

Fig. S1 The full scan XPS survey spectrum of **BTA-BDSA-COF**.

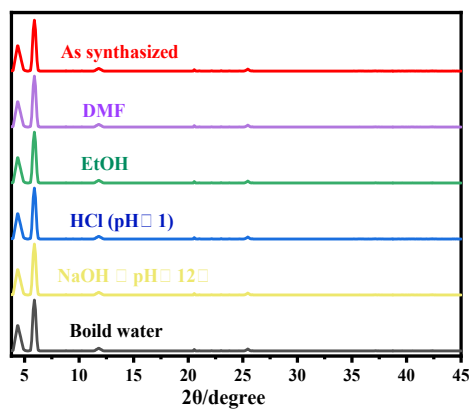


Fig. S2 PXRD patterns of **BTA-BDSA-COF** before and after treatment under the different conditions.

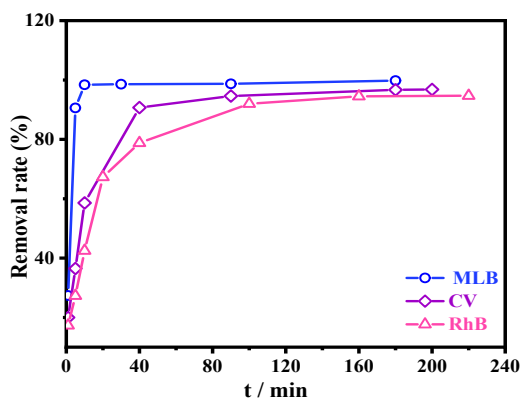


Fig. S3 **BTA-BDSA-COF** adsorption three Pseudo-second-order model.

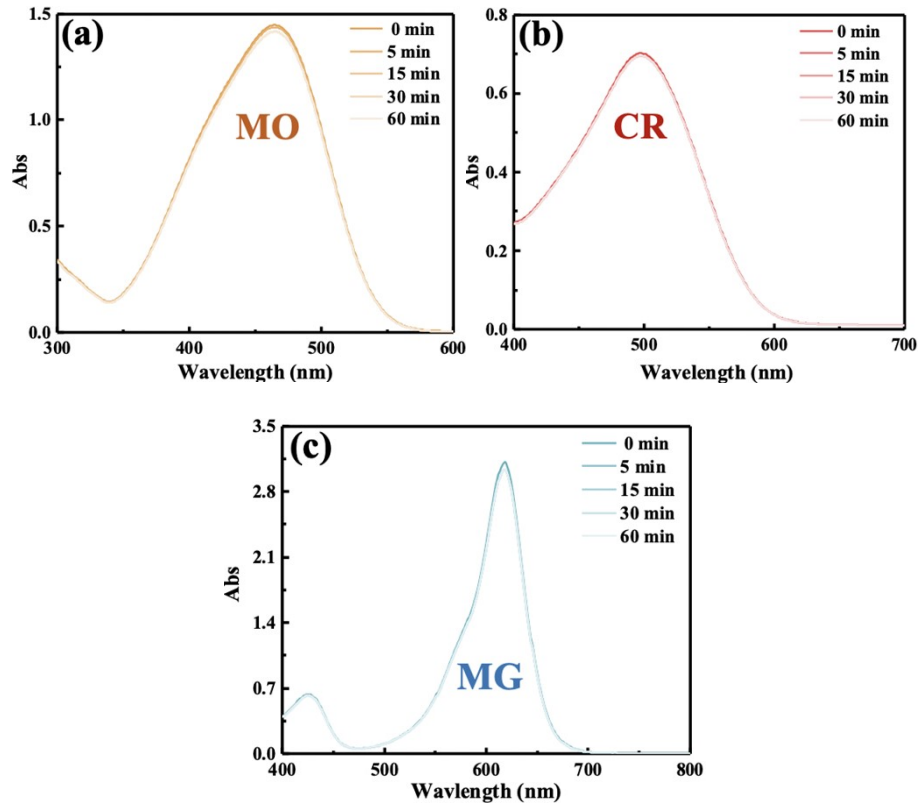


Fig. S4 UV-Vis absorption spectra of MO (a), CR (b) and MG (c) solutions with increasing adsorption time.

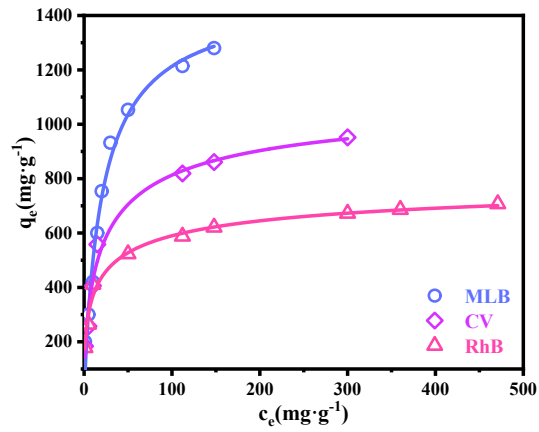


Fig. S5 Adsorption isotherms of BTA-BDSA-COF for MLB, CV and RhB.

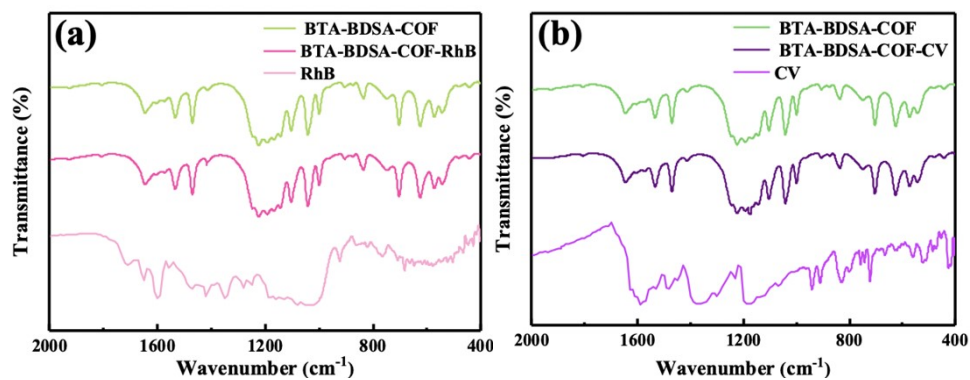


Fig. S6 FT-IR spectra of cationic dyes, **BTA-BDSA-COF** before and after adsorption of RhB(a) and CV (b).

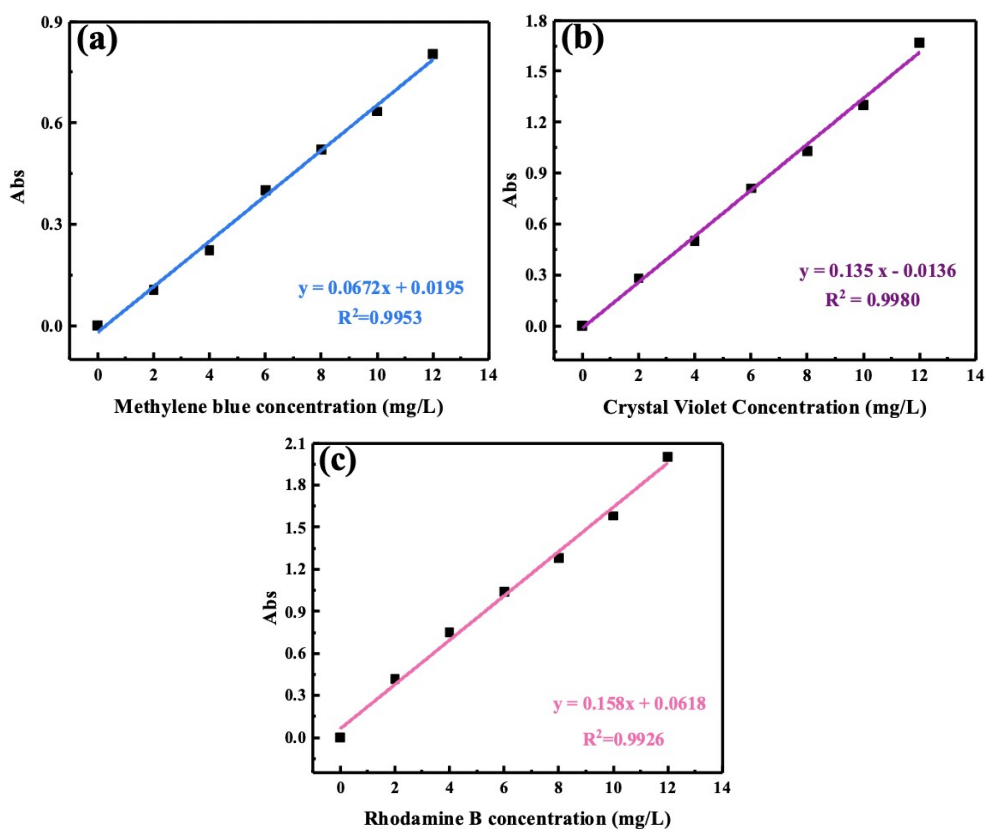


Fig. S7 Standard curves for MLB (a), CV (b), and RhB (c) dyes in water.