

## Supporting Information

# Modified Biomimetic Core-Shell Nanostructure Enable Long Circulation and Targeted Delivery For Cancer Therapy

Yifan Zhang <sup>a</sup>, Enrico Benassi <sup>a,b</sup>, Yue Shi <sup>c</sup>, Xuanyu Yue <sup>d</sup>, Lin Cui <sup>a</sup>, Shengchao  
Yang<sup>a,\*</sup>, Zhiyong Liu <sup>a,\*</sup>, Xuhong Guo <sup>a,e</sup>

*<sup>a</sup>School of Chemistry and Chemical Engineering, Shihezi University/ Key Laboratory of Green Process for Chemical Engineering / Key Laboratory for Chemical Materials of Xinjiang Uygur Autonomous Region / Engineering Center for Chemical Materials of Xinjiang Bingtuan, Shihezi University, Xinjiang, Shihezi 832003, China.*

*<sup>b</sup>Novosibirsk State University, Novosibirsk, 630090, Russia.*

*<sup>c</sup>Shenzhen Key Laboratory of Biomimetic Materials and Cellular Immunomodulation, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, Guangdong 518055, China*

*<sup>d</sup>Research Institute of Photocatalysis, State Key Laboratory of Photocatalysis on Energy and Environment, Fuzhou University, Fuzhou, 350002, China.*

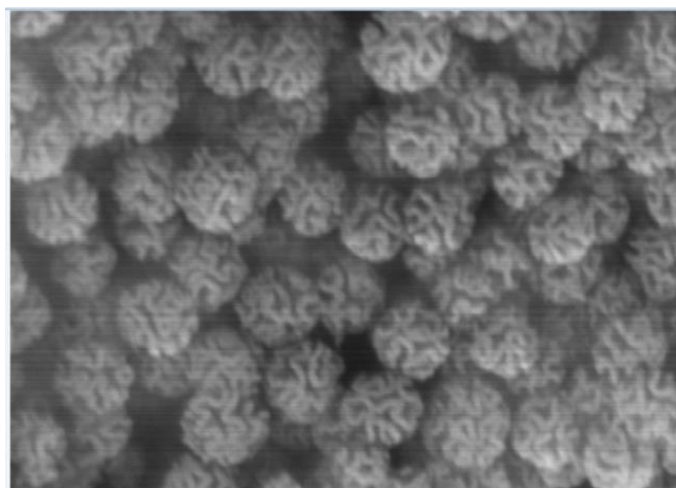
*<sup>e</sup>State Key Laboratory of Chemical Engineering, East China University of Science and Technology, Shanghai 200237, P. R. China.*

\* Corresponding author: Zhiyong Liu, Shengchao Yang.

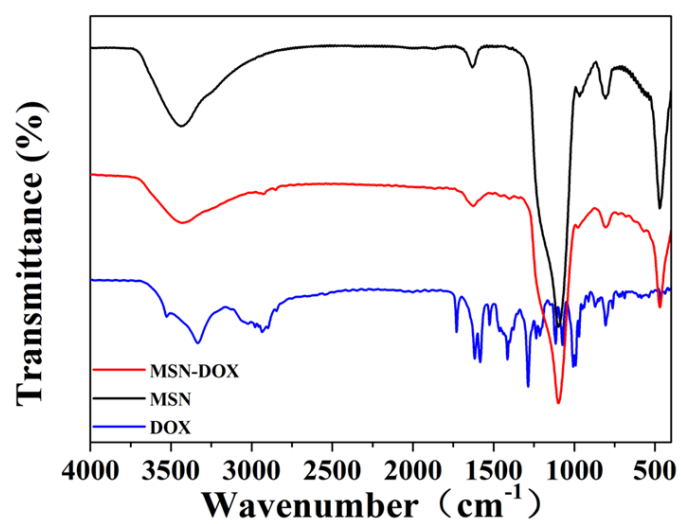
Address: Beisi Road, Shihezi City, Xinjiang, 832003, P. R. China.

Tel: 13677533280, 16609932906.

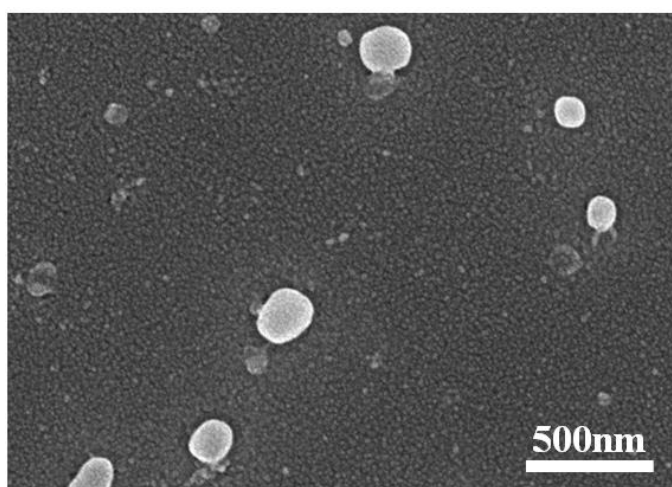
E-mail Address: lzyongclin@sina.com(Zhiyong Liu), shengchao.yang@shzu.edu.cn  
(Shengchao Yang).



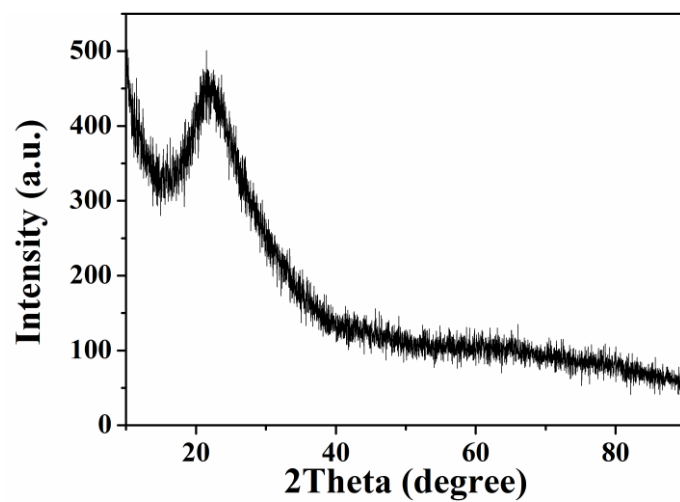
**Fig. S1** SEM images of MSN-1 and Bio-RBCm@MSN-DOX.



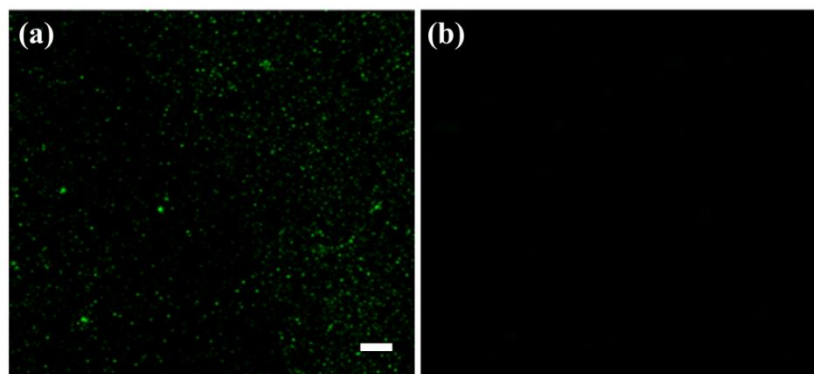
**Fig. S2** FT-IR spectra of MSN, DOX, MSN-DOX.



**Fig. S3** SEM images of Bio-RBCm@MSN-DOX, scale bar=500 nm.



**Fig. S4** XRD spectrum of MSN-1.



**Fig. S5** CLSM images of Bio-RBCm@MSN(a) and MSN(b) labeled by the cell membrane dye DiO. Scale bar is 5  $\mu\text{m}$ .