Supporting Information

Near-Infrared Emissive Lanthanide Hybridized Carbon Quantum Dots for Bioimaging Applications

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Figure S1. XPS spectra of CQDs
Figure S2. High-resolution XPS spectrum of O1s of Yb-CQDs and Nd-CQDs

Figure S3. Fluorescence spectra of CQDs with different excitation wavelengths

Figure S4. XPS spectra of the control sample of YbCl$_3$+CQDs after the dialysis.
Figure S5. (a) Visible emission spectrum ($\lambda_{ex} = 360$ nm) and (b) NIR emission spectrum of the control sample by directly adding YbCl$_3$ into the CQDs solution without dialysis (CQDs+YbCl$_3$ without dialysis) ($\lambda_{ex} = 420$ nm).

Figure S6. (a) Visible emission spectrum ($\lambda_{ex} = 360$ nm) and (b) NIR emission spectrum of the control sample by hydrothermal YbCl$_3$ and CQDs solution (hydrothermal CQDs+YbCl$_3$ without dialysis) ($\lambda_{ex} = 420$ nm).

Figure S7. (a) Visible emission spectrum ($\lambda_{ex} = 360$ nm) and (b) NIR emission spectrum of the control sample by hydrothermal YbCl$_3$ and CQDs solution and then purified by dialysis (hydrothermal CQDs+YbCl$_3$ after dialysis) ($\lambda_{ex} = 420$ nm).
Figure S8. (a) NIR emission spectrum of YbCl$_3$ in water ($\lambda_{\text{ex}} = 360$ nm) and (b) NIR emission spectrum of Yb-CQDs under excitation of 380 nm.