

Supporting Information

An integrated targeting drug delivery system based on the hybridization of graphdiyne and MOFs for visualized cancer diagnosis and therapy

Zhongbo Xue,^a Mengyao Zhu,^a Yuze Dong,^a Tong Feng,^a Zhuozhi Chen,^b Yaqing Feng,^a Zhongqiang Shan,^a Jialiang Xu^{*a,c} and Shuxian Meng^{*a}

^a School of Chemical Engineering and Technology, Tianjin University, Yaguan Road 135, Tianjin 300050, P.R. China. Email: msxmail@tju.edu.cn

^b School of Life Sciences, Tianjin University, Weijin Road 92, Tianjin 300072, P.R. China. Email: zhuozhichen@tju.edu.cn

^c School of Materials Science and Engineering, Nankai University, Tongyan Road 38, Tianjin 300350, P.R. China. Email: jialiang.xu@nankai.edu.cn

functional group	compound	IR absorption regions/cm ⁻¹				
		4000~2500	2500~2000	2000~1500	1500~900	Below 900
R-NH ₂	UIO-66-NH ₂ FUGY	3348 3458				
C=C	GDY FUGY			1603	1449	
C≡C	GDY FUGY		2122 2207			
-CONH-	FUGY	3100(N-H)		1648(I)	1207(II)	

Tab. S1 The vibrational modes of UIO-66-NH₂, GDY and FUGY

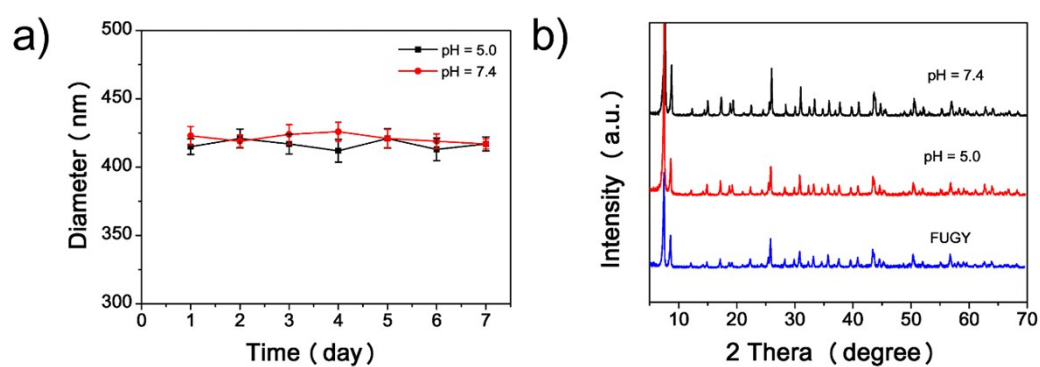


Fig. S1 The particle sizes (a) and PXRD patterns (b) of FUGY after immersion in solutions with different pH for one week.

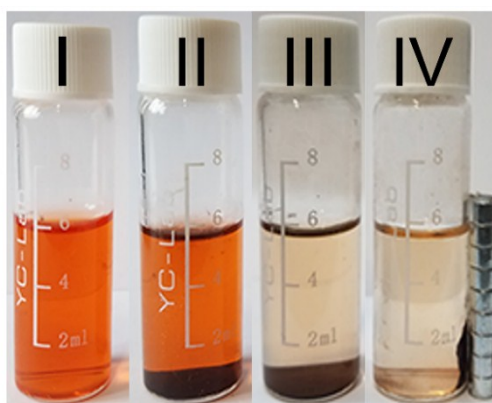


Fig. S2 Drug loading process (I ~III) and targeting effect (IV) of FUGY.

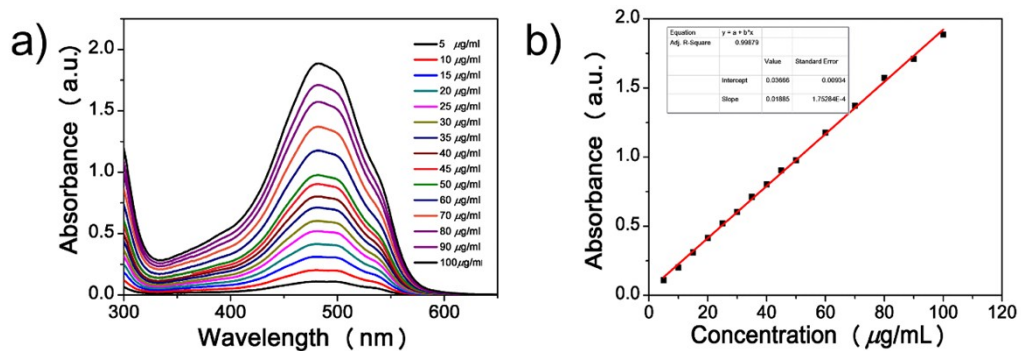


Fig. S3 (a) UV-vis spectra of doxorubicin (DOX) under different content. (b) Standard curve of DOX from UV-vis spectra.

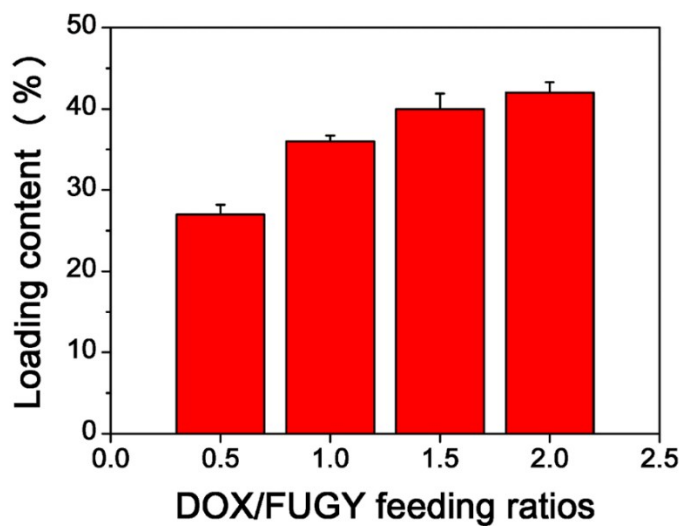


Fig. S4 Loading content of FUGY/DOX at different initial DOX/FUGY feeding ratios.

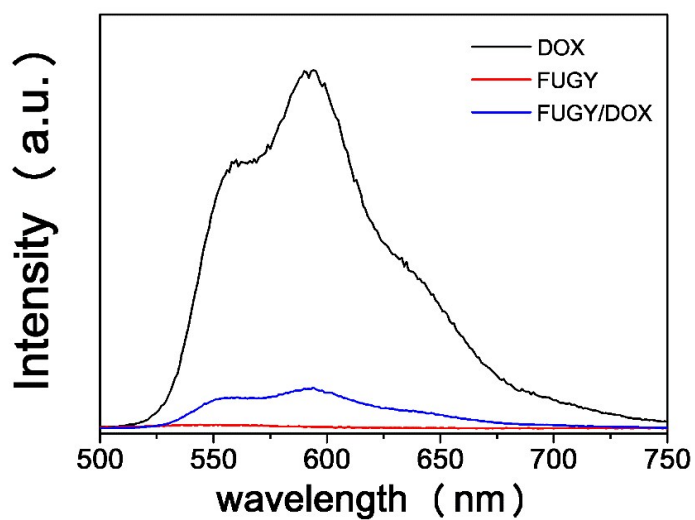


Fig. S5 Fluorescence spectra of DOX, FUGY, and FUGY/DOX.

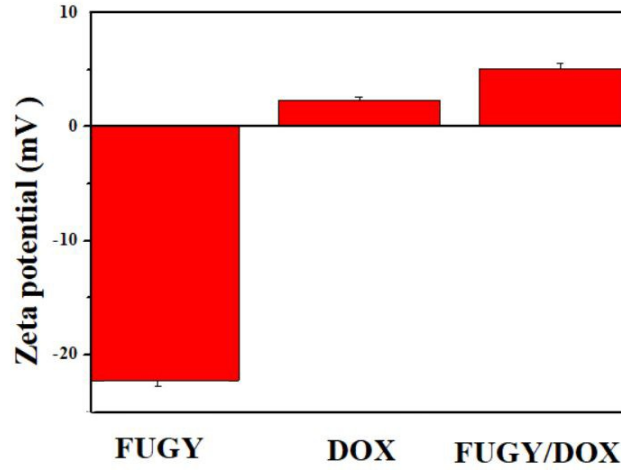


Fig. S6 Zeta potential of FUGY, DOX and FUGY/DOX.

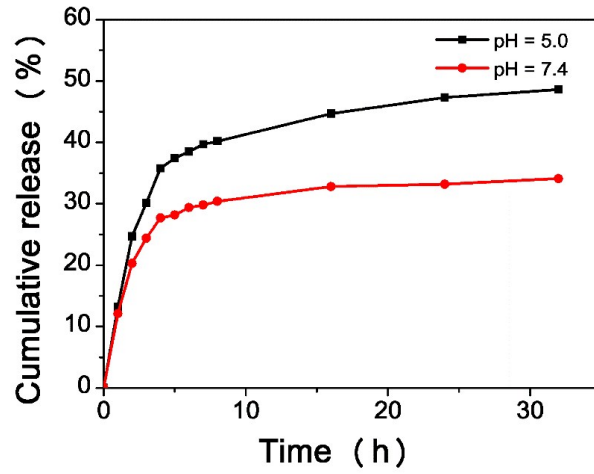


Fig. S7 DOX released from FUGY/DOX at pH 5.0 and 7.4.

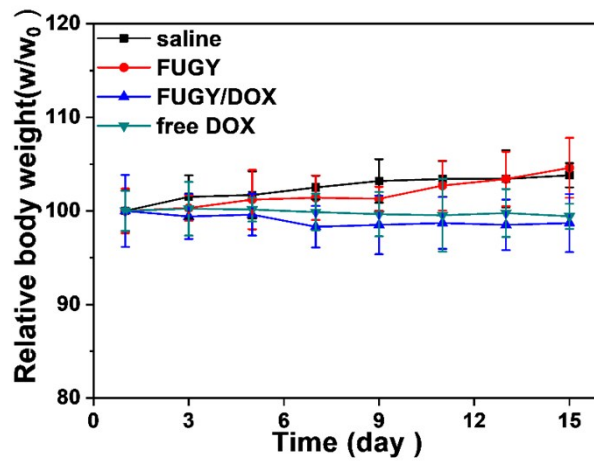


Fig. S8 Changes in relative body weights of four groups.