Electronic Supplementary Material (ESI) for RSC Advances. This journal is © The Royal Society of Chemistry 2016

## Near-infrared light induced imaging and targeted anti-cancer therapy based on a yolk/shell structure

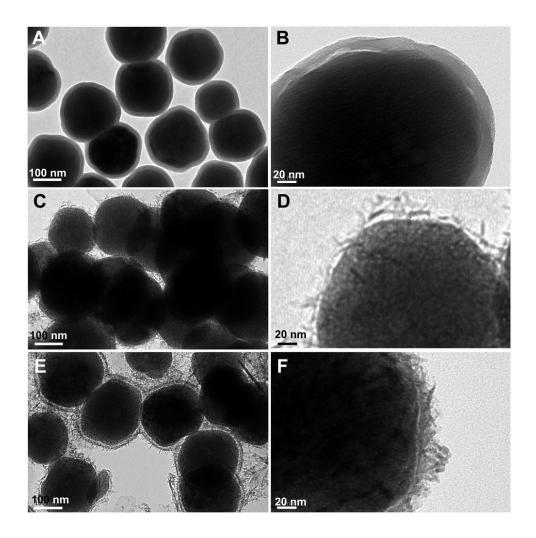
Ruichan Lv,<sup>a,b</sup> Chongna Zhong,<sup>b</sup> Arif Kuhan Gulzar,<sup>b</sup> Fei He,<sup>b</sup> Rui Gu,<sup>a,\*</sup> Shili Gai,<sup>b</sup> Shenghuan Zhang,<sup>b</sup> Guixin Yang,<sup>b</sup> and Piaoping Yang<sup>b,\*</sup>

<sup>a</sup> Department of Orthopedics, China-Japan Union Hospital of Jilin University, Changchun, 130033,

P. R. China, <sup>b</sup> Key Laboratory of Superlight Materials and Surface Technology, Ministry of

Education, College of Material Sciences and Chemical Engineering, Harbin Engineering

University, Harbin, 150001, P. R. China



**Fig. S1** TEM images of the samples prepared at different synthesized times of 0 h (A, B), 6 h (C, D), and 12 h (E, F).

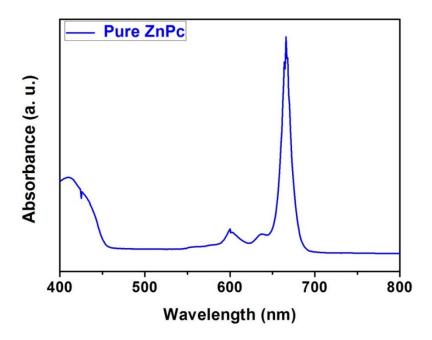
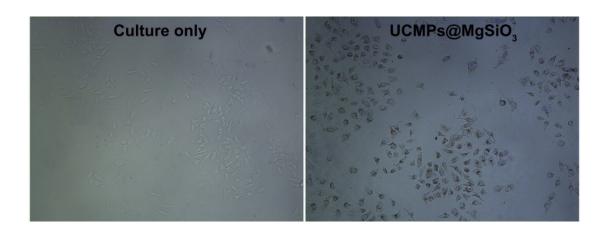


Fig. S2 The UV-vis absorbance spectrum of pure ZnPc.



**Fig. S3** The microscope images of L929 cells incubated with culture only and with UCMPs@MgSiO<sub>3</sub> spheres.

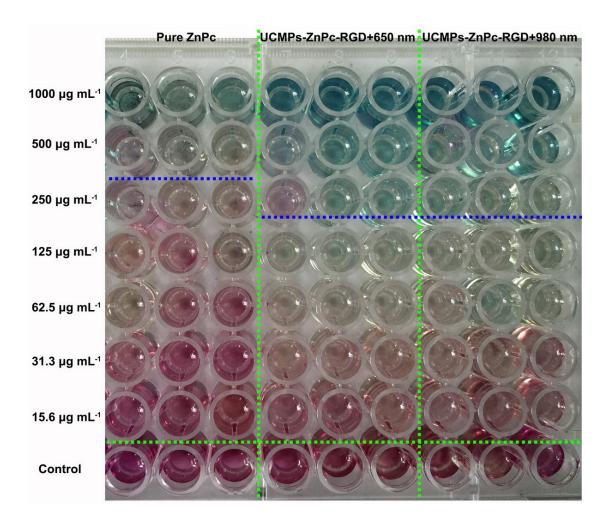
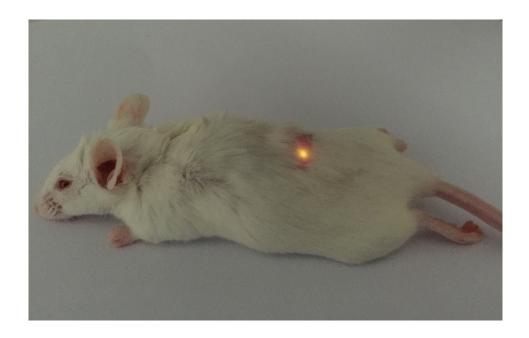


Fig. S4 Photograph of the plate using for MTT assay with HeLa cells after treatment.



**Fig. S5** The photograph of mouse after subcutaneously injected with UCMPs-ZnPc-RGD under 980 nm irradiation.

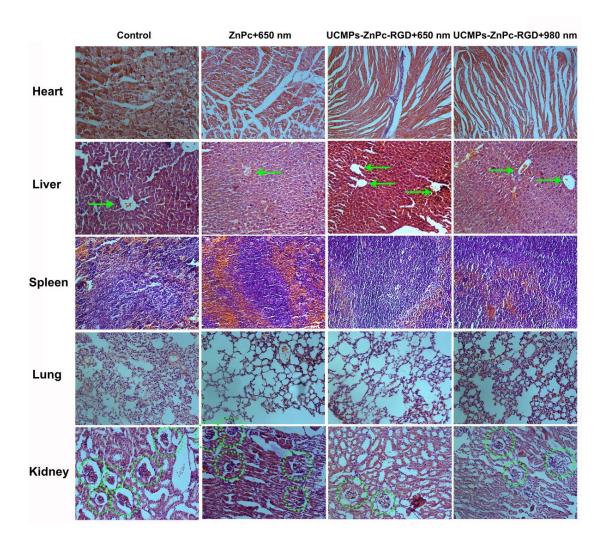


Fig. S6 H&E stained images of typical tissues obtained after 14 days of treatment.