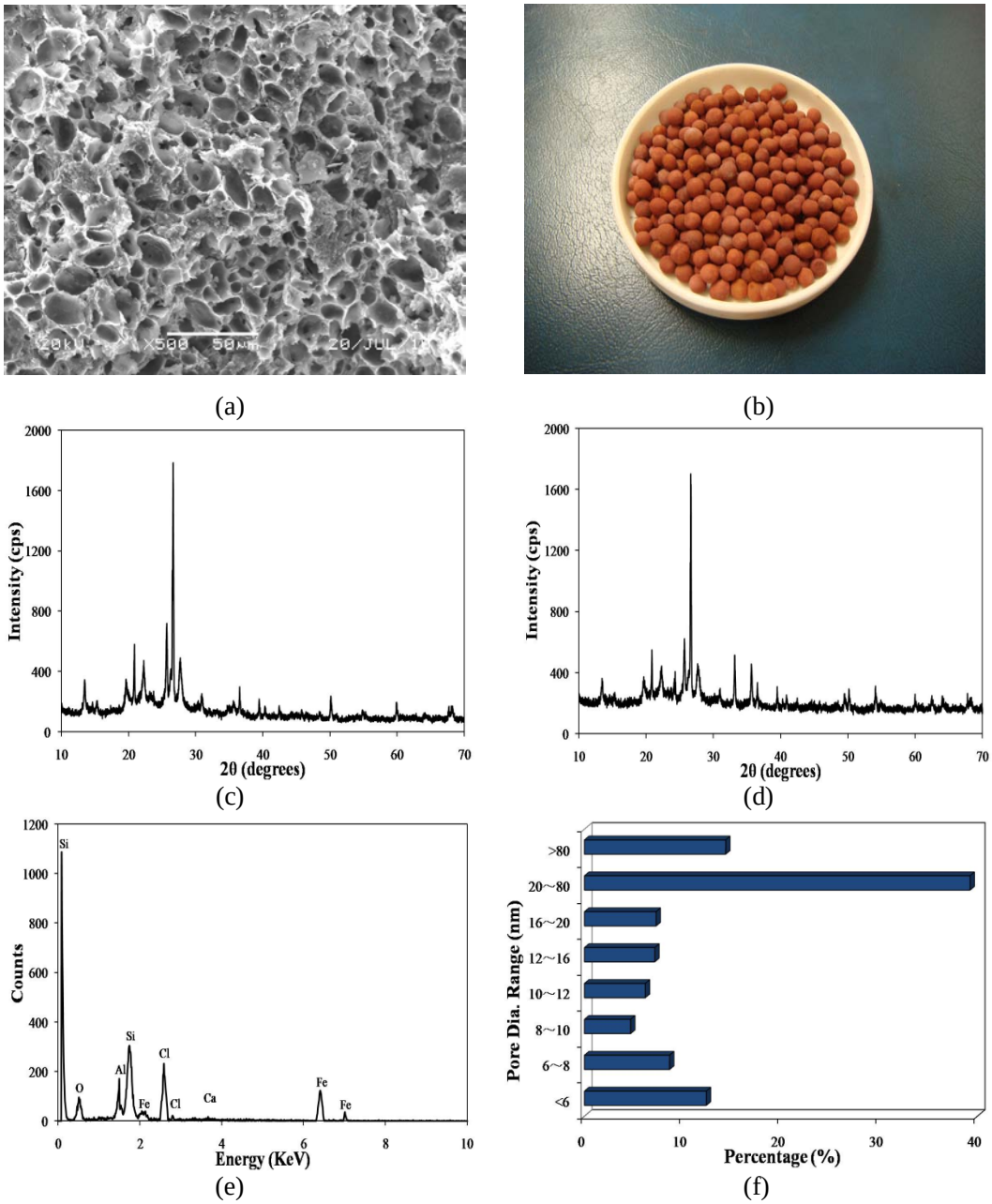
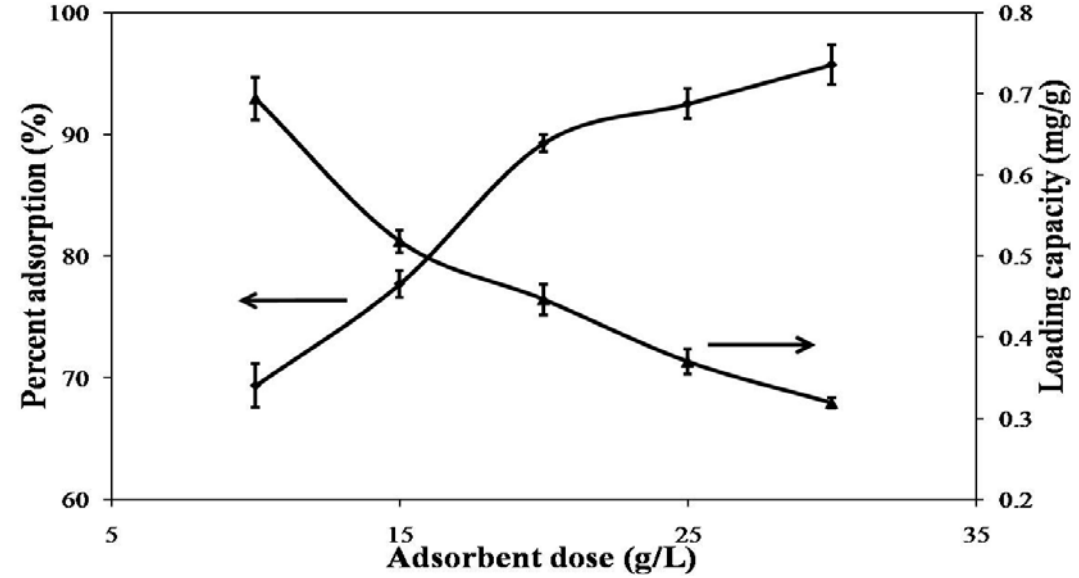


Fig. 1. SEM images of (a) cross section of pristine granular ceramics and (b) Photo of pristine granular ceramics, Powder XRD patterns of (c) pristine granular ceramics and (d) adsorbed granular ceramics, EDS spectra of (e) pristine granular ceramics, BJH (Barrett-Joyner-Halenda) pore-size distribution of (f) pristine granular ceramics.

(a)



(b)

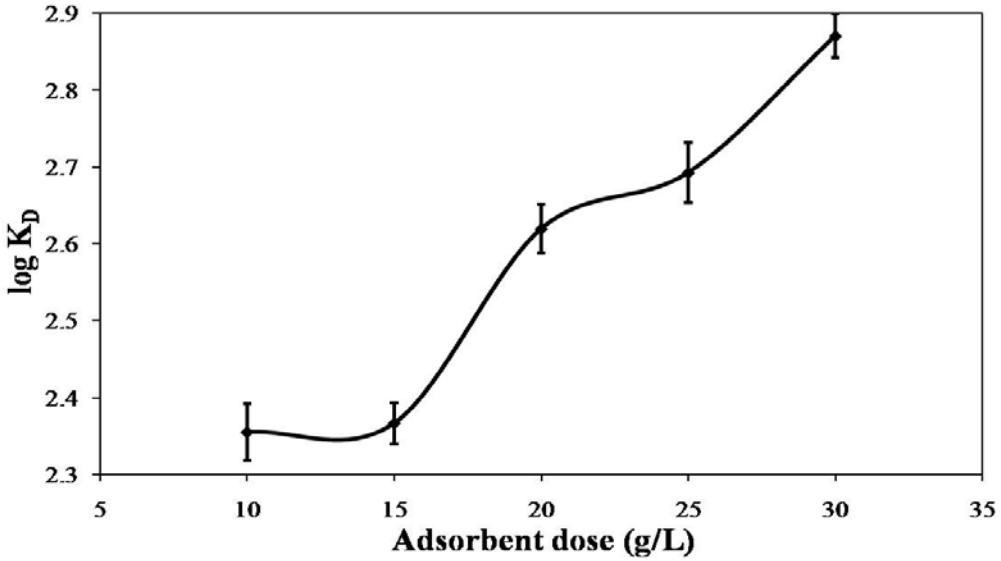


Fig. 2. (a) Effect of prepared adsorbent dose variation on fluoride removal (Initial pH 6.9±0.1, initial fluoride concentration 10 mg/L, equilibrium contact time 48 h and temperature 25±1 °C). (b) The plot of log K_D value as a function of prepared adsorbent dose (data corresponding to (a)).

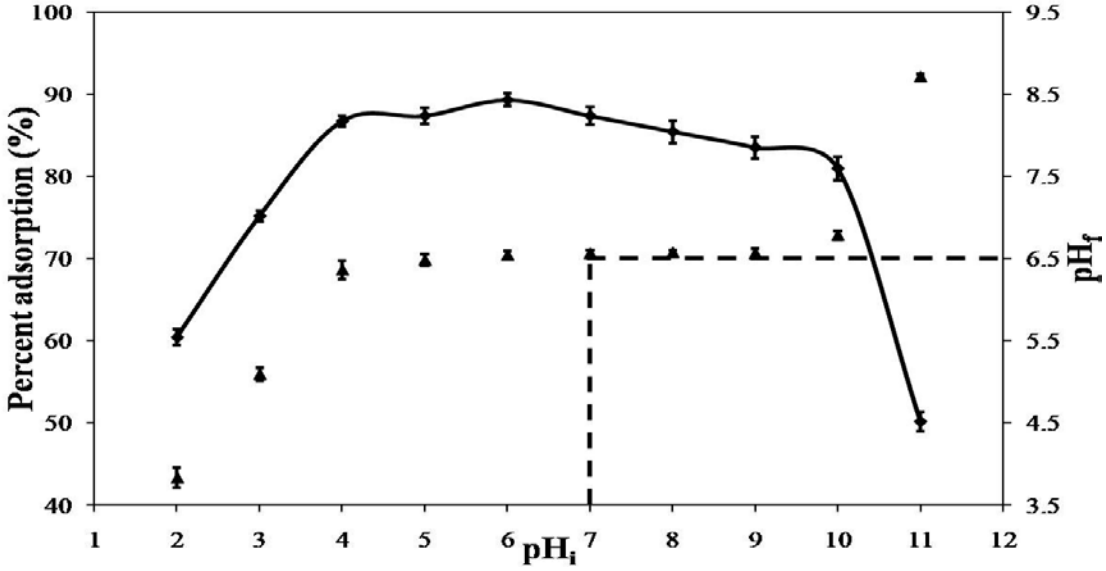


Fig. 3. (a) Effect of initial pH (pH_i) variation on fluoride removal (Adsorbent dose 20 g/L, initial fluoride concentration 10 mg/L, equilibrium contact time 48 h and temperature 25±1 °C). (b) The variation of final pH (pH_f) against initial pH (pH_i).

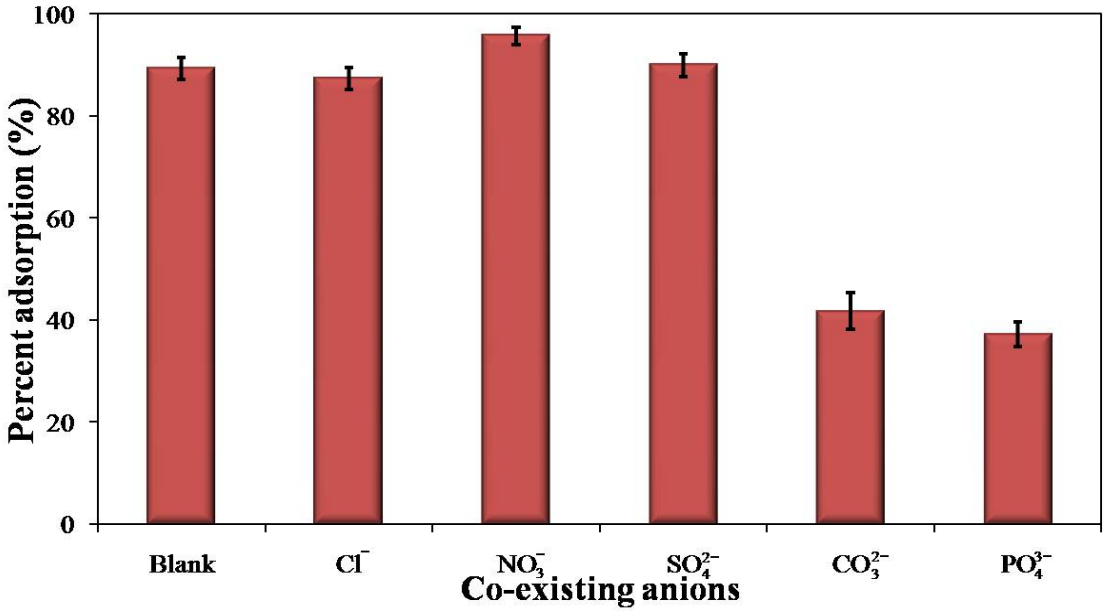
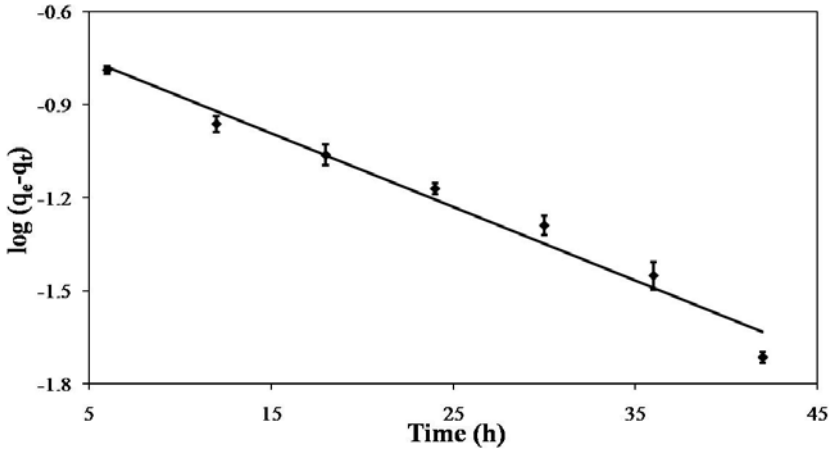
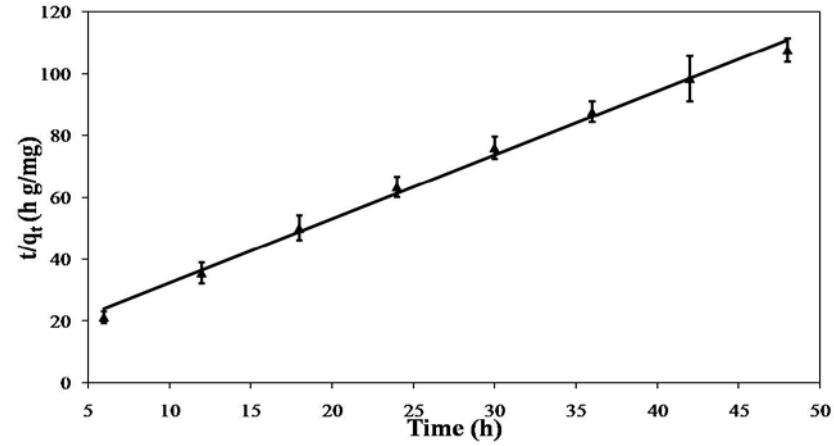


Fig. 4. Effect of different co-existing anions for fluoride removal (Adsorbent dose 20 g/L, initial fluoride concentration 10 mg/L, equilibrium contact time 48 h and temperature 25±1 °C)

(a)



(b)



(c)

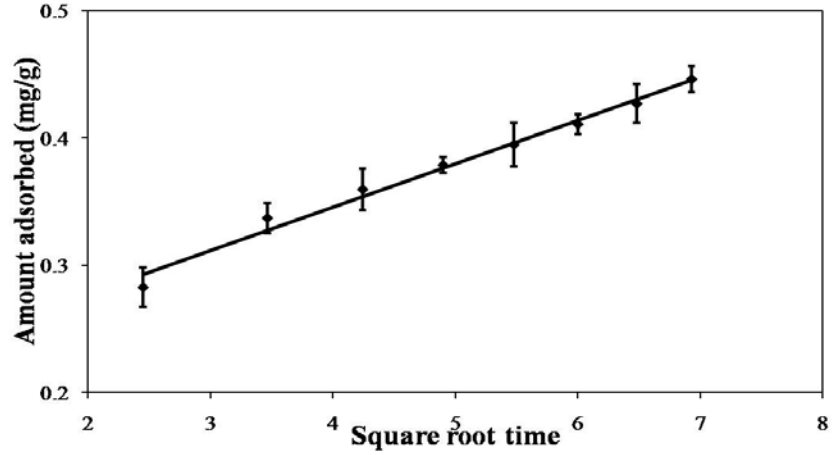


Fig. 5. (a) Pseudo-first-order kinetic plot for fluoride removal. (b) Pseudo-second-order kinetic plot for fluoride removal. (c) Intra-particle diffusion plot for fluoride removal. (Adsorbent dose 20 g/L, initial pH 6.9±0.1, initial fluoride concentration 10 mg/L, equilibrium contact time 48 h and temperature 25±1 °C)