Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Design of highly porous Fe_3O_4@reduced graphene oxide via a facile PMAA-induced assembly

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Table S1. Comparison of surface area of Fe_3O_4@RGO composites.

Ratio of Fe_3O_4 (wt %)	Surface Area (m^2/g)	Ref.
84	114.5	12
70	221	28
75	262	37
60	52.84	38
46	110	39
60	338.8	This work

Supporting Information

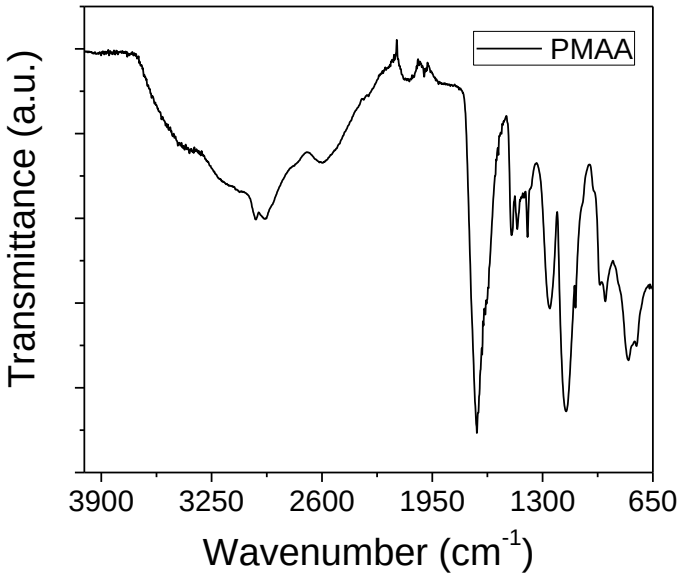

Fig. S1 FTIR spectrum of as-synthesized PMAA.

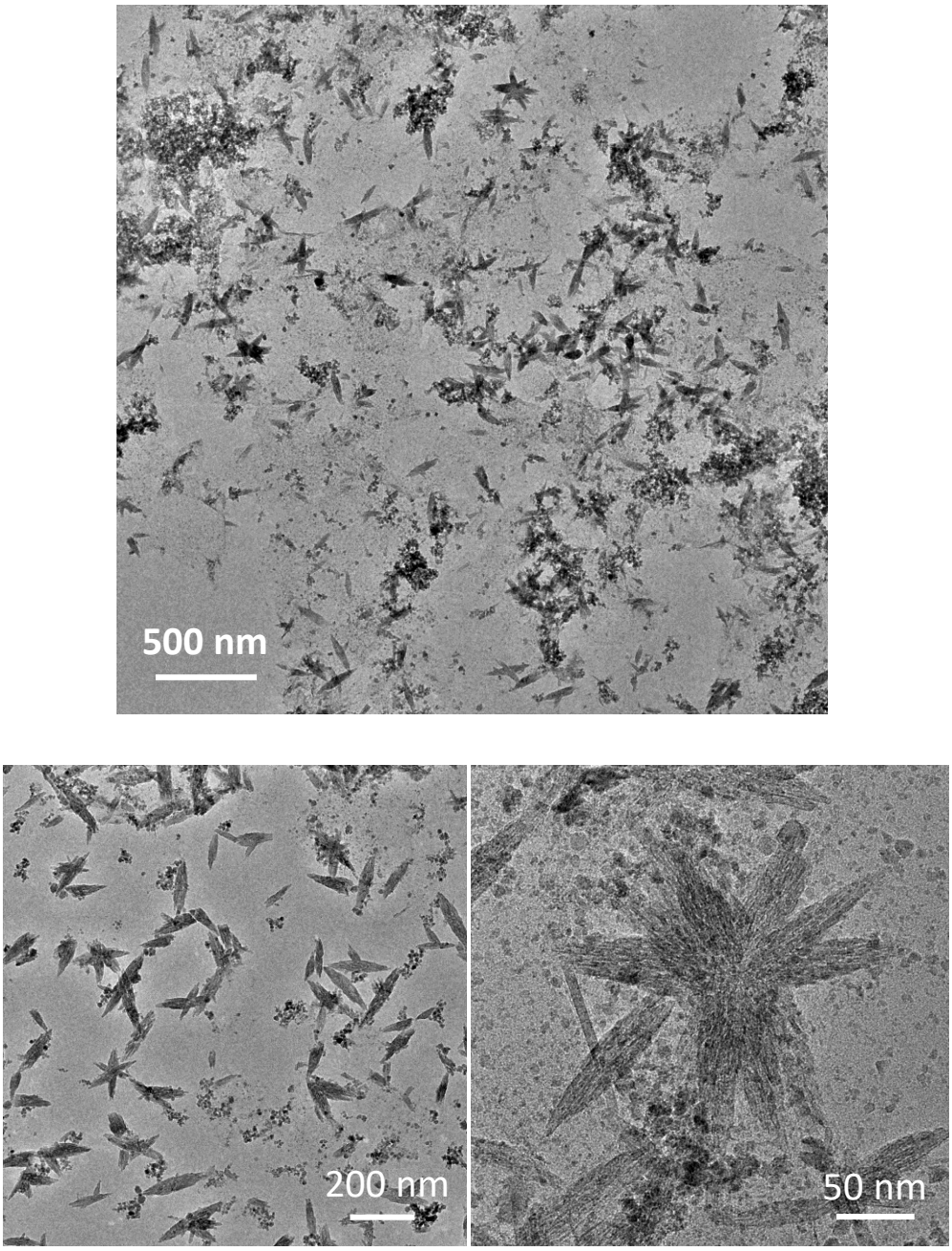

Fig. S2 TEM images of Fe_3O_4@RGO sheets dispersed at pH 9 with 4.8 mg/ml PMAA in water.

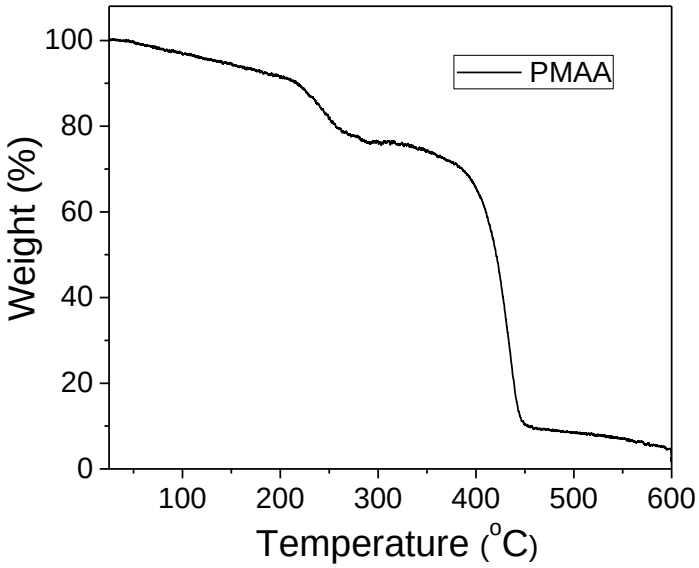

Fig. S3 TGA curve of PMAA under N_2 flow at a temperature ramp of 5 °C min^{-1} in air.

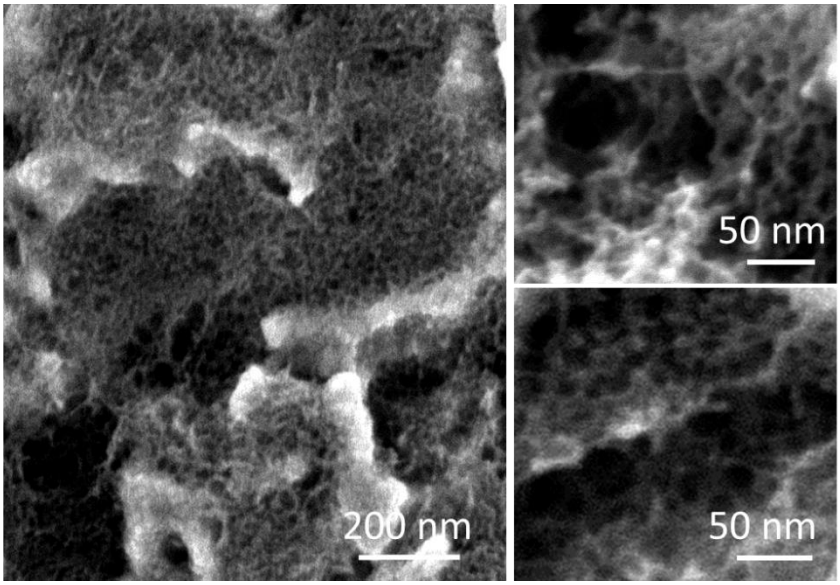

Fig. S4 SEM images of porous Fe_3O_4@RGO anodes.

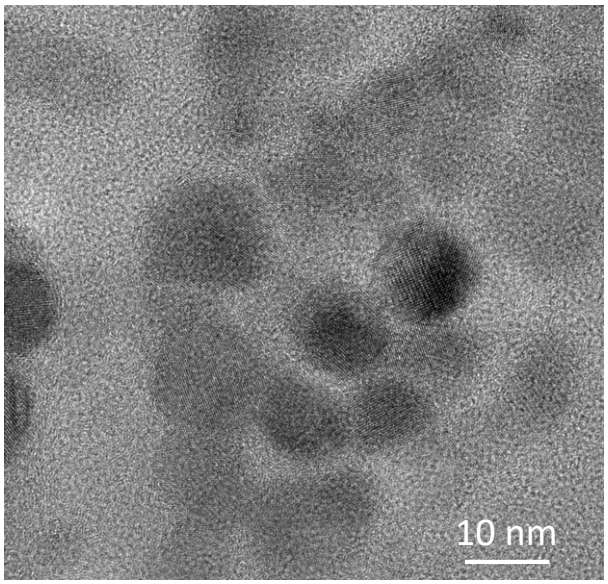

Fig. S5 TEM image of Fe_3O_4@RGO nanosheets

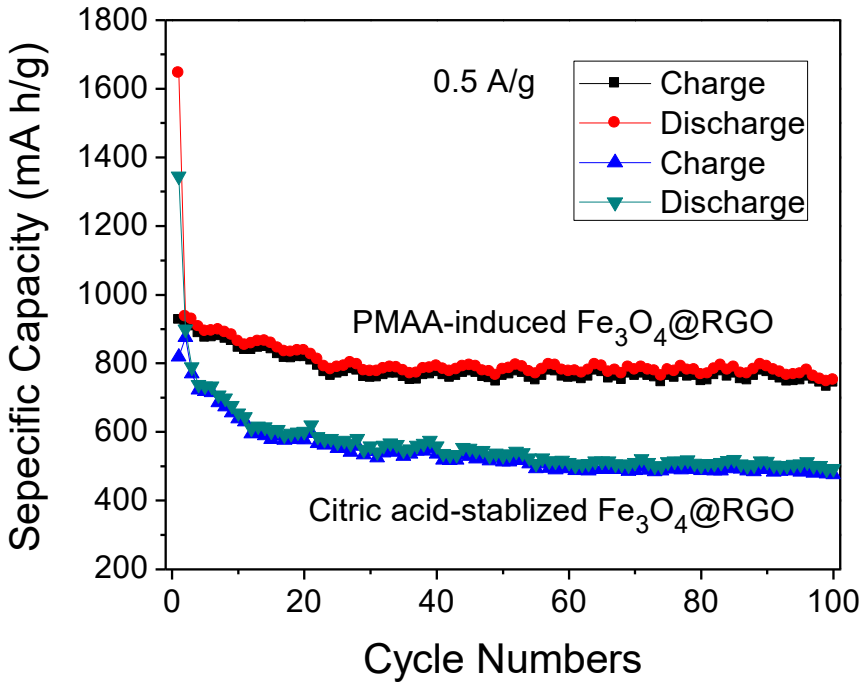

Fig. S6 Cycling performance of a PMAA-induced Fe_3O_4/RGO anode and a citric acid-stabilized Fe_3O_4@RGO anode at a current density of 0.5 A/g in the potential window of 3.0–0.002 V (*vs.* Li/Li^+).