

Electronic Supplementary Information

Dye-free near-infrared surface-enhanced Raman scattering nanoprobes for bioimaging and high-performance photothermal cancer therapy

Zhiming Liu,* Binggang Ye, Mei Jin, Haolin Chen, Huiqing Zhong, Xinpeng Wang
and Zhouyi Guo*

MOE Key Laboratory of Laser Life Science & SATCM Third Grade Laboratory of Chinese
Medicine and Photonics technology, College of Biophotonics, South China Normal University,
Guangzhou 510631, China.

E-mail: liuzm021@126.com; ann@scnu.edu.cn.

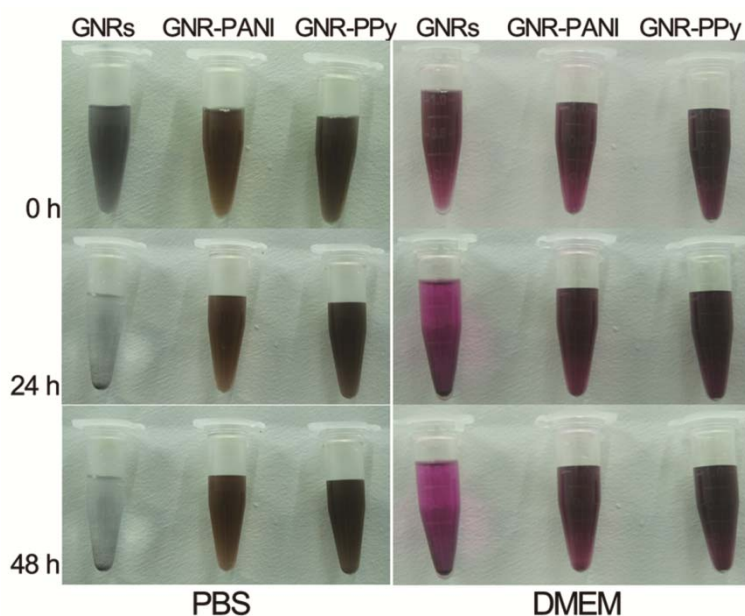


Fig. S1 The dispersion of the as-prepared GNR-CP nanoprobes in different physiological environments after PVP-functionalization.

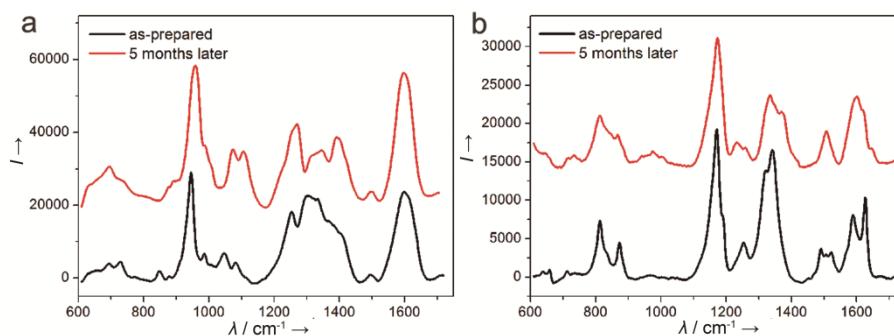


Fig. S2 The storage stabilities of GNR-PPy (a) and GNR-PANI (b). The Raman signals of GNR-CPs maintained consistent levels during five months.

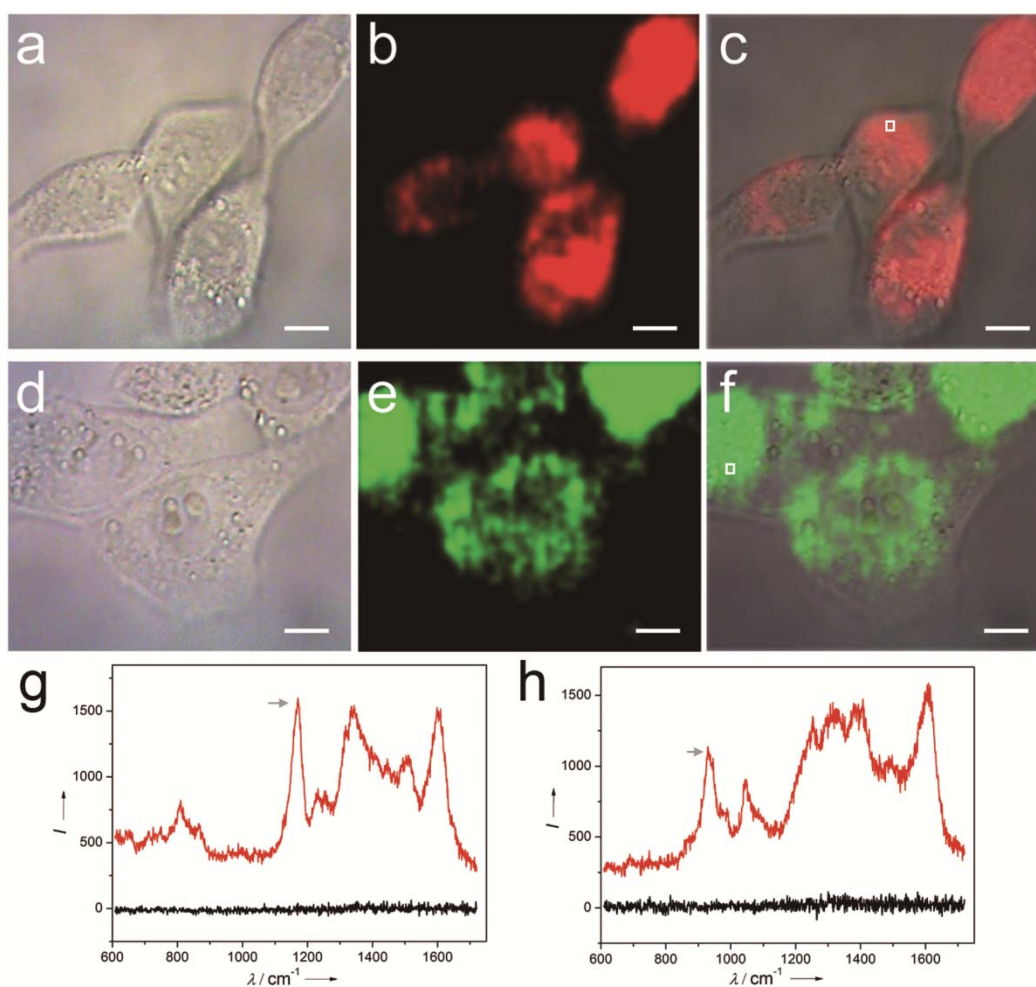


Fig. S3 NIR SERS imaging of 4T1 cells using GNR-PANI (a-c) or GNR-PPy (d-f) as nanotags. g and h: SERS spectral lines acquired from the 4T1 cells incubated with GNR-PANI (c) and GNR-PPy (f), respectively. Black lines are the background lines. Scale bar: 10 μm .

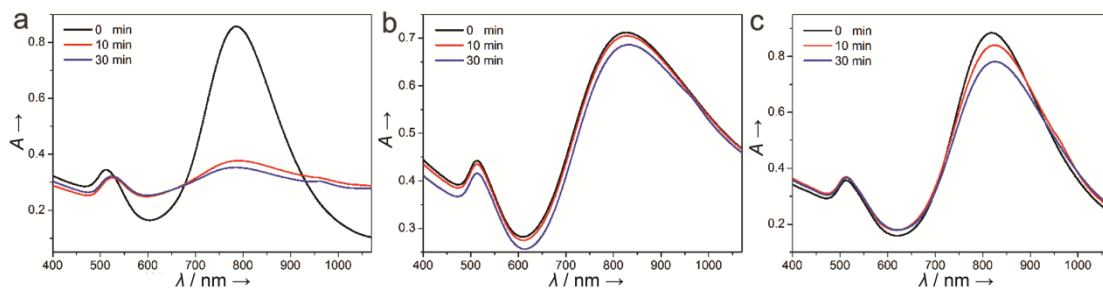


Fig. S4 UV-vis-NIR absorbance spectra of GNR (a), GNR-PPy (b) and GNR-PANI (c) before and after NIR laser irradiation at the power density of $2.5\text{W}/\text{cm}^2$ for 30 min. significant decrease was observed in the absorbance spectrum of GNRs after laser irradiation, indicating a structural collapse of nanorods under local heating.