

## World-class catalysis R&D for **biomass conversion**

ChemCatBio wants to work with you to accelerate the catalyst development cycle and rapidly transition early-stage R&D discoveries to industry.

We are an R&D consortium of U.S. Department of Energy national laboratories dedicated to identifying and **overcoming catalysis challenges** for conversion of biomass and waste feedstocks. Our **collaborative approach** integrates catalysis and process R&D from **foundational science to pilot-scale technology** evaluation.

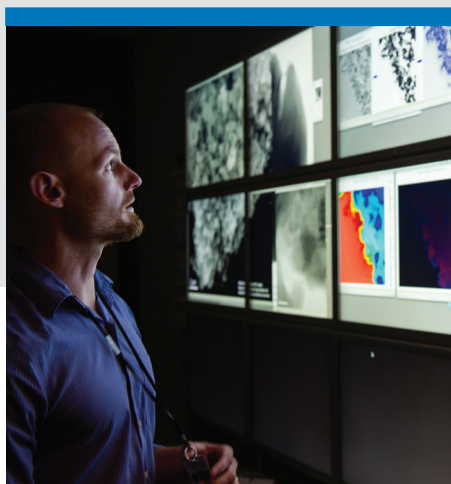
## Unique Capabilities

From the laboratory to the pilot plant and the theory in between, ChemCatBio has the experts and technology to tackle catalysis challenges in biomass conversion at any scale.

### Advanced Synthesis and Characterization



### Modeling and Interactive Tools

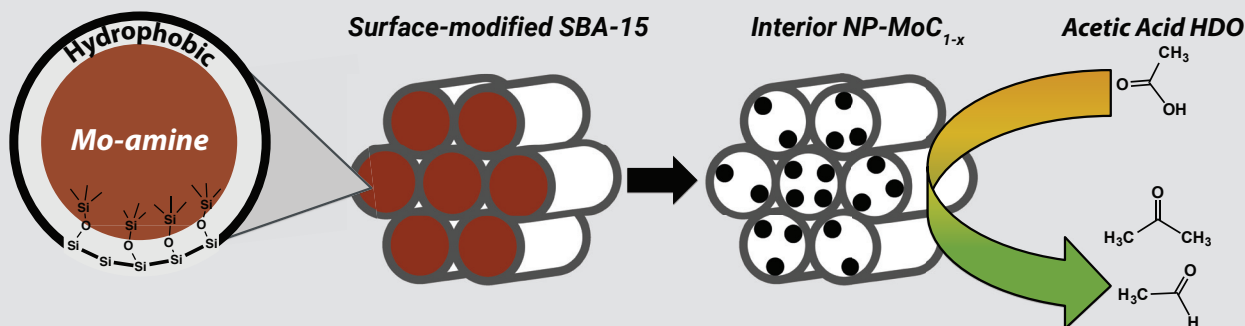


### Multi-Scale Evaluation



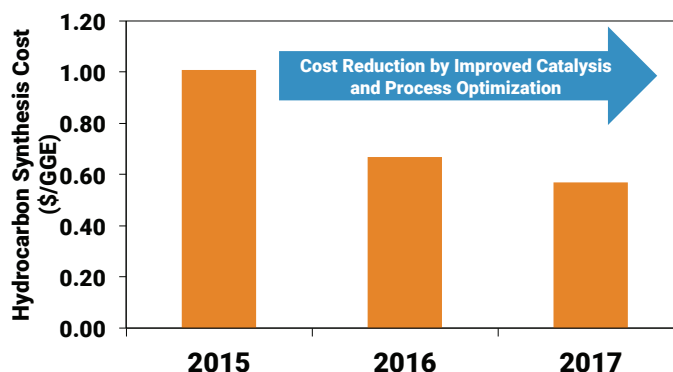
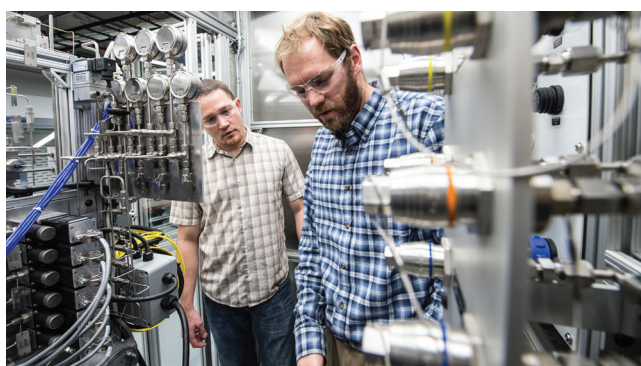
## Scientific Advancement

Nanoscale metal carbides, prepared via a new synthetic method developed by ChemCatBio researchers, improve the yield and quality of the resulting biofuel.<sup>1</sup>



## Technological Advancement

ChemCatBio researchers have achieved a 50% increase in fuel yield from biomass and a corresponding \$0.44/gasoline gallon equivalent reduction in production costs by converting a low-value byproduct into high-octane gasoline.<sup>2</sup>



<sup>1</sup> F. G. Baddour et al., *Angew. Chem. Int. Ed.* **2016**, 55, 9026

<sup>2</sup> J. A. Schaidle et al., *ACS Catal.* **2015**, 5, 1794. // C.A. Farberow et al., *ACS Catal.* **2017**, 7, 3662.

Find out more about our **unique capabilities** and the impact that ChemCatBio's **100+ researchers** have had through the **100+ peer-reviewed publications** since 2016.

Visit us at [ChemCatBio.org](http://ChemCatBio.org) to explore collaborative opportunities.

### Director

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