

Understanding of Active Sites and Interconversion of Pd and PdO during CH₄ Oxidation

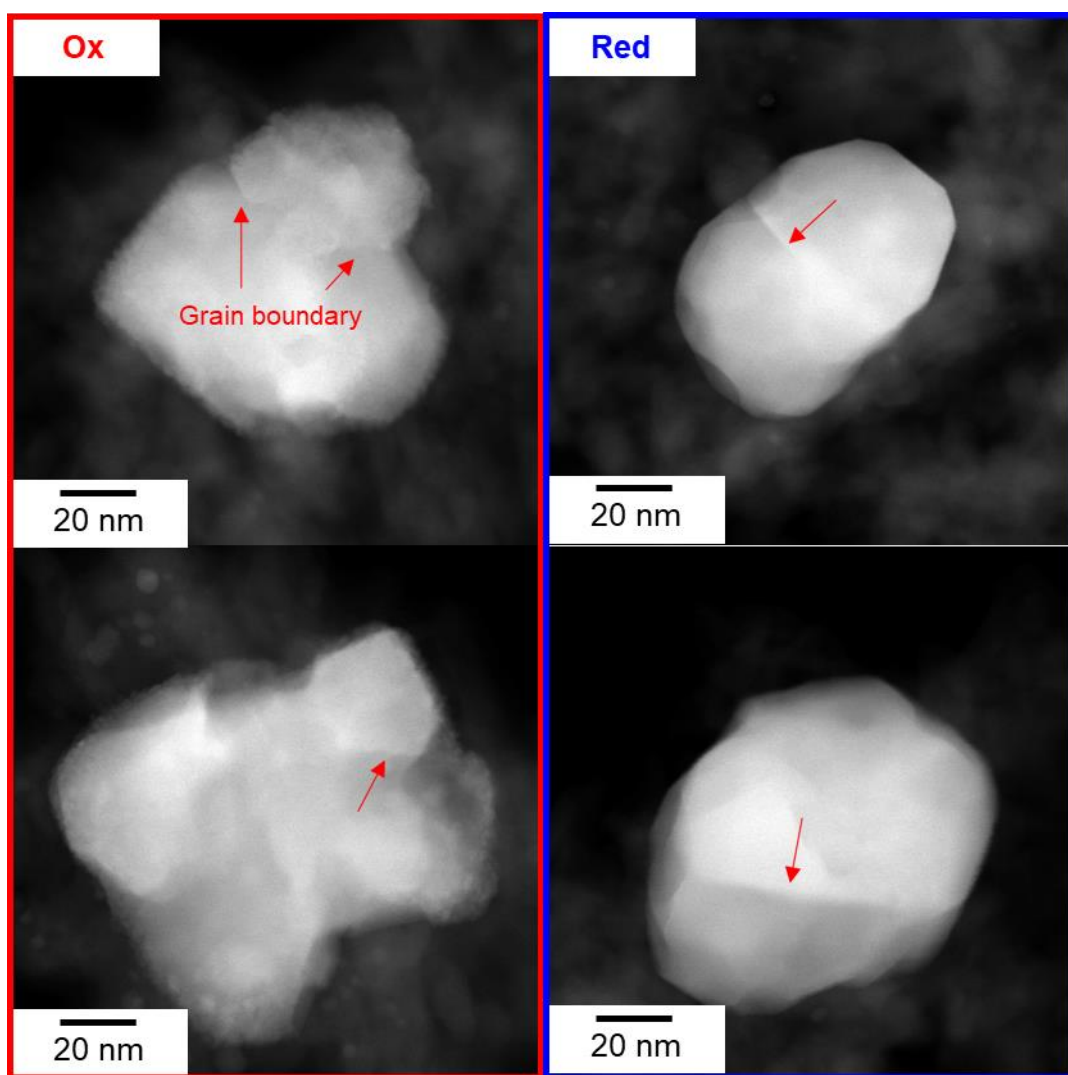


Figure S1. High magnification STEM images of Pd/Al₂O₃-Ox (red) and PdAl₂O₃-Red (blue).

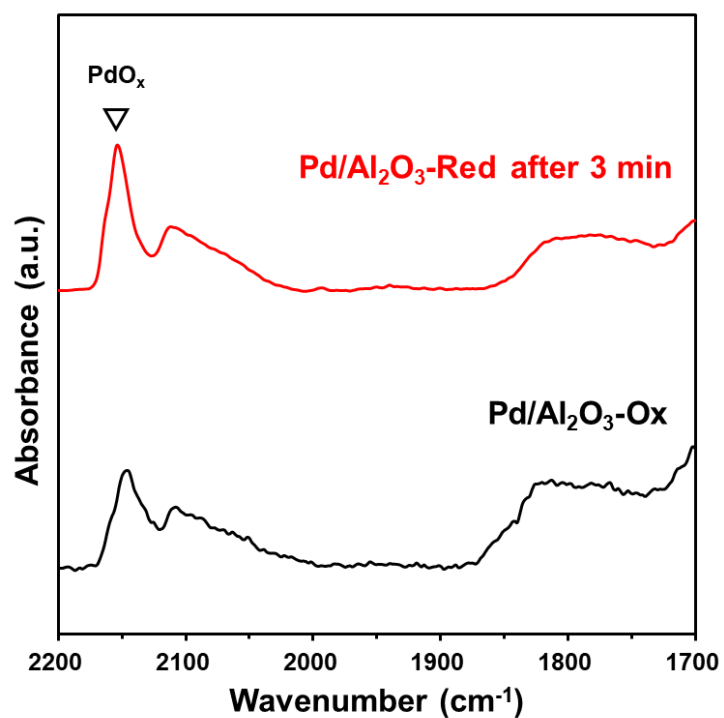


Figure S2. In-situ DRIFTS spectra of adsorbed CO on Pd/Al₂O₃-Ox (black) and Pd/Al₂O₃-Red after 3 min of CH₄ oxidation. DRIFTS spectra were recorded at 25 °C after He purging. The surface reconstruction from Pd to PdO immediately occurred within 3 min of the reaction. CH₄ oxidation condition – 1% CH₄, 10% O₂ in He at 340 °C.