Technology Description

NanoCoral™ produces platinum nanomaterials which can significantly reduce costs and improve the efficiency and durability of hydrogen fuel cells and other renewable energy technologies.

NanoCoral™ is an innovative nanotechnology for producing platinum catalysts and offers unique control over the shape, size, porosity, composition, stability, and other functional properties of platinum nanostructures compared with those achieved by existing methodologies.

The metals nanostructuring technology is based on two novel platform technologies—templated dendritic nanostructure growth and photocatalytic seeding and growth. Dendritic and ripening-resistant holey-sheet nanocatalyst technology enables the size and shape of platinum structures to be manipulated at the nanoscale to produce novel platinum catalysts and electrocatalysts and other nanomaterials. NanoCoral™ was recognized as an R&D 100 technology by R&D Magazine in 2009.

Technological Benefits

- Reduces amount of rare and expensive raw material
- Retains functionality with less material

Potential Applications

- Fuel cells
- Solar cells
- Sensors
- Electronics
- Catalysis

Contact Us

For more information, please contact:
Sandia National Laboratories
ip@sandia.gov
Refer to SD#7662
Or to learn more, please visit our website at: https://ip.sandia.gov