

## Electrostatic self-assembly route to prepare C-dots/gold nanoclusters

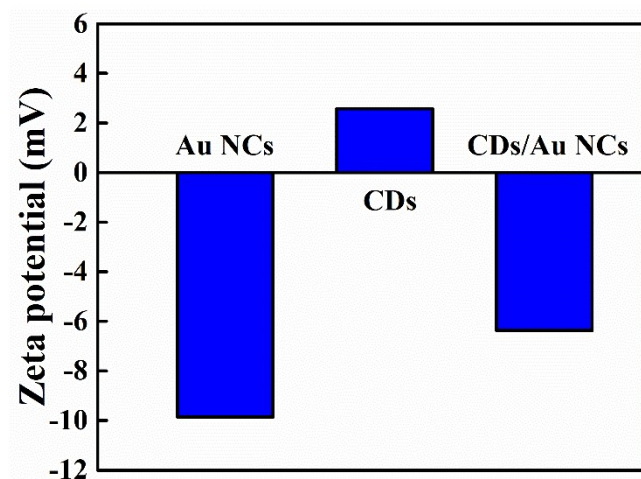
### dual-emission ratiometric optical thermometry in living cells

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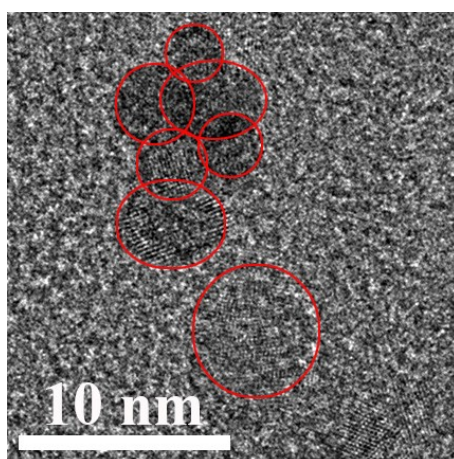
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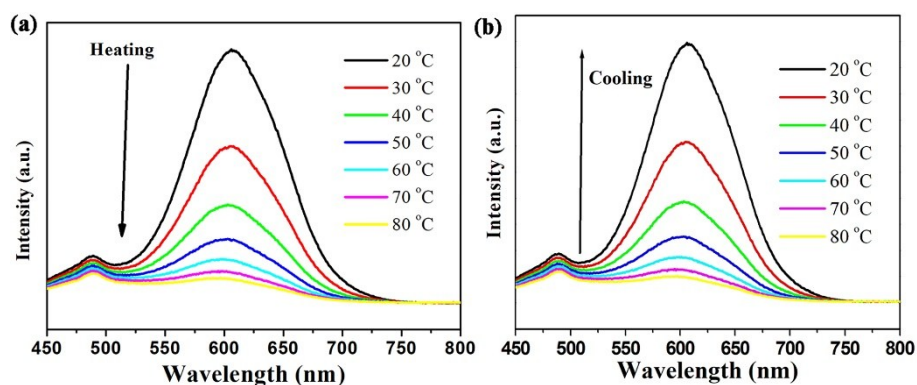
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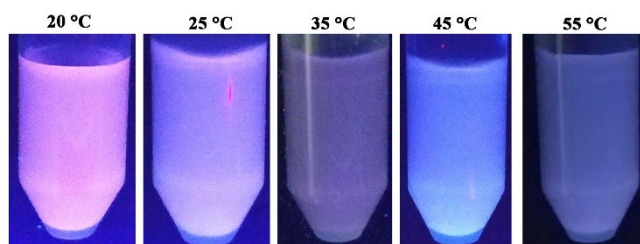
**Fig S1.** The Zeta potential of Au NCs, CDs and CDs/AuNCs.



**Fig S2.** The high resolution TEM image of CDs/AuNCs hybrid nanomaterials.



**Fig S3.** Temperature dependence of the emission intensity from GSH-AuNCs in aqueous solution. (a) Fluorescence emission spectra measured under the excitation of 430 nm with the increase of the temperature from 20 to 80 °C; (b) fluorescence emission spectra measured under the excitation of 430 nm with the decrease of the temperature from 80 to 20 °C (from bottom to top).



**Fig S4.** The fluorescent images of CDs/AuNCs hybrid nanomaterials in aqueous solution with 20 °C, 25 °C, 35 °C, 45 °C and 55 °C.