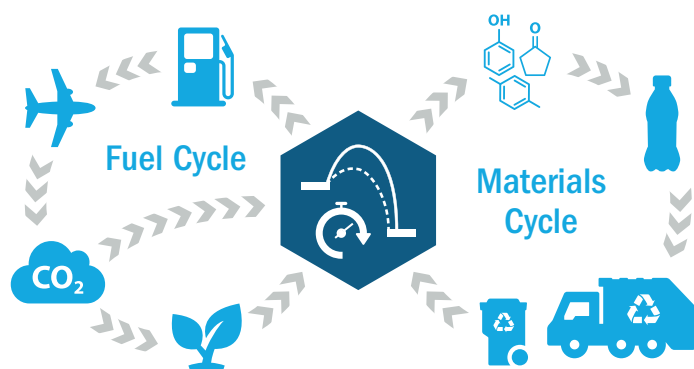


Accelerating technology development for renewable fuels and chemicals through catalysis.

The Chemical Catalysis for Bioenergy Consortium (ChemCatBio) harnesses the expertise of U.S. Department of Energy (DOE) national laboratories and industry partners to study key challenges in the conversion of renewable biomass and waste resources into fuels and chemicals.

Using renewable and waste feedstocks in place of fossil fuels can result in lower greenhouse gas emissions.

ChemCatBio is a mission-driven consortium with a specific focus on sustainable aviation fuel technologies, seeking to reduce the cost and time to move from discovery to scale-up, and ultimately, commercialization.



With over 85% of industrial chemical processes relying on catalysts, ChemCatBio's goal is to develop catalytic technologies that enable a decarbonized, circular bioeconomy.

Our Expertise and Leadership

Supported by DOE's Bioenergy Technologies Office, ChemCatBio researchers leverage unique DOE national laboratory facilities and capabilities to invent and advance catalytic materials and processes.

Using a collaborative approach, we coordinate streamlined access to our capabilities to assist industry partners towards their commercialization goals.

Our Capabilities and Technologies De-Risk the Process Development Lifecycle

ChemCatBio applies an innovative portfolio of resources and capabilities to overcome technical risks for the catalyst and process development cycle for sustainable, bio-based fuels, chemicals, and materials.

We empower researchers and industrial partners with access to innovative capabilities, tools, and expertise in:

- Materials synthesis
- Advanced catalyst characterization
- Computational modeling, interactive tools, and databases
- Multiscale evaluation of catalyst performance
- Techno-economic and sustainability analyses.

Research on Catalytic Conversion Technologies and Process

Our research and development on upgrading intermediates through catalytic technologies builds a scientific understanding of specific conversion pathways for production of bio-based fuels and valuable chemical co-products. This research includes the areas outlined in the graphic below:

Partner With ChemCatBio and Overcome Your Catalysis Conversion Barriers

Partnering with ChemCatBio can help industry remove the barriers to developing catalysts and related technologies to produce biomass- and waste-derived fuels and chemicals.

Industry partners have access to the expertise of more than 120 ChemCatBio researchers across eight national laboratories.

Flexibility and dependability are core values in our research agreements. We can connect you with the right resources you need while safeguarding your valuable intellectual property.

Learn more about how ChemCatBio is decarbonizing the economy by accelerating catalyst development for bioenergy applications: chemcatbio.org.

