

## Supporting information

### *Persistent luminescence nanoparticles with high intensity for colorectal cancer surgery navigation and precision resection*

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## Table of contents

### 1. Results and Discussion

- Figure S1. The scheme of MOF-template method for ZGC preparation<sup>1</sup>
- Figure S2. The FT-IR of ZGC-NH<sub>2</sub>
- Figure S3. Linear plot of folic acid concentration versus absorbance values with the corresponding linear regression fit ( $R^2=0.99$ )
- Figure S4. The comparison of PersL curve of ZGC and ZGC-NH<sub>2</sub>
- Figure S5. The comparison of PersL curve of ZGC and ZGC-FA
- Figure S6. The photostability of ZGC-FA under repeated white light excitation.
- Figure S7. The cytotoxicity of ZGC and ZGC-FA
- Figure S8. The spectrum of commercial LED lights.
- Figure S9. The signal-to-noise (SNR) ratio in PersL imaging of mouse tumor (yellow: tumor; blue: noise; The SNR is 23.9)

## Results and discussion

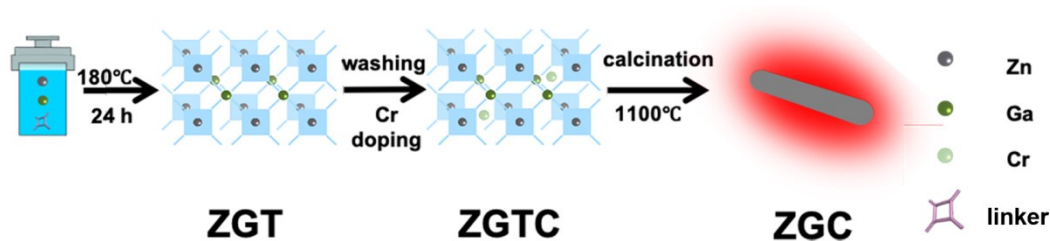


Figure S1. The scheme of MOF-template method for ZGC preparation<sup>1</sup>

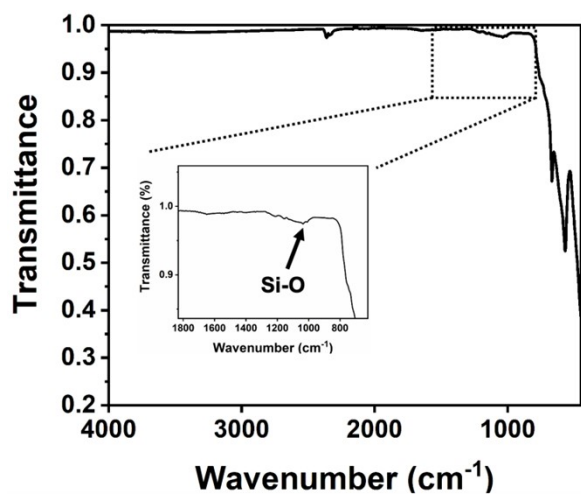


Figure S2. The FT-IR of ZGC-NH<sub>2</sub>

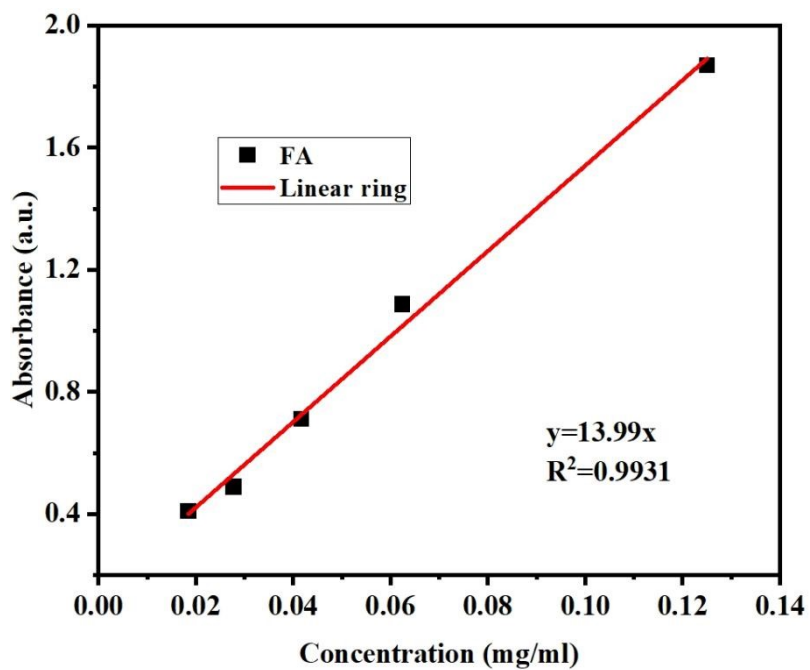


Figure S3. Linear plot of folic acid concentration versus absorbance values with the corresponding linear regression fit ( $R^2=0.99$ )

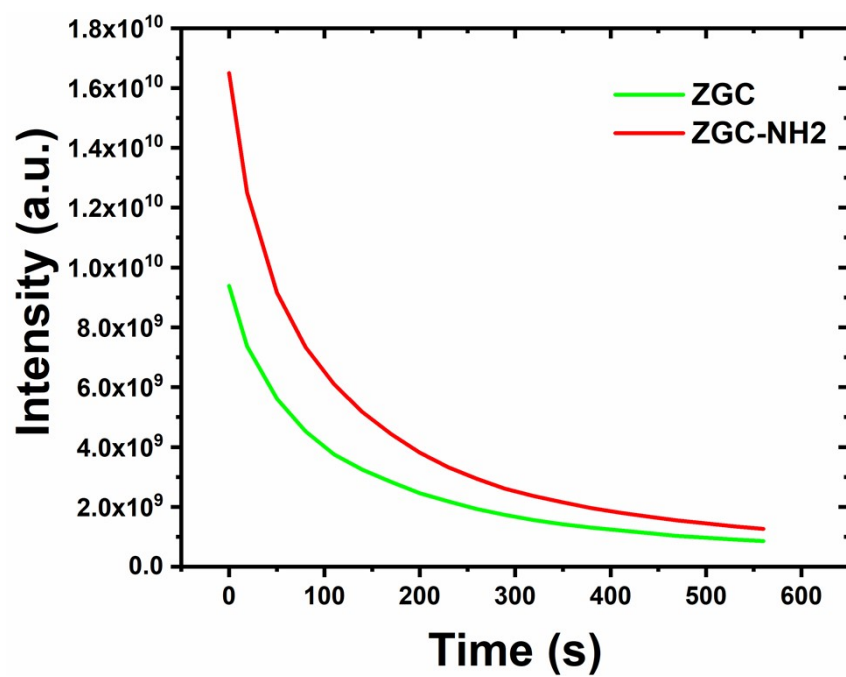


Figure S4. The comparison of PersL curve of ZGC and ZGC-NH<sub>2</sub>

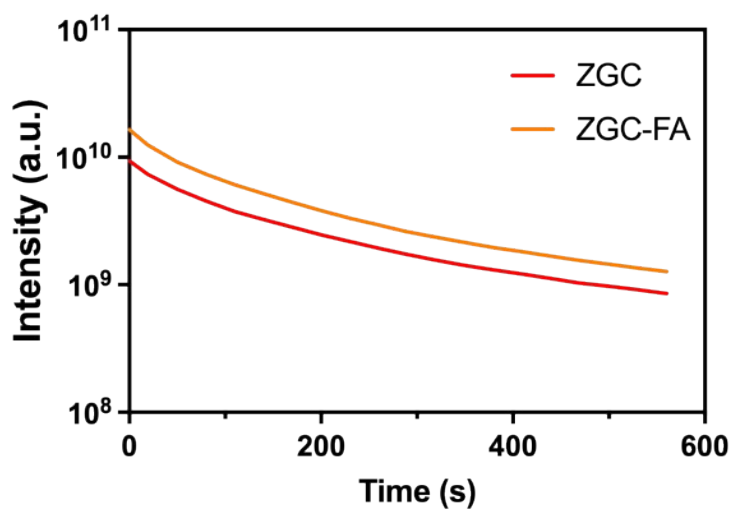


Figure S5. The comparison of PersL curve of ZGC and ZGC-FA

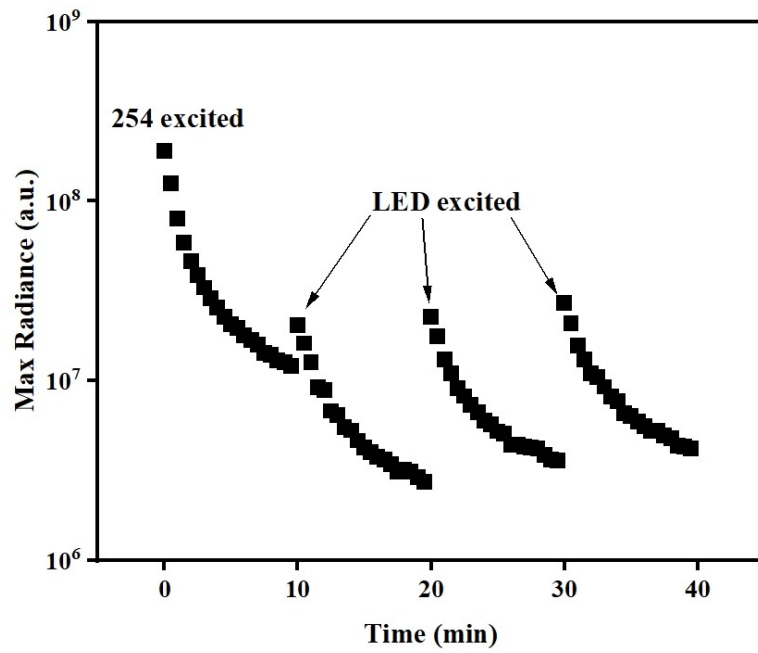


Figure S6. The photostability of ZGC-FA under repeated white light excitation.

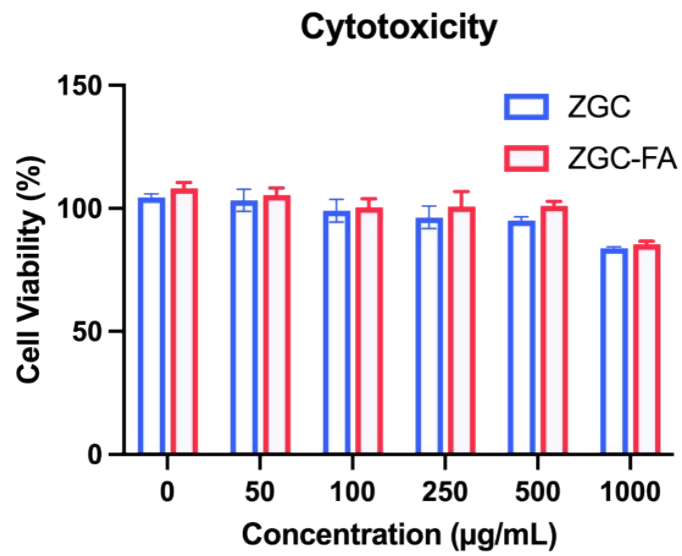


Figure S7. The cytotoxicity of ZGC and ZGC-FA

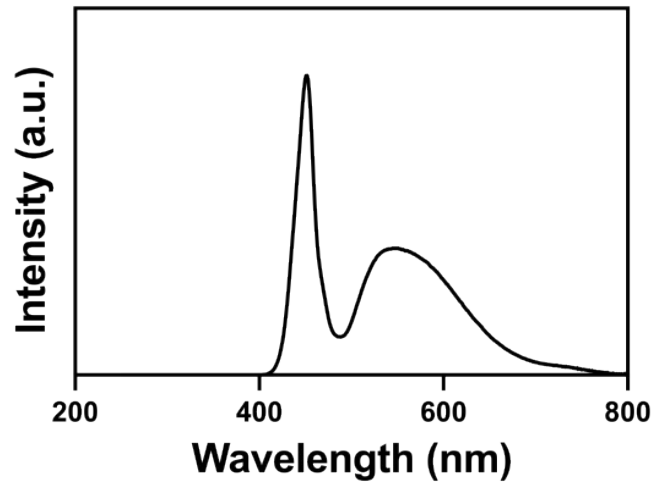


Figure S8. The spectrum of commercial LED lights.

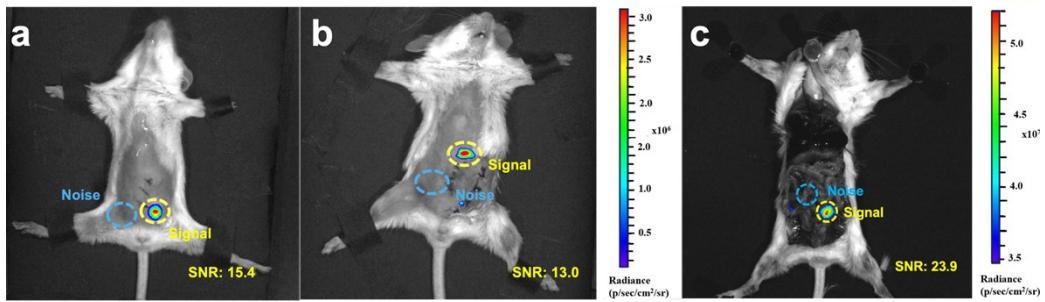


Figure S9. The signal-to-noise ratio (SNR) for preoperative (a-b) and intraoperative PersL imaging (c) (yellow: tumor; blue: noise; the average SNR is 17.6)

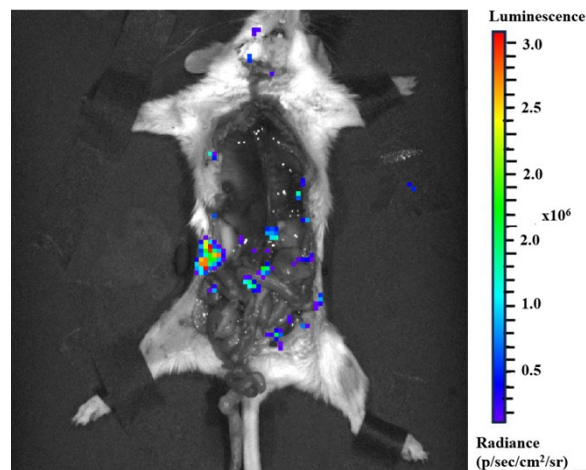


Figure S10. Non-targeted ZGC tumor imaging in mice

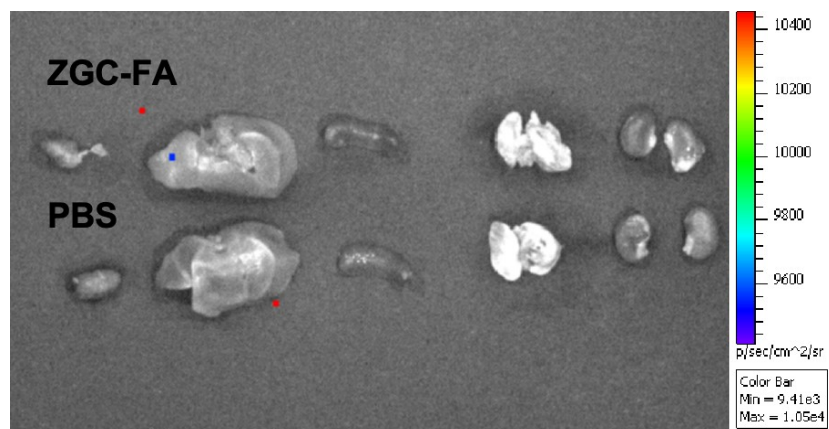


Figure S11. PersL imaging of major organs after 14 days

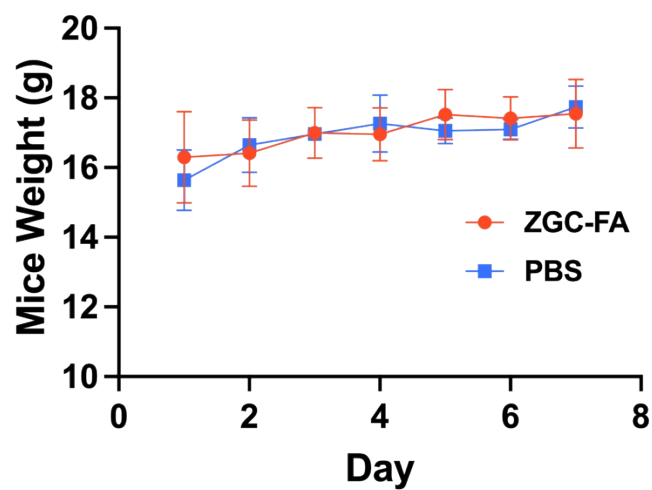


Figure S12. The Weight changes in mice over a period of 7 days (n=5)

#### Reference

- 1 Z. Yan, C. Yin, M. Sun, W. Yuan, W. Wang, Q. Wu and Z. Yuan, *J. Mater. Chem. B*, 2023, **11**, 4076–4082.