Supporting Information

A hydrostable anionic zinc-organic framework carrier with a bcu topology for drug delivery

Jun Wang,[‡] Deyun Ma,,[†] Weilin Liao,[†] Shujun Li,[†] Manfei Huang,[†] Huimin Liu,[†] Yifei Wang,[†] Rui Xie,[†] and Jun Xu,*,[‡]*

[†]School of Food and Pharmaceutical Engineering, Zhaoqing University, Zhaoqing 526061, P. R. China. Fax: +86-758-2716-357; Tel: +86-758-2716-447; E-mail: mady@zqu.edu.cn

[‡] College of Medicine, Jinan University, Guangzhou 510632, P. R. China. E-mail: goldstar_8209@163.com

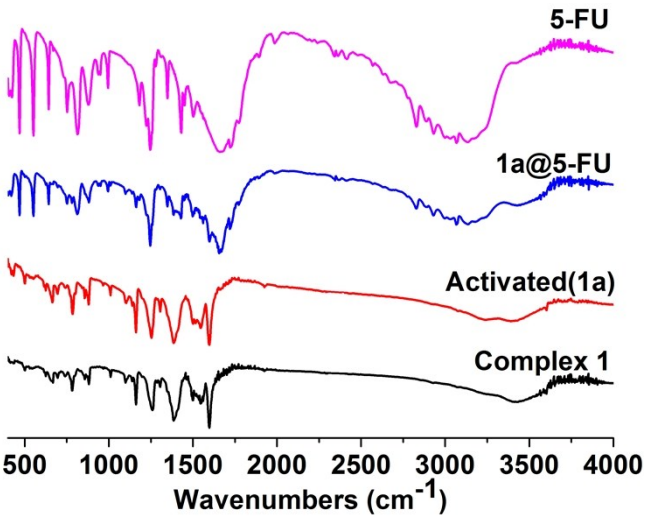

Figure S1. IR spectra of **1**, **1a**, **5-FU** and **1a@5-FU**.

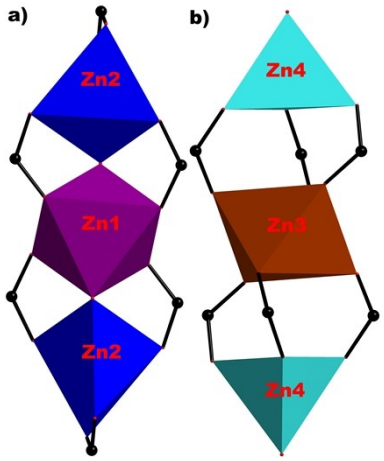

Figure S2. Polyhedral representations of the $[Zn_3(\mu_2\text{-}OOC_{bridging})_4(\mu_2\text{-}OC_{bridging})_2(\mu\text{-}OOC_{chelating})_2]$ (a) and $[Zn_3(\mu_2\text{-}OOC_{bridging})_6\ (\mu\text{-}OOC)_2]$ (b) SBUs of **1**.

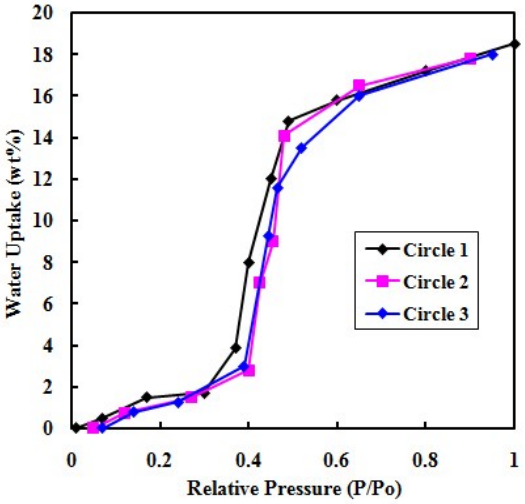

Figure S3. Reusability of **1a** for H_2O vapor adsorption at 298 K.

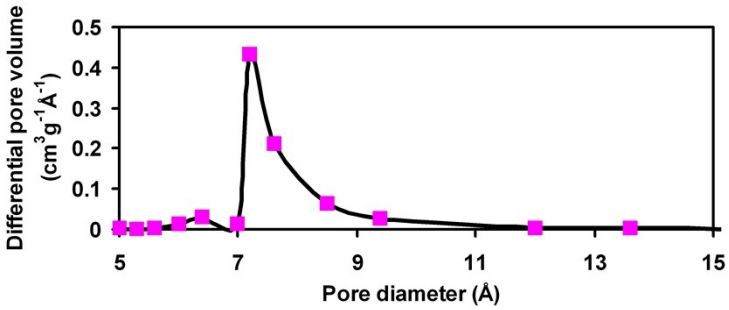

Figure S4. Micropore size distributions of **1** based on HK model.

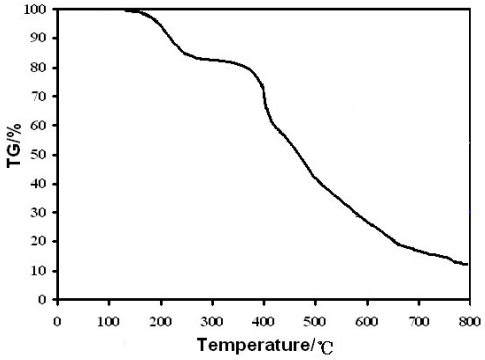

Figure S5. Thermogravimetric analysis of the 5-FU-loaded **1a.**

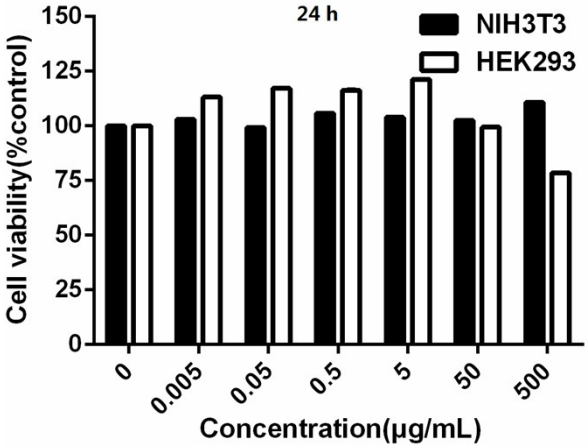

Figure S6. MTT toxicity assays of **1** on HEK-293 and NIH-3T3 cells of 24 h.

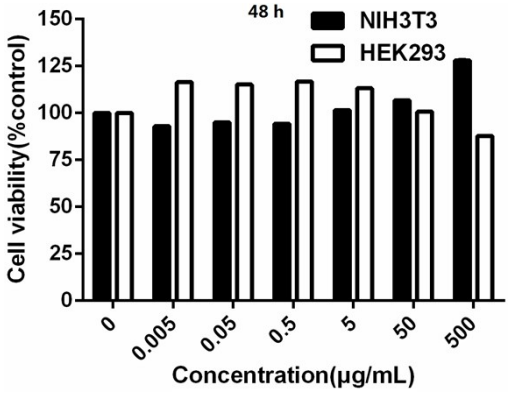

Figure S7. MTT toxicity assays of 1 on HEK-293 and NIH-3T3 cells of 48h.

Table S1 Selected bond length and angles of **1**

		1	
Zn1-O5^{i}	2.064(4)	Zn1-O7^{i}	2.102(4)
Zn1-O11^{i}	2.124(4)	Zn2-O20^{ii}	2.101(5)
Zn2-O19	2.276(5)ii	Zn3-O1^{iii}	2.081(4)
Zn3-O1^{iv}	2.081(4)	Zn3-O15^{v}	2.093(4)
Zn3-O16^{v}	2.113(4)	Zn4-O14^{v}	1.952(5)
Zn4-O2^{iv}	1.953(5)	Zn4-O9^{vi}	1.962(4)
O5^{i}-Zn1-O5	180.0	O5-Zn1-O7	95.03(17)
O5^{i}-Zn1-O11	89.30(16)	O7-Zn1-O11	90.49(16)
O6-Zn2-O4	120.79(19)	O4-Zn2-O11	98.03(16)
O11-Zn2-O20^{ii}	99.27(19)	O20^{ii}-Zn2-O19^{ii}	58.79(19)
O1^{iii}-Zn3-O15^{v}	93.74(18)	O1^{iv}-Zn3-O16^{v}	86.59(17)
O15^{v}-Zn3-O16^{v}	83.50(16)	O1^{iii}-Zn3-O16	86.59(17)
O17-Zn4-O14^{v}	121.35(19)	O17-Zn4-O2iv	110.3(2)
O17-Zn4-O9^{vi}	108.04(19)	O2^{iv}-Zn4-O9^{vi}	99.85(19)

Symmetry codes: i = -x, -y, -z; ii x, -1+y, z; iii x, 1+y, 1+z; iv 1-x, -y, -z; v 1-x, 1-y, 1-z; vi 1+x, 1+y, z.

Table S2 The encapsulation efficiency of 5-FU affected by the 5-FU/material weight ratio

5-FU/material weight ratio	1:1	1:2	1:3	2:1	2:3	3:1	3:2
Contact times (min)	5/10/20/30	5/10/20/30	5/10/20/30	5/10/20/30	5/10/20/30	5/10/20/30	5/10/20/30
Encapsulation efficiency (wt%)	4.01/9.12 /7.94/8.23	6.84/11.12 /10.82/9.55	14.46/17.18 /15.90/14.11	7.67/10.21 /9.74/8.23	10.38/15.10 /13.86/12.72	6.87/8.12 /7.89/7.02	4.07/7.89 /5.01/4.12