

**The efficient removal of diclofenac sodium and bromocresol green  
from aqueous solution by sea urchin-like Ni/Co-BTC bimetallic  
organic framework: adsorption isotherms, kinetics and mechanism**

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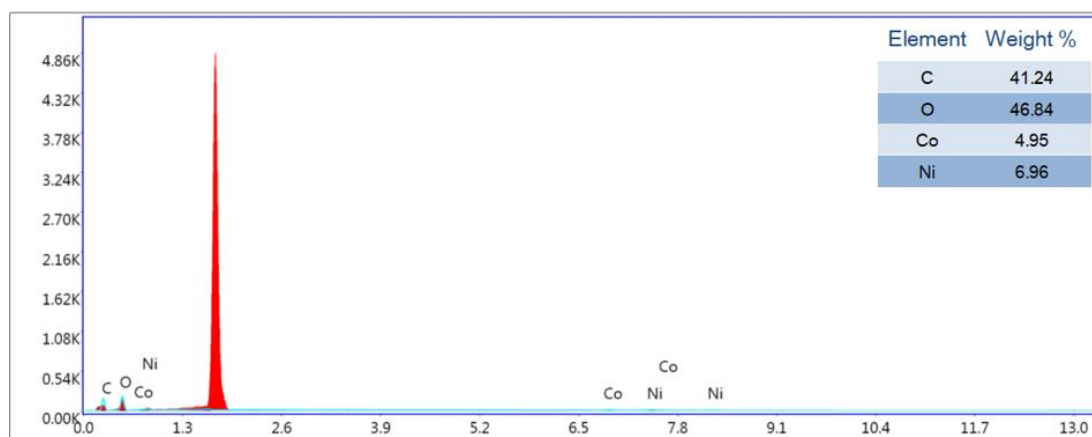


Fig. S1 EDX spectra of Ni/Co-BTC MOF.

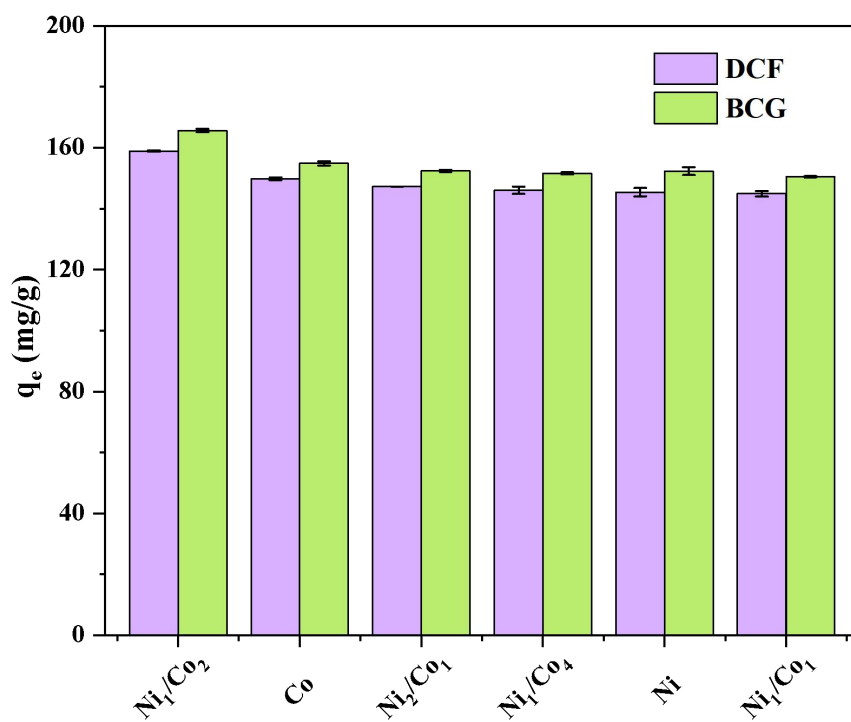


Fig. S2 Effect of Ni/Co molar ratio on adsorption of DCF and BCG on Ni/Co-BTC MOF.

Reaction conditions: DCF and BCG concentration = 100 mg/L, respectively; adsorbent loading =

0.5 g/L, temperature = 25°C, initial pH = 7.

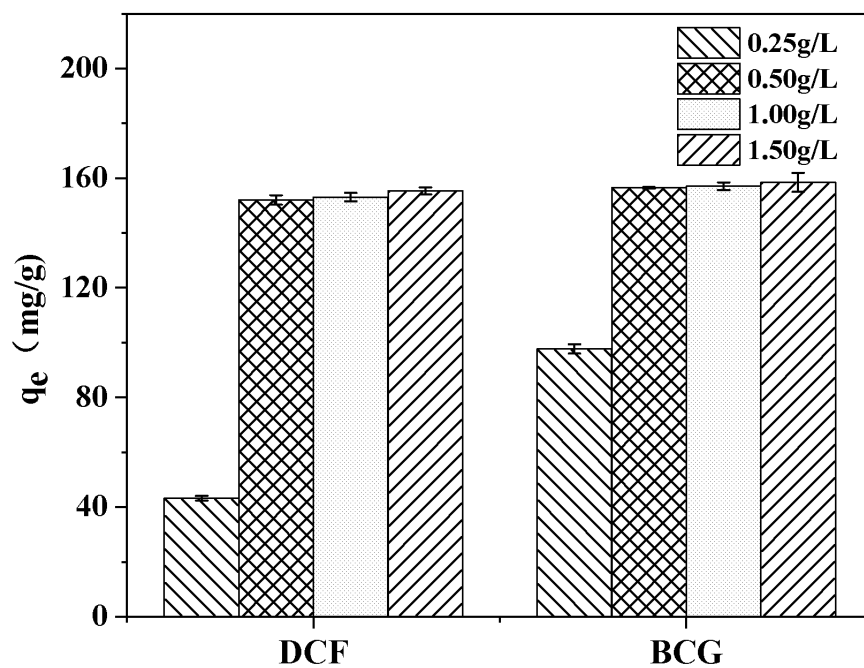


Fig. S3 Effect of adsorbent dosage on adsorption of DCF and BCG on Ni/Co-BTC MOF.

Reaction conditions: DCF and BCG concentration = 100 mg/L, respectively; temperature = 25°C,  
initial pH = 7.

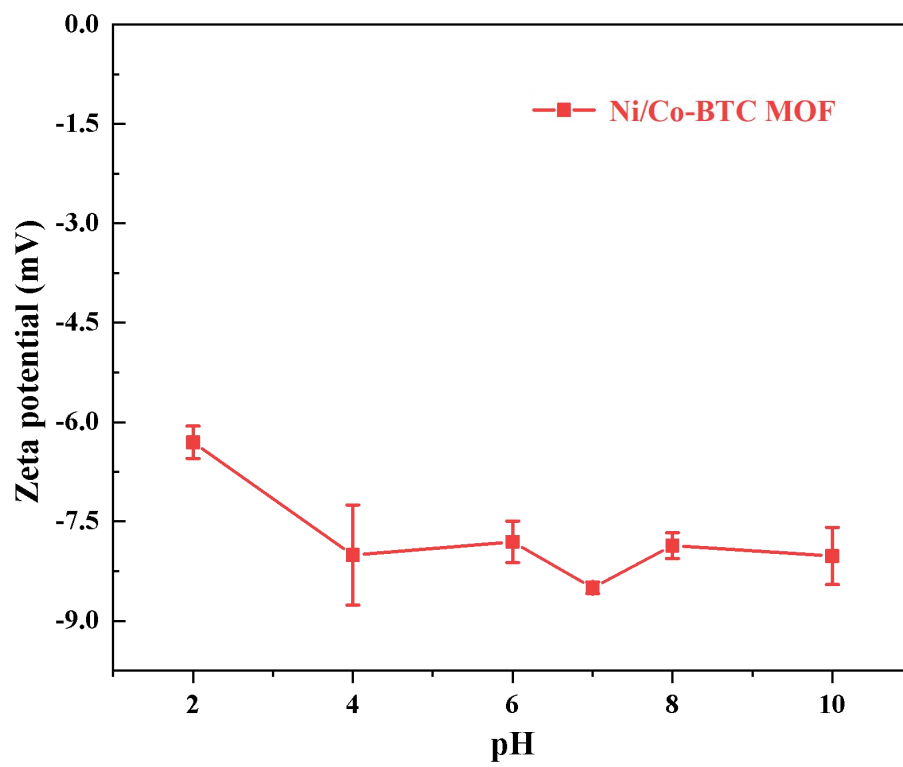


Fig. S4 The zeta potential of Ni/Co-BTC MOF at different pH.

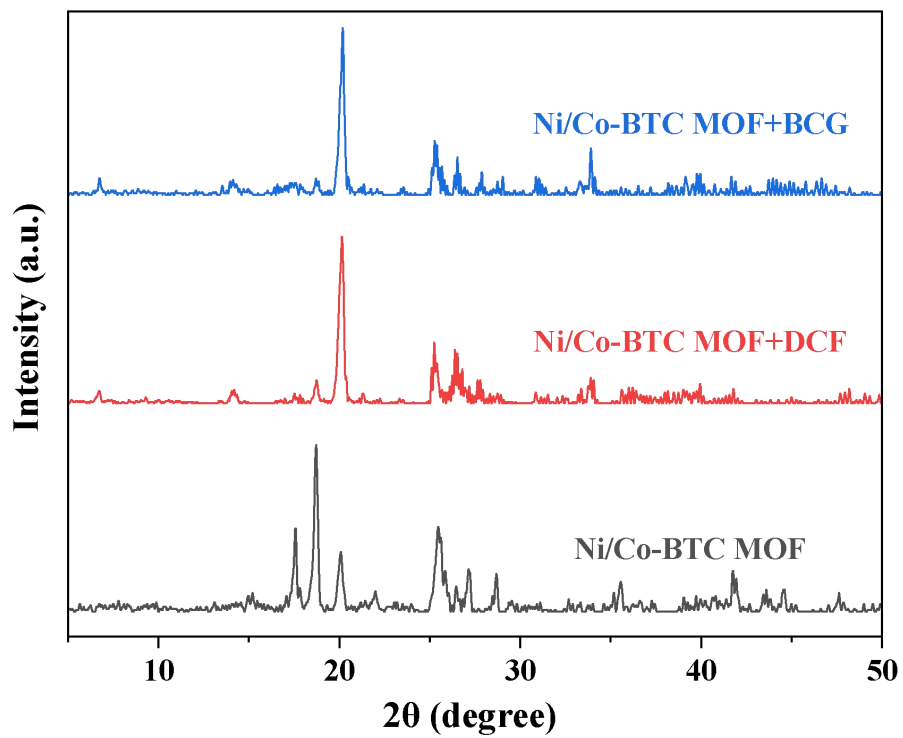


Fig. S5 XPS spectra of Ni/Co-BTC MOF before and after DCF and BCG adsorption. Reaction conditions: DCF and BCG concentration = 100mg/L, respectively; adsorbent loading = 0.5 g/L, temperature = 25°C, initial pH = 7.

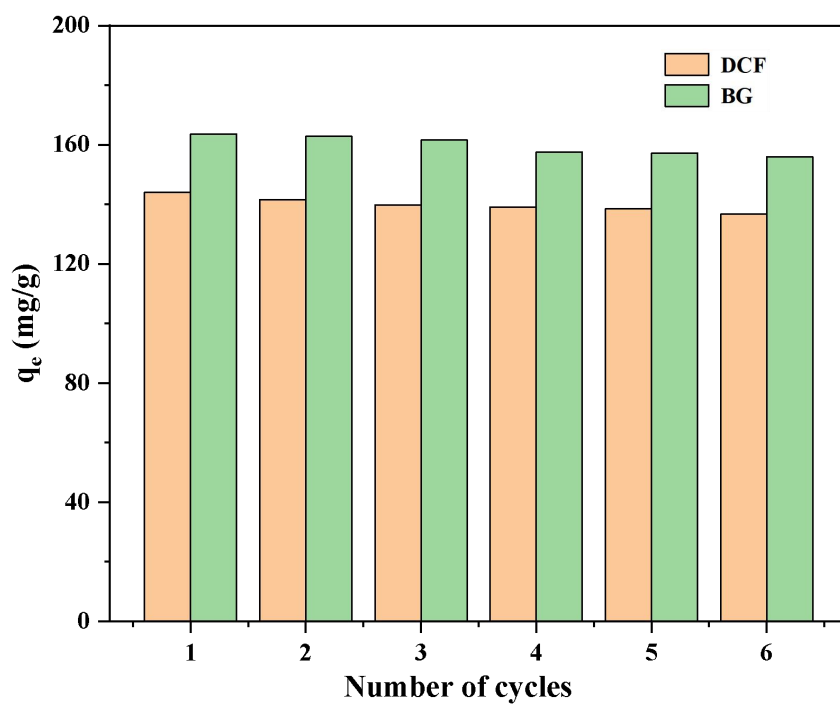


Fig. S6 Reusability of Ni/Co-BTC MOF for DCF and BCG adsorption. Reaction conditions: DCF and BCG concentration = 100mg/L, respectively; adsorbent loading = 0.5 g/L, temperature = 25°C, initial pH = 7.

Table.S1 Maximum adsorption capacities of DCF and BCG on other adsorbents

Pollutants	Adsorbent	Maximum adsorption capabilities (mg/g)	Ref.
DCF	Glutaraldehyde-modified silica/chitosan composites	237.8	1
	Plasma-based surface functionalization of palm fibers	31.08	2
	Fe <sub>3</sub> O <sub>4</sub> @MOF-100 (Fe)	377.36	3
	Ni <sub>0.5</sub> Zn <sub>0.5</sub> Fe <sub>2</sub> O <sub>4</sub>	52.91	4
	Sycamore ball activated carbon	178.89	5
	Ni/Co-BTC MOF	343.05	This study
BCG	Cotton stalks activated carbon	222.22	6
	Phragmites karka	392.3	7
	ZnO-NRs-AC	57.80	8
	Cd(OH) <sub>2</sub> -NW-AC	108.7	9
	ZIF-11	150	10
	Poly (1,2-epoxy-3-phenoxy) propane	52.63	11
	Ni/Co-BTC MOF	569.29	This study

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