Electronic Supplementary Information

Earth-abundant and Nano-micro composite catalysts of Fe₃O₄@Reduced Graphene Oxide for Green and Economical Mesoscopic Photovoltaics with High Efficiencies up to 9%

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Figure S1. SEM images of the as-prepared pure Fe₃O₄ agglomerated nanoparticles



Figure S2. SEM images of the as-prepared pure RGO



Figure S3. J-V curves of DSCs based on different thickness Fe₃O₄@RGO CEs under

AM1.5, 100 mW cm⁻² simulated illumination

Table S1. Photovoltaic parameters of the DSCs based on different thickness $Fe_3O_4@RGO$ CEs under AM1.5, 100 mW cm⁻² simulated illumination

Thickness(µm)	V _{oc} (V)	J _{sc} (mA/cm ²)	FF	PCE/%
4.8±0.5	0.78±0.02	10.71 ± 0.2	0.60±0.01	5.00±0.2
7.8±1	0.78±0.01	9.33±0.4	0.73 ± 0.02	5.33 ± 0.3
10.7±0.9	0.78±0.02	9.67±0.3	0.76±0.01	5.79±0.2
13.2 ± 0.5	0.75±0.03	13.08±0.5	0.69±0.01	6.77±0.5
16.4±1	0.79±0.02	11.66±0.1	0.76±0.01	7.02 ± 0.1
22.2±1.2	0.71±0.01	10.59±0.2	0.57±0.02	4.31±0.2