

Supporting information of

Improvement of catalytic activity of platinum nanoparticles decorated carbon
graphene composite on oxygen electroreduction for fuel cells

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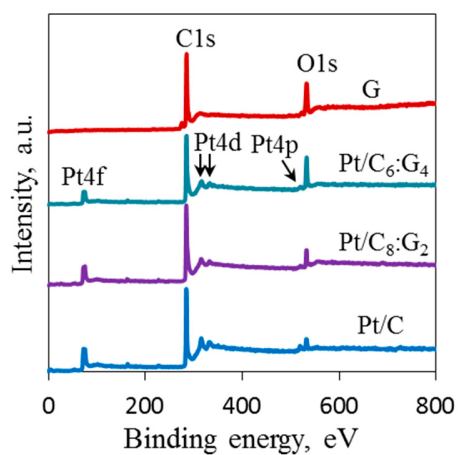


Figure S1: XPS survey spectra for Pt/C, Pt/C₈:G₂, Pt/C₆:G₄ and Pt/C₁:G₉ samples.

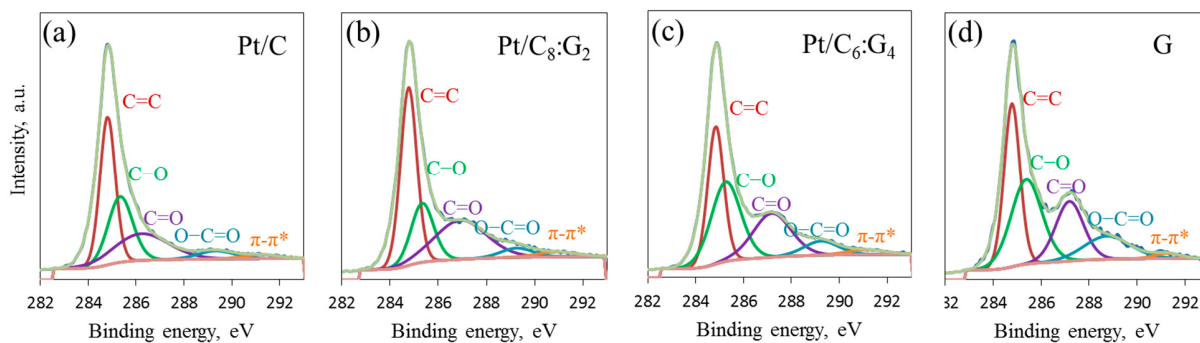


Figure S2: C 1s XPS spectra for Pt/C (a), Pt/C₈:G₂ (b), Pt/C₆:G₄ (c) and G-sheets (d) samples.

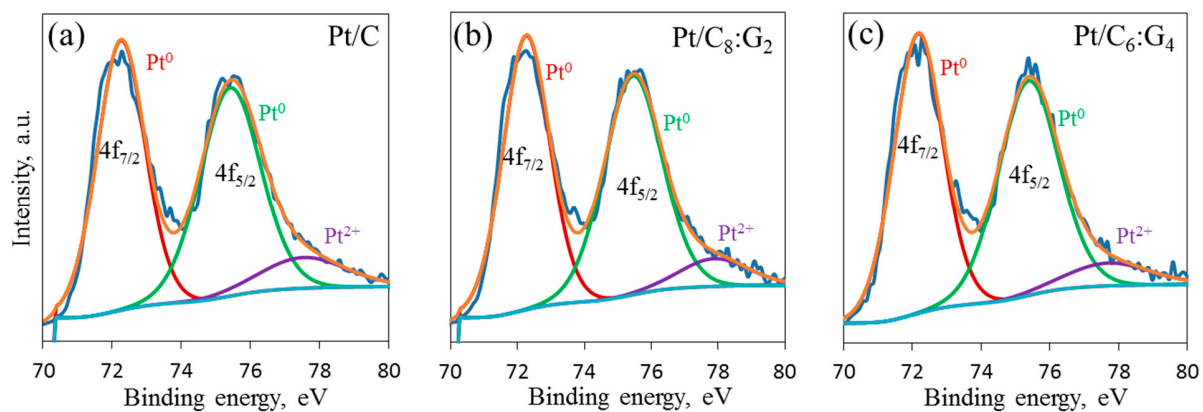


Figure S3: Pt 4f XPS spectra for Pt/C (a), Pt/C₈:G₂ (b) and Pt/C₆:G₄ (c) samples.

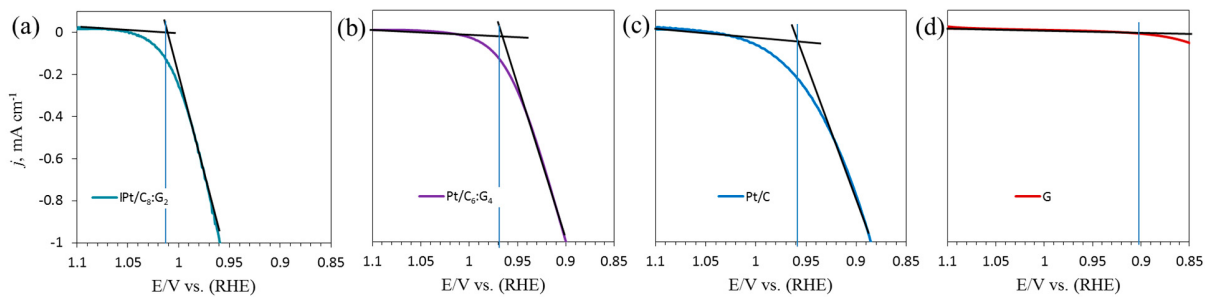


Figure S4: Curves showing the ORR onset potential for Pt/C₈:G₂ (a), Pt/C₆:G₄ (b), Pt/C (c) and G-sheets (d) electrodes.

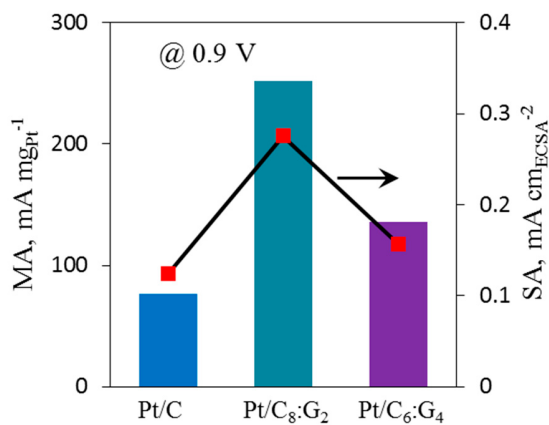


Figure S5: Comparison of MA and SA for Pt/C, Pt/C₈:G₂ and Pt/C₆:G₄ electrodes at 0.9 V.

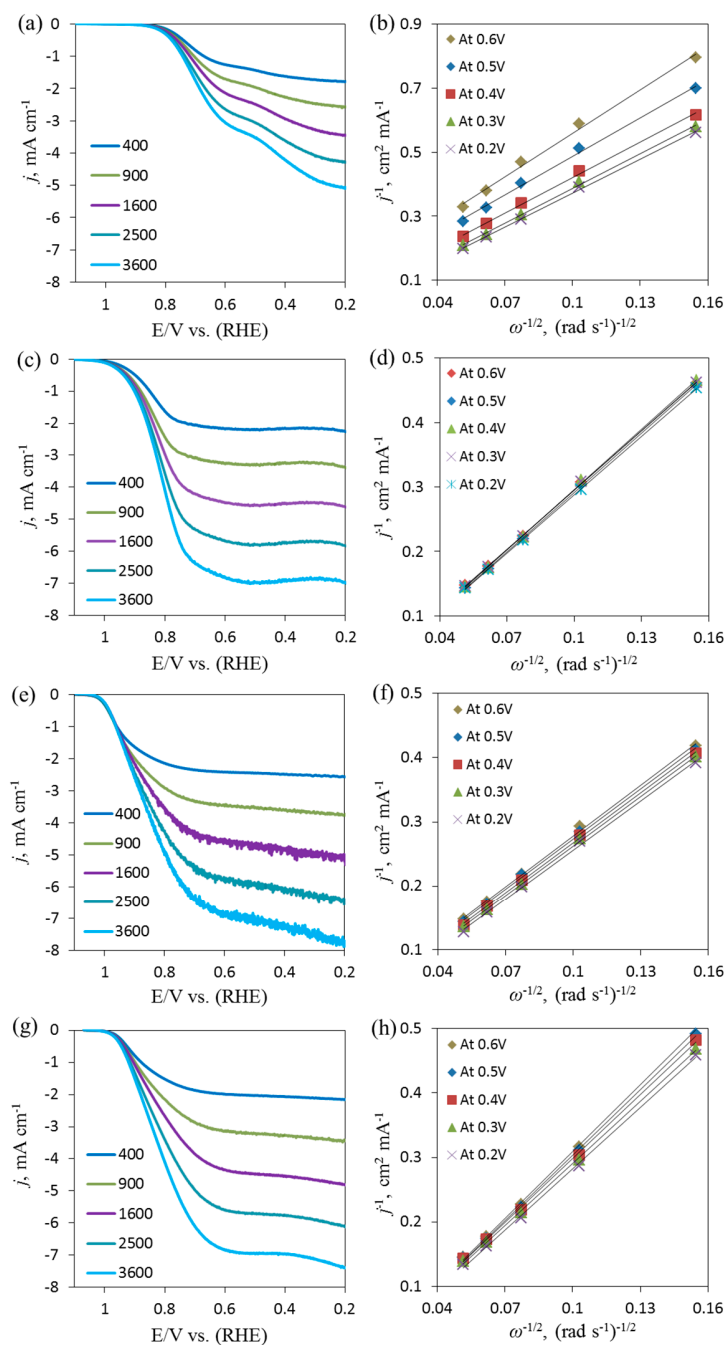


Figure S6: LSV curves for ORR at various rpm on G-sheets (a), Pt/C (c), Pt/C₈:G₂ (e) and Pt/C₆:G₄ (g) electrodes in an O₂-saturated 0.1 M HClO₄ electrolyte at a scan rate of 5 mV s⁻¹; the corresponding K-L plots for G-sheets (b), Pt/C (d), Pt/C₈:G₂ (f) and Pt/C₆:G₄ (h) at different electrode potentials.

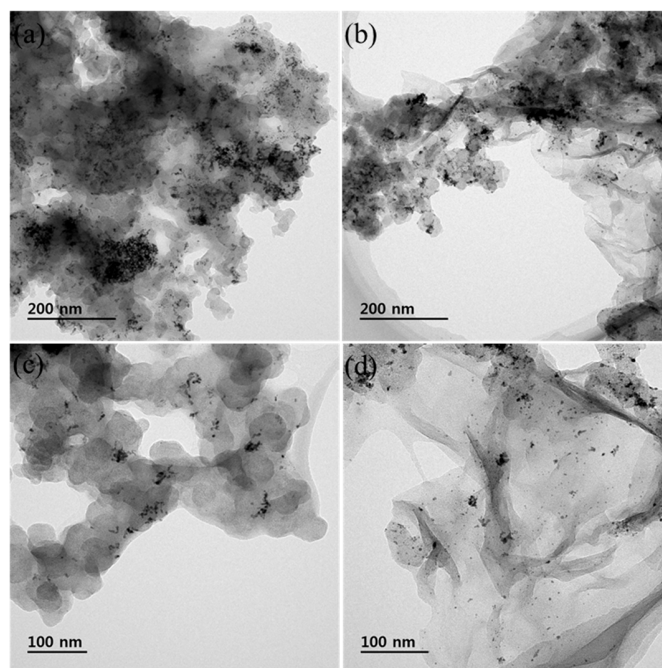


Figure S7: Comparison of TEM images of Pt/C (a, c), and Pt/C₈:G₂ (b, d) before (a, b) and after (c, d) long-term stability test.