

***Electronic Supporting Information (ESI) for***

Sodium alginate-based magnetic carbonaceous biosorbents for  
highly efficient Cr(VI) removal from water

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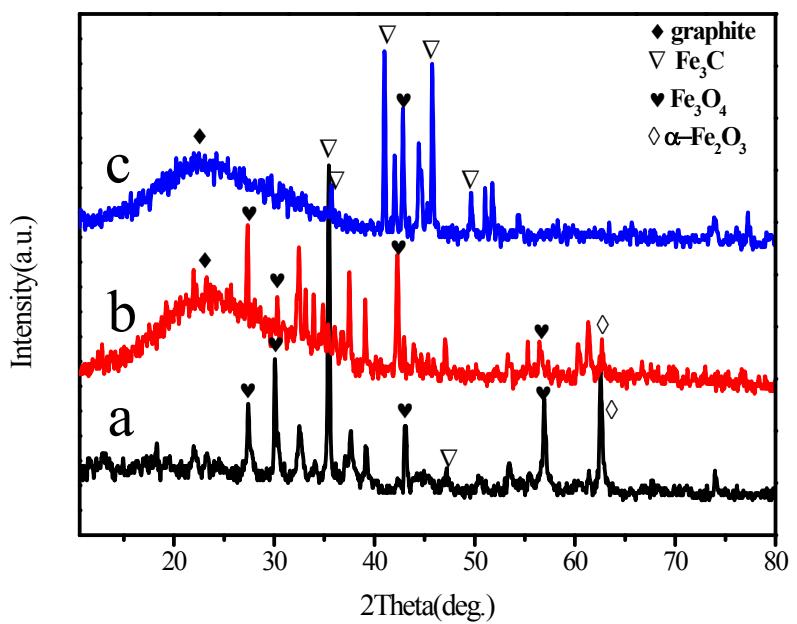


Fig. S1. XRD of (a) Fe-SA-400, (b) Fe-SA-600, (c) Fe-SA-800.

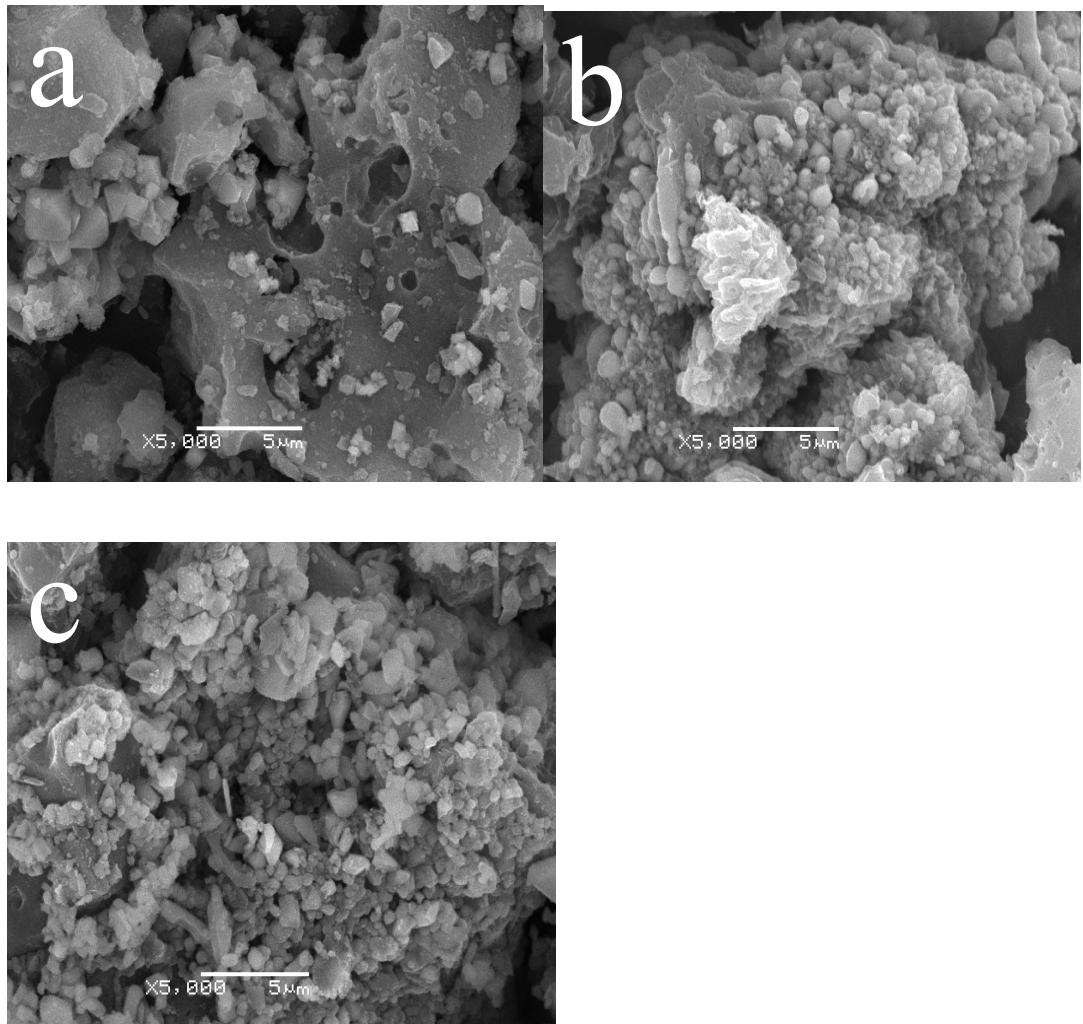


Fig.S2 SEM images of (a) Fe-SA-400, (b) Fe-SA-600, (c) Fe-SA-800.

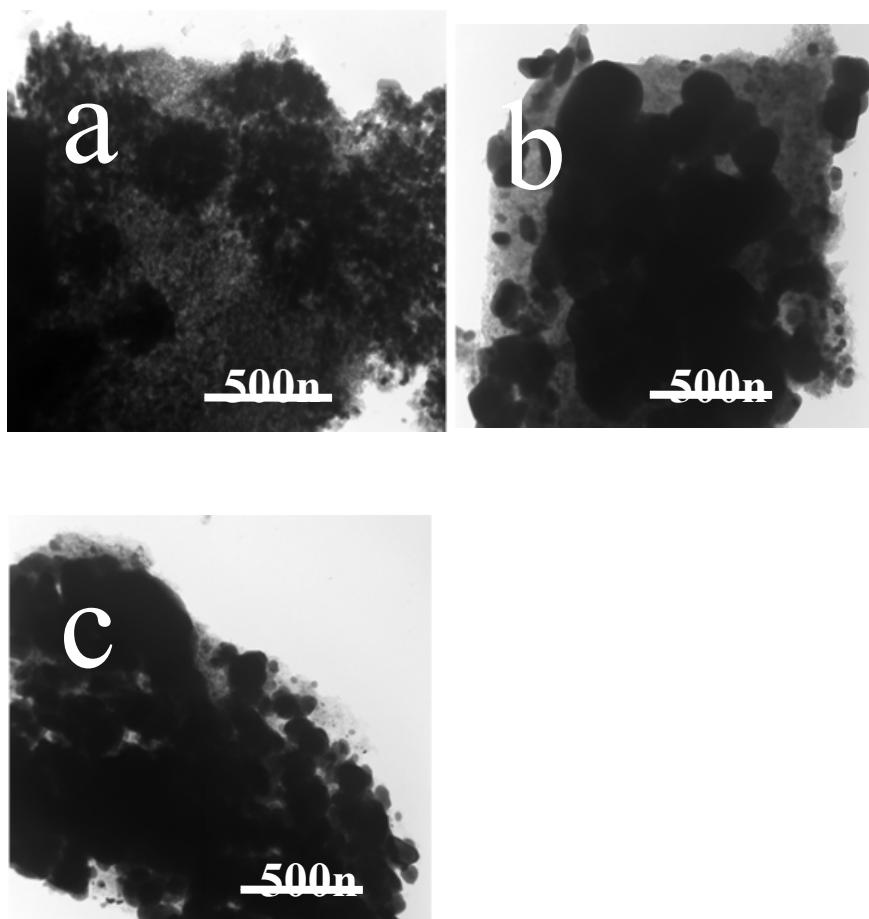


Fig.S3 TEM images of (a) Fe-SA-400, (b) 600 and (c) 800.

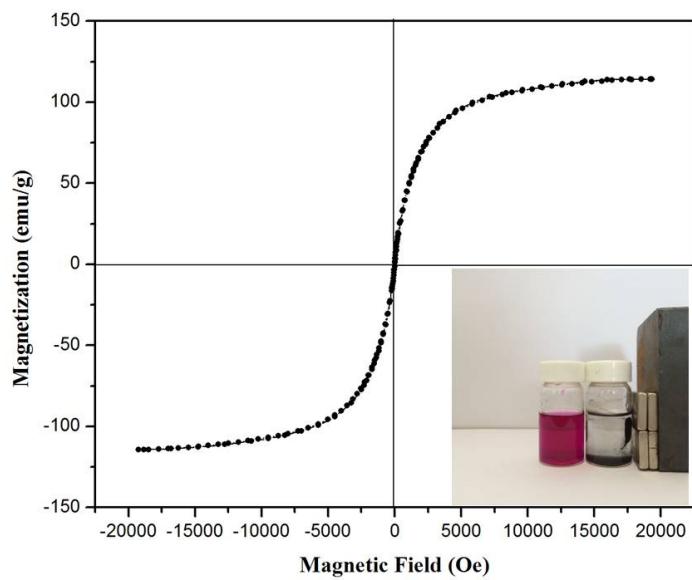


Fig.S4 Magnetization curve of Fe-SA-800 and the inset is comparation of before and after adsorption.

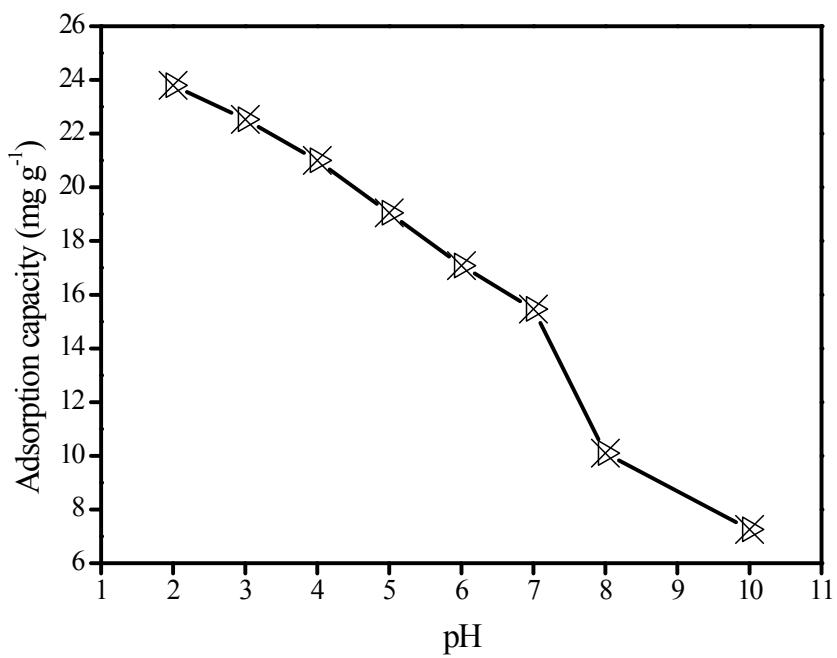


Fig. S5 Effect of pH on the adsorption of Cr(VI) by Fe-SA-800 (adsorbent dose, 0.02 g; volume, 20 mL; initial Cr (VI) concentration, 25 mg L<sup>-1</sup>; contact time, 1 h and temperature, 293 ± 2K).

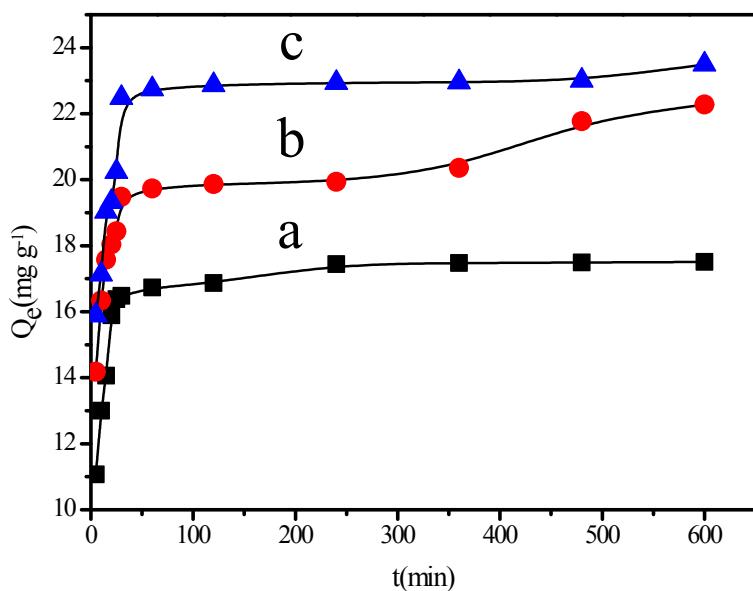


Fig. S6. Effect of contact time on the adsorption of Cr(VI) by (a) Fe-SA-400, (b) Fe-SA-600, and (c) Fe-SA-800 (adsorbent dose, 0.02 g; initial Cr(VI) concentration, 25 mg L<sup>-1</sup>; volume, 20 mL; pH, 2.0 and temperature, 293± 2K ).

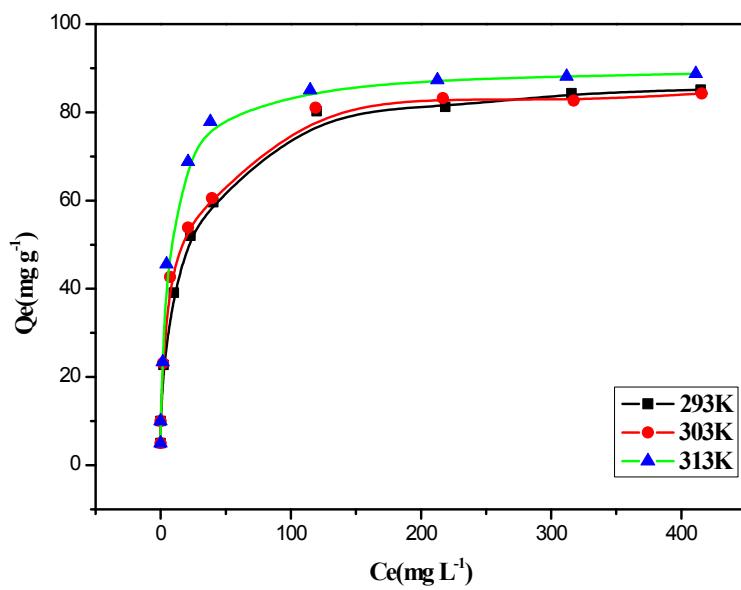


Fig.S7 Adsorption isotherms of Cr(VI) onto Fe-SA-800 at varied temperatures of 293K, 303K and 313K (adsorbent dose, 0.02 g; volume, 20 mL; pH, 2.0 and contact time, 24 h).

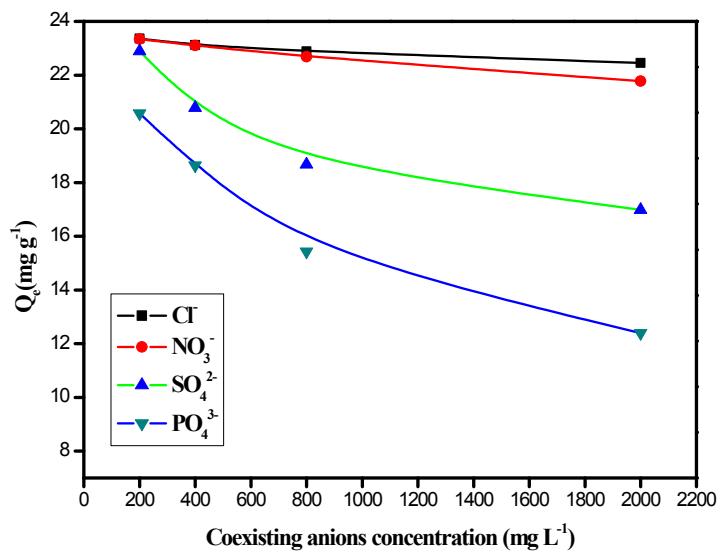


Fig.S8 The effect of coexisting anions strength on the adsorption Cr(VI) (adsorbent dose, 0.02 g; volume, 20 mL; initial Cr (VI) concentration, 25 mg L<sup>-1</sup>; contact time, 1h and temperature, 293 ± 2K).

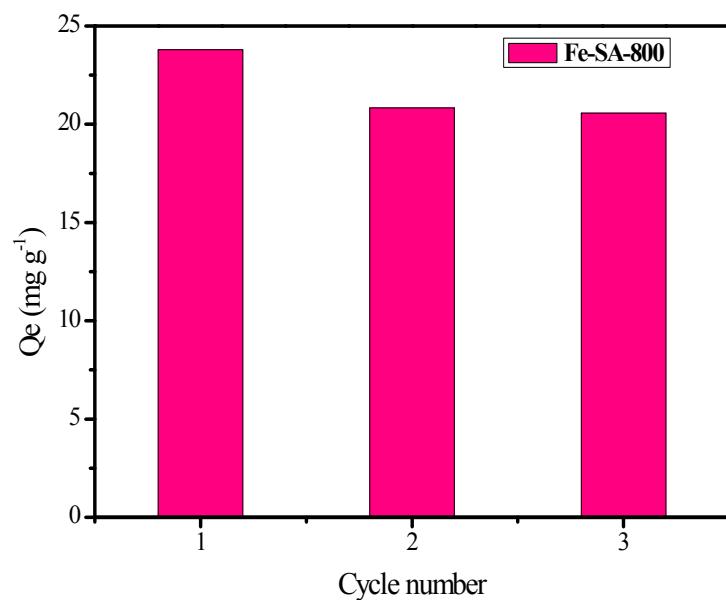


Fig. S9 The reusability of Fe-SA-800 adsorbed Cr (VI) (Cr (VI) concentration, 25 mg L<sup>-1</sup>; pH, 2.0; contact time, 1 h and temperature, 293± 2K).

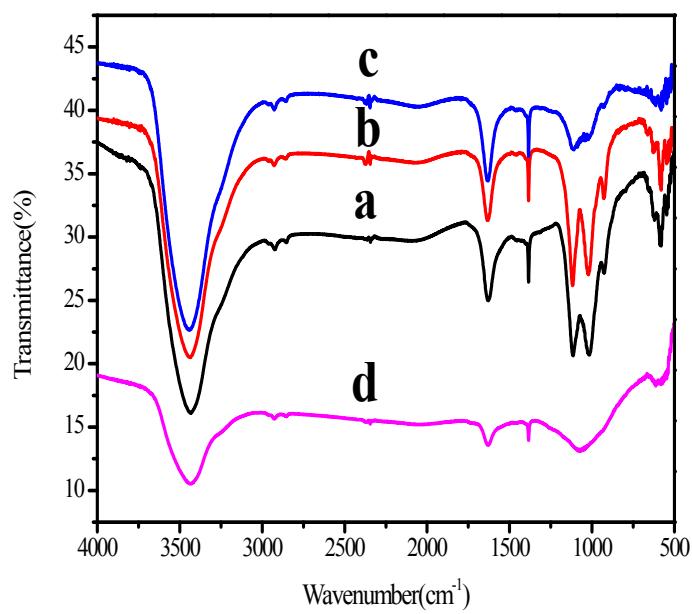


Fig. S10 FTIR spectra of (a) Fe-SA-400, (b) Fe-SA-600, (c) Fe-SA-800, and (d) Fe-SA-800- Cr(VI).