Electronic Supplementary Information (ESI)

One-pot photochemical synthesis of graphene composites uniformly deposited with silver nanoparticles and their high catalytic activity towards the reduction of 2-nitroaniline

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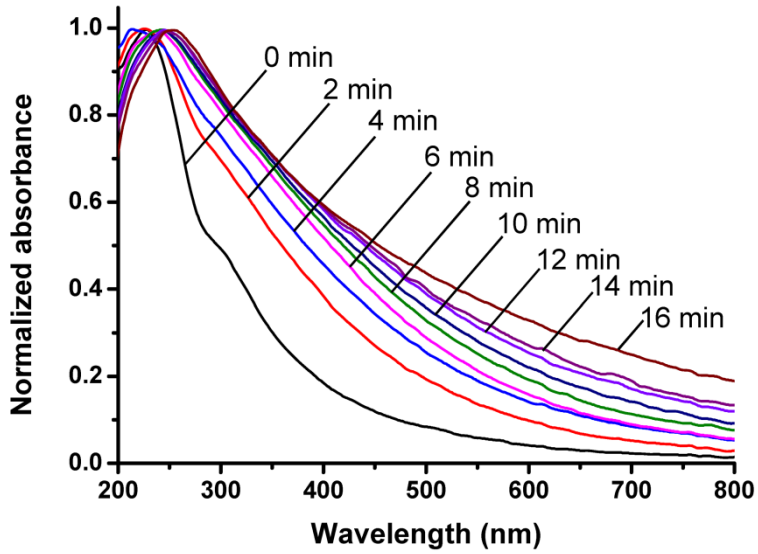

Fig. S1 Progress of pohotochemical reaction of GO in aqueous solution monitored by UV-vis absorption spectra recorded from 0.1 mg/mL GO solution set at 15 cm below a 450 W medium-pressure Hg lamp at the irradiation time as shown in the figure.

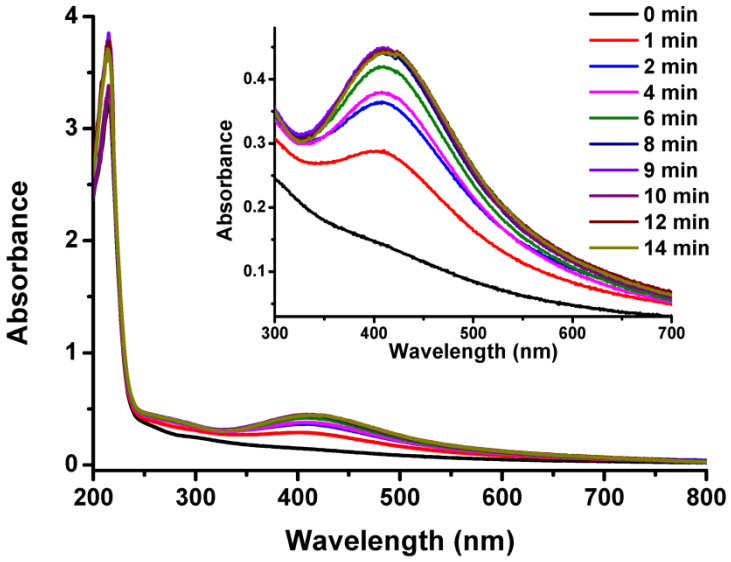

Fig. S2 Development of UV-vis absorption spectra measured from a reaction solution with a $Ag(NH_3)_2OH$-to-GO weight ratio of 2 at the indicated time. The insert shows the amplified spectra from 300 nm to 700 nm. Other conditions were the same as those described in Fig. S1.

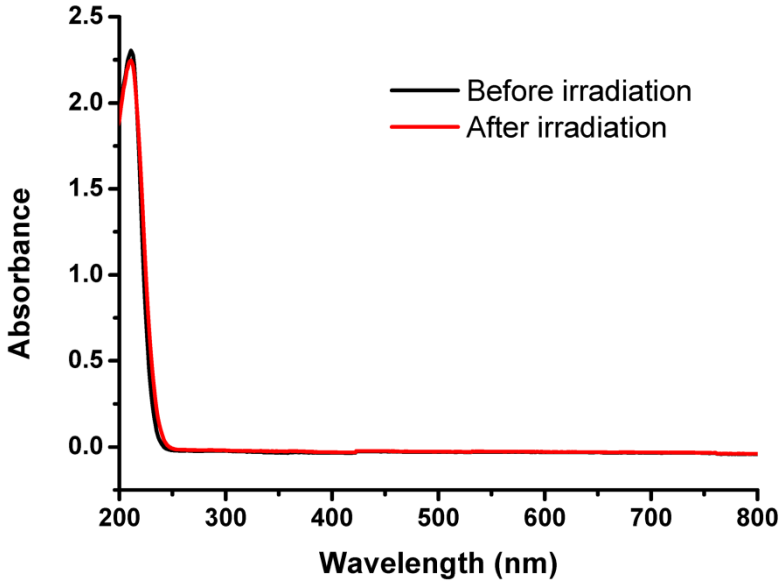

Fig. S3 UV-vis absorption spectra measured before and after 14 min optical irradiation of 1 mM $Ag(NH_3)_2OH$ aqueous solution. Other conditions were the same as those described in Fig. S1.

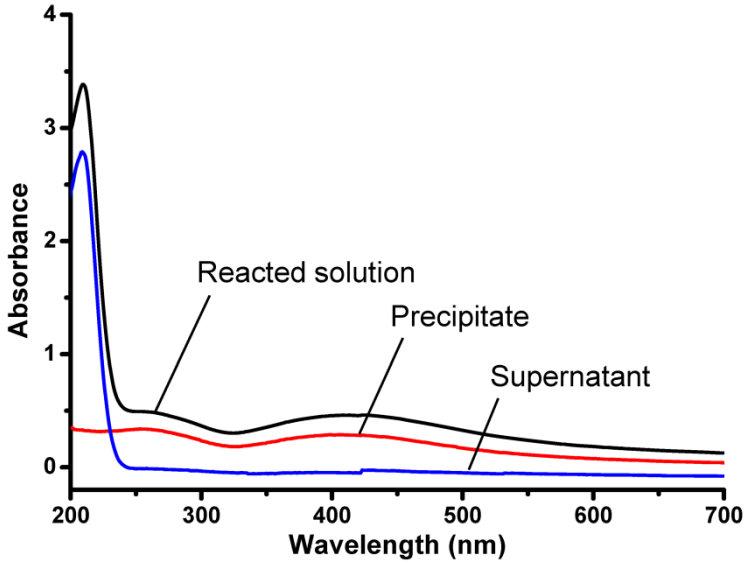

Fig. S4 UV-vis absorption spectra of a reacted solution, its centrifugal supernatant and re-dispersed solution of its precipitate. Other conditions were the same as those described in Fig. S1 and S2.

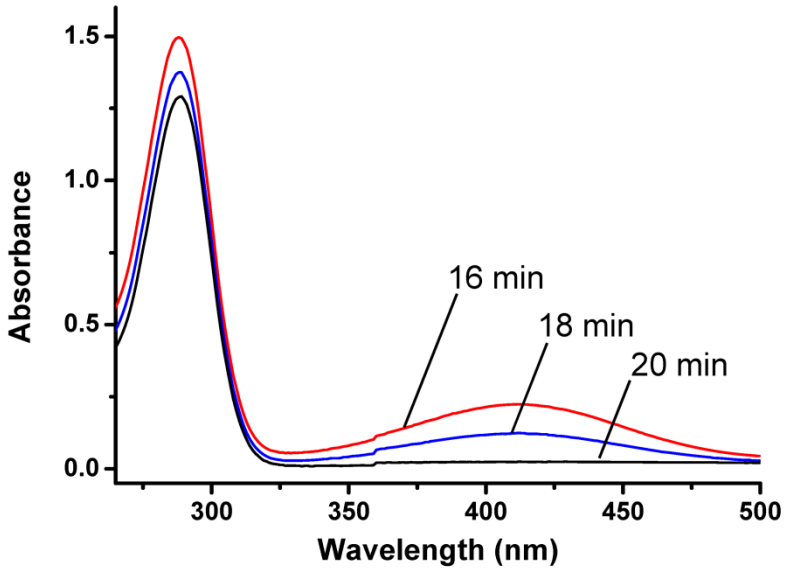

Fig. S5 UV-vis absorption spectra measured from the centrifugal supernatants of the solution (2 mL) containing 0.5 mM 2-nitroaniline and 10 mM $NaBH_4$ after the addition of 50 μL AgNPs-rGO suspension for the indicated time. The AgNPs-rGO was prepared at a $Ag(NH_3)_2OH$-to-GO weight ratio of 2.