyethylene Blends".
International Journal of Adhesion & Adhesives, Vol. 25, 6, pp 502-506, 2005

"Radiation-curable pressure sensitive adhesives"
Adhesives & Sealants Industry Magazine September 2016

“Extended Creep Behavior of Dental Composites using Time-Temperature Superposition Principle”.
Dental Materials, Vol. 19, pp 46-53, 2003.

“Rapid Assessment of Stability of Dispersions via Microrheology and Oscillatory Rheology Techniques”.
Society of Rheology Conference, Montreal, Canada October 2013

“Long-term Creep Response of Dental Composites”.
International Association of Dental Research (IADR) conference proceeding abstract, 1892, 2001.

“Chemical resistance of various polymers used in membrane manufacturing”
Everything About Water; October 2013.

“Kinetics of Fluoride Release from Restorative Materials”
International Association of Dental Research (IADR) conference proceedings 2000.

“Creep Relaxation and Dynamic Properties of Provisional Crown and Bridge Materials”,
International Association of Dental Research (IADR) conference proceedings 1999.