

CHEMICAL UPCYCLING OF POLYMERS

[FUNDING OPPORTUNITY ANNOUNCEMENT \(FOA\) NUMBER: DE-FOA-0002462](#)

Award Selection (July 2021)

The Office of Science of the Department of Energy is pleased to announce that 10 projects (listed below) have been selected to receive funding as part of competition for research in Chemical Upcycling of Polymers sponsored by the Office of Basic Energy Sciences. The research efforts will advance understanding of the efficient deconstruction of existing polymers into intermediates that can be used to create new valuable products, the direct modification of existing polymers to create polymers with new functionality, and the design of next-generation polymers that can be reused efficiently and sustainably through many energy-efficient product cycles.

Projects announced at this time are selections for negotiation of financial award. The final details for each award are subject to grant and contract negotiations between DOE and the awardees.

Principal Investigator	Institution	City, State	Proposal Title
Botte, Gerri	Texas Tech University	Lubbock, TX	Understanding and Controlling Electrochemical Routes for Upcycling of Polyolefins
Chen, Eugene	Colorado State University	Fort Collins, CO	Redesigning Polymers to Leverage A Circular Economy (REPLACE)
Chirik, Paul	Princeton University	Princeton, NJ	Chemically Recyclable Polyolefins
Chowdhury, Sanchari	New Mexico Institute of Mining and Technology	Socorro, NM	Development of Recyclable Thermosets for Additive Manufacturing
Diao, Tianning	New York University	New York, NY	Degradation and Upcycling of Poly(acrylic) Acid (PAA)
Gutiérrez, Oliver	Pacific Northwest National Laboratory	Richland, WA	Towards a Polyolefin-Based Refinery: Understanding and Controlling the Critical Reaction Steps
Helms, Brett	Lawrence Berkeley National Laboratory	Berkeley, CA	Unlocking Chemical Circularity in Recycling by Controlling Polymer Reactivity Across Scales
Saito, Tomonori	Oak Ridge National Laboratory	Oak Ridge, TN	Precision Deconstruction of Polymers by Tailored Ionic Liquids
Scott, Susannah	University of California, Santa Barbara	Santa Barbara, CA	Rheology-enhanced Chemo-catalytic Upcycling of Polyolefins
Winey, Karen	University of Pennsylvania	Philadelphia, PA	Polyolefin Upcycling Through Dehydrogenation and Functionalization