Upgrading of Indirect Liquefaction (IDL) Intermediates

NREL NATIONAL RENEWABLE ENERGY LABORATORY

Pacific Northwest NATIONAL LABORATORY

OAK RIDGE National Laboratory

Goal:

Develop a market-responsive, integrated biorefinery concept based on the conversion of IDL intermediates (methanol and ethanol) to produce a suite of fuels and co-products that can be controlled to meet market demand.

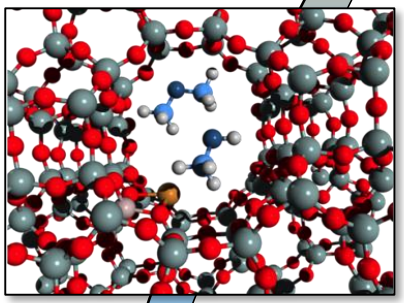
Approach:

Develop multi-functional catalysts for unique upgrading processes and provide the experimental data to improve the understanding of these chemical transformations and processes.

Impact:

Provide the scientific and economic basis for developing new biofuels processes via IDL intermediates that can exceed the performance and economics of commercial, benchmark processes

Biomass Indirect Liquefaction
Light oxygenate intermediates



Multi-functional catalysts for unique transformations
Balancing acidic, basic, metallic sites

Suite of biofuels and co-products to meet market demand
High-octane gasoline, distillate fuels, and polymer precursors