

Supporting Information

Enhanced and Durable Electrocatalytic Performance of Thin Layer PtRu Bimetallic Alloys on Pd-Nanocubes for Methanol Oxidation Reactions

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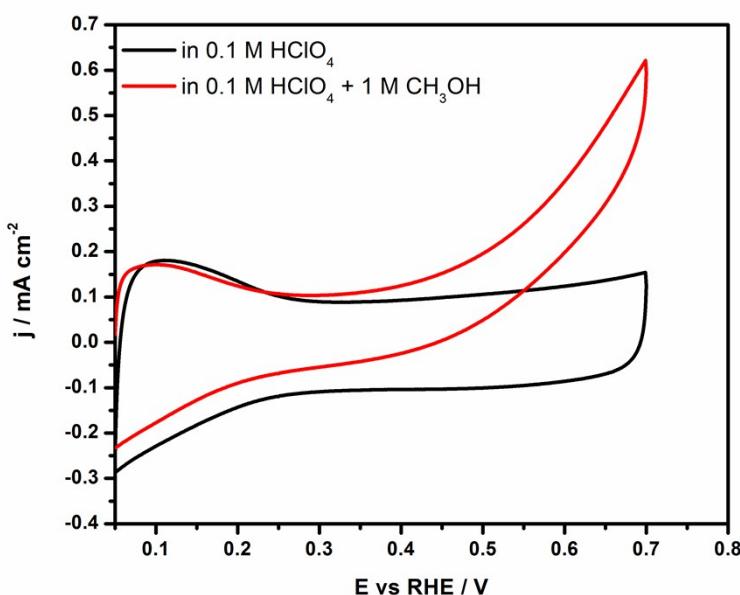


Fig. S1: Base CV for commercial PtRu/C in 0.1 M HClO₄ solution at 50 mV/s and CV for commercial PtRu/C in 0.1 M HClO₄ + 1M CH₃OH solution at 50 mV/s

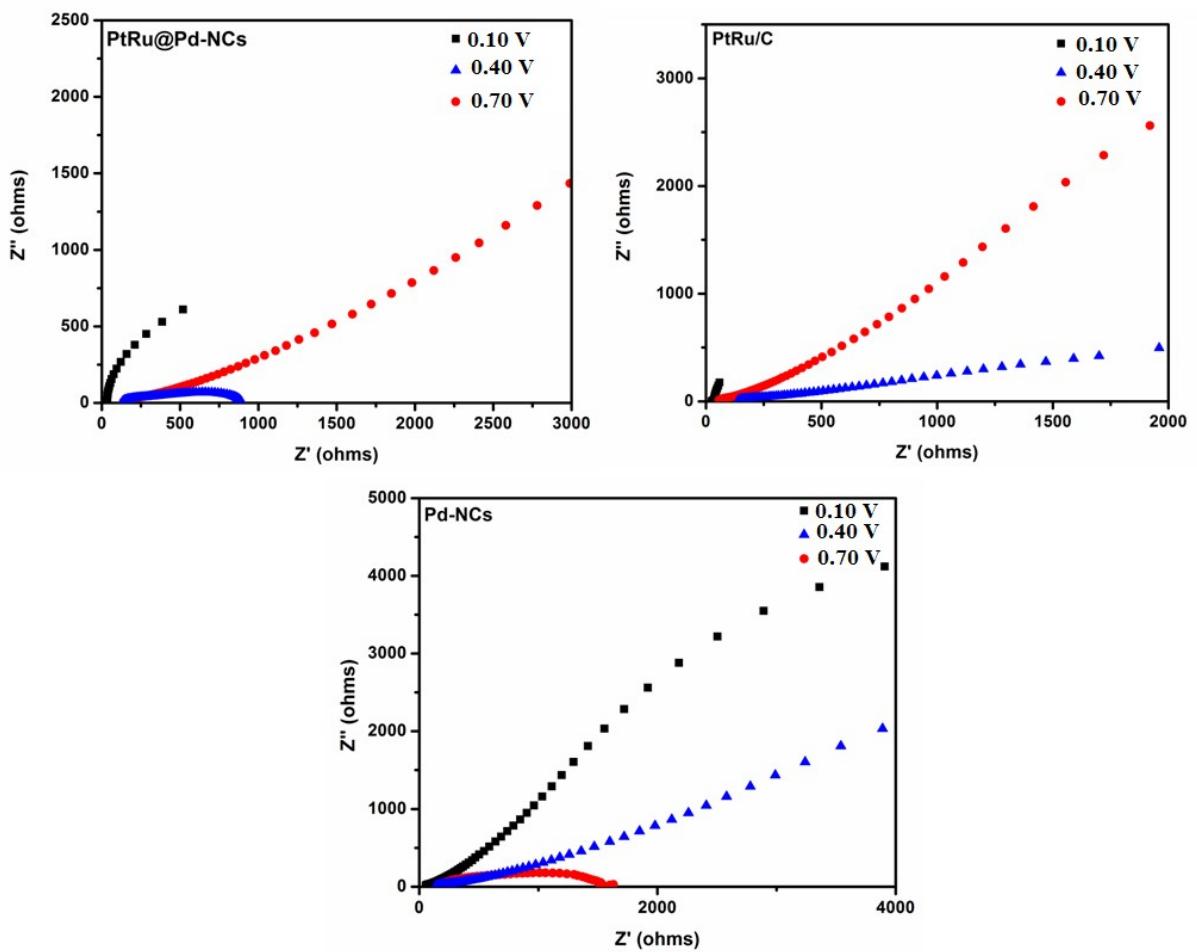


Fig. S2: Nyquist plots for electrochemical impedance spectroscopic curves at three different potentials from 0.10 V to 0.70 V vs. RHE for all the catalysts.

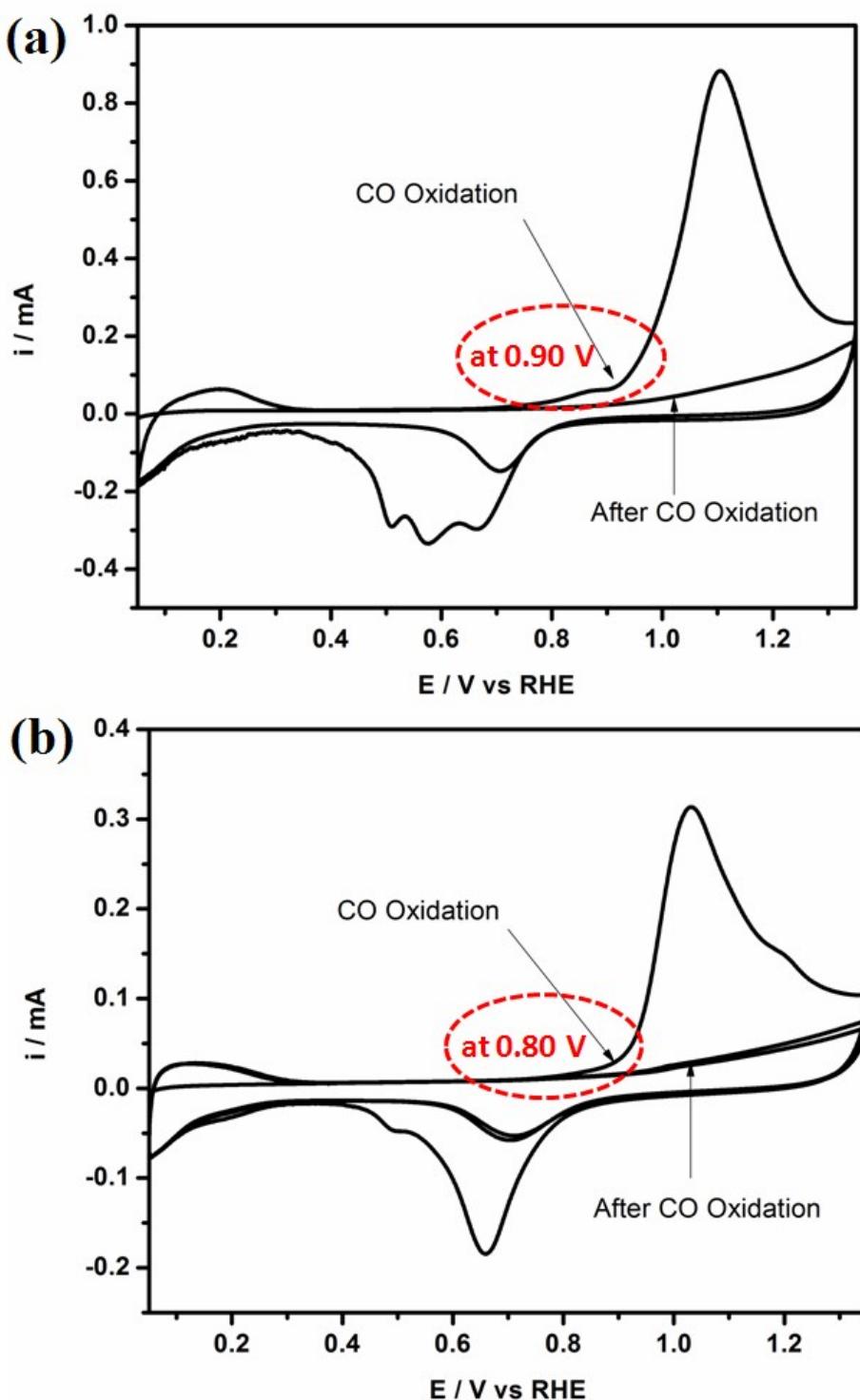


Fig. S3: Electrochemical CO oxidation of (a) Pd-NCs and (b) PtRu@Pd-NCs catalysts, in 0.1 M HClO₄, the scan rate is 50 mV s⁻¹.

Table S1: Measurements of current densities of PtRu@Pd-NCs and PtRu/C catalysts by normalizing current with ECSA and geometric surface area

Sr. No.	Catalyst	$j / \text{mA cm}^{-2}$ (w.r.t ECSA)	$j / \text{mA cm}^{-2}$ (w.r.t geometric surface area)
01	PtRu@Pd-NCs	11.44	44.29
02	PtRu/C	0.65	10.38