

Luminescent CaTiO₃:Yb,Er Nanofibers Co-conjugated with Rose Bengal and Gold Nanorods for Potential Synergistic Photodynamic/Photothermal Therapy

Yike Fu^{a†}, Heng Liu^{a†}, Zhaohui Ren^a, Xiang Li^{a*}, Jie Huang^b, Serena Best^c, Gaorong Han^{a*}

^a *State Key Laboratory of Silicon Materials, School of Materials Science and Engineering, Zhejiang University, Hangzhou, Zhejiang 310027, P. R. China.*

^b *Department of Mechanical Engineering, University College London, London WC1E 7JE, UK.*

^c *Department of Materials Science and Metallurgy, University of Cambridge, Cambridge CB3 0FS, UK.*

* *E-mail: xiang.li@zju.edu.cn; hgr@zju.edu.cn*

† *Authors contributed equally to this work.*

The UV-vis absorption spectra of RB-HA molecules with different concentrations were examined (Figure S1a). A linear fit was calculated between the concentration of RB-HA molecules and the absorption intensity (Figure S1b). The correlation equation is $\text{Abs} = 96.0355 \times \text{concentration (mg/mL)} + 0.0010$ (correlation coefficient $R^2 = 0.99$). Therefore, the concentration of RB-HA molecules loaded on CTO fibers could be obtained *via* substituting the difference between the absorption intensity at ~566 nm of pure CTO (0.08 mg/mL) and CTO-RB (0.08 mg/mL) into the correlation equation (Figure S1c). The number of RB-HA molecules attached is therefore determined to be 1.77×10^{16} molecules per milligram CTO nanofibers.

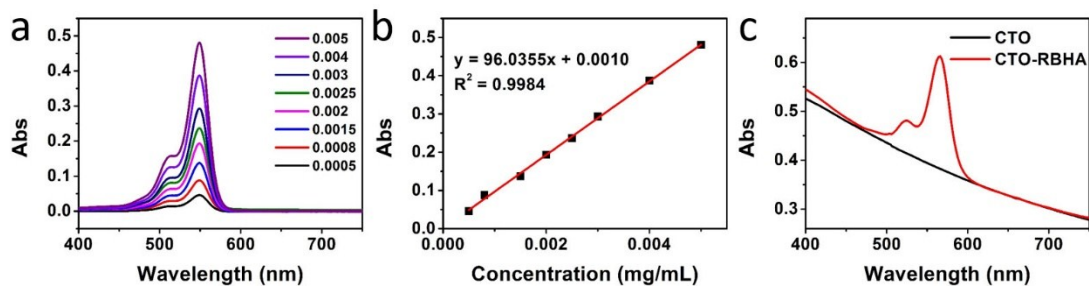


Figure S1 (a) UV-vis absorption spectra of RB-HA with different concentrations; (b) Linear correlation between the absorption intensity at 549 nm and the concentration of RB-HA; (c) UV-vis absorption spectra of CTO nanofibers and CTO-RBHA nanocomposite.