

Synthesis of copper-isonicotinate metal-organic frameworks simply by mixing solid reactants and investigation of its adsorptive properties in the removal of fluorescein dye

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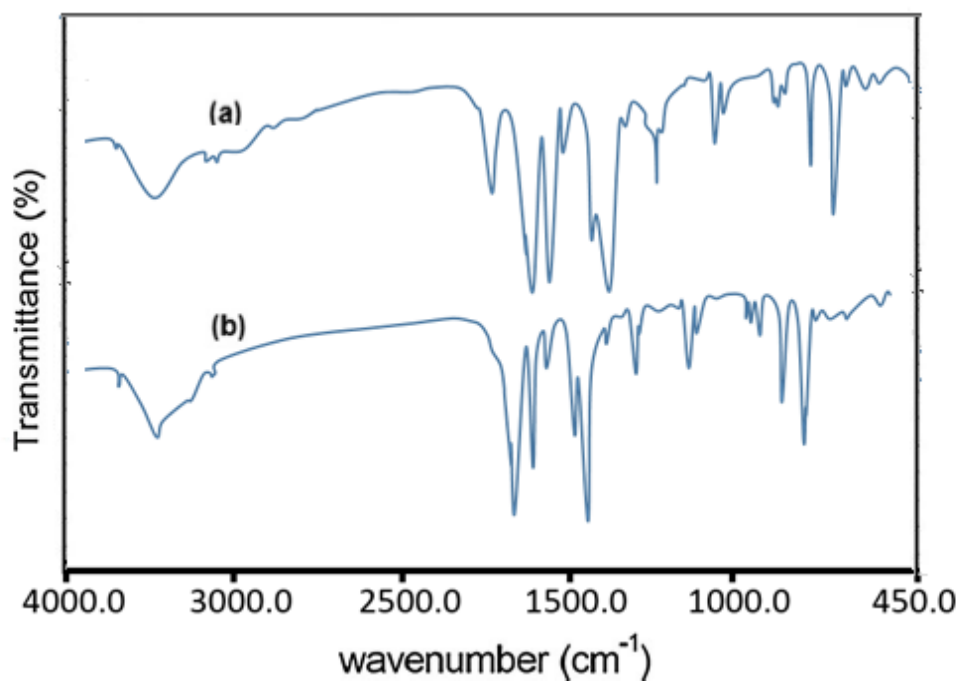


Figure S1. FT-IR spectra of (a) **1** (MSR) and (b) **2** obtained from desolvation of samples of **1**.

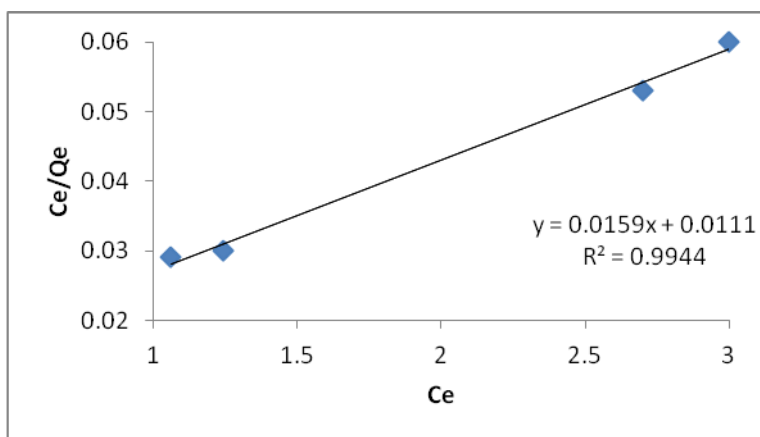


Figure S2: Langmuir isotherm plot for the adsorption of fluorescein dye on mCu-INA at Co-3-18 mg/L, temp = 298 °K, pH = 7.8, time = 6 hours at 165 rpm

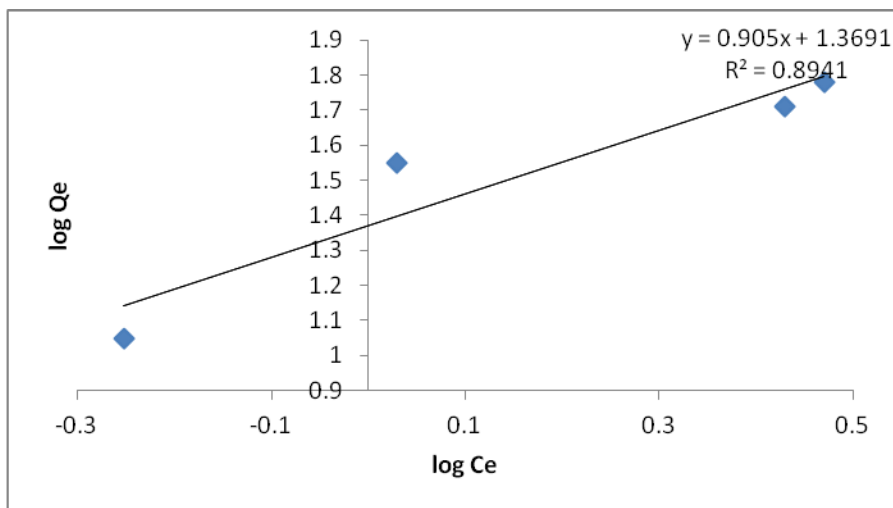


Figure S3: Freundlich isotherm plot for the adsorption of fluorescein dye on mCu-INA at Co-3-18 mg/L, temp = 298 K, pH = 7.8, time = 6 hours at 165 rpm

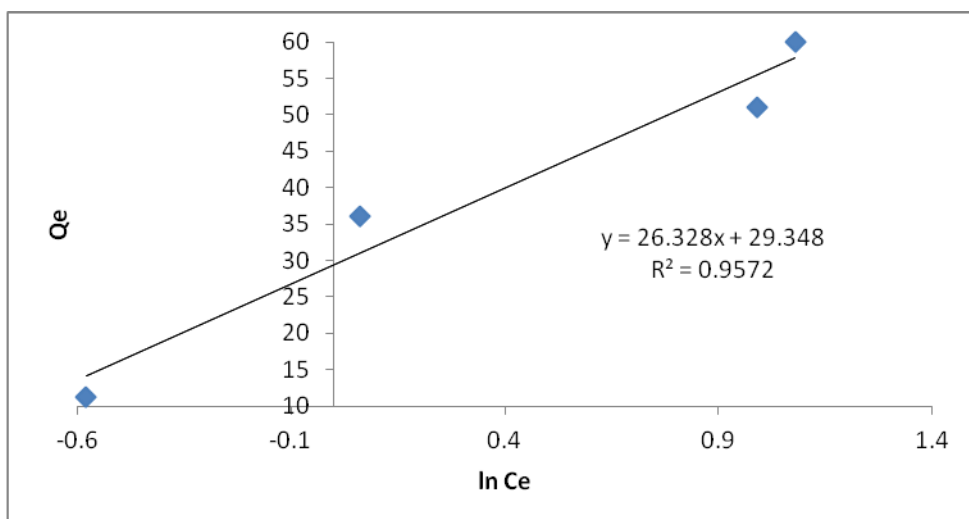


Figure S4: Temkin isotherm plot for the adsorption of fluorescein dye on mCu-INA

at Co-3-18 mg/L, temp = 298 K, pH = 7.8, time = 6 hours at 165 rpm

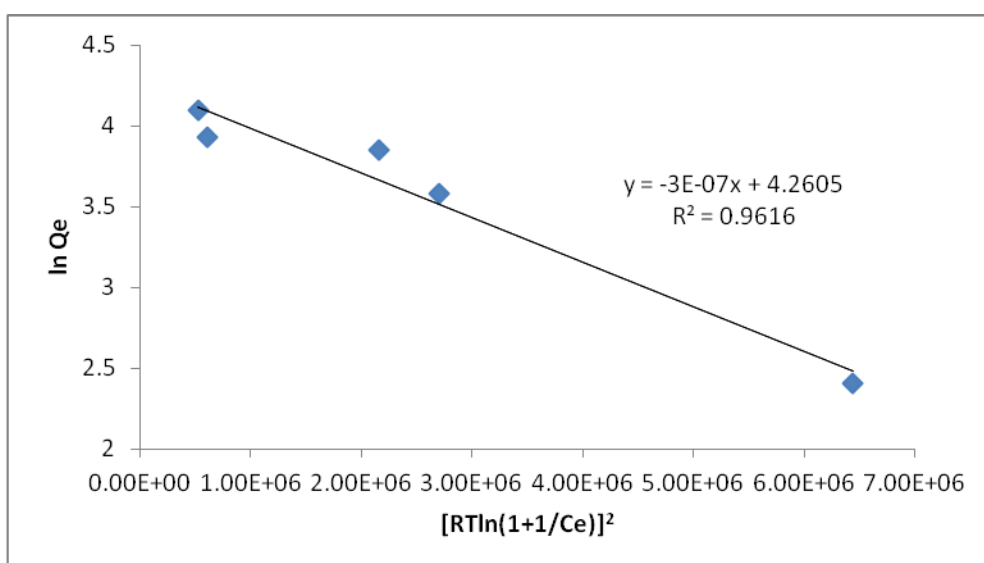


Figure S5: Dubinin Radushkevich isotherm plot for the adsorption of fluorescein

dye on mCu-INA at Co-3-18 mg/L, temp = 298 K, pH = 7.8, time = 6 hours at 165 rpm

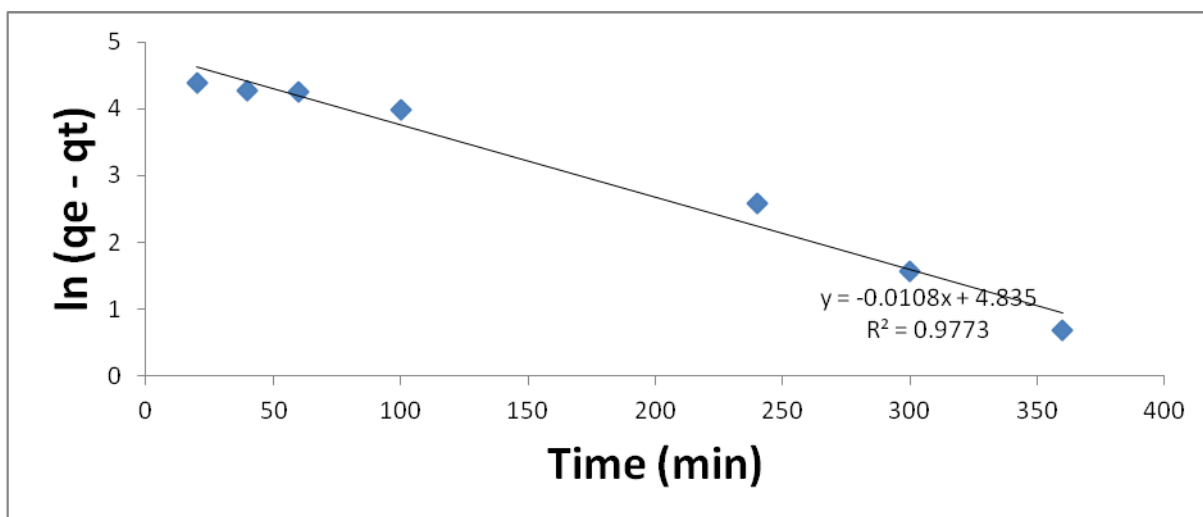


Figure S6: Plot of pseudo- first order kinetics of Fluorescein adsorption on mCu-INA

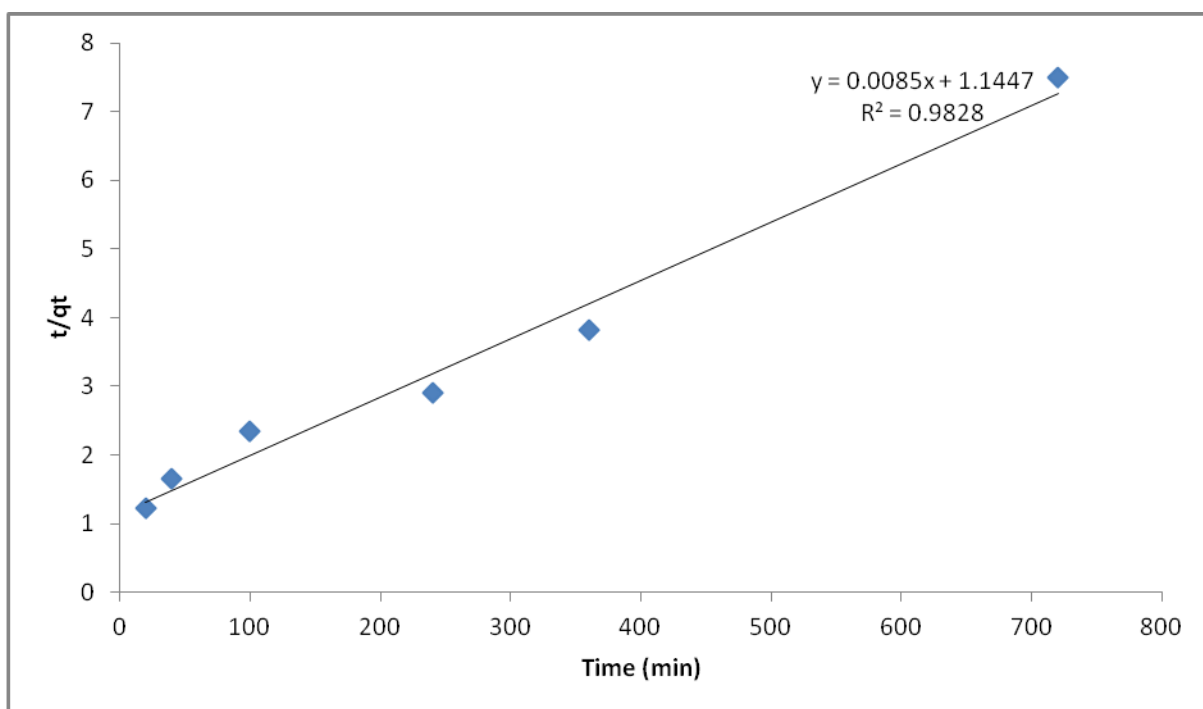


Figure S7: Plot of pseudo- second order kinetics of Fluorescein adsorption on mCu-INA

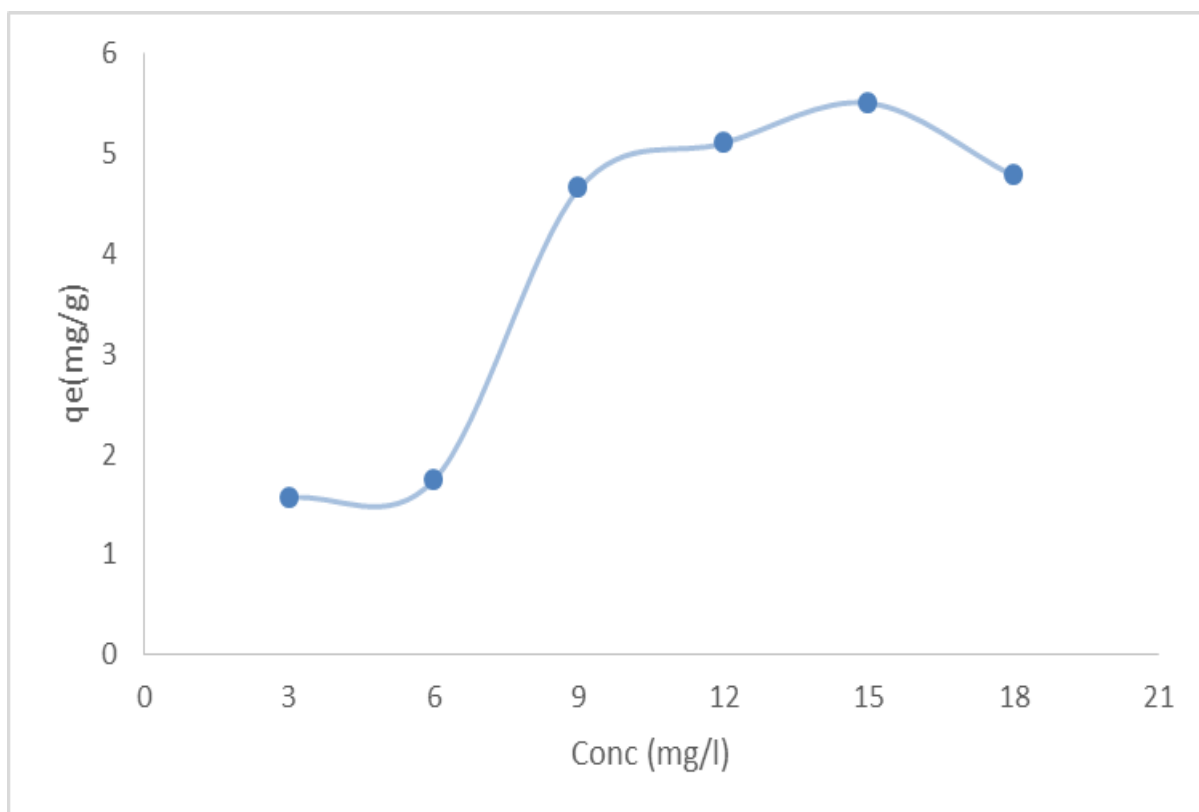


Fig. S8. Effect of dye concentration on the adsorption of Fluorescein dye on [Cu(INA)₂]. Contact time: 360 min, adsorbent concentration: 20 mg, temperature: 298 K, pH: 7.8

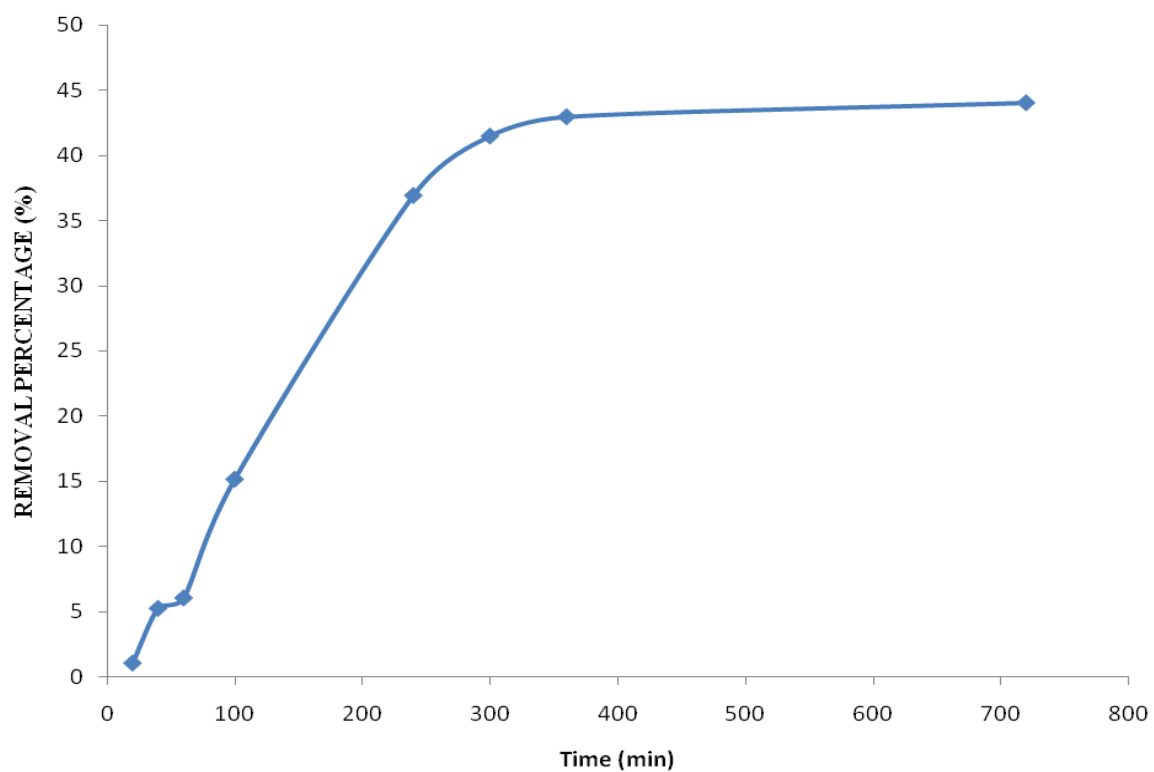


Fig. S9. Effect of contact time on the adsorption of fluorescein dye on $[\text{Cu}(\text{INA})_2]$. Dye concentration: 15 mg/L, temperature: 298 K, adsorbent dosage: 20 mg, pH = 7.8 at 165 rpm

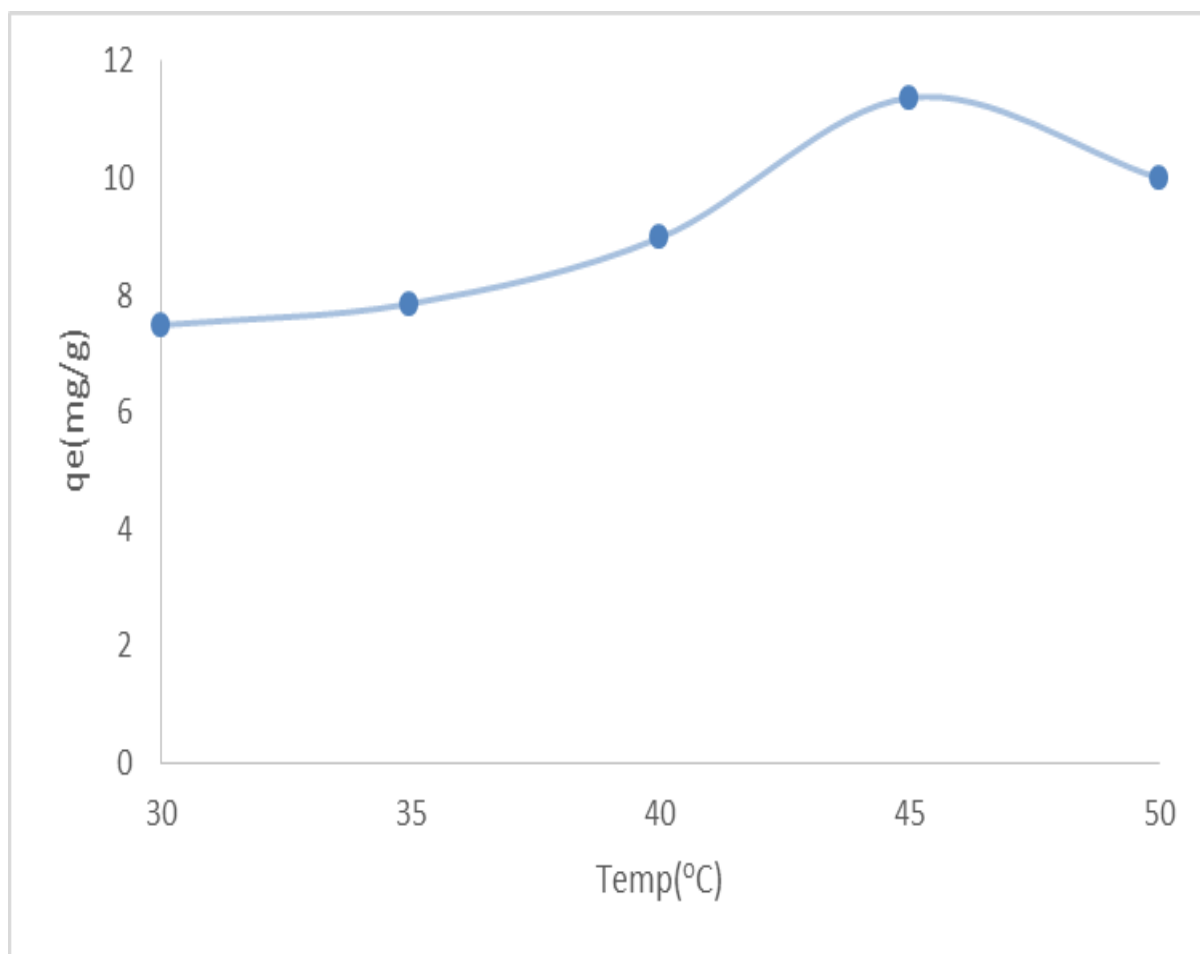


Fig. S10. Effect of temperature on the adsorption of Fluorescein on $[\text{Cu}(\text{INA})_2]$. Contact time: 360 min, dye concentration: 15 mg/L, adsorbent dosage: 20 mg, pH: 7.8 at 165 rpm.

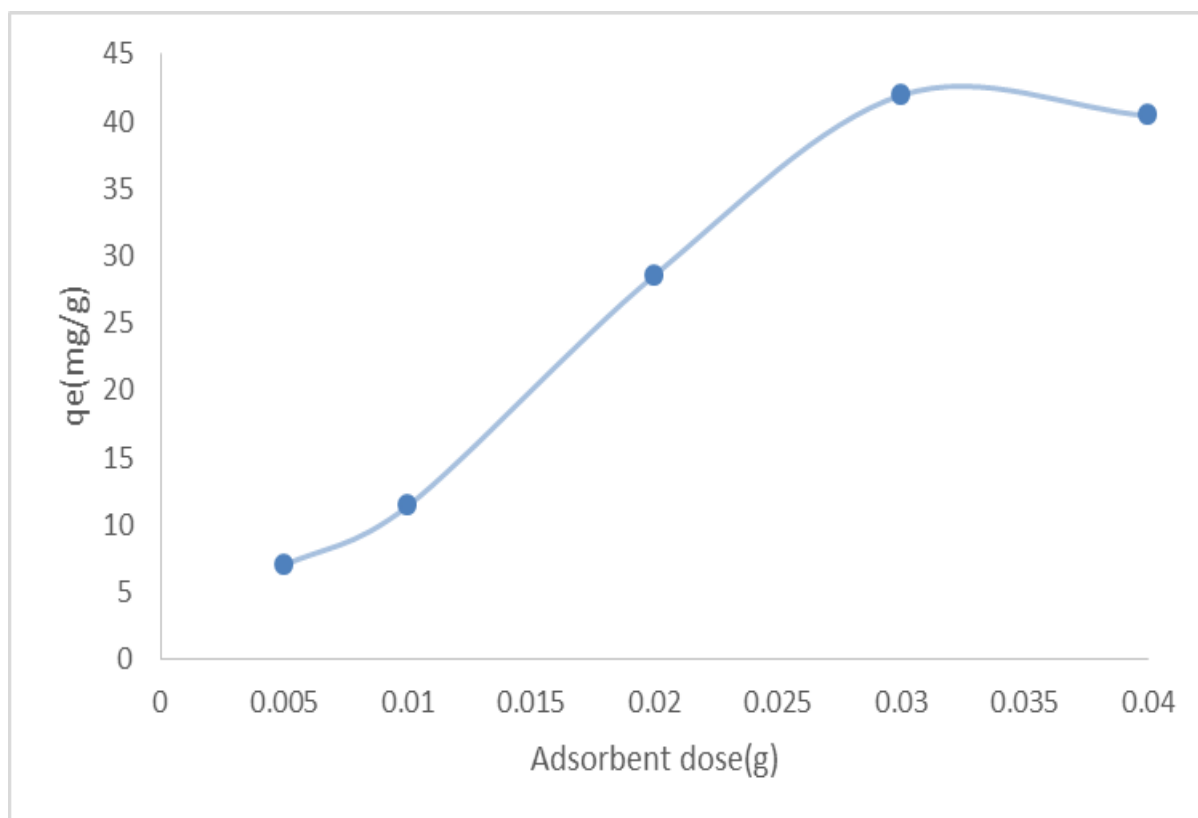


Fig. S11. Effect of adsorbent dosage on the adsorption of Fluorescein dye on [Cu(INA)₂]. Contact time: 360 min, dye concentration: 15 mg/L, temperature: 45 °C, pH: 7.8 at 165 rpm.