**Fluoride adsorption on cubical ceria nanoadsorbent: Function of surface properties**[†]

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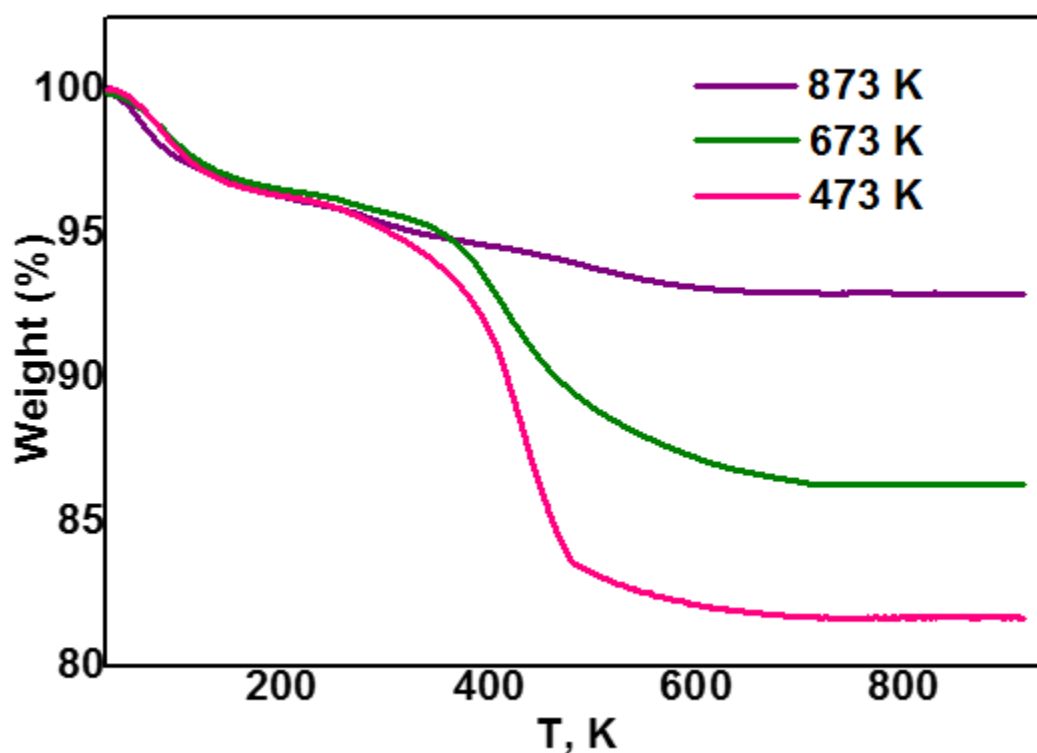
**Supplementary information**



**Fig. S1** TGA curves of cubical ceria adsorbent calcined at different temperatures

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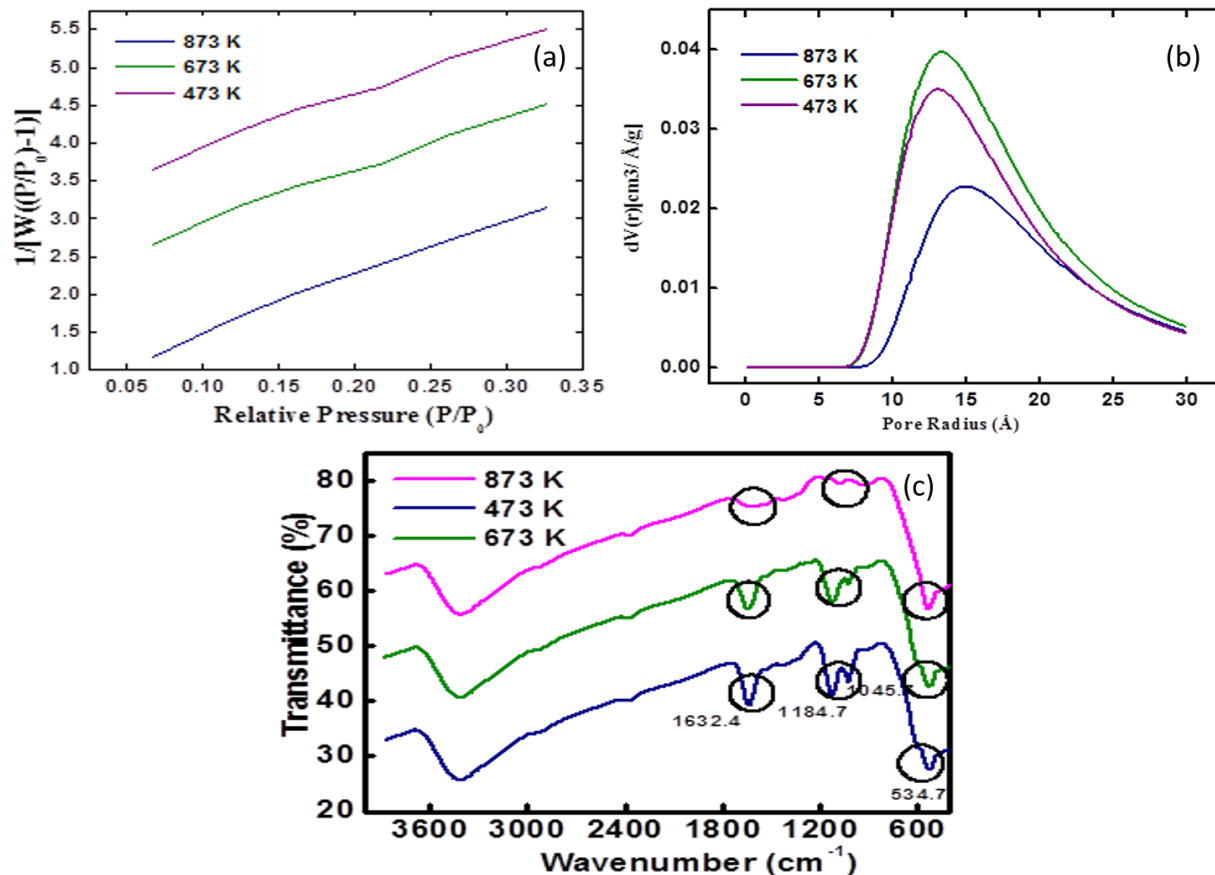
**Fig. S2** BET surface area plots at different temperatures (a), Dubinin–Astakhov plots for the pore radius at different temperatures (b), and FTIR studies of the nanoadsorbent calcined at different temperatures (c).
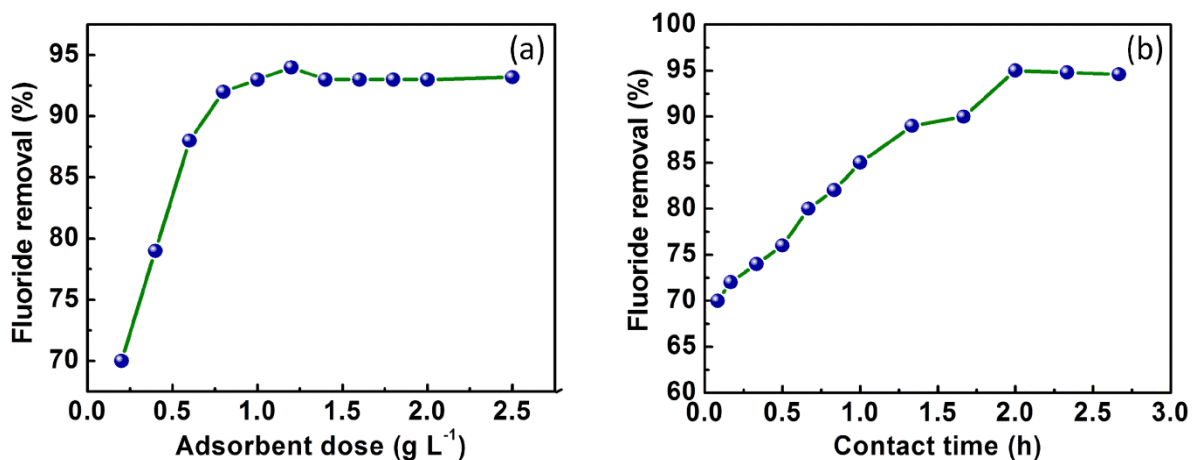


**Fig.S3** Effect of adsorbent dose on fluoride removal efficiency (a) and effect of contact time on fluoride removal efficiency (b).
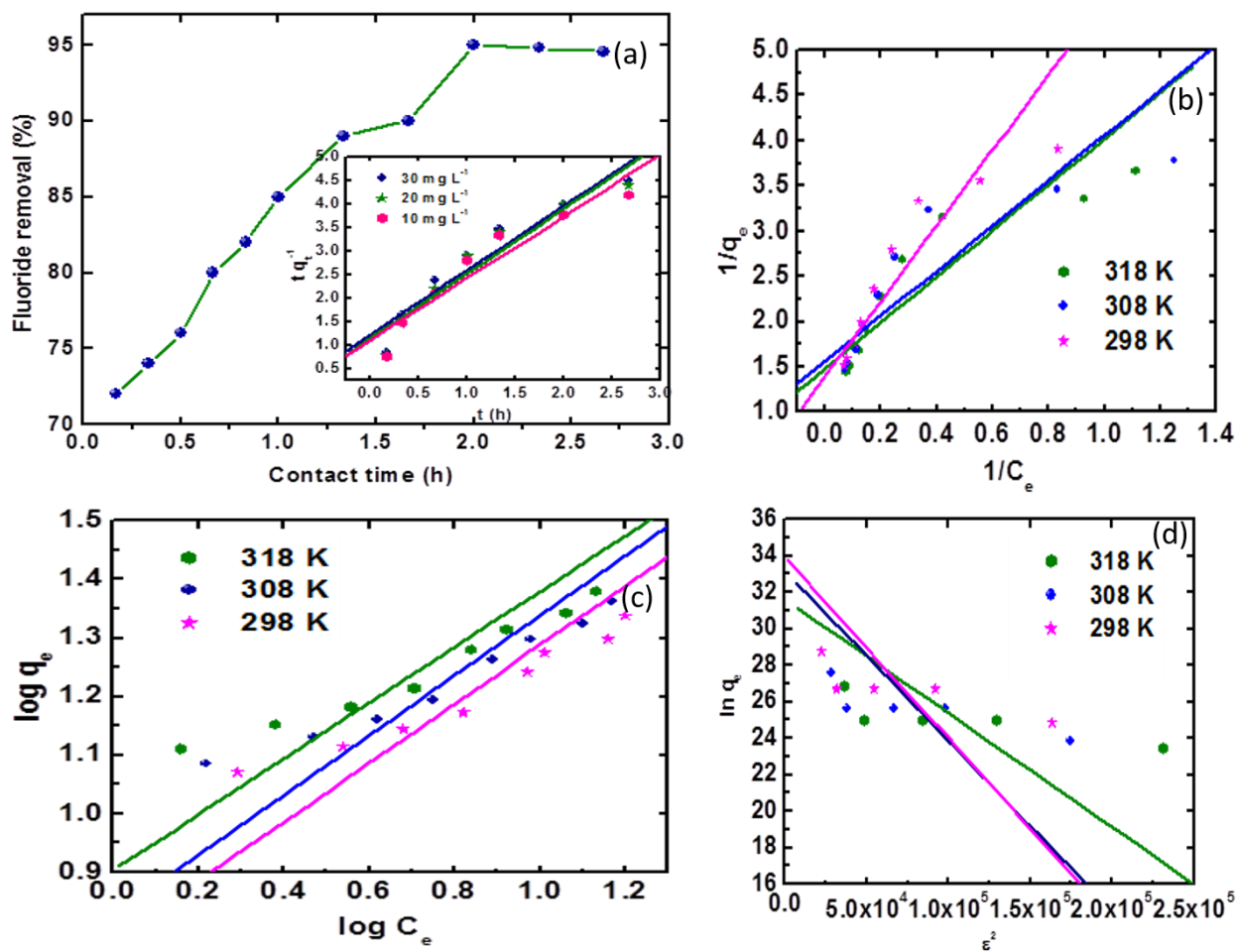
**Fig. S4** Kinetics of fluoride adsorption by using cubical ceria nanoadsorbent. Inset shows pseudo–second–order kinetic model. (a), Langmuir adsorption isotherm curves at different temperatures (b), Freundlich adsorption isotherm curves at different temperatures, and D–R adsorption isotherm curves at different temperatures (d).
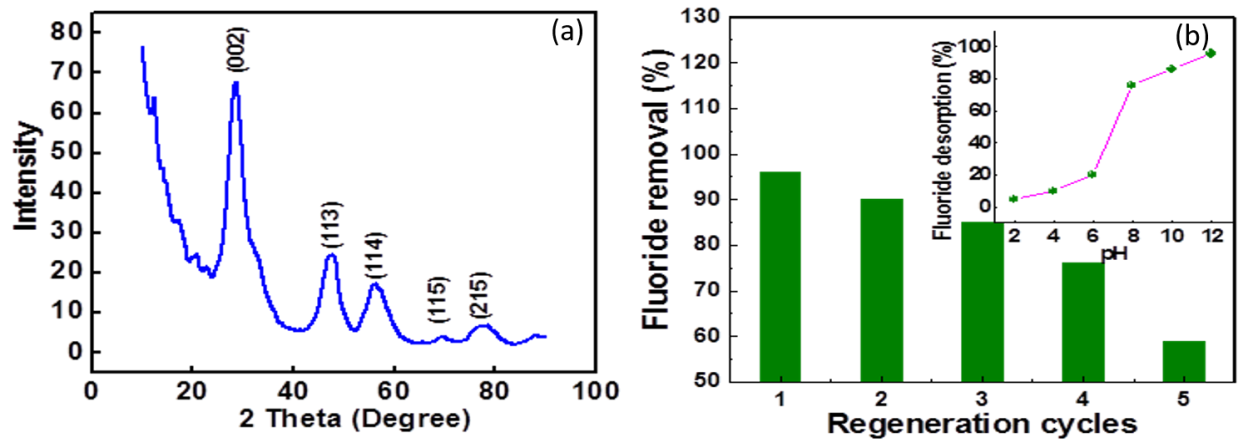
**Fig. S5** XRD patterns of the nanoadsorbent after fluoride adsorption (a), desorption of fluoride as a function of solution pH and regeneration cycles (b).