

Figure S1. LSVs of APYR-W-N (a), APYR-H-N (c), and APYR-T-N (e) recorded at a scan rate of 10 mV s⁻¹ in O₂-saturated 1 M KOH at different rotation rates, (b, d, f) Corresponded Koutecky-Levich plots at electrode potentials of 0.25-0.6 V.

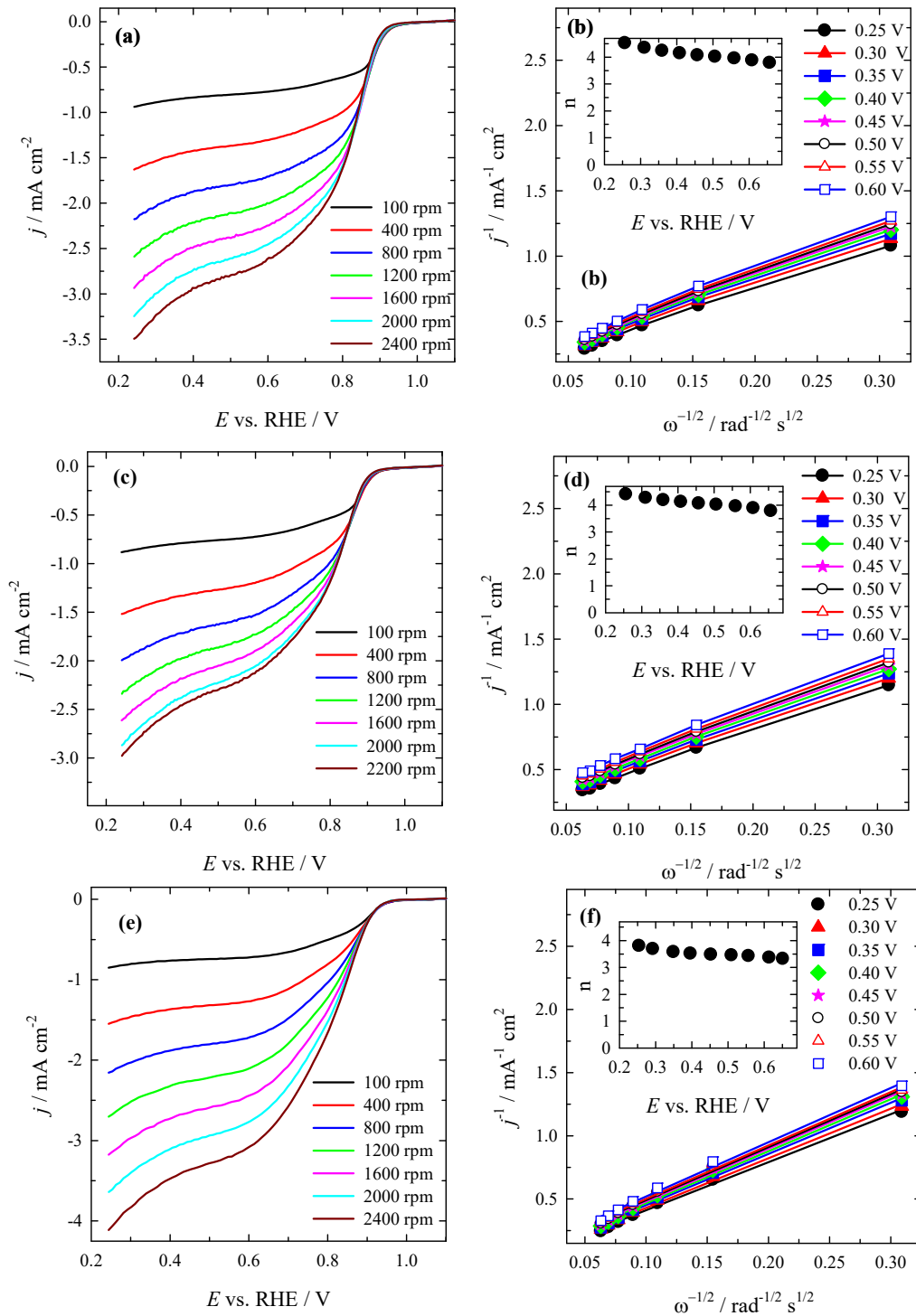


Figure S2. LSVs of AHTC-W-N (a), AHTC-H-N (c), and AHTC-T-N (e) recorded at a scan rate of 10 mV s^{-1} in O_2 -saturated 1 M KOH at different rotation rates, (b, d, f) Corresponded Koutecky–Levich plots at electrode potentials of 0.25–0.60 V.

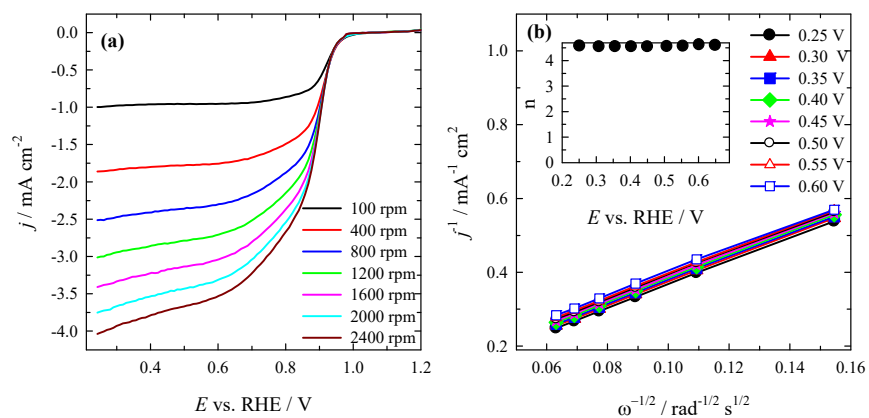


Figure S3. LSVs of Pt/C (a) recorded at a scan rate of 10 mV s⁻¹ in O₂-saturated 1 M KOH at different rotation rates, (b) Corresponded Koutecky–Levich plots at electrode potentials of 0.25–0.60 V.