

**Supporting Information for**

**Deactivation of Ru Catalysts under Catalytic CO Oxidation by  
Formation of Bulk Ru Oxide Probed with Ambient Pressure XPS**

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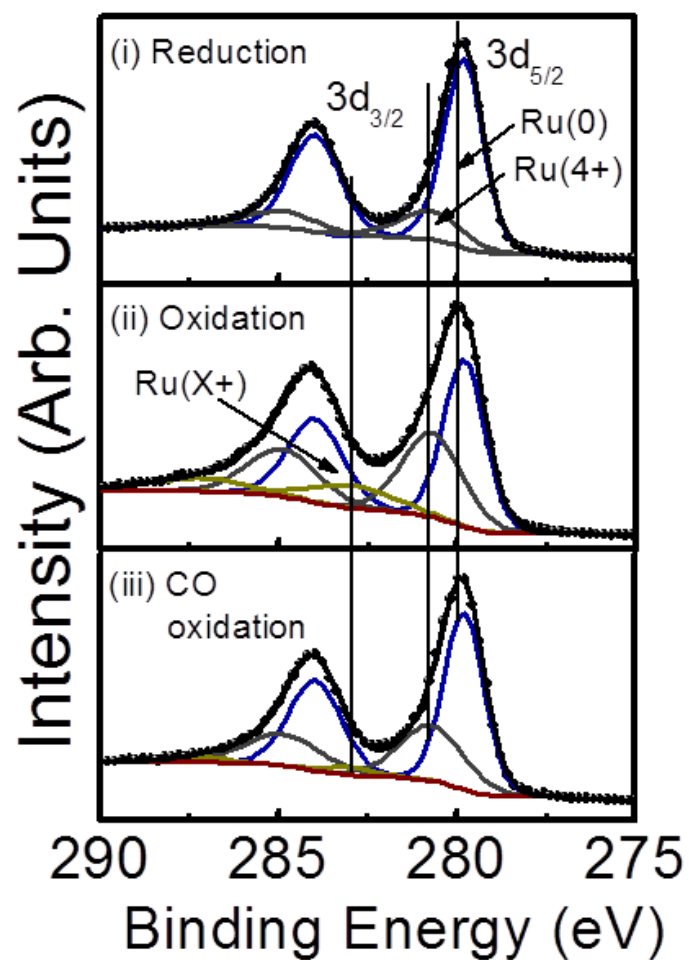


Figure S1: Ru3d spectra showing the surface oxidation states of Ru on a Ru film at 200 °C at an incident photon energy of 825 eV: (i) reduction under 80 mTorr CO (ii) oxidation under 200 mTorr O<sub>2</sub>, and (iii) catalytic CO oxidation under 200 mTorr O<sub>2</sub> and 80 mTorr CO.