

CB² Research Roadmap

SYNTHESIS

- Carbohydrate chemistry of plant polysaccharides
- Lignin-based polymer building blocks
- Biobased monomer & polymer synthesis
- Polymer characterization
- Emulsion polymerization

MODELING

- Processing
- Structure
- Property
- Optimization
- Statistical/stochastic
- Rheological behavior

PROCESSING

- Biopolymer compounding
- Biopolymer functionalization
- Reactive extrusion
- Fiber spinning
- Solvent casting
- Additive manufacturing
- Coating
- Welding

**Commercialization
(Scaling-up; TEA) with
IAB Input
&
University Centers' Expertise
& Collaboration**

END-OF-LIFE

- Chemical, thermal & mechanical recycling
- Composting/ biodegradation
- Respirometry and disintegration lab testing
- Field testing of degradation
- Repurpose
- LCI/LCA

BIOBASED PRODUCTS

- Coatings
- Adhesives
- Packaging
- Textiles
- Films
- Building products
- Automotive

BIOCOMPOSITES

- Biobased fibers
- Biobased resins
- Hybrids
- Novel manufacturing processes
- Composite molding



Center for Bioplastics
and Biocomposites

cb2center.org