

# Supported Au-CuO Catalysts for Low Temperature CO Oxidation



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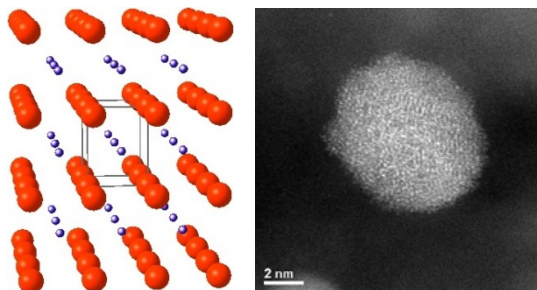
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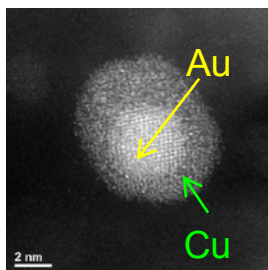
# Au@CuO/SiO<sub>2</sub>: Low temperature CO Oxidation and thermal stability

- Higher engine efficiency results in lower exhaust temperatures.
  - Pt, Pd and Rh optimal operating temperature ~200 ° C.
- Formation of Au@CuO core@shell structure produces low temperature catalytic activity.
- CuO helps stabilize small Au particles to reduce sintering.

## AuCu Alloy Nanoparticles



550 ° C, 16h  
10% O<sub>2</sub>, 1% H<sub>2</sub>O/Ar



Au-Cu phase separation

## Thermal Ageing for 10h

