

Supporting information for

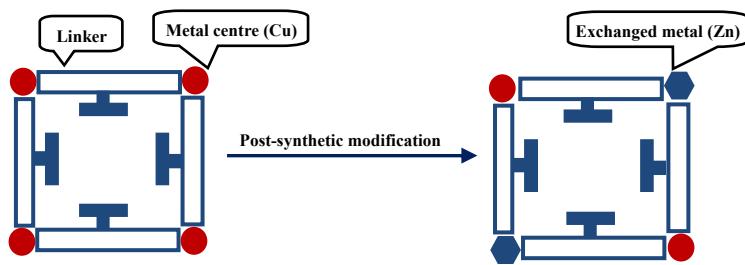
**Enhanced Adsorption of Dibenzothiophene with Zinc/Copper-Based
Metal-Organic Frameworks**

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Scheme S.I.1. Substitution some of the copper metal centre by zinc metal in a post-synthetic modification reaction

Table S.I. captions:

Table S.I.1 Textural properties of Cu-BTC and Zn/Cu-BTC.

Table S.I.2 Sulfur capacity of different composite adsorbents at ambient temperature and pressure.

Table S.I.1 Textural properties of Cu-BTC and Zn/Cu-BTC.

Samples	BET surface area (m ² /g)	Pore volume (cm ³ /g)
Cu-BTC	1386	0.62
Zn35/Cu-BTC	1245	0.59
Zn55/Cu-BTC	1103	0.57
Zn75/Cu-BTC	1082	0.52

Table S.I.2 Sulfur capacity of different composite adsorbents at ambient temperature and pressure

Adsorbent	ALO		ARO		MIO		Reference
	B.C., wt %	S.C., wt %	B.C., wt %	S.C., wt %	B.C., wt %	S.C., wt %	
Cu-BTC	3.21	6.15	2.68	3.85	2.97	4.82	This work
Zn35/Cu-BTC	6.78	9.62	4.42	5.22	5.61	6.31	This work
Zn75/Cu-BTC	9.38	10.39	4.72	5.51	6.68	7.36	This work
Zn55/Cu-BTC	9.93	11.89	4.98	5.92	7.21	7.93	This work
MOF-5/Cu(I)	9.42	10.94	3.96	4.84	6.16	6.82	[4]
Zeolite-Y/Cu(I)	5.50	7.54	0.61	1.73	0.70	1.41	[38]
A.C./Cu(I)	2.65	6.15	1.12	3.91	1.61	2.06	[37]
SBA-15/Cu(I)	6.48	8.52	1.14	3.92	0.95	2.11	[37]

B.C.: Breakthrough capacity, wt %; S.C.:Saturation capacity, wt %.

Figure captions:

Fig. S.I.1 XRD patterns of Zn55/Cu-BTC before and after adsorption/desorption experiment

Fig. S.I.2 N₂ adsorption–desorption isotherms of Zn55/Cu-BTC before and after adsorption/desorption experiment.

Fig. S.I.3 Pore size distribution of Zn55/Cu-BTC before and after adsorption/desorption experiment.

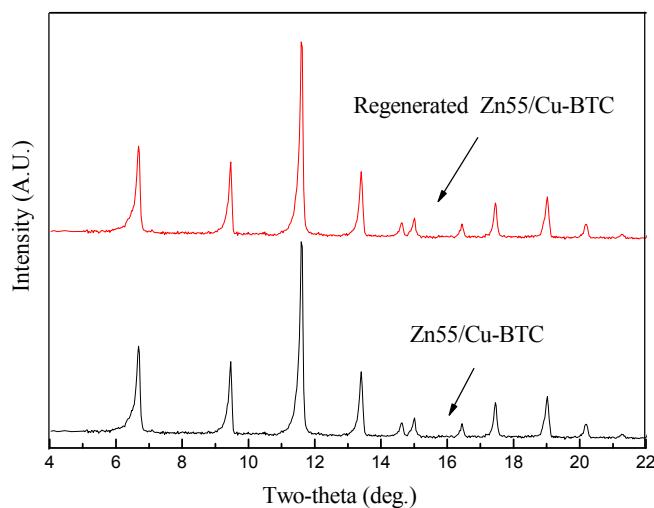


Fig. S.I.1 XRD patterns of Zn55/Cu-BTC before and after adsorption/desorption experiment.

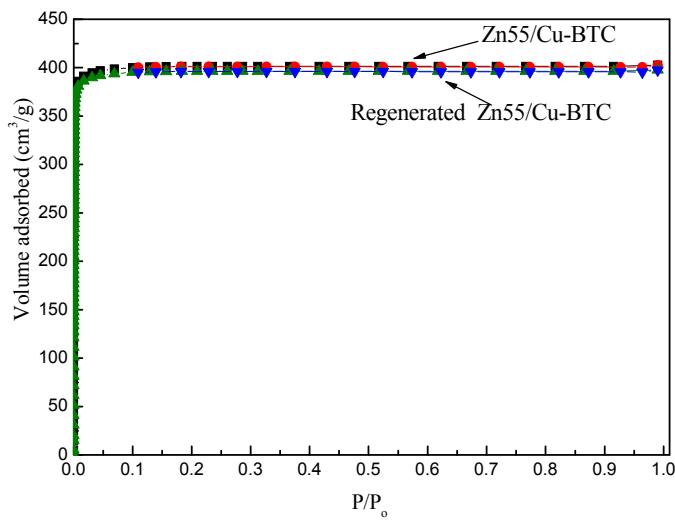


Fig. S.I.2 N₂ adsorption–desorption isotherms of Zn55/Cu-BTC before and after adsorption/desorption experiment.

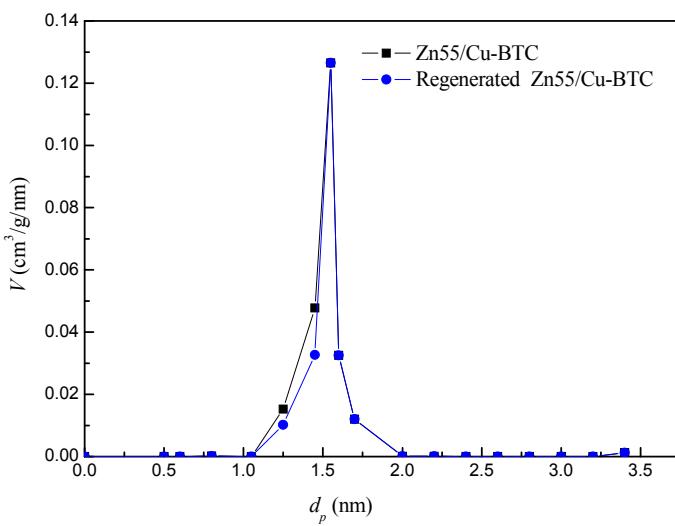


Fig. S.I.3 Pore size distribution of Zn55/Cu-BTC before and after adsorption/desorption experiment.