**Cover Page for Supplementary Information**

**Manuscript title: Novel magnetic biosorbent prepared by oak shell waste material as an efficient adsorbent for consecutive removal of Pb2+, Ag+, Ba2+, Sr2+ and chromate from aqueous solutions**

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**Figure S1.** EDAX analysis of AC-Fe3O4-DTZ sample.

**Figure S2.** Adsorption capacity of Pb-ads-4(a), Ag-ads-4(b),Ba-ads-4(c), Sr-ads-4(d) adsorbents.

**Figure S3.** Pseudo-first-order kinetics equation.

**Figure S4.** Pseudo-second-order kinetics equation.

**Figure S5.** Equilibrium distribution of Cr (VI) species in aqueous medium.

**Figure S6.** Langmuir, Freundlich, Redlich-Peterson,Sips isotherm of Pb-ads-4 (a), Ag-ads-4 (b),Ba-ads-4 (c), Sr-ads-4 (d) adsorbents.

**Figure S7.** Van‘t Hoff plot of ln Kd versus 1/T.



**Fig. S1.** EDAX analysis of AC-Fe3O4-DTZ sample.



**Fig. S2.**Adsorption capacity of Pb-ads-4(a) ,Ag-ads-4(b),Ba-ads-4(c), Sr-ads-4(d) adsorbents.



**Fig. S3.** Pseudo-first-order kinetics equation.



**Fig. S4.** Pseudo-second-order kinetics equation.



**Fig. S5.** Equilibrium distribution of Cr(VI) species in aqueous medium.



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