Electronic Supplementary Information

Non-Precious Ir-V Bimetallic Nanoclusters Assembled on Reduced Graphene Oxide Nanosheets as Catalysts for the Oxygen Reduction Reaction

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**Fig. S1** TEM image of rGO-supported Ir₃V nanoclusters. (a) Ir₂₁V/rGO, (b) Ir₁₄V/rGO, (c) Ir₁₁V/rGO.
Fig. S2 UV-Vis absorption spectra of GO and the Ir,V/rGO hybrids.
**Fig. S3** Ir 4f and C 1s XPS spectra of Ir$_x$V nanoclusters supported on rGO. (a, b) Ir$_{21}$V/rGO; (c, d) Ir$_{14}$V/rGO; (e, f) Ir$_{11}$V/rGO.
**Fig. S4** CO stripping cyclic voltammograms of the as-synthesized Ir/rGO and Ir<sub>x</sub>V/rGO in 0.1 M HClO<sub>4</sub> at a potential scan rate of 50 mV/s.

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**Fig. S5** Steady-state ORR polarization curves of disk ($I_d$), and ring electrode ($I_r$) from Ir$_x$V/rGO in O$_2$-saturated 0.1 M KOH at different rotation rates. (a) Ir/rGO; (b) Ir$_{11}$V/rGO; (c) Ir$_{14}$V/rGO; and (d) Ir$_{21}$V/rGO.
Fig. S6 Rotating disk electrode linear sweep voltammograms at various rotation rates and the Koutecky-Levich plots obtained on Ir\textsubscript{x}V-rGO. (a, b) Ir/rGO; (c, d) Ir\textsubscript{11}V/rGO; (e, f) Ir\textsubscript{14}V/rGO; (g, h) Ir\textsubscript{21}V/rGO.