Supplementary Information (SI)

Construction of Lacunary α–$K_8SiW_{11}O_{39}$ polyoxometalate/MIL–101(Cr)MOF/$CoFe_2O_4$ magnetic nanocomposites for adsorptive removal of toxic azo dyes and antibiotics from wastewater

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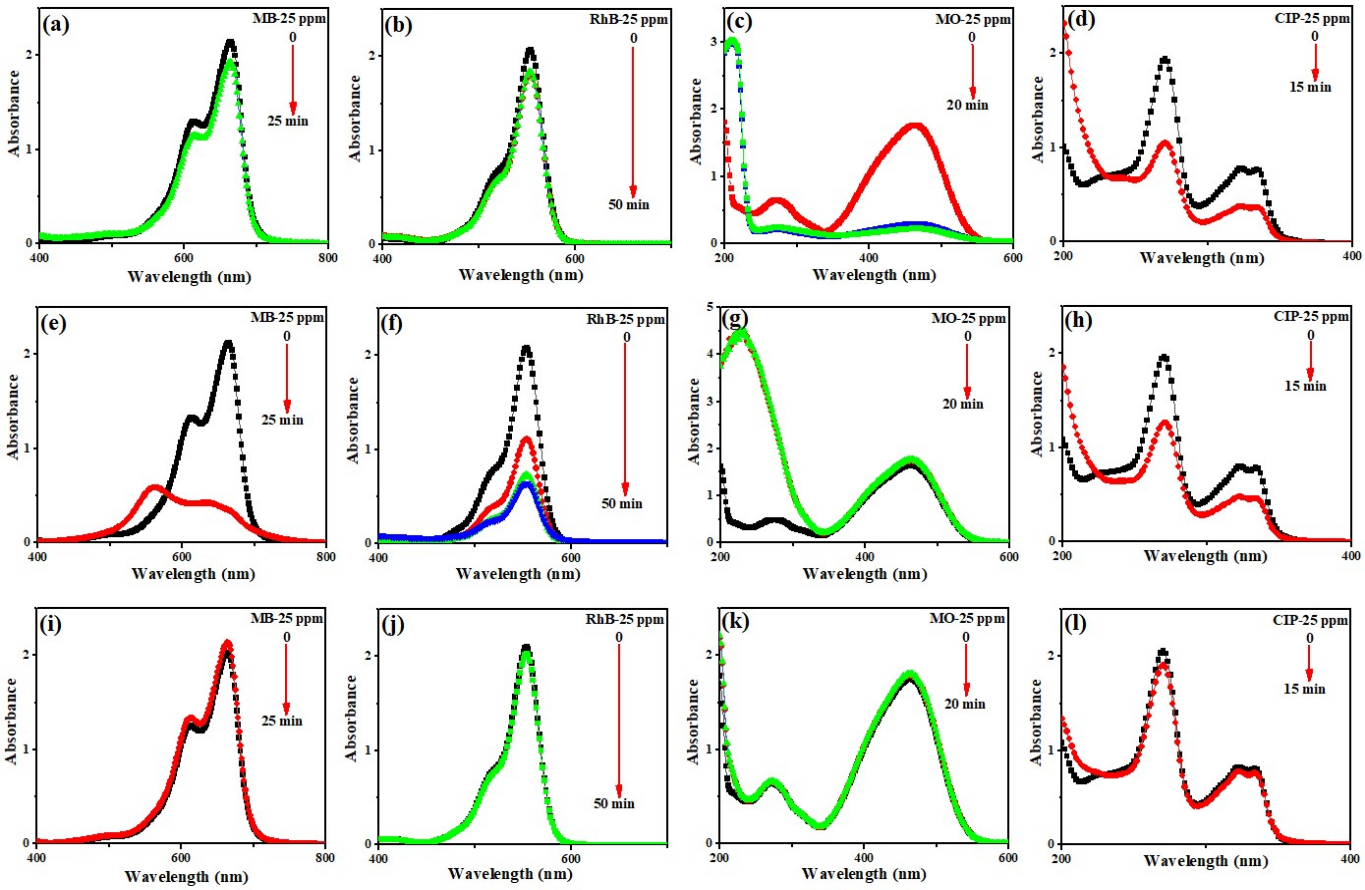

Fig. 1S The adsorption rate and capability of (a-d) pristine MIL-101(Cr), (e-h) pure α-$SiW_{11}O_{39}^{8-}$, and (i-l) CFO nanoparticles

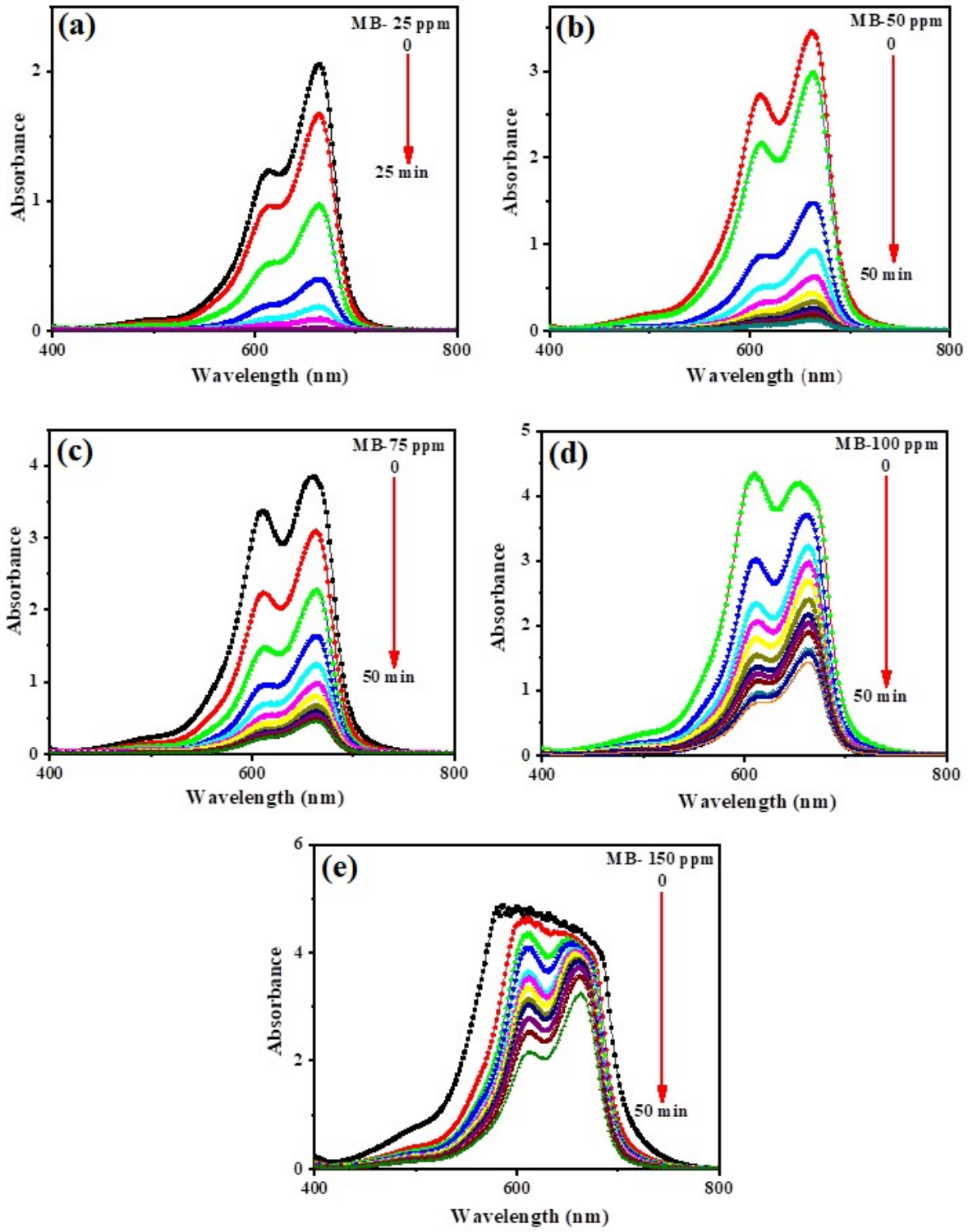

Fig. 2S The effect of different concentrations on the removal of MB by LPOM@MIL-101(Cr)/CFO nanocomposite. Reaction conditions: $[dye]_0$= 25 mg l^{-1}; adsorbent dosage = 30 mg in 30 ml solution at ambient temperature

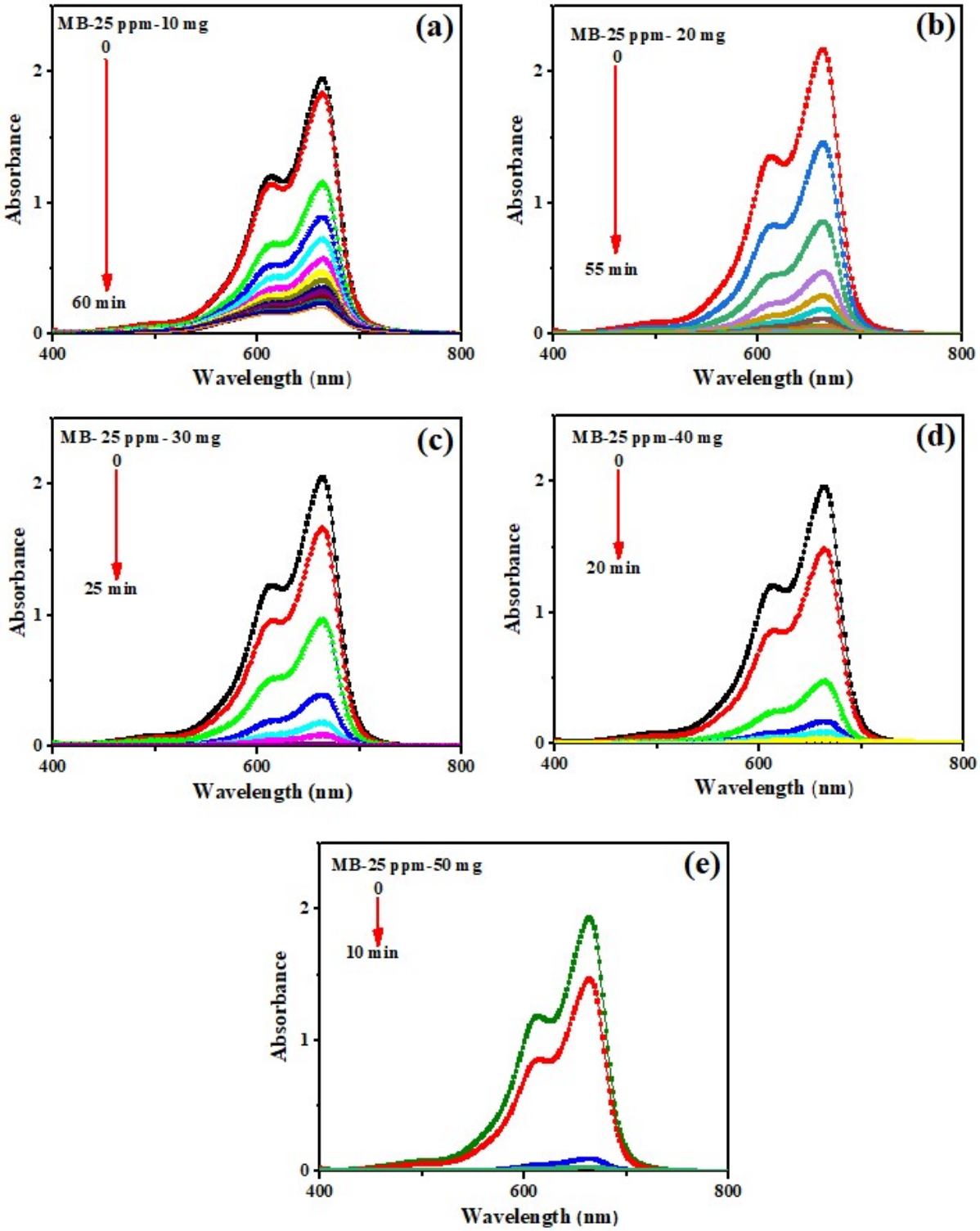

Fig. 3S The effects of adsorbent dosage on the removal of MB by LPOM@MIL-101(Cr)/CFO nanocomposite

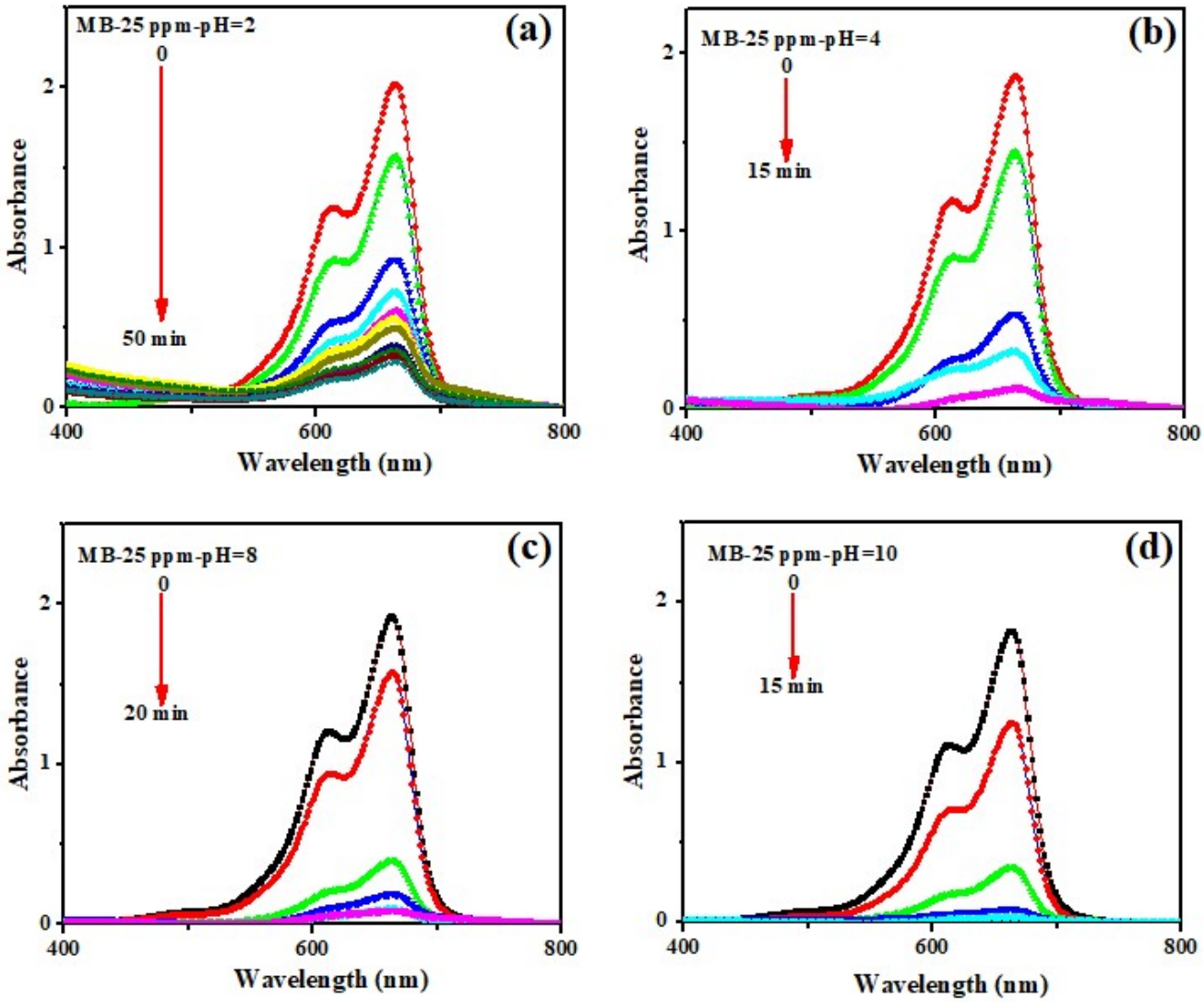

Fig. 4S Theeffects of different pH on the removal of MB by LPOM@MIL-101(Cr)/CFO nanocomposite

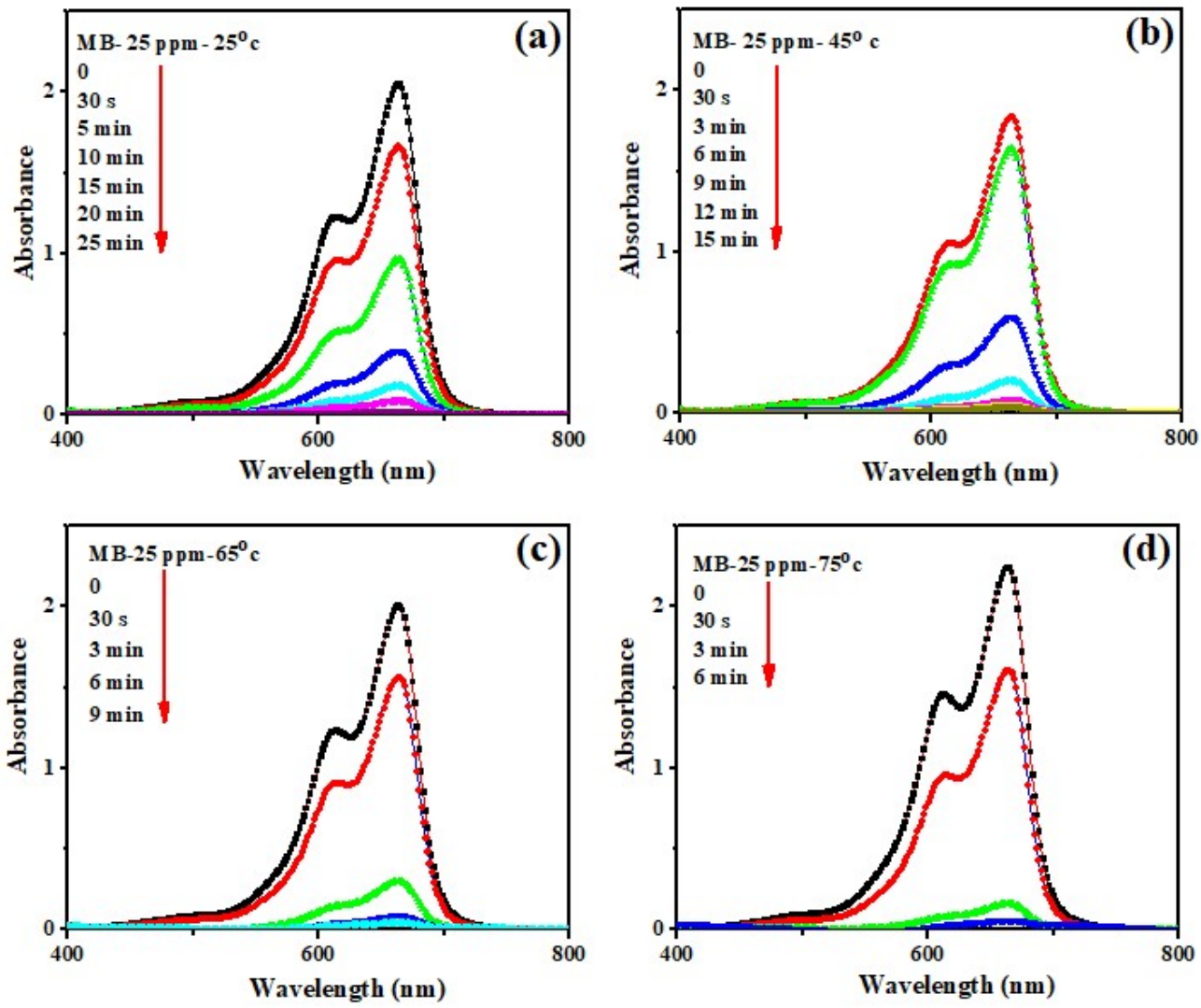

Fig. 5S The effects of different temperature on the removal of MB by LPOM@MIL-101(Cr)/CFO nanocomposite

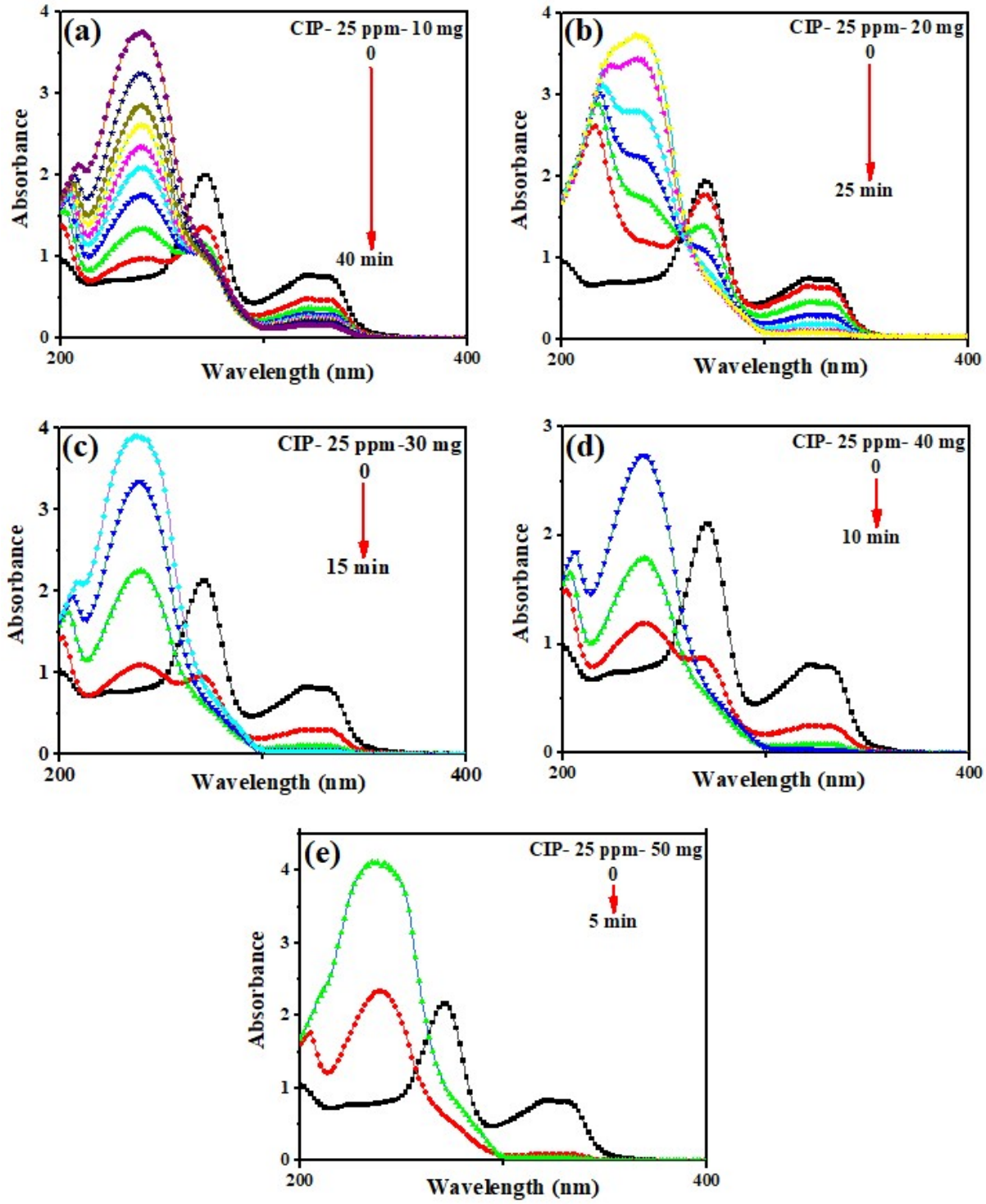

Fig. 6S The effect of adsorbent dosage on the removal of CIP drug by LPOM@MIL-101(Cr)/CFO nanocomposite

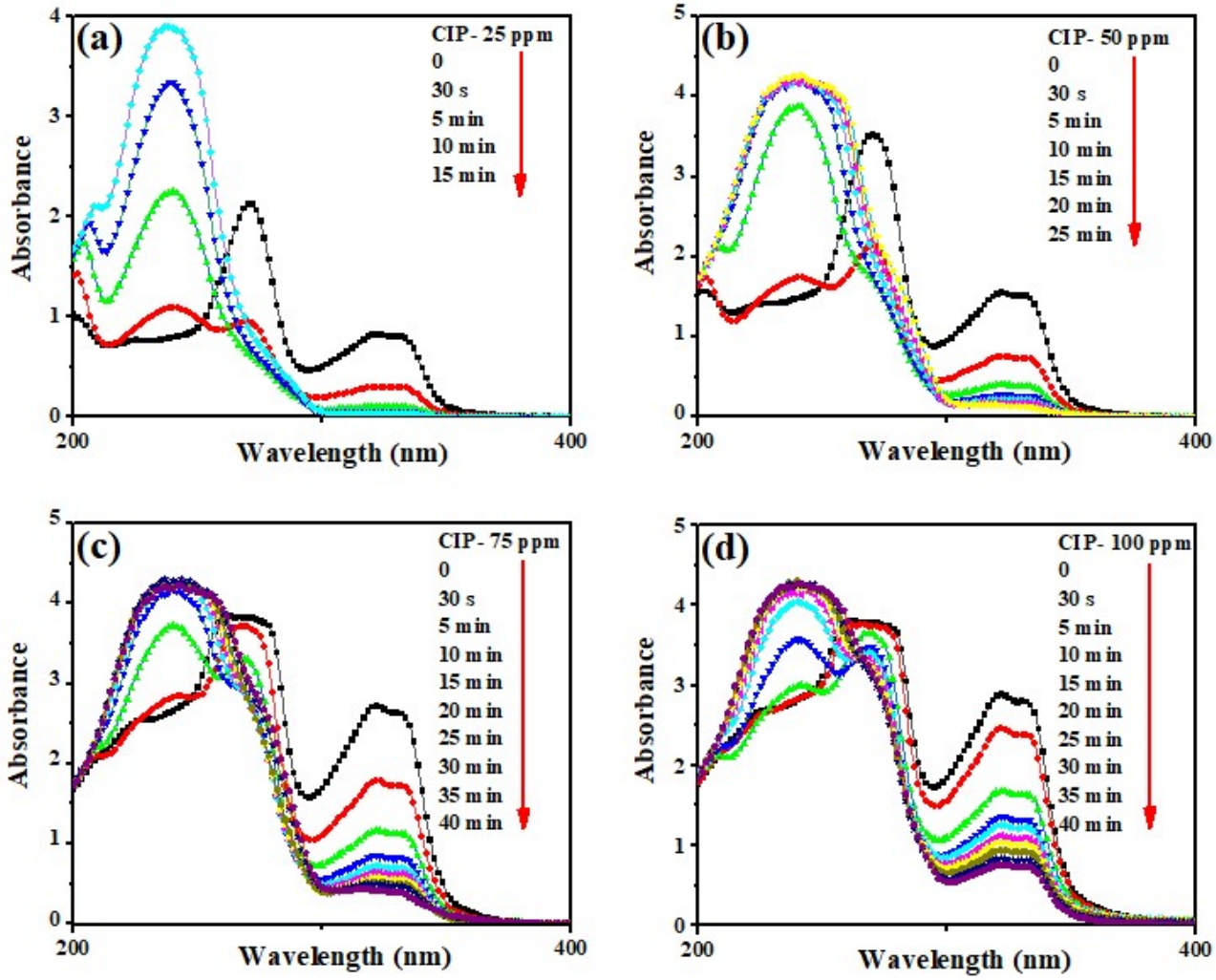

Fig. 7S The effect of different concentrations on the removal of CIP drug by LPOM@MIL-101(Cr)/CFO nanocomposite. Reaction conditions: $[drug]_0$= 25 mg l^{-1}; adsorbent dosage = 30 mg in 30 ml solution at ambient temperature.

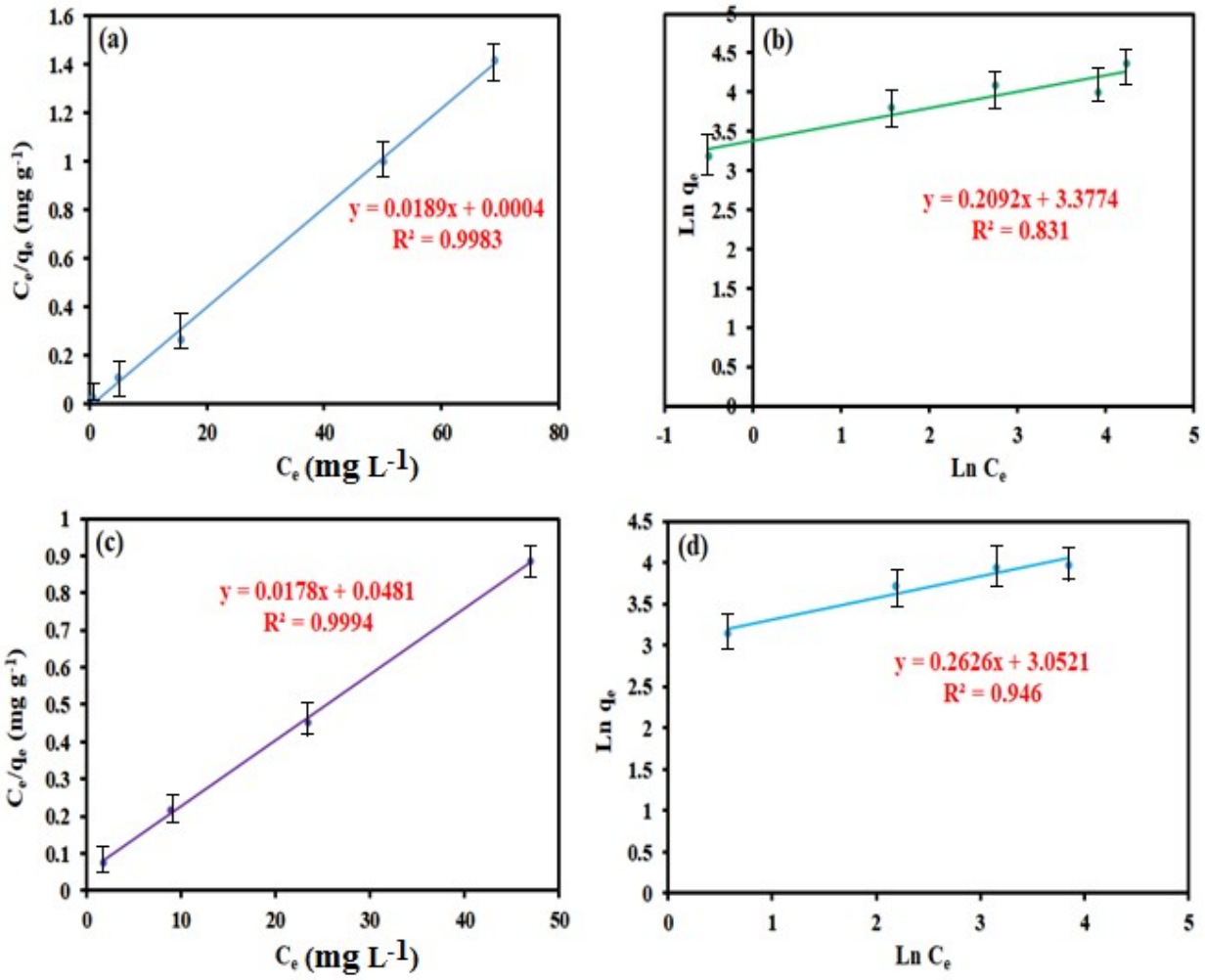

Fig. 8S (a,c) Langmuir isotherm and (b,d) Freundlich isotherm for adsorption of MB and CIP onto LPOM@MIL-101(Cr)/CFO nanocomposite. Error bars represent one standard deviation for three measurements.

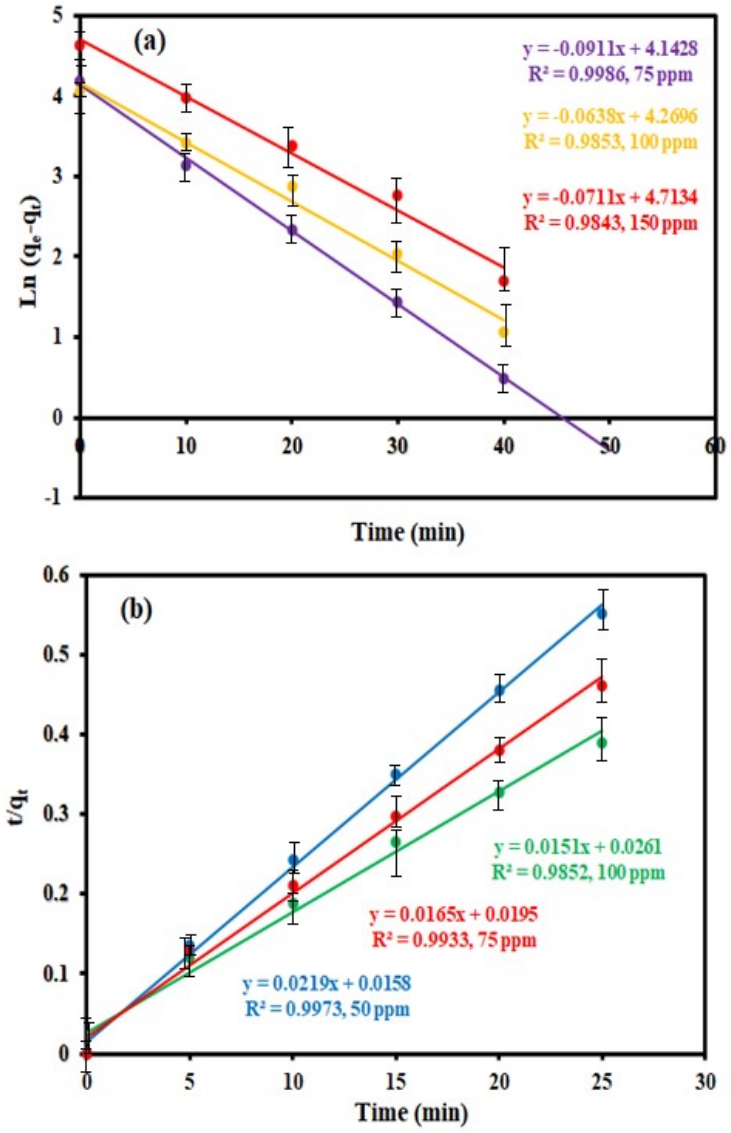

Fig. 9S (a) Pseudo- first- order kinetic for adsorption of MB, (b) pseudo- second- order kinetic for adsorption of CIP onto LPOM@MIL-101(Cr)/CFO nanocomposite. Error bars represent one standard deviation for three measurements.

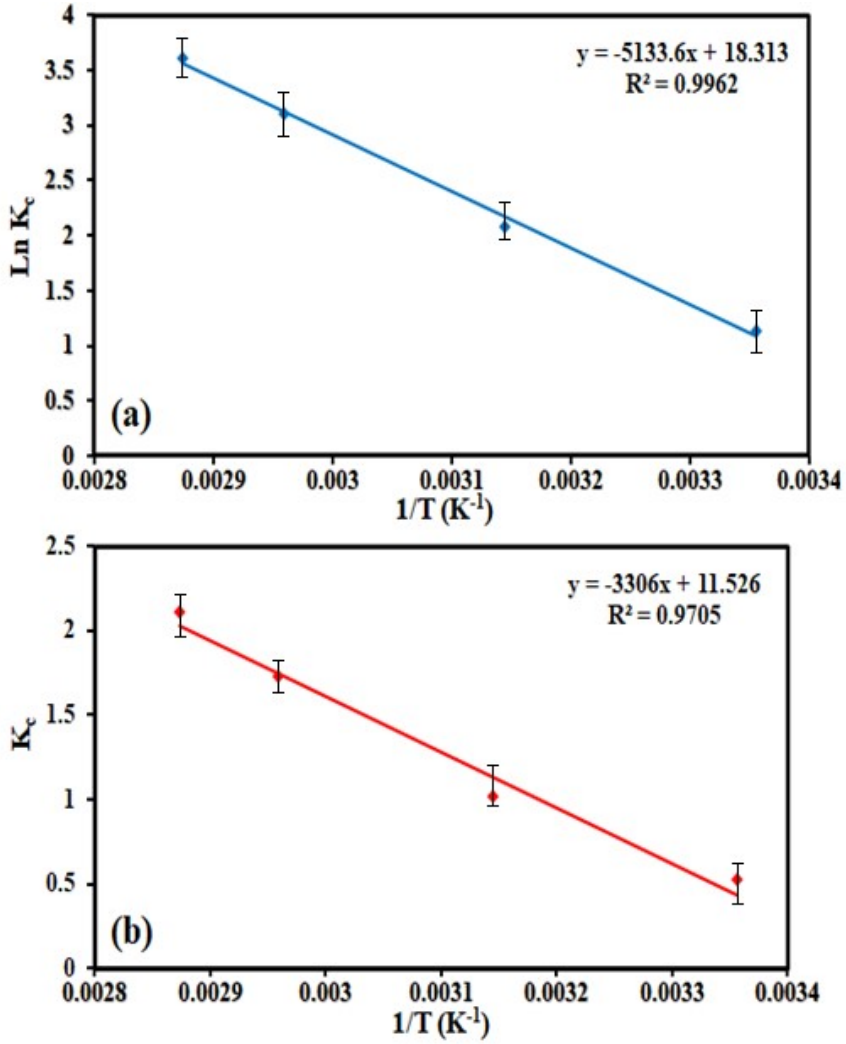

Fig. 10S Van't Hoff plots for the adsorption of (a) MB and (b) CIP on the LPOM@MIL-101(Cr)/CFO nanocomposite. Error bars represent one standard deviation for three measurements.