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## Supporting Information

# Pd-Ag@CeO<sub>2</sub> Catalyst of Core-shell Structure for Low Temperature Oxidation of Toluene Under Visible Light Irradiation

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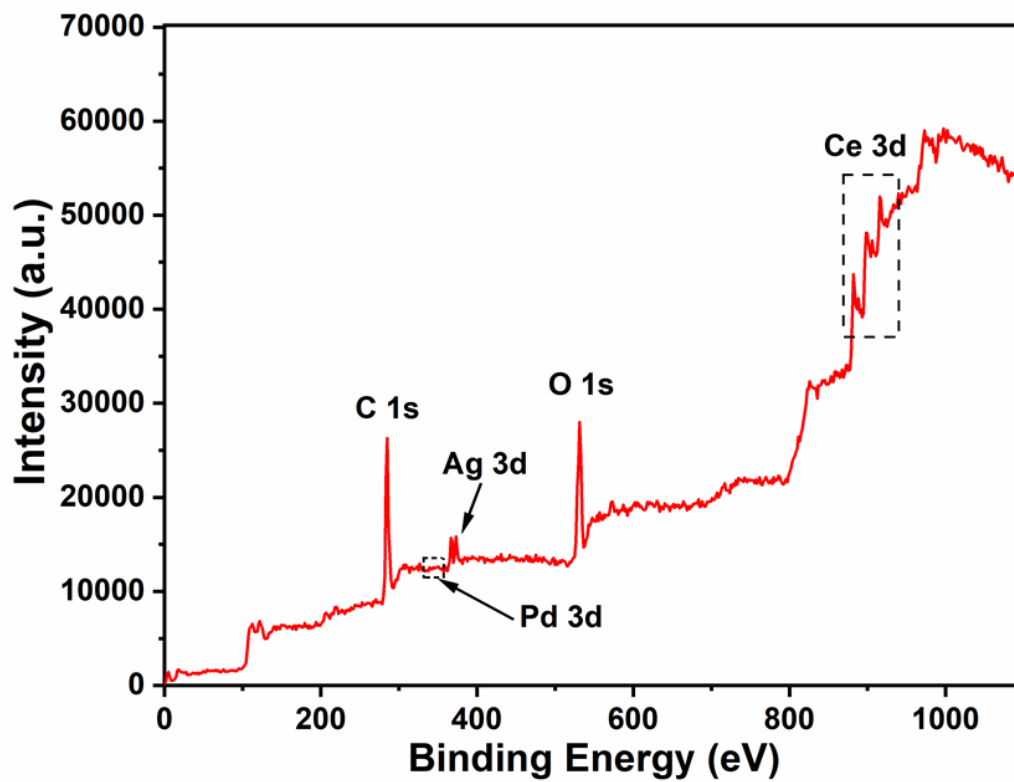


Figure S1. XPS survey spectra for PdAgCe catalyst

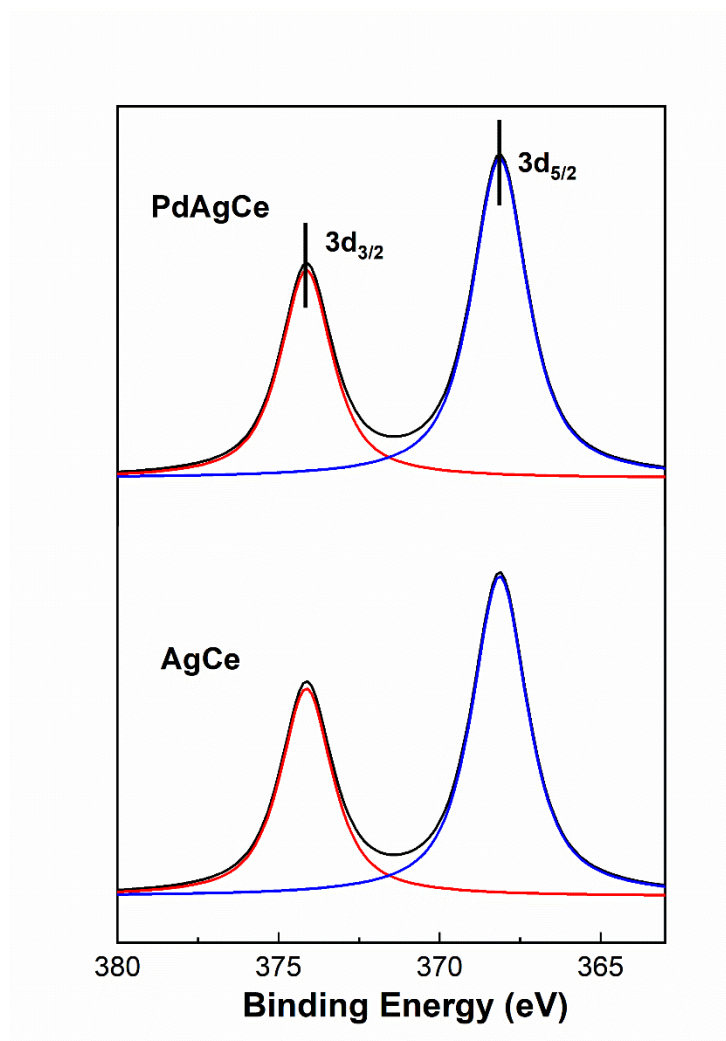


Figure S2. Ag<sub>3d</sub> XPS spectra for AgCe and PdAgCe catalysts

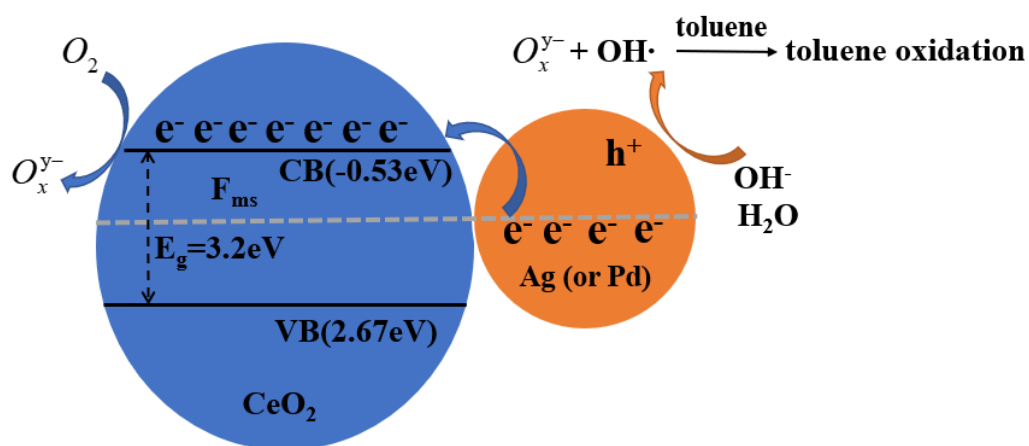


Figure S3. Proposed photo oxidation mechanism of toluene on PdAgCe catalyst

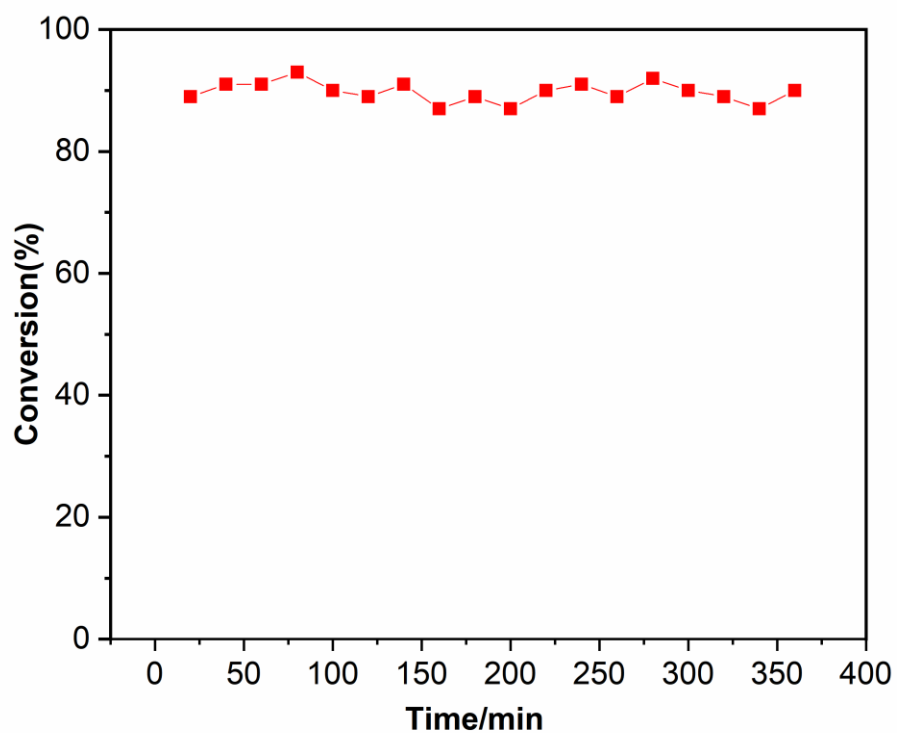


Figure S4. Stability of PdAgCe catalyst at 160°C with visible light irradiation