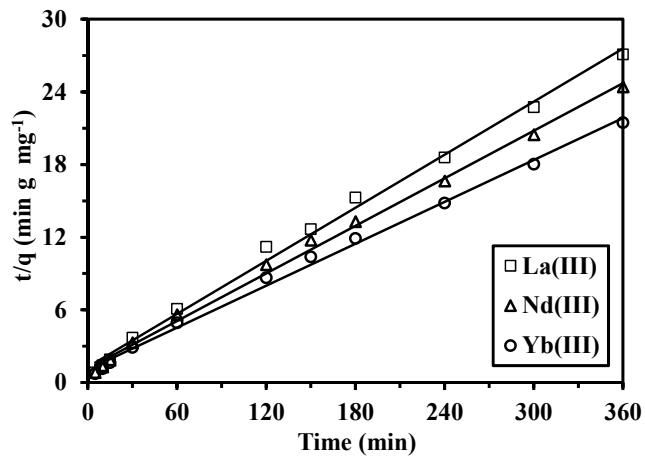
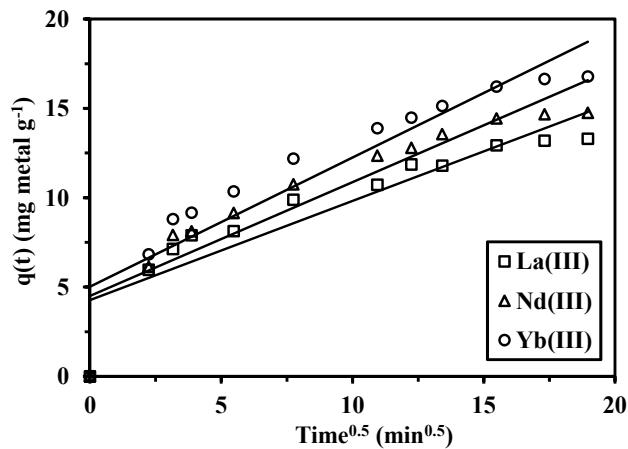


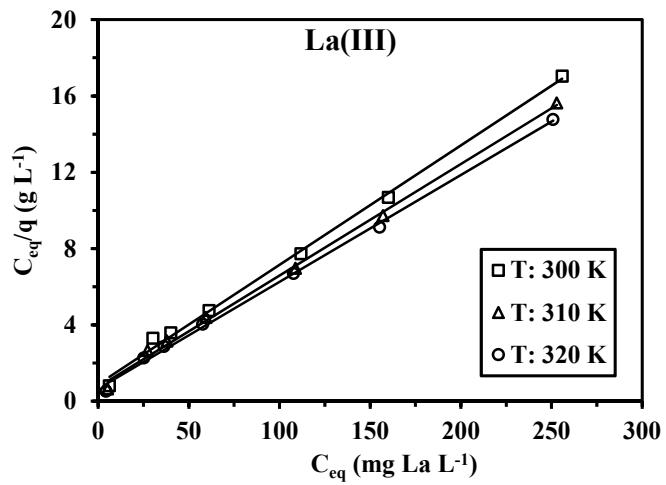
## Supplementary Information



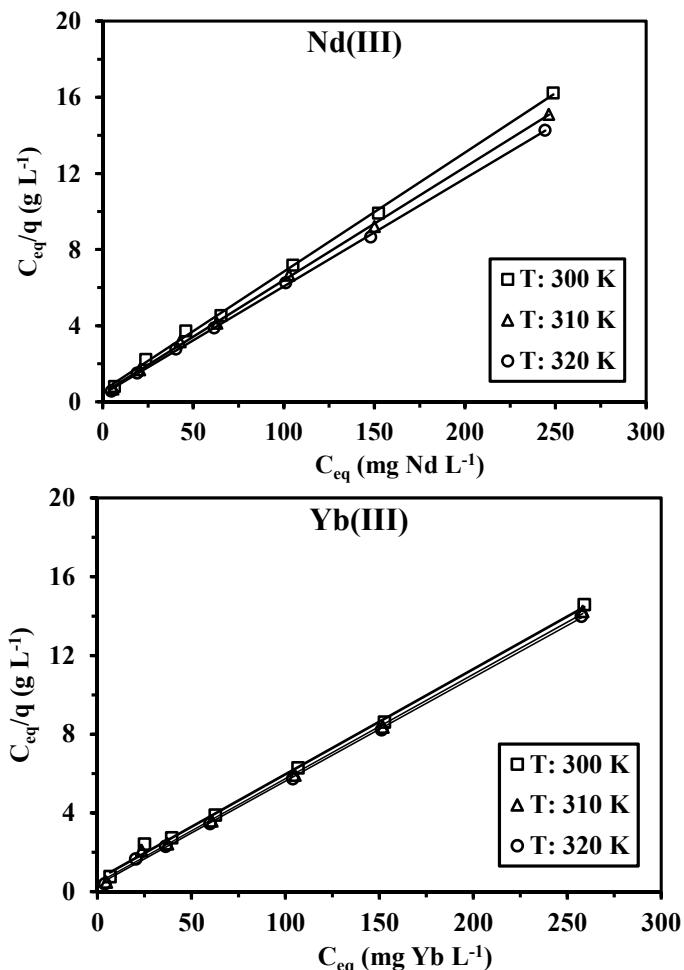
**Figure S1.** Pseudo-second order kinetic plots for the sorption of La(III), Nd(III) and Yb(III) ions. ( $C_i = 100 \text{ mg} \cdot \text{L}^{-1}$ ;  $T = 300 \text{ K}$ ; pH = 5).



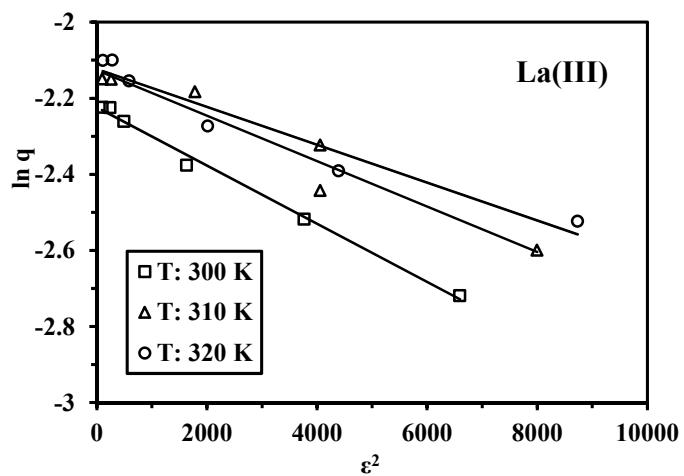
**Figure S2.** Intraparticle diffusion kinetic plots for the sorption of La(III), Nd(III) and Yb(III) ions. ( $C_i = 100 \text{ mg} \cdot \text{L}^{-1}$ ;  $T = 300 \text{ K}$ ; pH = 5).



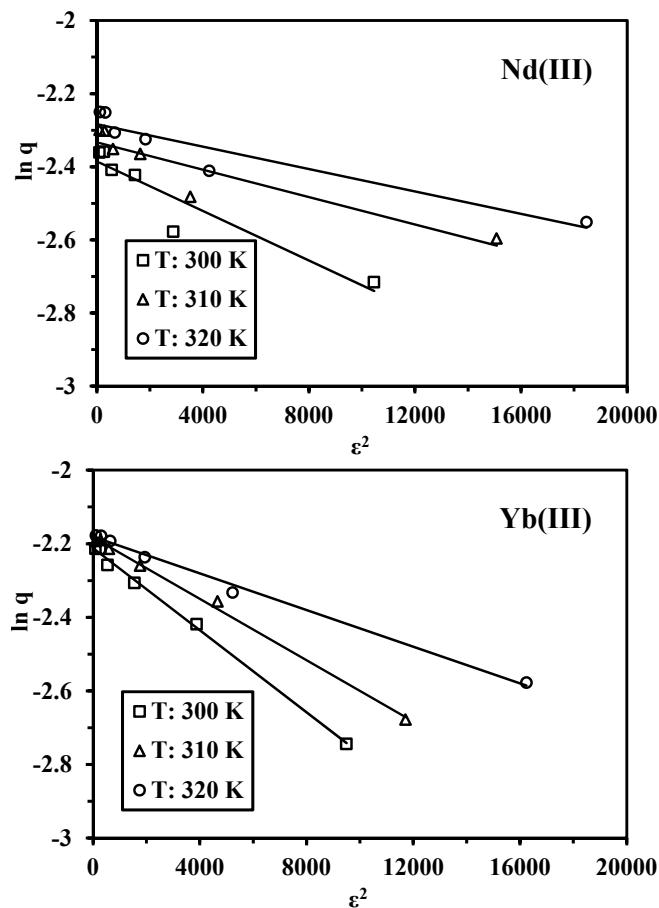
**Figure S3. Cont.**



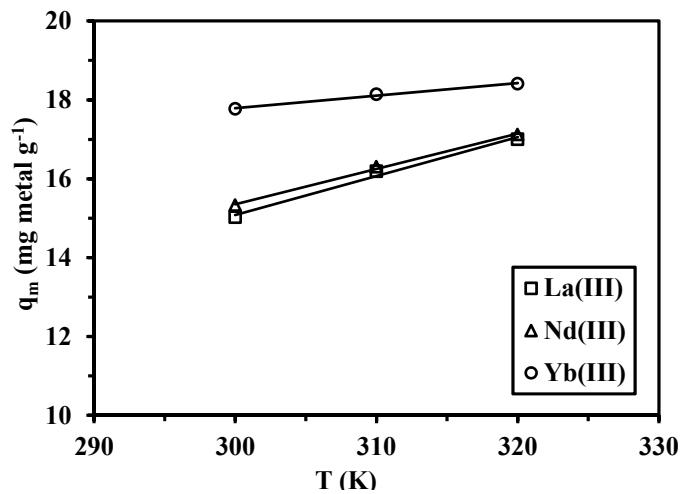
**Figure S3.** Langmuir plots for sorption of La(III), Nd(III) and Yb(III) ions at different temperatures.



**Figure S4. Cont.**



**Figure S4.** D-R isotherms plots for sorption of La(III), Nd(III) and Yb(III) ions at different temperatures.



**Figure S5.** Plot of the values of  $q_e$  of La(III), Nd(III) and Yb(III) ions as a function of temperature. ( $t = 4$  h, pH = 5,  $m = 0.05$  g,  $V = 20$  mL).