# PROJECT FACTS

UNIVERSITY OF KENTUCKY CENTER FOR APPLIED ENERGY RESEARCH

## BIOFUELS AND ENVIRONMENTAL CATALYSIS

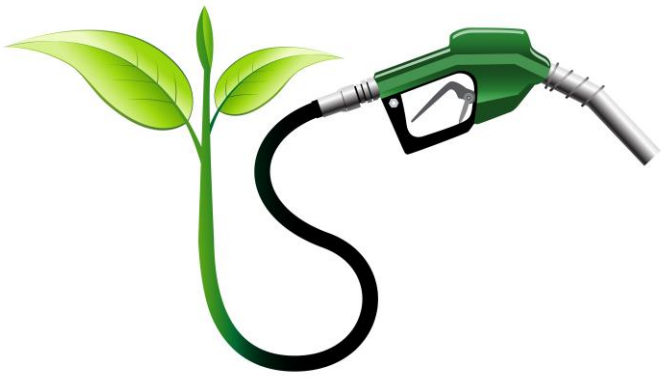
The **Biofuels and Environmental Catalysis** research group is focused on two principal objectives:

-to reduce the environmental impacts of fuel use

-to develop renewable fuel sources.

**The University of Kentucky Biofuels and Environmental Catalysis research group develops renewable fuels and reduces the impacts of fuel use**

- Developing catalytic technology to curb emissions of air pollutants
- Researching algae-based carbon capture and utilization
- Analyzing, fractionating and purifying different forms of biomass
- Depolymerizing lignin for the production of platform chemicals
- Densifying biomass into bio-oils through pyrolysis and liquefaction
- Catalytically upgrading biomass and bio-oils to drop-in hydrocarbon fuels
- Synthesizing, characterizing and testing catalysts using state-of-the-art equipment and instrumentation
- Providing analytical services, consulting and technology transfer
- Offering research opportunities to students in order to train the next generation of scientists and engineers



Kentucky is particularly well suited for developing a biofuels industry. In the east we have timber and forestry resources, as well as the opportunity to grow dedicated energy crops on reclaimed mine lands that would otherwise be non-productive. In the central and western part of the state we have an enormous agricultural base for the production of traditional crops like corn and soybeans, as well as opportunities to use new oil crops, like canola, for biofuels.

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