



## Increased and Prolonged Catalytic Activity of Noble Metal Nano-Catalysts

### Applications

- Heterogeneous catalysis
- Supported catalytic reactors

### Problem & Solution

Palladium is a well-established nanocatalyst material. However it suffers from lifetime degradation because of sintering resulting in irreversible reduction of surface area.

A metal oxide shell inhibits sintering, prolonging the life of the catalyst by preserving its surface area. In addition the catalytic activity of the nanocatalyst is enhanced.

### Benefits

- Increased catalytic activity
- Preservation of surface area by preventing sintering
- Applicable to other combinations of metals

### Patent Pending

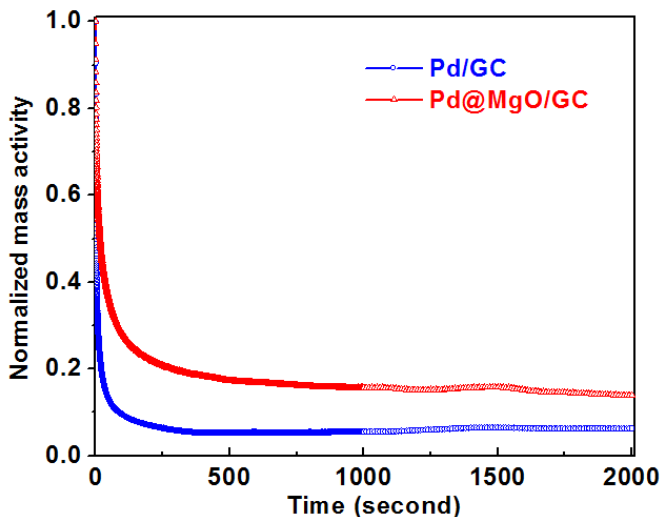
### Keywords

Nano-catalyst, catalyst, noble metal, palladium, sputter deposition

### For more information

Business Development/Technology Licensing Section

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Amperometric *i*-*t* curves of methanol electro-oxidation on Pd/GC and Pd@MgO/GC nanocatalysts in N<sub>2</sub>-saturated 1 M KOH containing 0.5 M methanol at a fixed potential of -0.35V.