Hydrolytic Degradation of Biorenewable Epoxy Resins

Research Themes

• Degradable polymers derived from renewable sources
• Advanced materials for wind energy
• Characterization of polymer properties

Recent Accomplishments

• Epoxy resins with high epoxidized soybean oil (ESO) content exhibited accelerated degradation rates
• Phenolic acids produced degradable epoxy resins while retaining desirable mechanical and thermal properties
• Significant potential for ESO and phenolic acid based epoxy resins

Issues

• Synthesizing epoxy resins from renewable sources with significant degradation behavior while maintaining desirable mechanical and thermal properties
• Exploring other sustainable materials with degradation potential
• Characterizing thermal properties of synthesized materials

Rawan Almallahi
Major/Field of Study: Chemical Engineering
College: Cullen College of Engineering
Professor: Dr. Megan Robertson
Email: rawmalahi@hotmail.com