

Nanocatalysts

Examples:

- China's largest coal company (Shenhua Group) has licensed technology from Hydrocarbon Technologies that will enable it to liquify coal and turn it into gas. The process uses a gel-based nanoscale catalyst, which improves the efficiency and reduces the cost.



Impact: "If the technology lives up to its promise and can economically transform coal into diesel fuel and gasoline, coal-rich countries such as the U.S., China and Germany could depend far less on imported oil. At the same time, acid-rain pollution would be reduced because the liquefaction strips coal of harmful sulfur." See [Very Small Business](#)

- One of the characteristic properties of all nanoparticles has been used from the outset in the manufacture of automotive catalytic converters: The surface area of the particles increases dramatically as the particle size decreases and the weight remains the same. A variety of chemical reactions take place on the surface of the catalyst, and the larger the surface area, the more active the catalyst. Nanoscale catalysts thus open the way for numerous process innovations to make many chemical processes more efficient and resource-saving – in other words more competitive. From [Nanotechnology at BASF](#)