

Supporting Information

Energetic Carbon-based Hybrids: Green and Facile Synthesis from Soy Milk and Extraordinary Electrocatalytic towards ORR

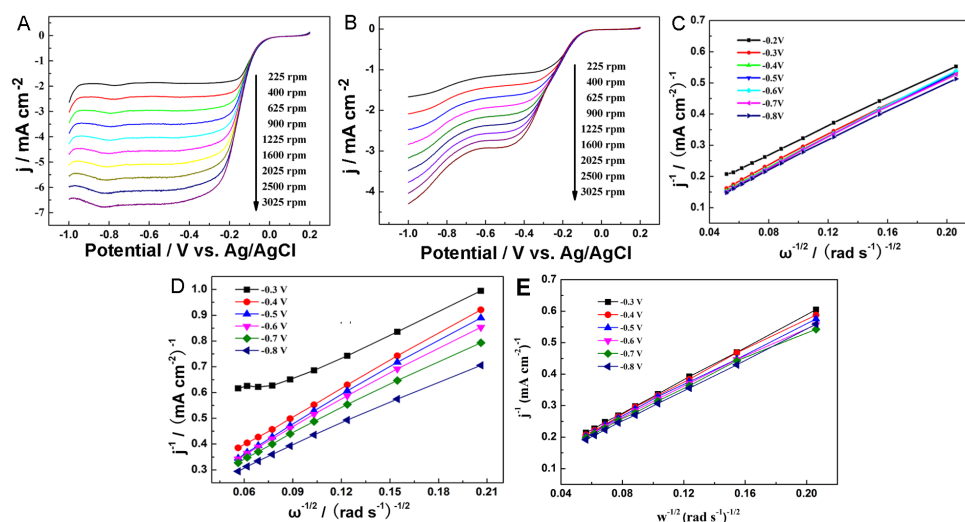


Figure S1. RDE voltammograms of Pt/C (A) and N-C₉₀₀ (B) in O₂-saturated 0.1 M KOH with various rotation rates at a scan rate of 10 mV s⁻¹; Koutecky–Levich plots of Pt/C (C), N-C₉₀₀ (D) and Co-N-C₉₀₀ (1) (E) electrodes at -0.3 V.

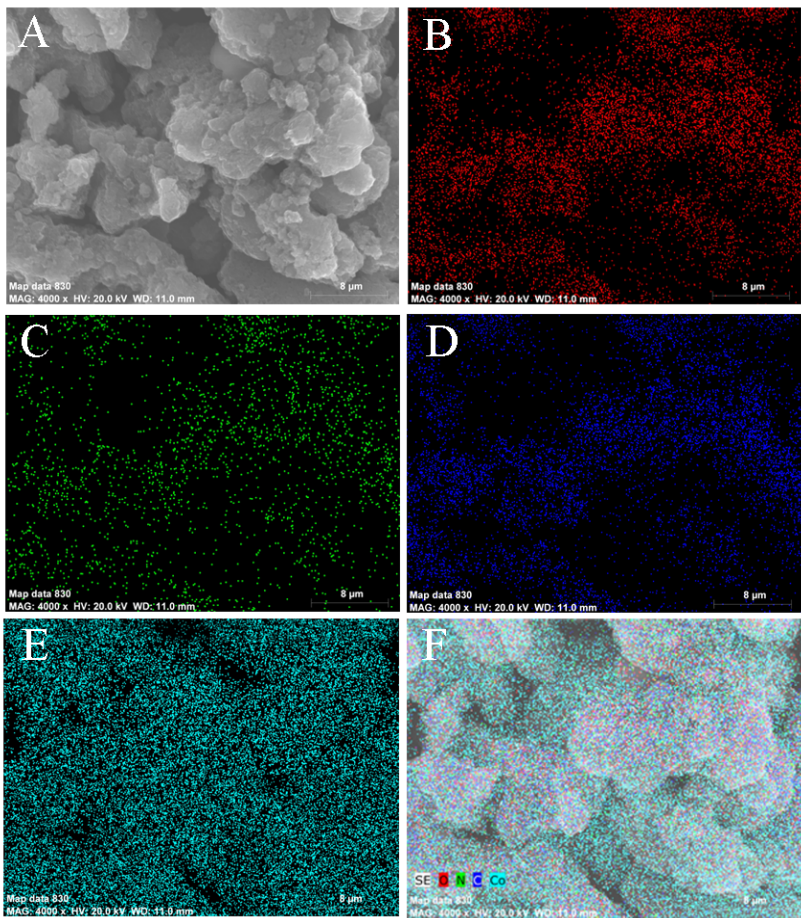


Figure S2. SEM (A) and EDS map scanning (B-F) for Co-N-C₉₀₀ (1). (B) O; (C) N; (D) C; (E) Co and (F) O, N, C and Co.

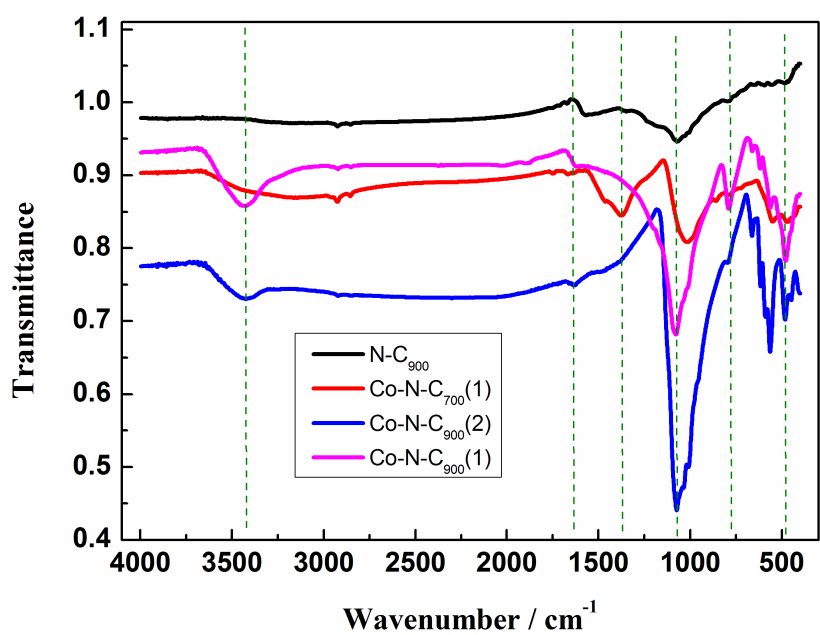


Figure S3. IR absorption spectrum of N-C₉₀₀, Co-N-C₇₀₀ (1), Co-N-C₉₀₀ (1), and Co-N-C₉₀₀ (2) powder in KBr pellet.

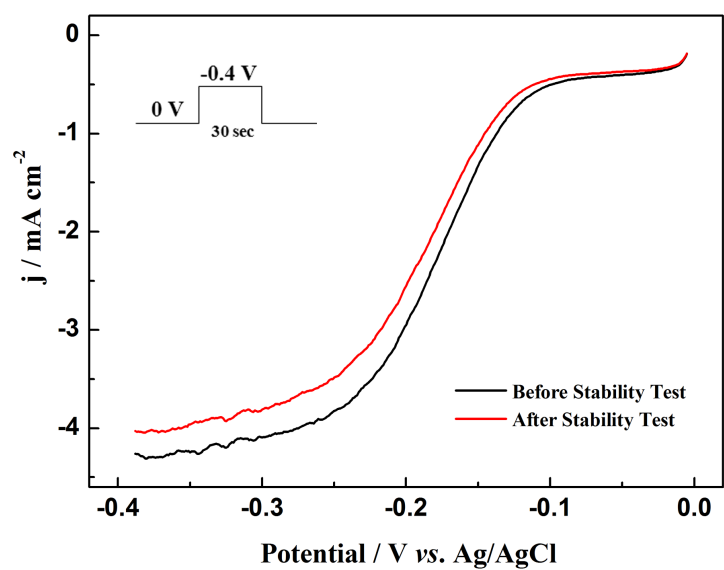


Figure S4. Sequential ORR polarization curve for Co-N-C₉₀₀ (1) in O₂-saturated 0.1 M KOH at a scan rate of 100 mV s⁻¹. The electrode rotation rate was 1600 rpm.

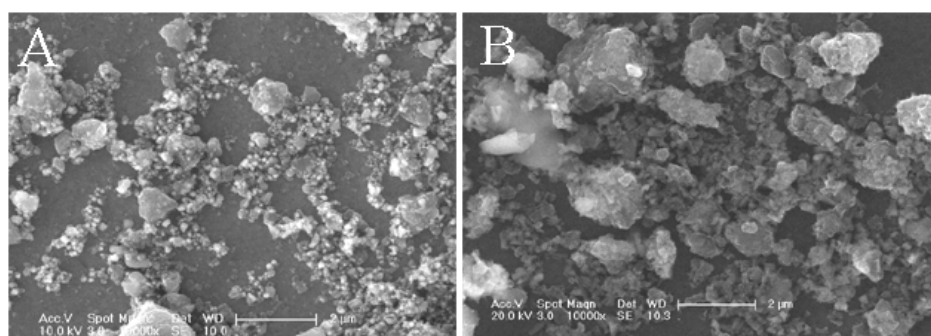


Figure S5. SEM image of Co-N-C₉₀₀ (1) (solvents containing water, isopropanol and Nafion) before (A) and after (B) stability test.

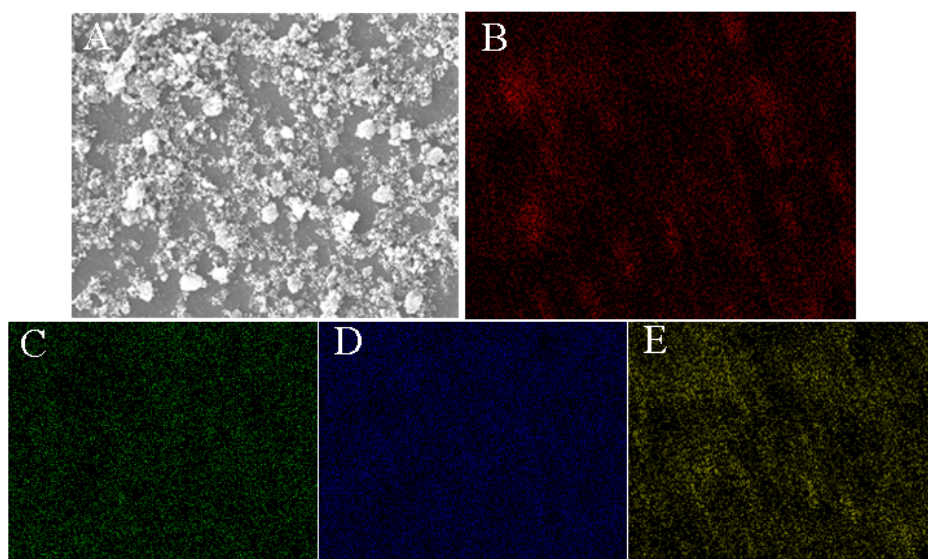


Figure S6. SEM (A) and EDS map scanning (B-E) for Co-N-C₉₀₀ (1) after stability test. (B) C; (C) N; (D) O and (E) Co.