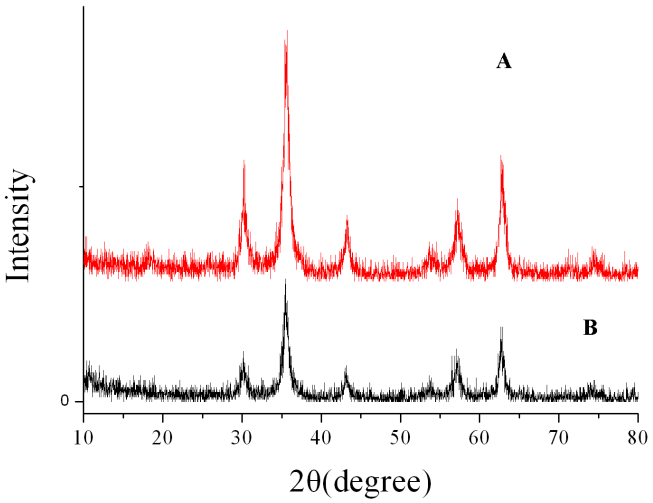


Figure S1. XRD patterns of the pure Fe_3O_4 (A) and MCGN(B).

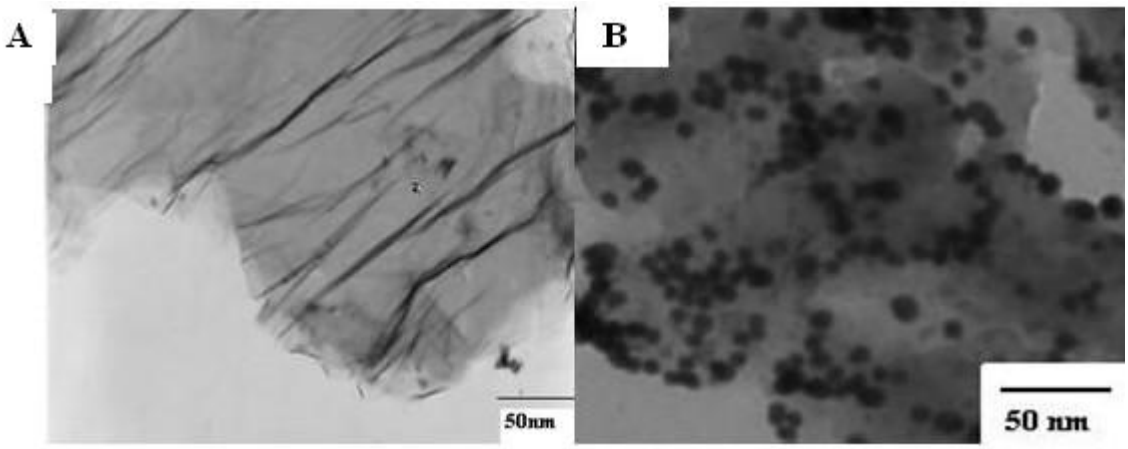
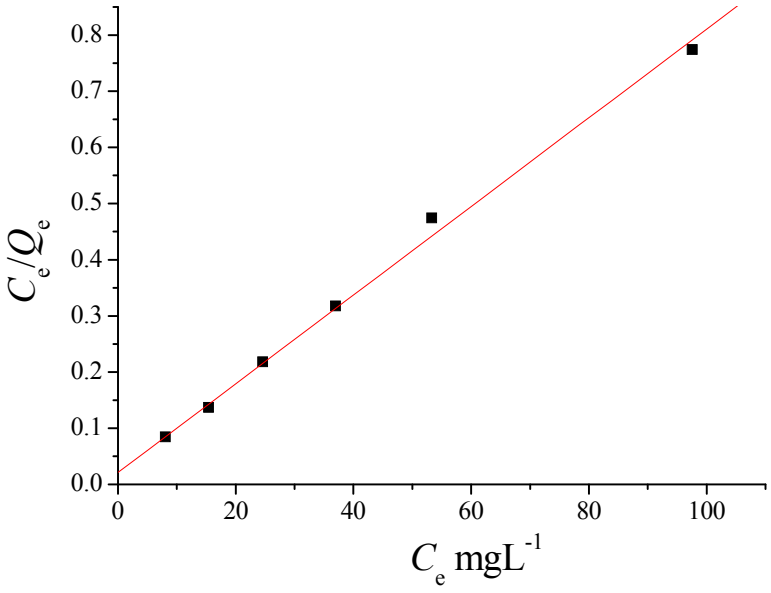
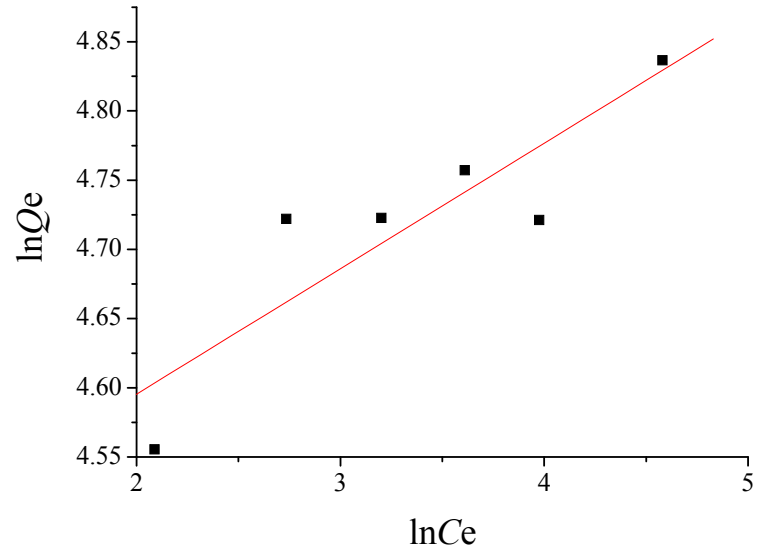


Figure S2. TEM images of GO (A) and MCGN(B).

We found that the stirring speed of 1000 r/min and stirring time of 36 h could not cause the partial breakage of the MCGN during the heavy metal ions removal experiments. Moreover, individual MCGN could suffer from the mechanical manipulation with strength as high as 1.5 N without partial breakage. These results suggest the mechanical strength of MCGN is excellent, benefiting from GO.



a



b

Figure S3. Langmuir plot (a) and Freundlich plot (b) for the adsorption of Cr(VI) ions by MCGN. The concentration of MCGN was 1.0 g.L^{-1}. The initial Cr(VI) ions concentrations ranged from 10.0 to 100.0 mg.L^{-1}.

We prepared cyclodextrin/ graphene oxide under identical conditions without adding Fe_3O_4. We used cyclodextrin/ graphene oxide(CG), cyclodextrin(CD), graphene oxide(GO) as the adsorbents to removal Cr(VI) ions and found that the adsorption

capacity of them were lower than MCGN, and these adsorbents could adsorb Cr(VI) ions more slowly. (Figure S4). In addtion, it was difficult to collect these adsorbents from the solution. These experiments reveal the magnetic cyclodextrin of MCGN would affect the overall adsorption capacity and adsorption speed.

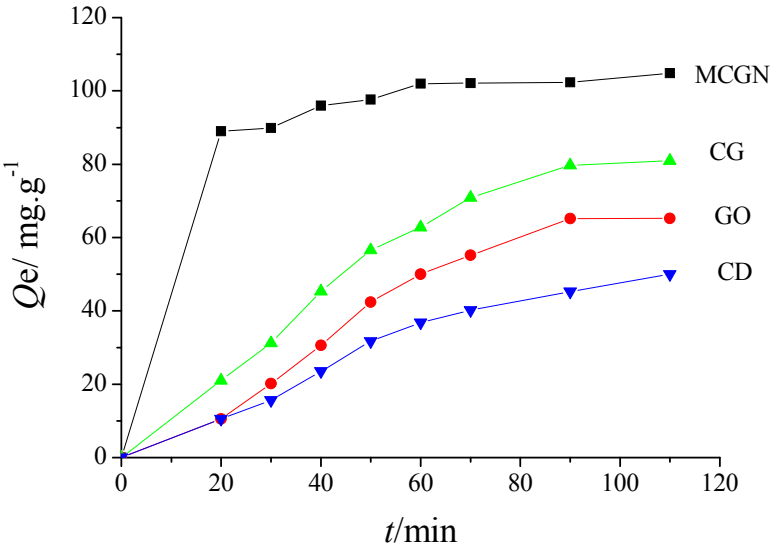


Figure S4. Time profile of Cr(VI) ions removal with cyclodextrin/ graphene oxide(CG), cyclodextrin(CD), graphene oxide(GO). The concentration of adsorbent was 1.0 $g \cdot L^{-1}$. The initial Cr(VI) ions concentration was 100.0 $mg \cdot L^{-1}$. The contact time was 2 h.