

Figure S1. Plots of kinetic models for the adsorption of  $Cr^{3+}$  and  $Co^{2+}$  metal ions onto Fe<sub>3</sub>O<sub>4</sub>@TSC nanocomposite (a) Pseudo-first-order, (b) Pseudo-second-order and (c) Intra-particle diffusion models

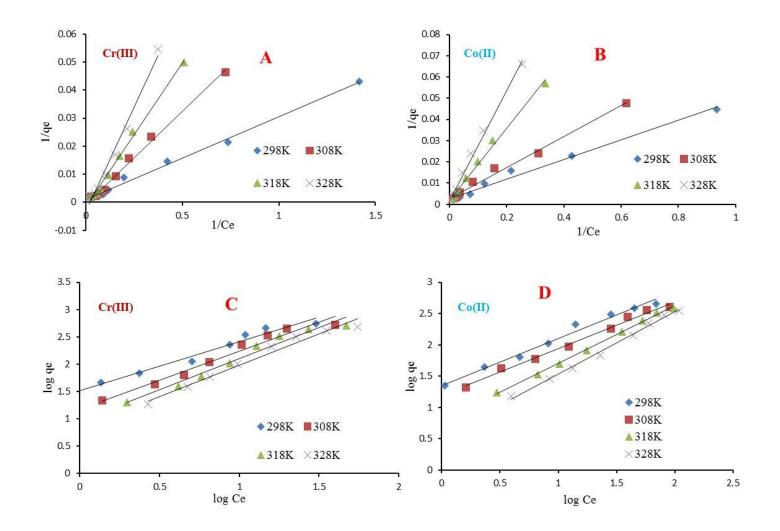


Figure S2. Plots of isotherm models for the adsorption of  $Cr^{3+}$  and  $Co^{2+}$  metal ions onto Fe<sub>3</sub>O<sub>4</sub>@TSC nanocomposite (A & B) Langmuir and (C&D) Freundlich isotherm models