Supporting information

Synthesis of graphene/α-Fe$_2$O$_3$ composites with excellent electromagnetic wave absorption properties

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Fig. S1. A HRTEM image of Fe$_2$O$_3$ nanoparticle in the composite
Figure S2 TEM images of Fe$_2$O$_3$ formed with absence of GO. (a) A low resolution image. (b) A high resolution image.
Fig. S3. TG curves of rGO/Fe$_2$O$_3$ composites with different amounts of Fe$_2$O$_3$ nanoparticles.
Fig. S4. The reflection loss of rGO/Fe$_2$O$_3$ composites with different amounts of Fe$_2$O$_3$ nanoparticles (a) 78%, (b) 61% measured with different thickness from 1 to 5mm.
Fig. S5. Frequency dependence of real part (a) imaginary part (b) and dielectric loss tangent (c) for three kinds of rGO/Fe$_2$O$_3$ composites.