

Electronic Supplementary Information

Development of nanoporous adsorbent for the removal of health hazardous fluoride ions from aqueous systems†

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Supplementary Data

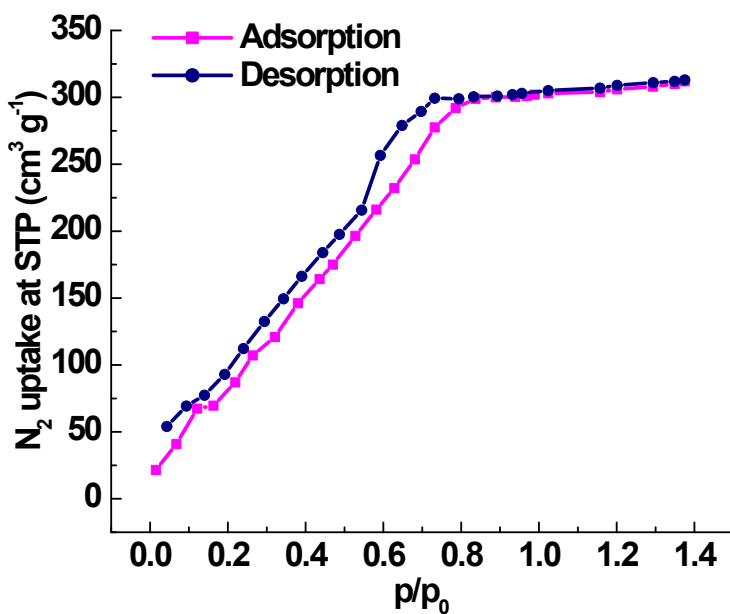


Fig. S1: N_2 Adsorption/Desorption curves.

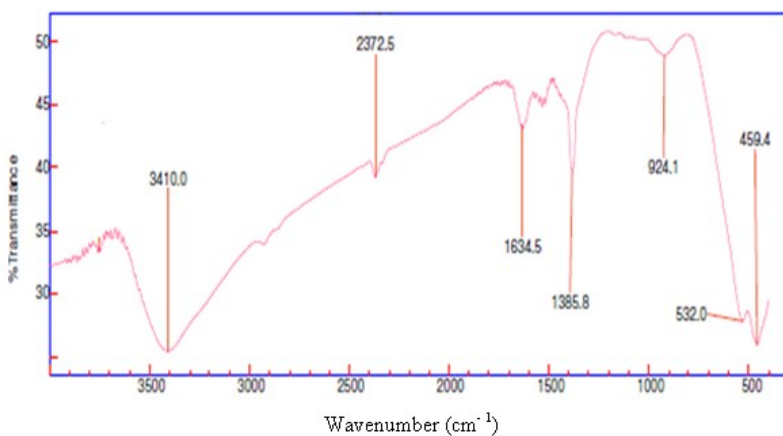


Fig. S2: FTIR spectrum of Fe–Ce–Ni nanoadsorbent before fluoride adsorption.

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† Electronic supplementary information (ESI) available:

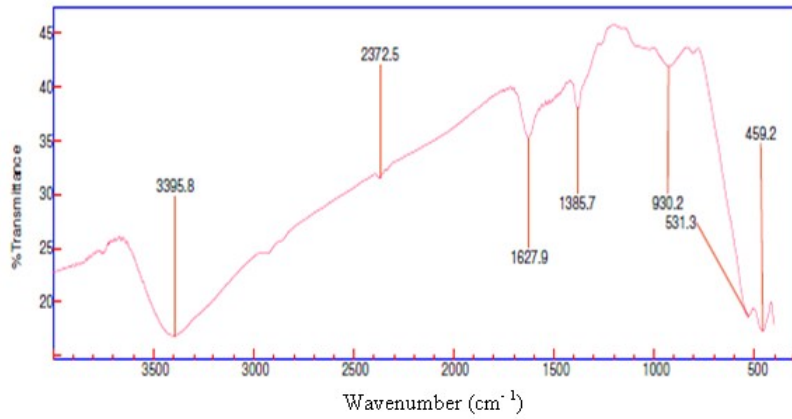


Fig. S3: FTIR spectrum of Fe–Ce–Ni nanoadsorbent after fluoride adsorption.

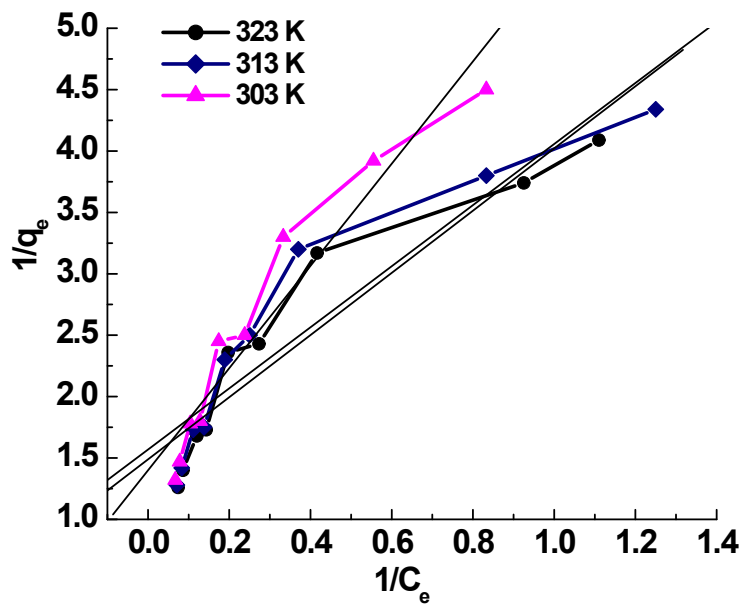


Fig. S4: Langmuir isotherm outlines of the fluoride adsorption by nanoadsorbent.

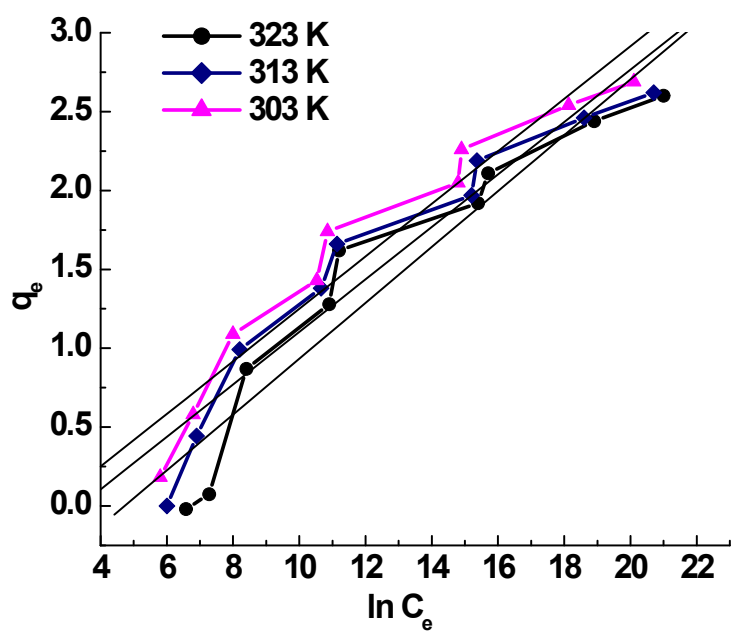


Fig. S5: Temkin isotherm outlines of the fluoride adsorption by nanoadsorbent.

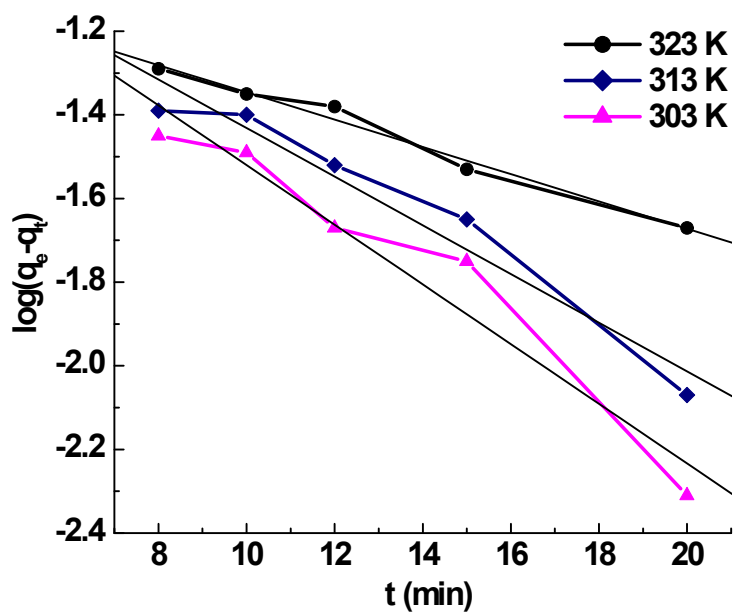


Fig. S6: Pseudo-first-order plots of the fluoride adsorption by nanoadsorbent.

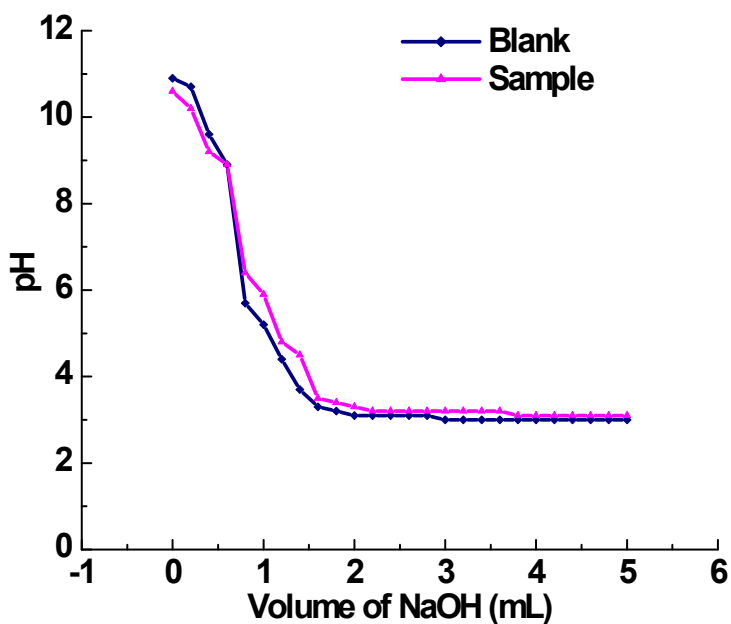


Fig. S7: Potentiometric titration curve of nanoadsorbent.

Table S1 Water quality parameters before and after treatment

Water quality parameter	Before treatment	After treatment
pH	8.40	8.21
EC (μS)	2674	2597
TDS (mg L^{-1})	416.0	352.0
DO (mg L^{-1})	6.70	7.3
F^{-} (mg L^{-1})	6.40	1.28
Cl^{-} (mg L^{-1})	257.0	250.0
PO_4^{3-} (mg L^{-1})	0.078	0.031
SO_4^{2-} (mg L^{-1})	204	197
CO_3^{2-} (mg L^{-1})	193	192
HCO_3^{-} (mg L^{-1})	214	194
NO_3^{-} (mg L^{-1})	41	39

