

Supporting Information

Synthesis of Boron Doped Graphene for Oxygen Reduction Reaction in Fuel Cells

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Materials

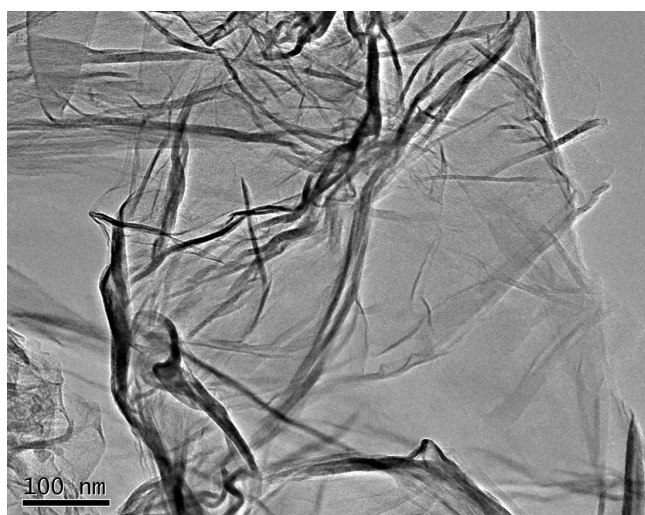


Fig. S1 TEM image of the pristine graphene prepared by thermal annealing of GO at 1200 °C under Ar atmosphere for 4 h.

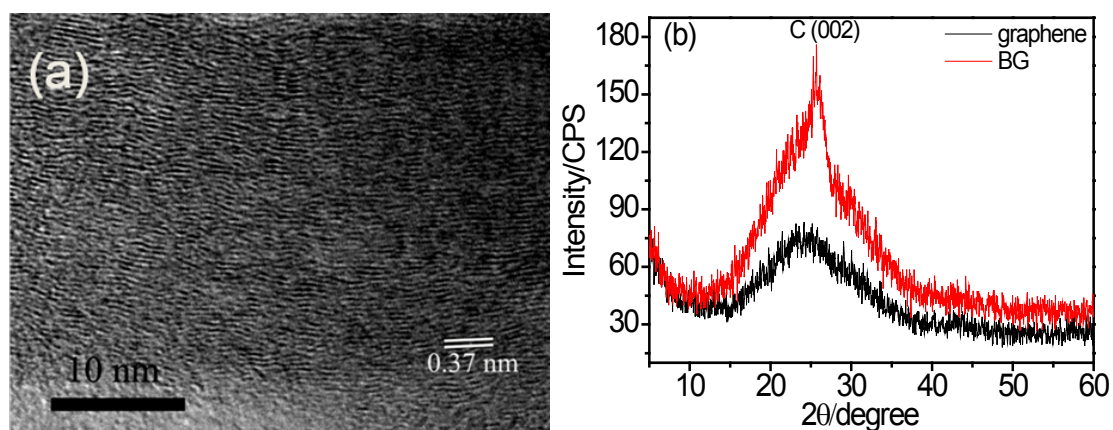


Fig. S2 (a) High resolution TEM image of BG. (b) PXRD patterns of BG and pristine graphene.

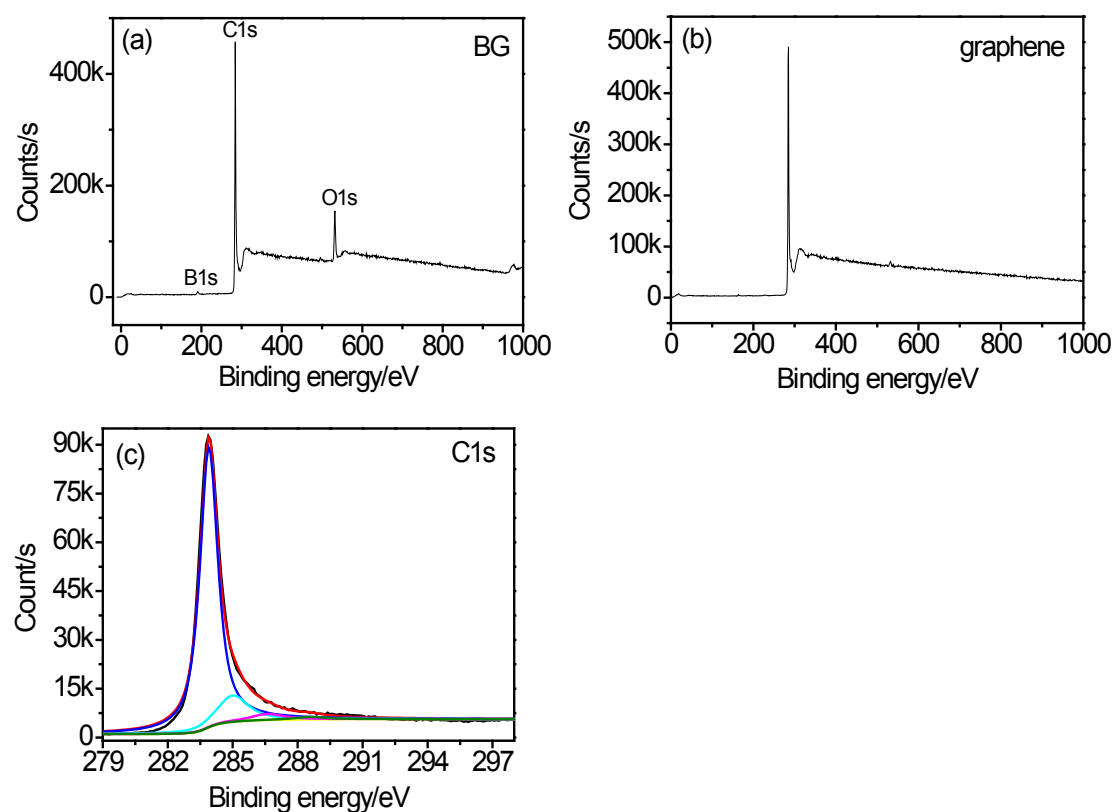


Fig. S3 XPS spectra: survey scan of BG (a) and pristine graphene (b), high resolution C1s peak for BG after curve fitting (c).

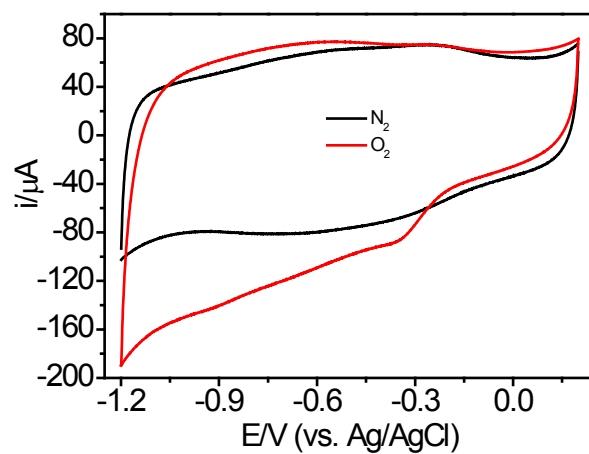


Fig. S4 CV curves of ORR on BG/GCE in N_2 - (black) and O_2 -saturated (red) 0.1 M KOH aqueous solution (scan rate: 100 mV/s).

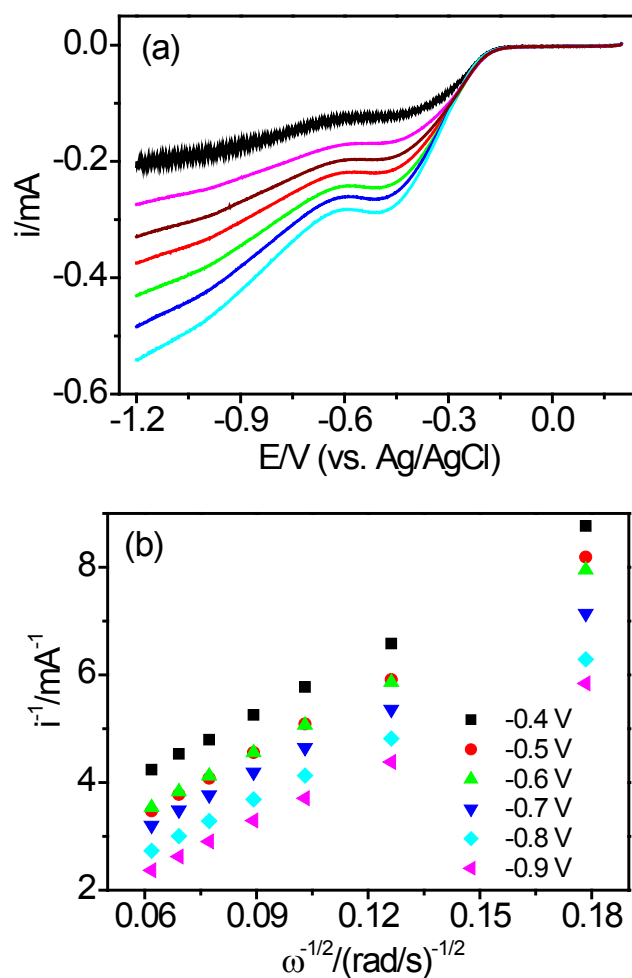


Fig. S5 (a) Linear sweep voltammetric curves of ORR on graphene/GCE at different rotation rate in an O₂-saturated 0.1 M KOH aqueous solution at a scan rate of 10 mV/s. The rotation rate from top to bottom: 300, 600, 900, 1200, 1600, 2000, and 2500 rpm. (b) K-L plots for the graphene/GCE at different electrode potentials.