

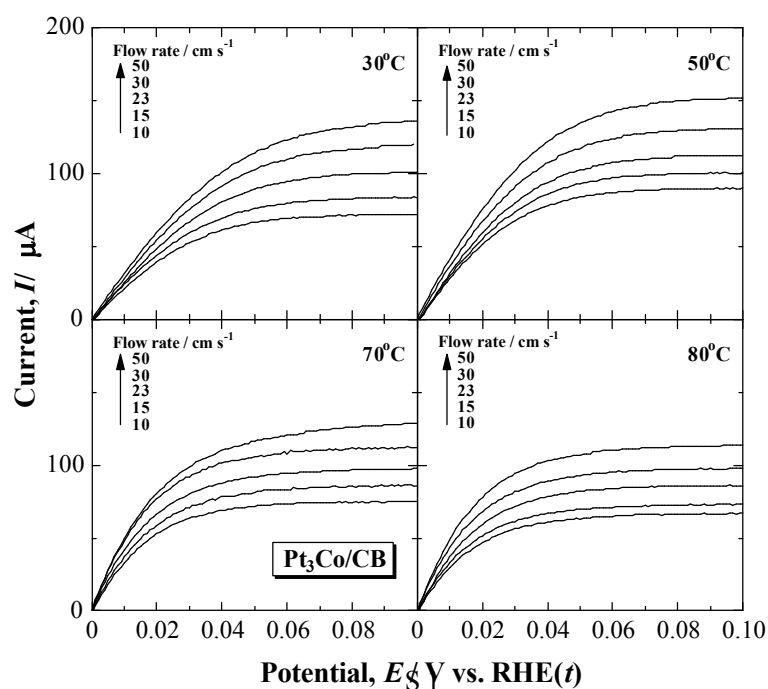
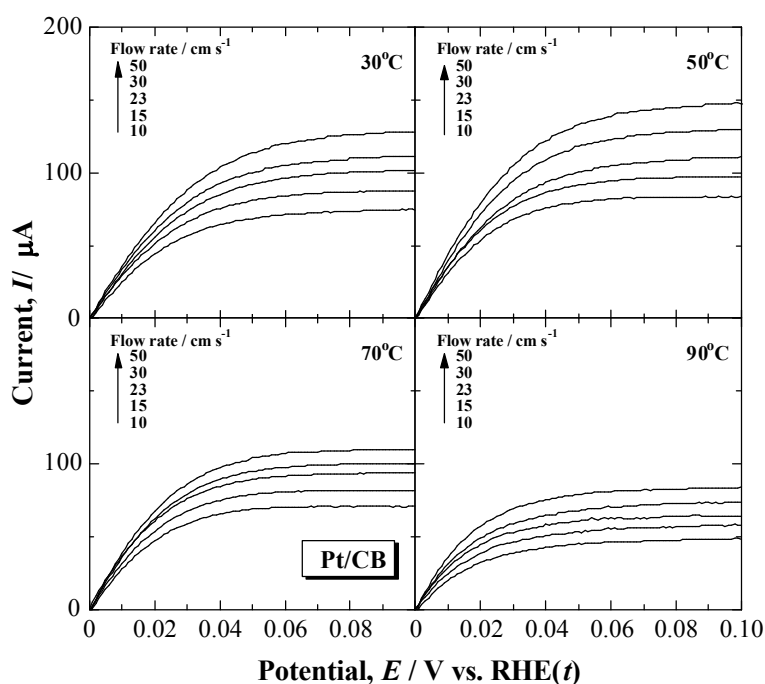
Electronic Supporting Information for “Temperature-Dependence of Hydrogen Oxidation Reaction Rates and CO-Tolerance at Carbon-Supported Pt, Pt–Co, and Pt–Ru Catalysts”

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(1) Supplementary data sets for Figure 1 (hydrodynamic voltammograms)



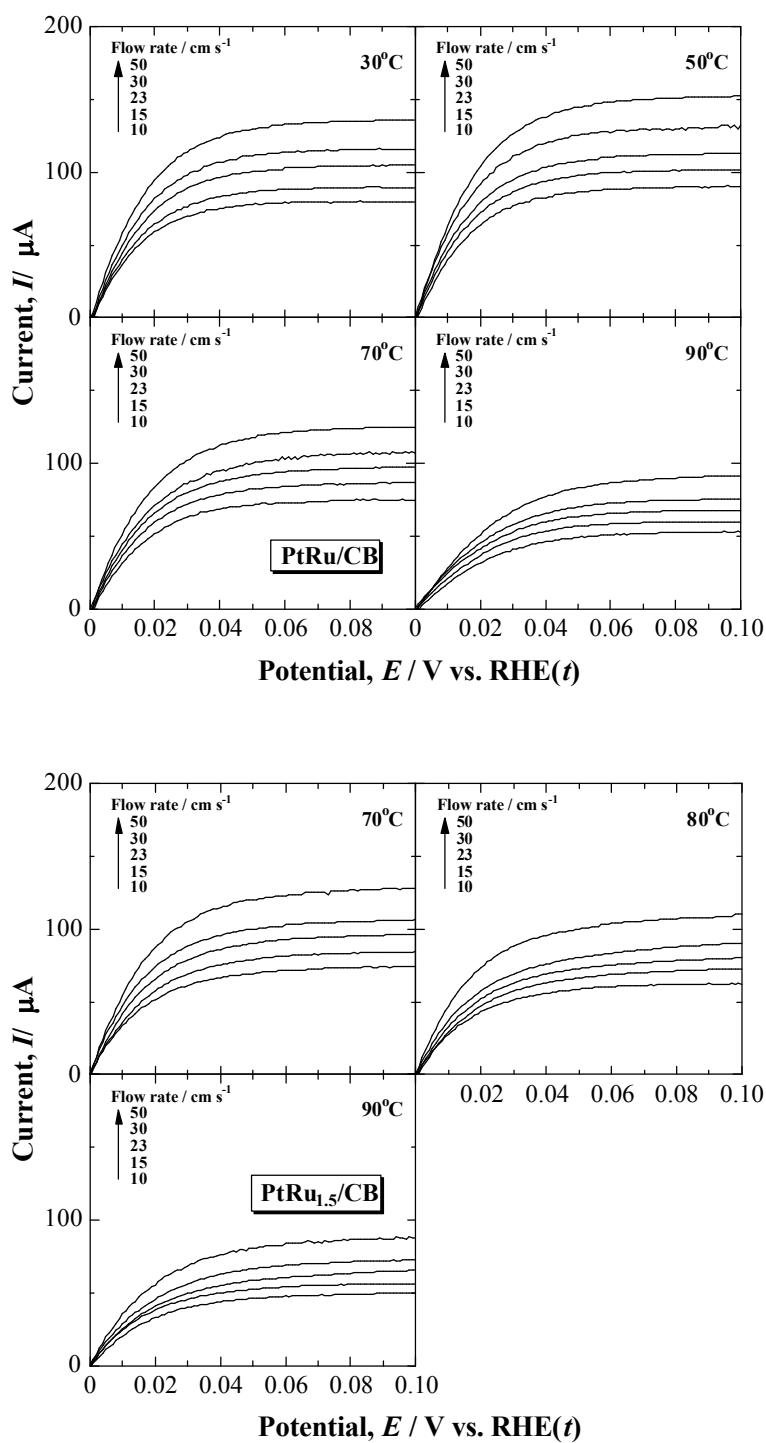


Figure S1. Hydrodynamic voltammograms for the HOR at Nafion-coated supported catalysts in H₂ saturated 0.1 M HClO₄ at 30 to 90 °C measured at a potential sweep rate of 0.5 mV s⁻¹ and various mean flow rates of the solution, *U*_m, from 10 to 50 cm s⁻¹.

(2) Evaluation method of kinetically controlled current I_K from I^{-1} vs. $U_m^{-1/3}$ plot

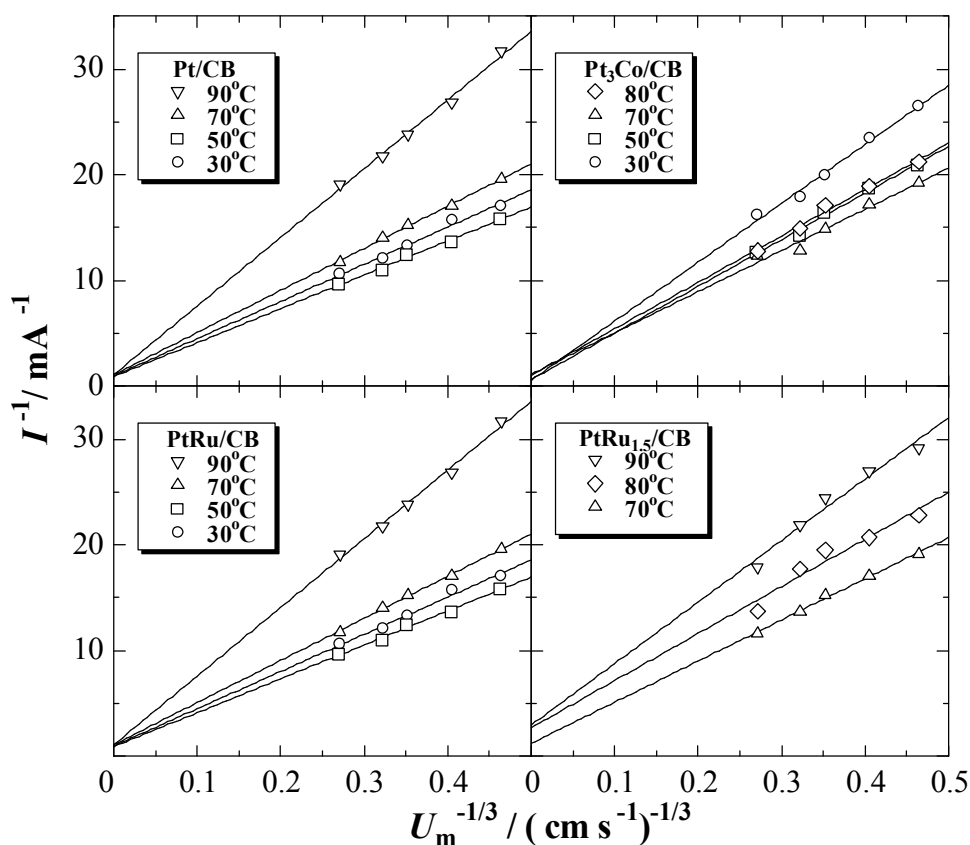


Figure S2. I^{-1} vs. $U_m^{-1/3}$ plots at 0.020 V vs. RHE(t) obtained from hydrodynamic voltammograms at Nafion-coated supported catalysts in H₂-saturated 0.1 M HClO₄ solution in the temperature range from 30 to 90 °C. Solid lines are least-squares fits. The kinetically controlled current density j_K was calculated by $j_K = I_K/S^0$, where S^0 is the electrochemically active area of the working electrode.

(3) Supplementary data sets for Figure 5; relationship between $\log(1-\theta_{\text{CO}})$ and t_{ad} at 50 to 90 °C.

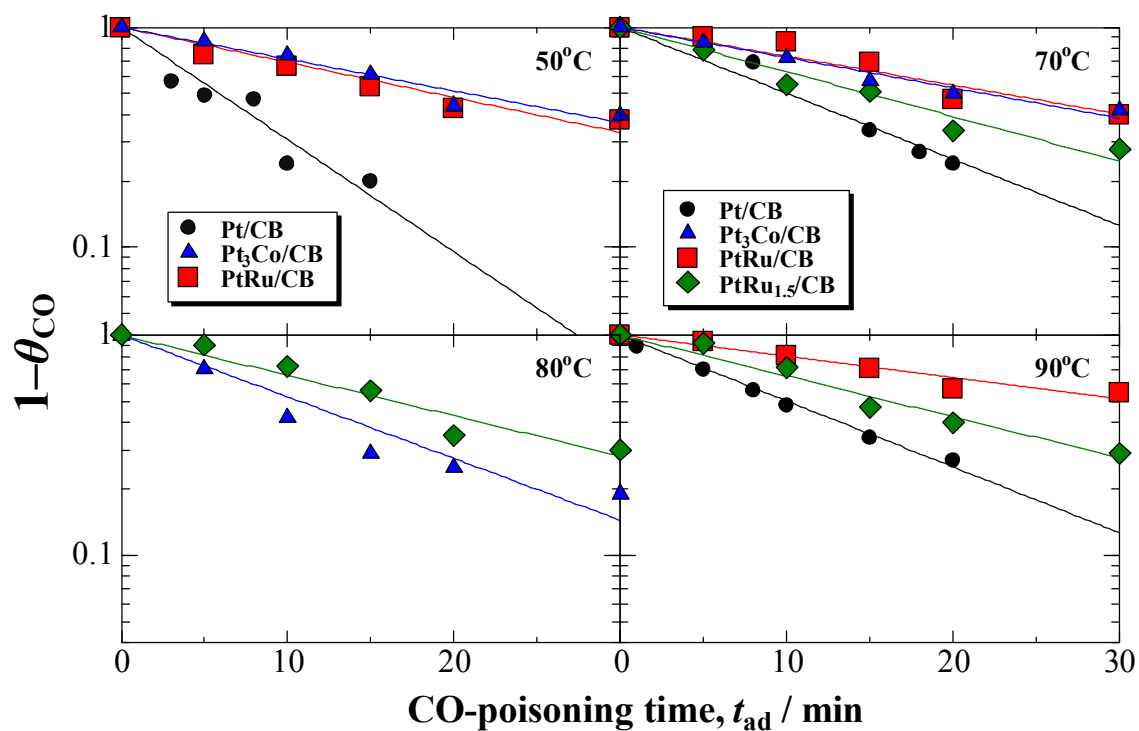


Figure S3. Plots of $\log(1-\theta_{\text{CO}})$ vs. t_{ad} at various supported catalysts upon exposure to 0.1 M HClO₄ solution saturated with 0.30% CO (H₂ balance) at 0.050 V and 30°C. Solid lines are the least-squares fits.