

# Accepted Manuscript

Mesoporous Cr<sub>2</sub>O<sub>3</sub>-supported Au–Pd nanoparticles: High-performance catalysts for the oxidation of toluene

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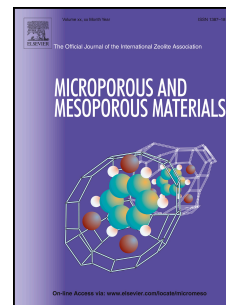
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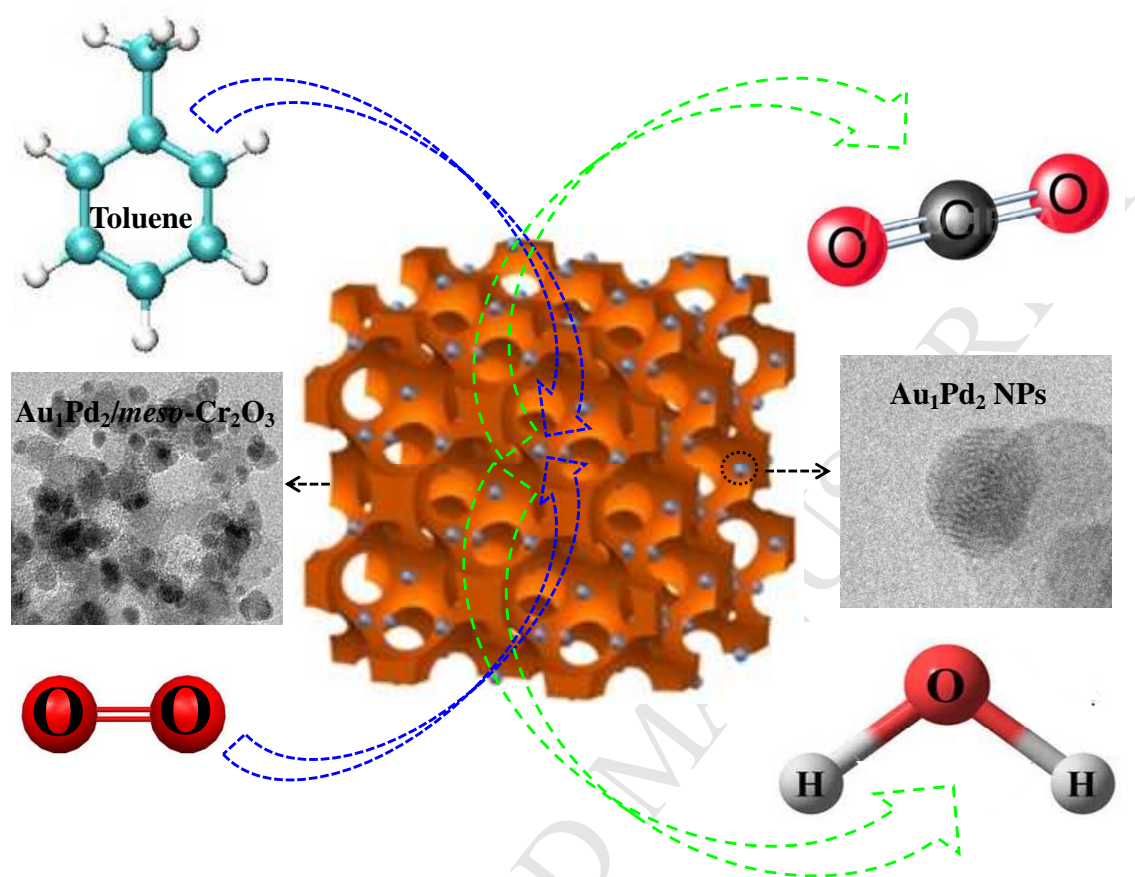
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## Graphical abstract:



Three-dimensionally ordered mesoporous  $\text{Cr}_2\text{O}_3$  (meso- $\text{Cr}_2\text{O}_3$ ) and its supported  $\text{Au-Pd}$  ( $x\text{Au}_1\text{Pd}_2/\text{meso-Cr}_2\text{O}_3$ ) catalysts were prepared using the KIT-6-templating and PVA-protected reduction methods, respectively. The small noble metal particle size, high adsorbed oxygen species concentration, good low-temperature reducibility, and strong interaction between  $\text{Au-Pd}$  NPs and meso- $\text{Cr}_2\text{O}_3$  were responsible for the excellent catalytic performance of  $1.95\text{Au}_1\text{Pd}_2/\text{meso-Cr}_2\text{O}_3$ .

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