Supplementary material

Novel Ratiometric Fluorescent Probe based on Internal Reference of Lanthanide/nucleotide for Alkaline Phosphatase Detection

Haoran Yu, [a] Ziqing Qiang, [a] Yelin Sun, [a] Mengyao Sun, [a] Lei Zhang, [a] Bohao Yu, [a*] Wen Lei [b]

and Weibing Zhang [a*]

[a]Shanghai Key Laboratory of Functional Materials Chemistry, School of Chemistry & Molecular Engineering, East China University of Science and Technology, Shanghai 200237, P. R. China
[b]Shanghai Research Institute of Chemical Industry CO., LTD., 345 East Yunling Road, Shanghai, 200062, China.

Haoran Yu and Ziqing Qiang contributed equally to this work.
Corresponding authors: Bohao Yu, Weibing Zhang
*E-mail: weibingzhang@ecust.edu.cn. Tel: +86-21-64252145. Fax: +86-021-64233161.

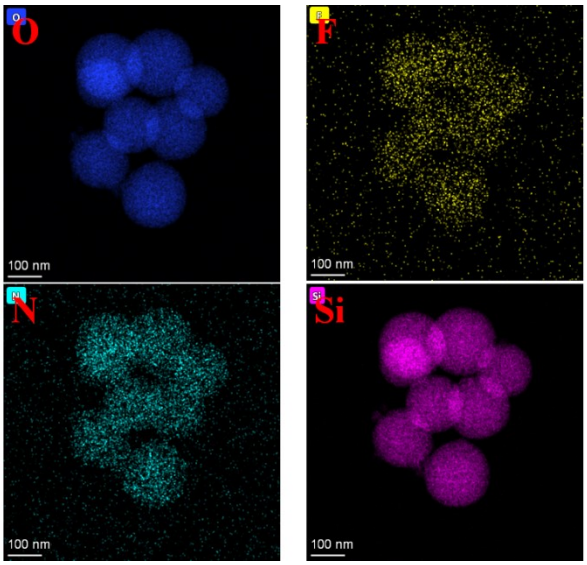

Figure S1. Layered images of each element in the CIP@SiO_2.

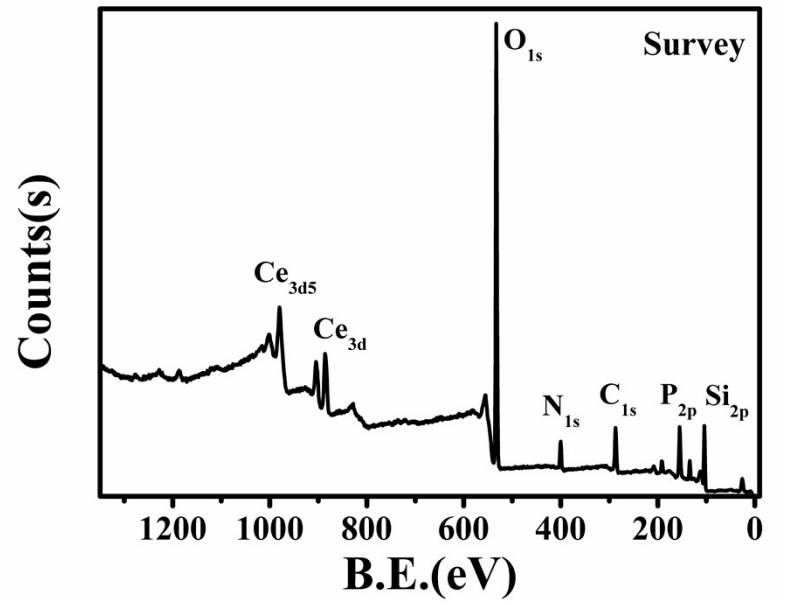

Figure S2. XPS survey spectra of CIP@SiO_2-Ce/ATP-Tris.

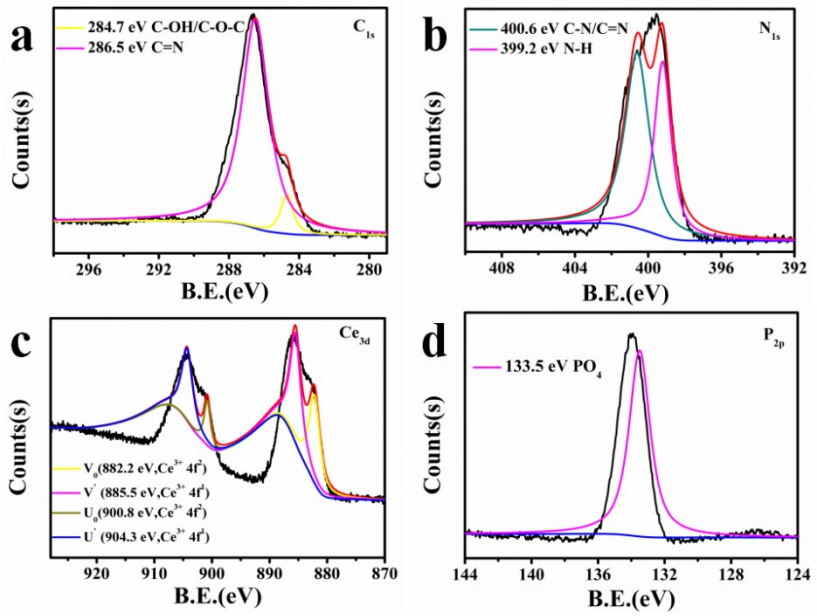

Figure S3. High-resolution C1s (a), N1s (b), Ce3d (c) and P2p (d) peaks of CIP@SiO_2-Ce/ATP-Tris.

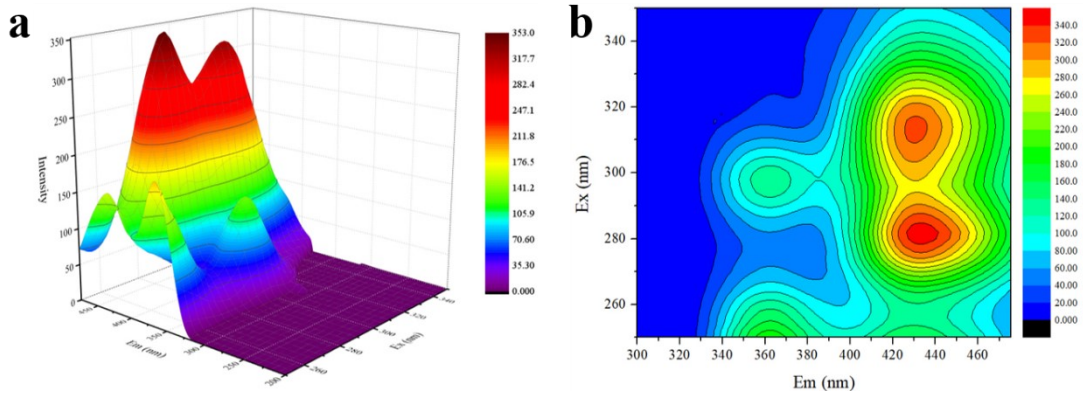

Figure S4. 3-D fluorescence spectra (a) and fluorescence intensity contour map (b) of CIP@SiO_2-Ce/ATP-Tris.

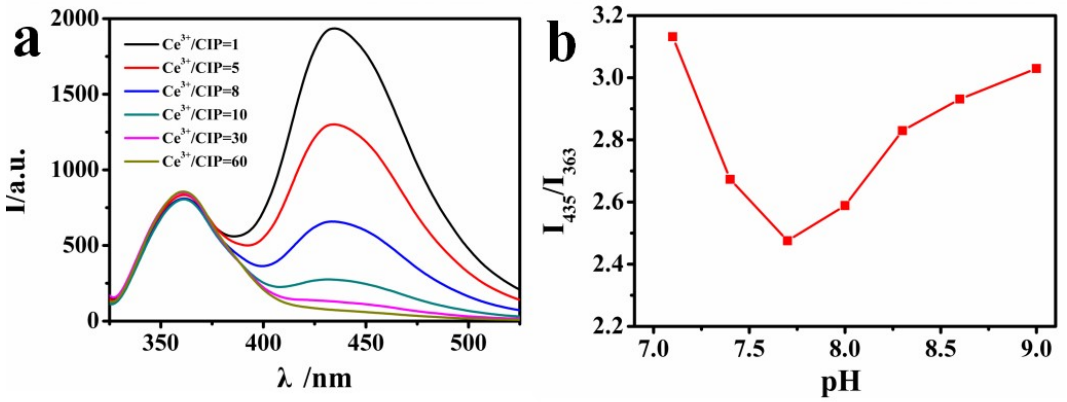

Figure S5. Emission spectra of CIP@SiO_2-Ce/ATP-Tris with different ratios of Ce^{3+}/CIP (a) and effects of pH values on the ratio of fluorescence intensity of CIP@SiO_2-Ce/ATP-Tris (b).

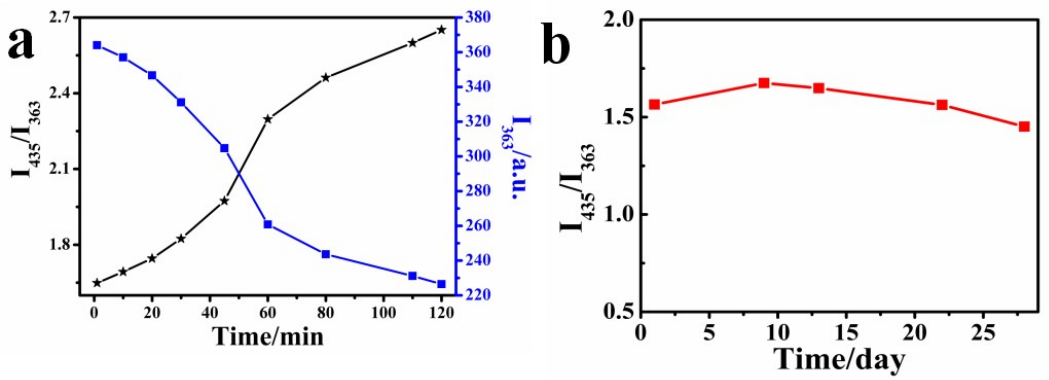

Figure S6. Effects of enzymatic time on fluorescence intensity of CIP@SiO_2-Ce/ATP-Tris (a) and the long-term stability of CIP@SiO_2-Ce/ATP-Tris solution (b).