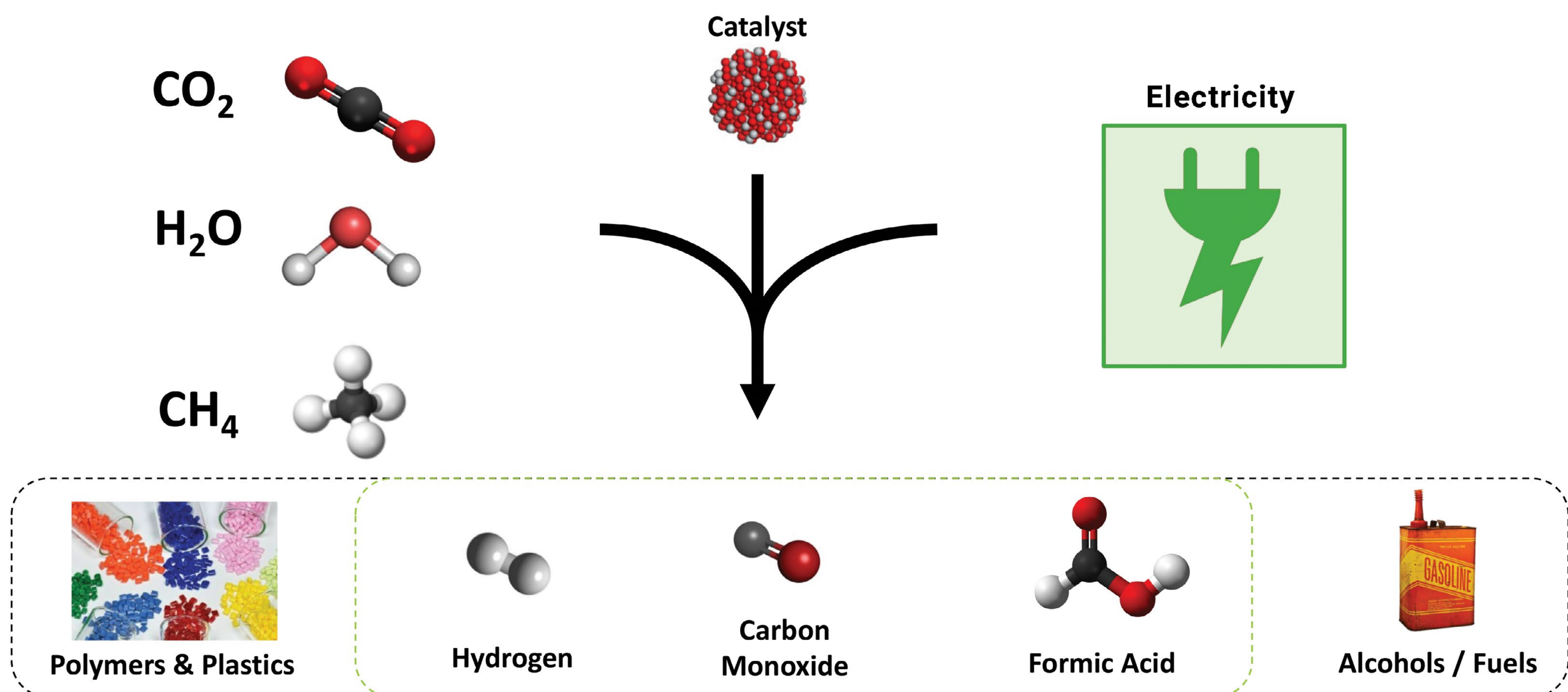


NETL's Record-Setting Catalyst and R&D Tools Transform Carbon Conversion

NETL's experimental and computational work has developed materials that use electricity to convert CO₂, natural gas and water into carbon-neutral chemicals, such as synthesis gas (CO + H₂) and formic acid. These feedstock chemicals can then be upgraded into value-added fuels, energy carriers, and materials using existing industrial processes.

Converting CO₂ into Industrially Useful Chemicals



NETL-developed catalyst efficiently converts CO₂ into sustainable chemicals.

NETL research is de-risking electrified conversion of CO₂ into sustainable chemicals. Our materials development efforts and analysis tools are moving the needle for CO₂ conversion efficiency and providing unbiased evaluation of economic and environmental benefits.

- Reducing curtailment by converting excess electricity into useful products.
- Multiple high-profile publications, awarded and pending patents, and publicly available tools to demonstrate economic potential and carbon life-cycle impacts of CO₂ conversion technologies.
- Outstanding energy efficiencies of 15-20 kWh/kg_{H₂} and 2-3 kWh/kg_{CO} represent some of the best electrified syngas production.
- Industry engagement to improve materials and processes.

DOE PROGRAM

**Carbon Dioxide
Conversion**