

Supplementary Information

High Performance Pt/Ti₃O₅Mo_{0.2}Si_{0.4} Electrocatalyst with Outstanding Methanol Oxidation Activity

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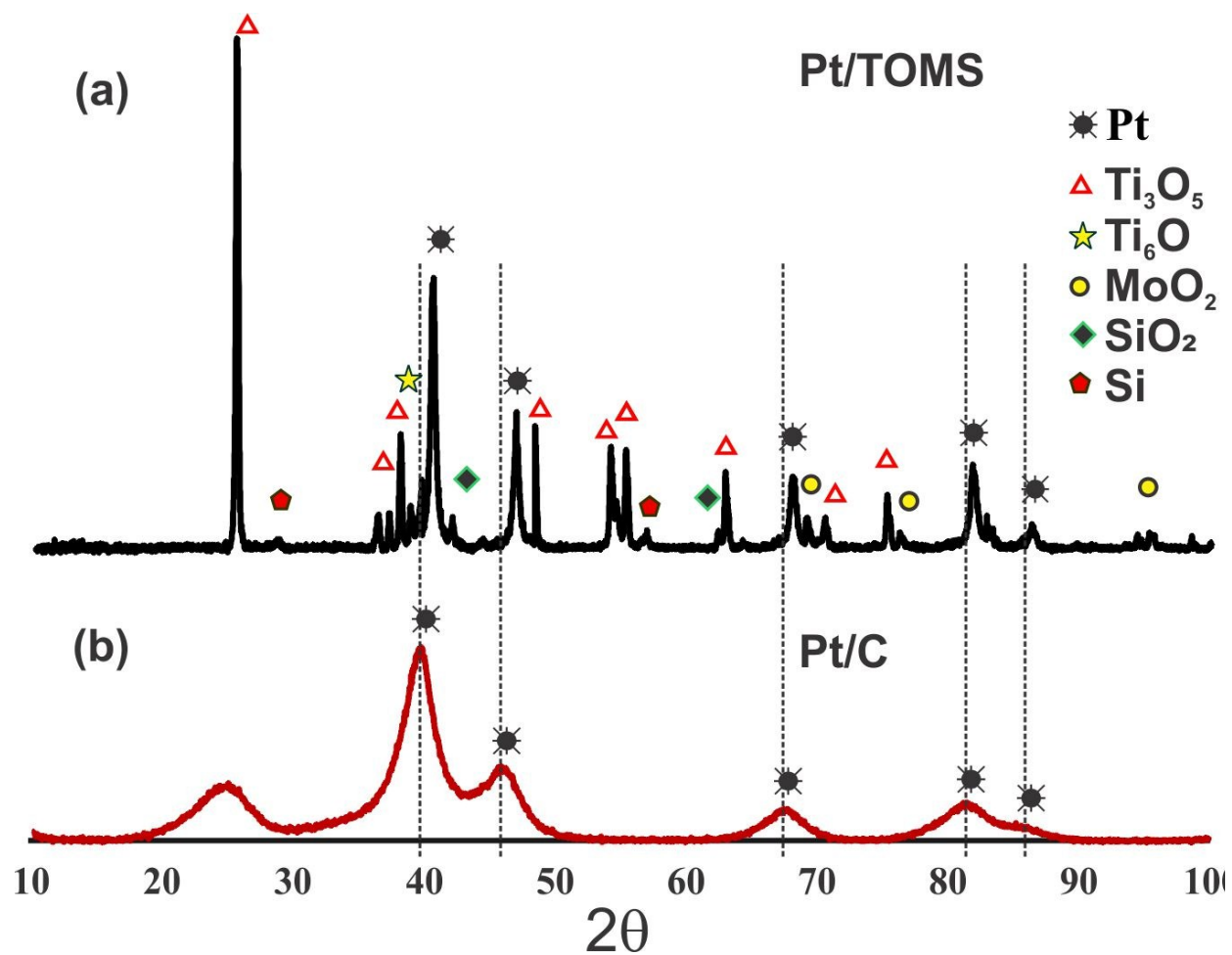


Fig. S1. The X-ray diffraction patterns obtained for the Pt/TOMS and Pt/C catalysts.

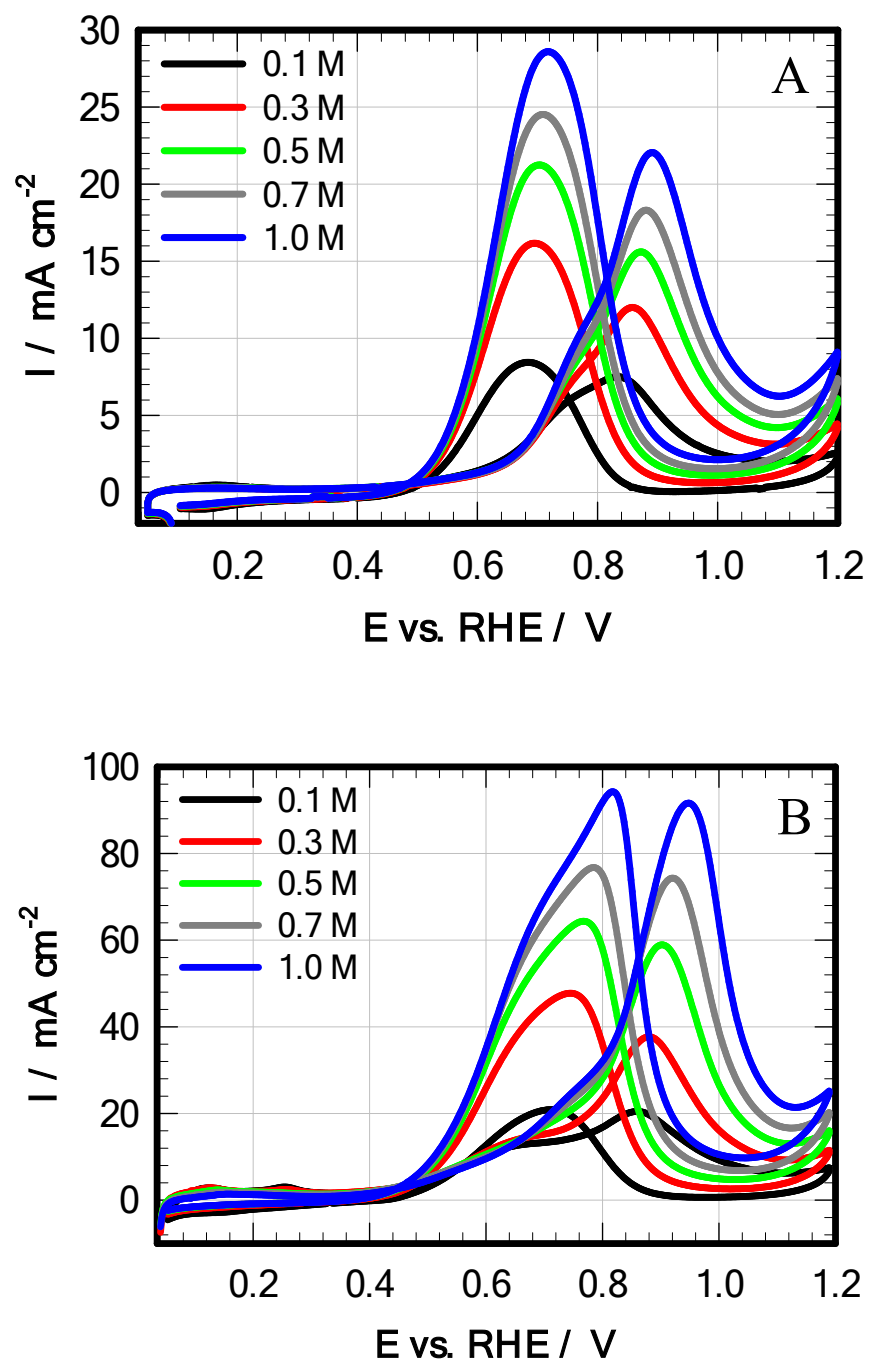


Fig. S2. Methanol oxidation in $0.5 \text{ M H}_2\text{SO}_4$ as a function of methanol concentration at room temperature ($\square 20^\circ \text{C}$). Potential sweep rate was 20 mV s^{-1} .

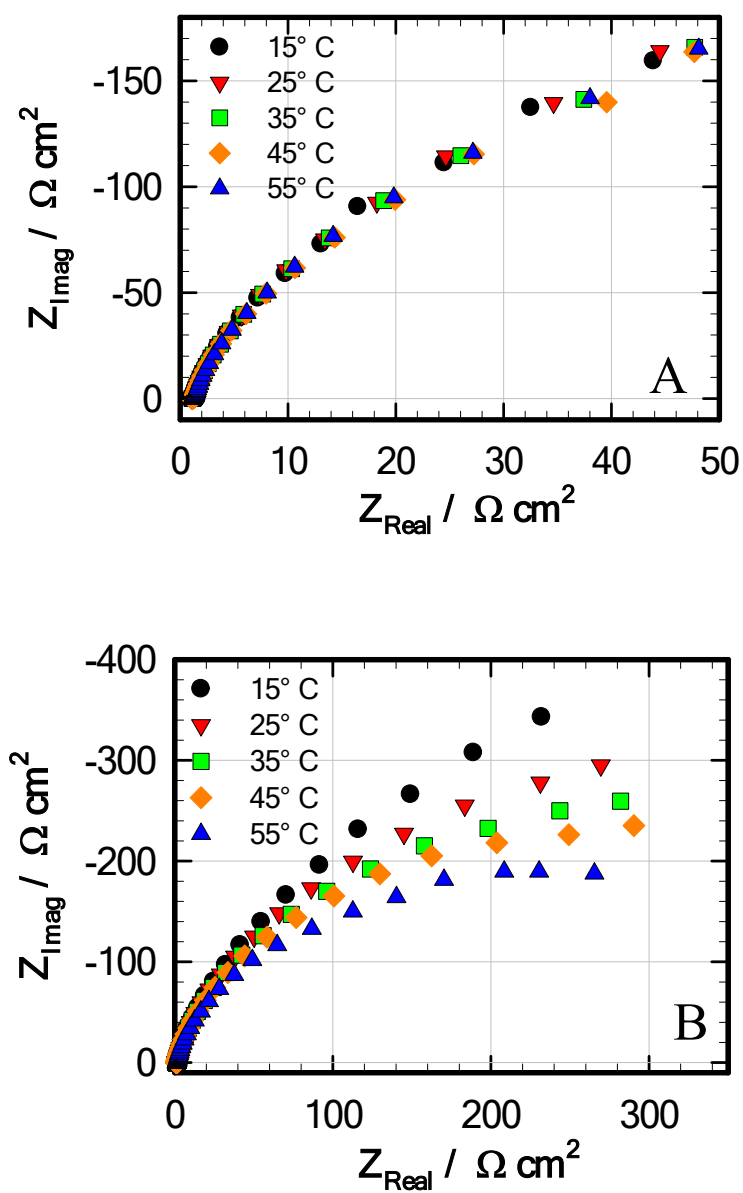


Fig. S3. Nyquist plots (100 kHz – 0.1 Hz; dc bias potential = 0.4 V_{RHE}) for methanol oxidation over Pt/C (A) and Pt/TOMS (B) in 0.5 M H₂SO₄ as a function of methanol concentration at room temperature (□20°C).

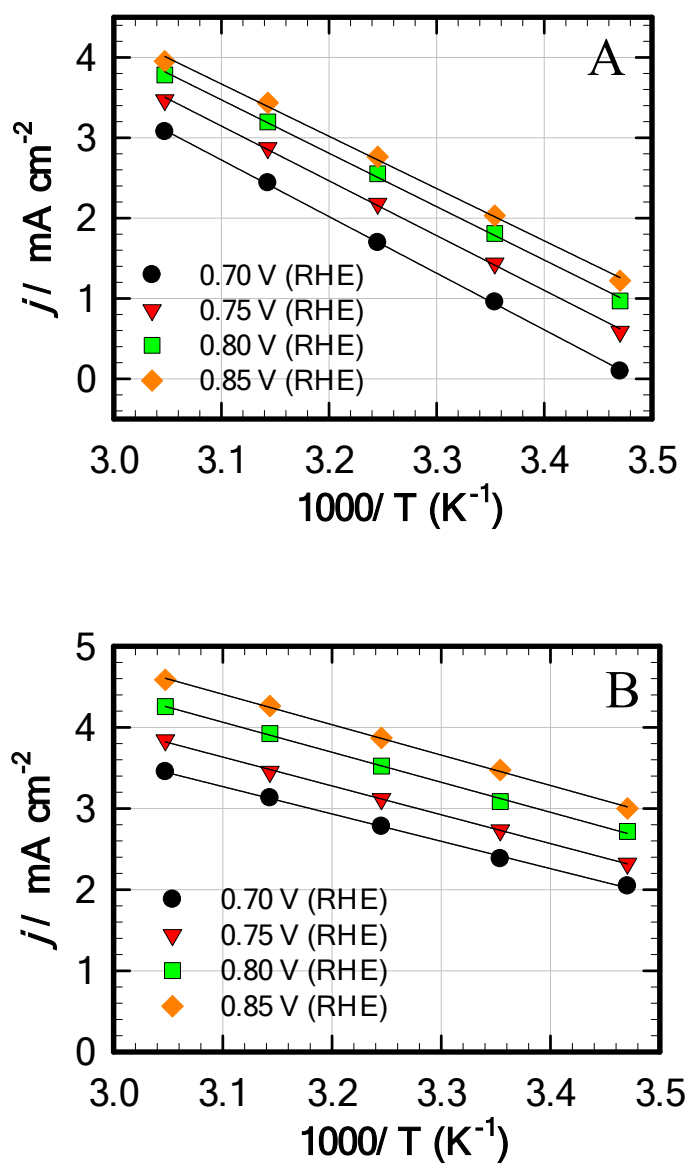


Fig. S4. Arrhenius plots for methanol oxidation (0.5 M) over Pt/C (A) and Pt/TOMS (B) at the temperature range of 70 to 85°C.