Electronic Supplementary Material (ESI) for New Journal of Chemistry.

A Hybrid Composite Catalyst of Fe_3O_4 nanoparticles-based Carbon for Electrochemical Reduction of Oxygen

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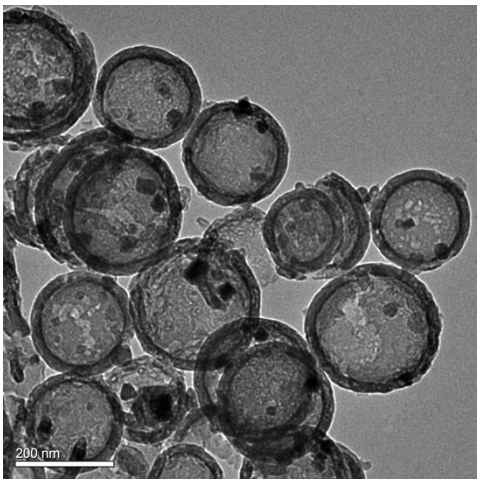

Figure S1. The TEM images of Fe_3O_4/HCS-900.

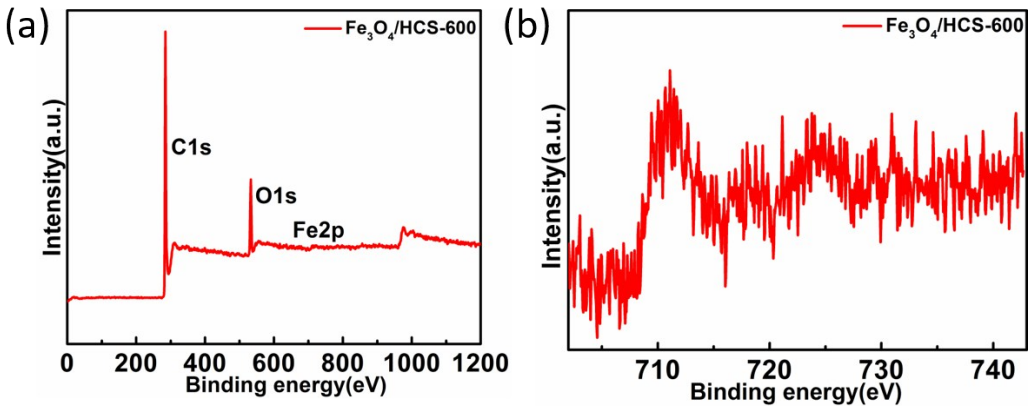

Figure S2. (a) XPS spectrum of Fe_3O_4/HCS-600. (b) High-resolution Fe2p spectrum of Fe_3O_4/HCS-600.

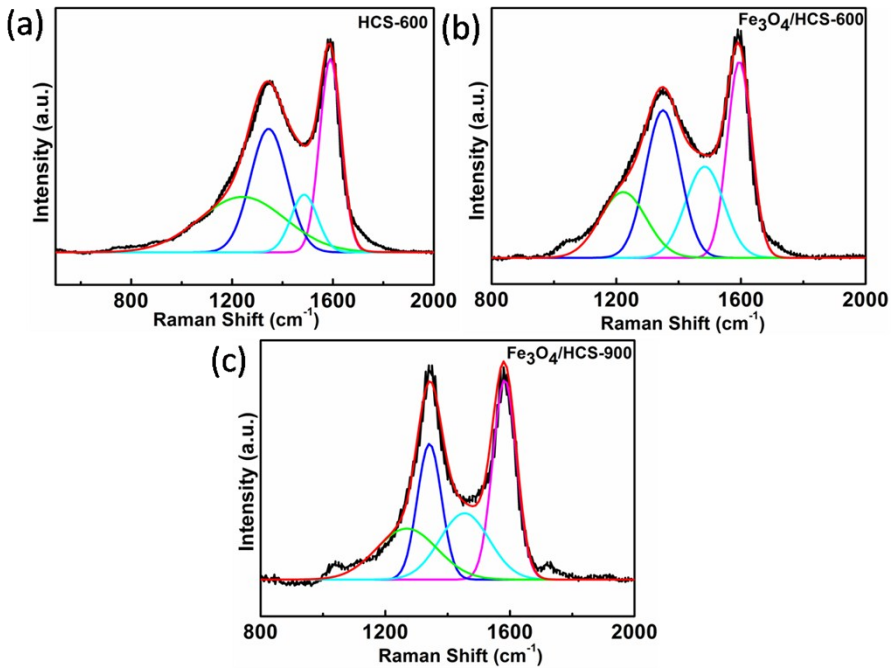

Figure S3. Fitted Raman spectra of (a) HCS-600, (b) Fe_3O_4/HCS-600, (c) Fe_3O_4/HCS-900.

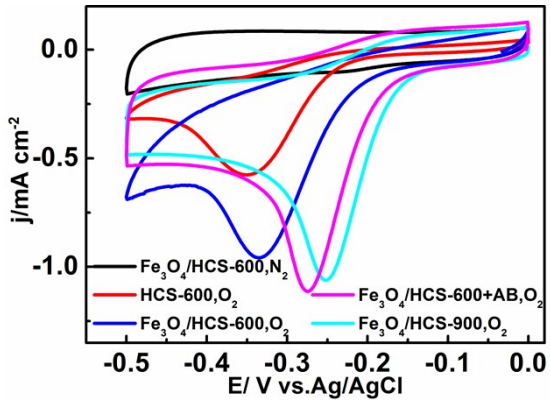

Figure S4. CVs of HCS-600, Fe_3O_4/HCS-600, Fe_3O_4/HCS-600+AB and Fe_3O_4/HCS-900 in 0.1M KOH solution (O_2-saturated or N_2-saturated).

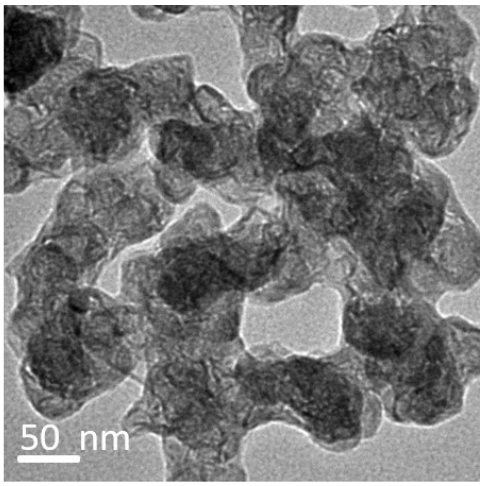

Figure S5. TEM image of AB. Scale bar: 50 nm.

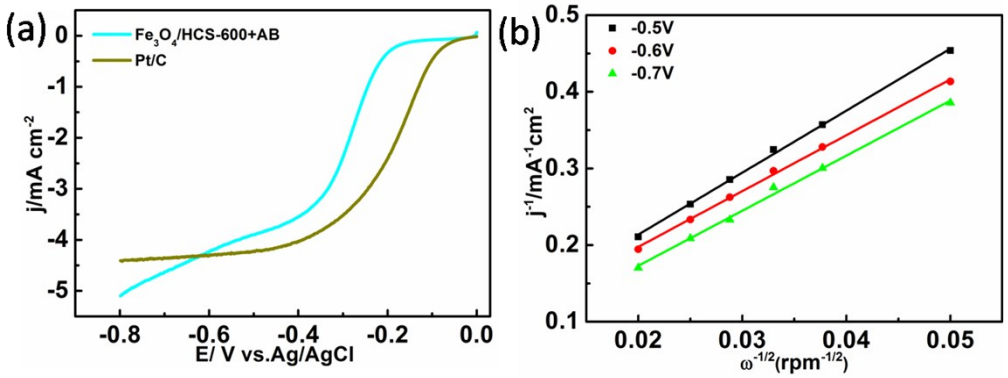

Figure S6. (a) RDE curves from Fe_3O_4/HCS-600+AB and Pt/C. (b) Koutecheky-Levich plots of the ORR for Fe_3O_4/HCS+AB. (O_2-saturated 0.1M KOH solution was employed in these measurements).

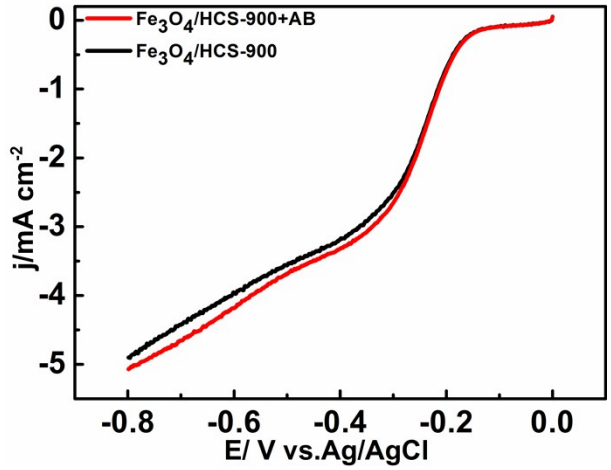

Figure S7. (a) RDE curves for Fe_3O_4/HCS-900 and Fe_3O_4/HCS-900+AB.

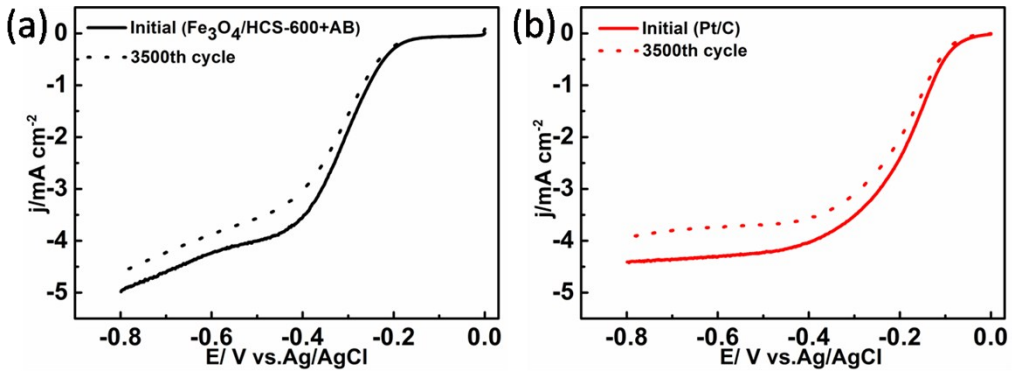

Figure S8. (a), (b) Polarization curves measured during cycling durability tests at 1600 rpm in O_2-saturated 0.1M KOH (cycling tests were carried out in a potential window of -0.1V to -0.5V vs. Ag/AgCl with 100 mV s^{-1}).