

Supplementary Information

Non-covalent complex of quantum dots and chlorin e_6 : efficient energy transfer and remarkable stability in living cells revealed by FLIM

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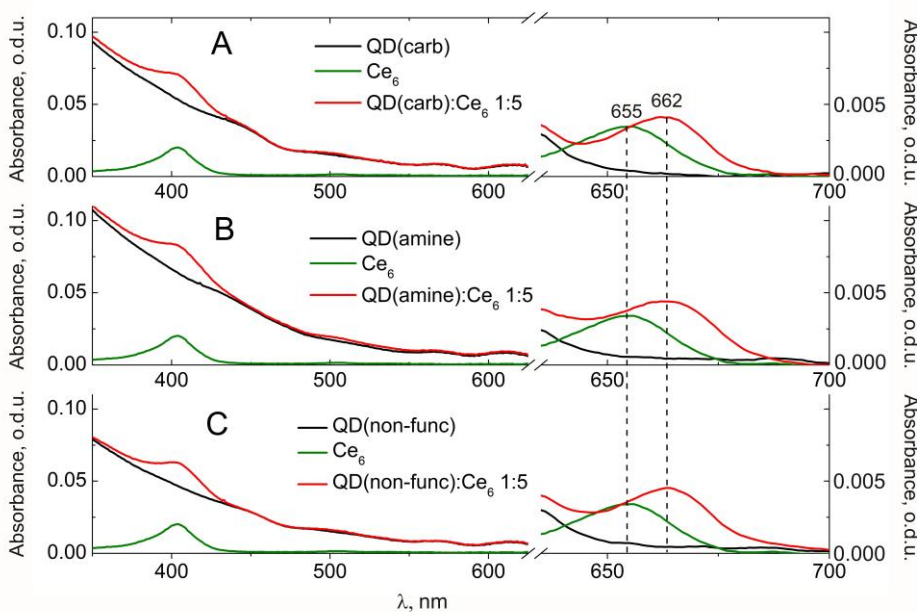


Figure S1. Absorption spectra of 0.02 μM carboxyl (A), amine (B) and non-functionalized (C) QD, 0.1 μM Ce_6 and corresponding mixed QD- Ce_6 (0.02 μM QD : 0.1 μM Ce_6) solutions (buffer pH 7).

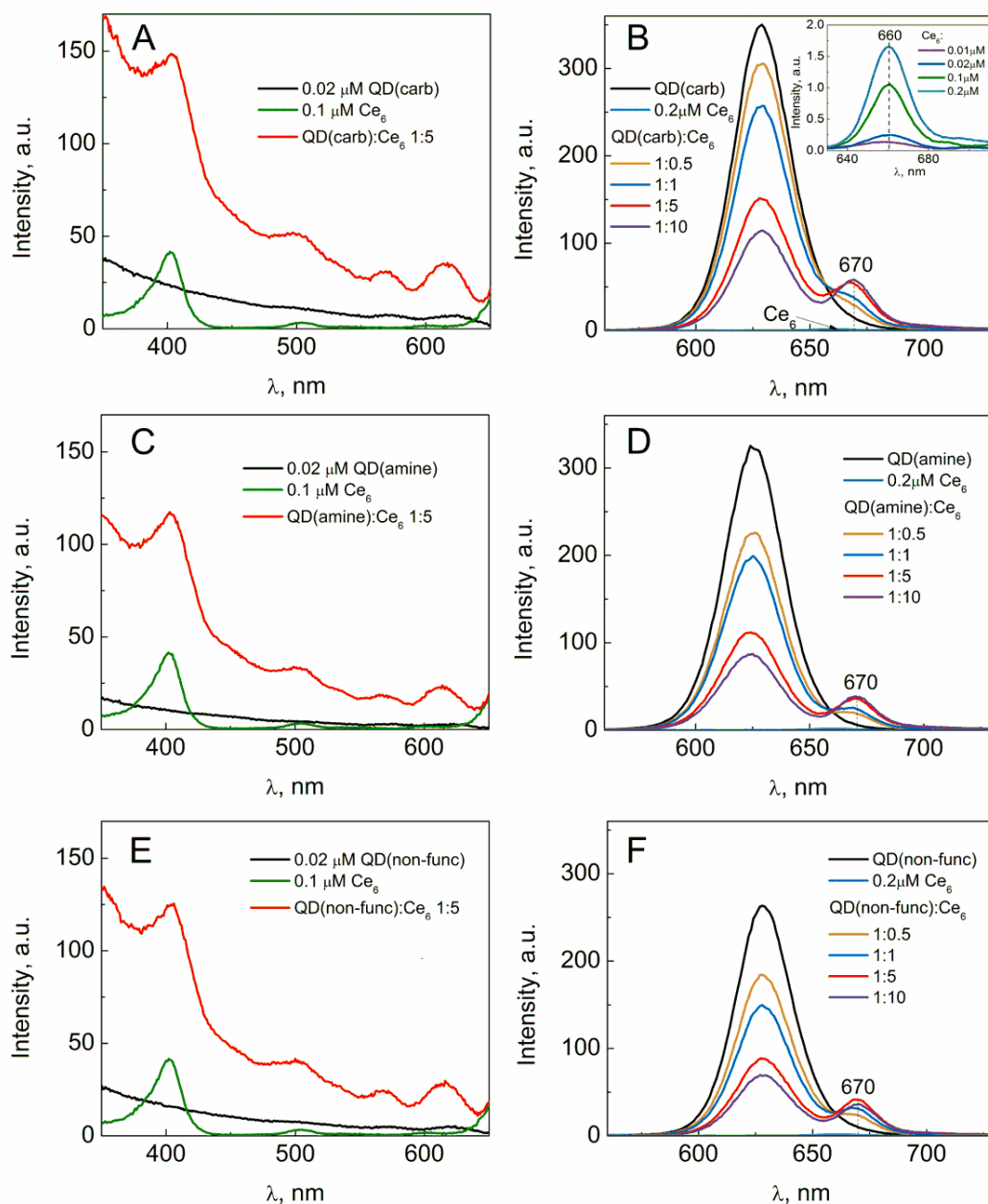


Figure S2. Fluorescence excitation spectra of free 0.02 μM carboxyl (A), amine (C) and non-functionalized (E) QDs, 0.1 μM Ce_6 and corresponding mixed QD- Ce_6 (0.02 μM QD : 0.1 μM Ce_6) solutions at $\lambda_{\text{em}} = 670$ nm. B, D, F - Fluorescence spectra of respective QD, Ce_6 and QD- Ce_6 solutions at varying QD: Ce_6 molar ratio from 1:0.1 to 1:10 at $\lambda_{\text{ex}} = 465$ nm. The inset in Figure B shows the fluorescence of Ce_6 solution at corresponding concentrations at $\lambda_{\text{ex}} = 465$ nm.

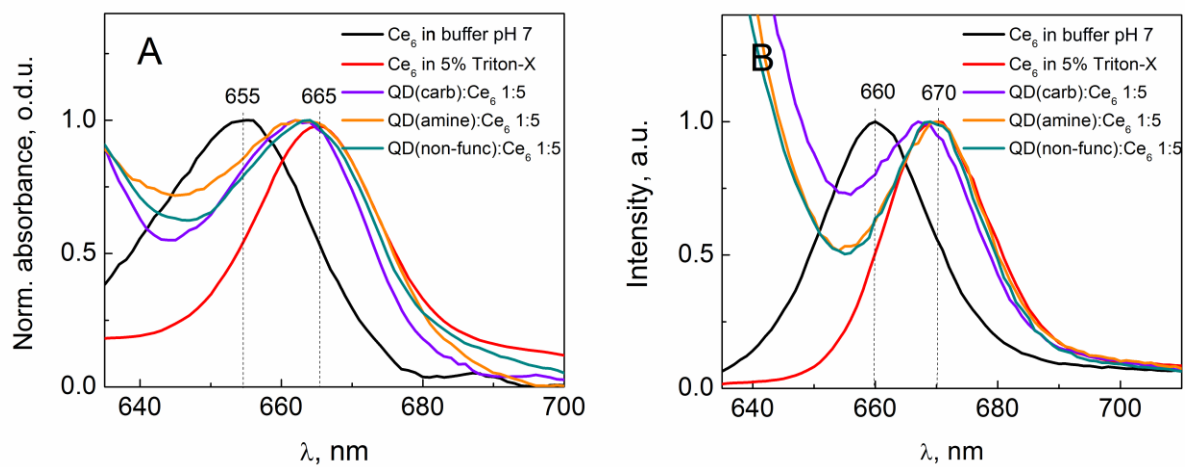
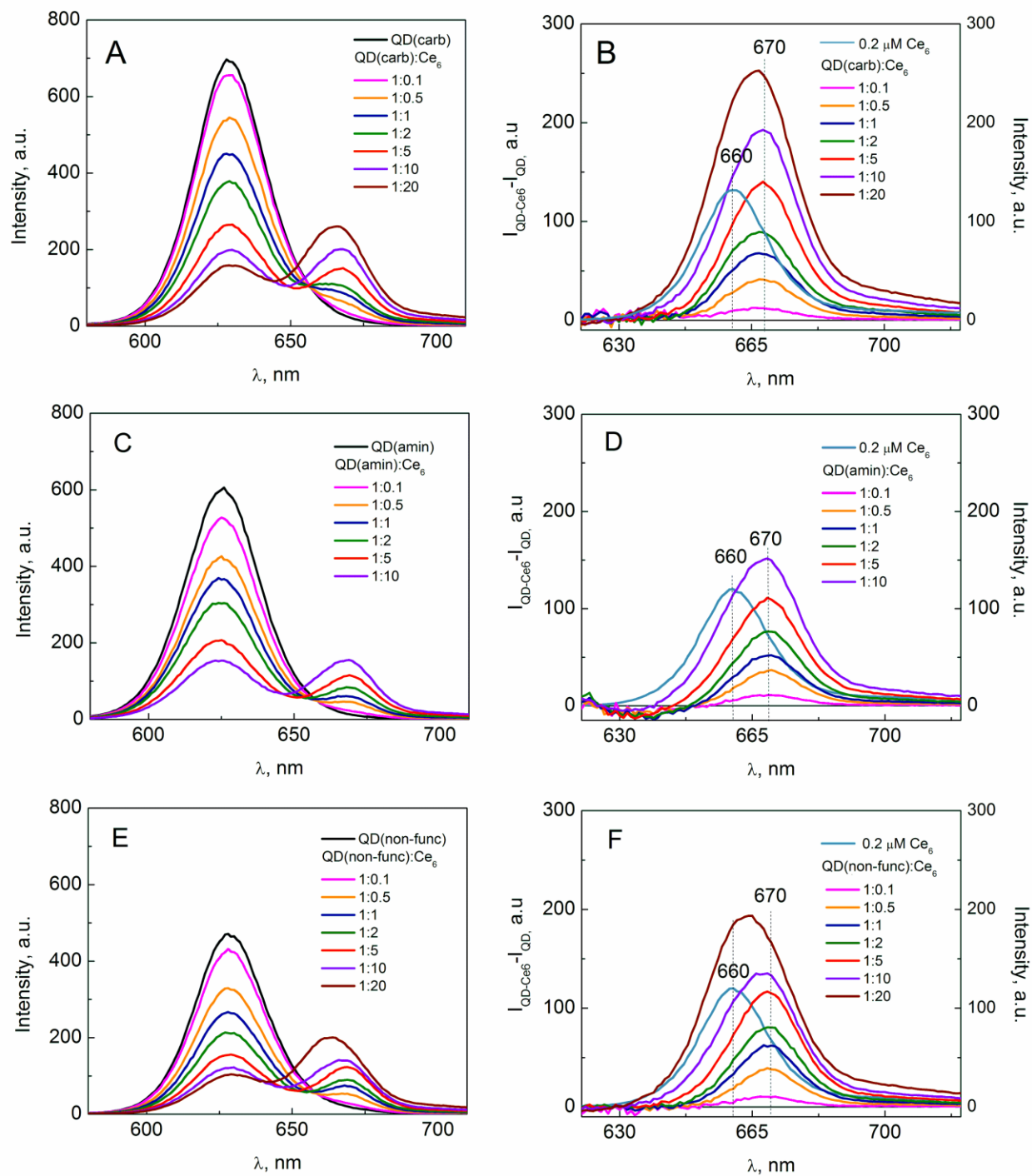


Figure S3. Normalized absorption (A) and fluorescence (B) spectra of $0.1 \mu\text{M}$ Ce_6 in buffer, 5% Triton-X 100 and in the presence of $0.02 \mu\text{M}$ QD with different terminal groups (QD: Ce_6 1:5). The excitation at 400 nm was used for Ce_6 in buffer and Triton-X and at 465 nm for QD- Ce_6 solutions.



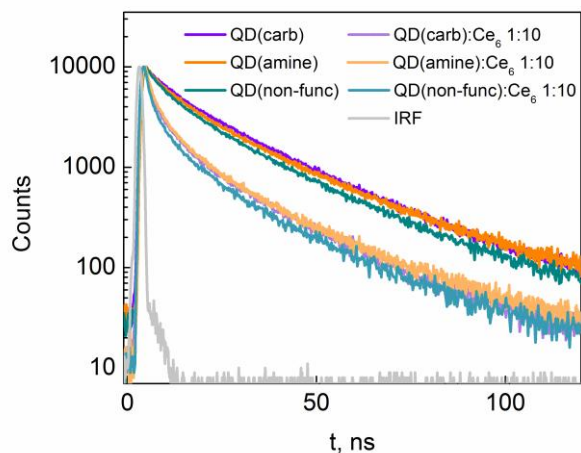


Figure S5. Fluorescence decay of 0.02 μM QDs and QD- Ce_6 solutions at 1:10 QD: Ce_6 molar ratio registered at $\lambda_{\text{em}}=620$ nm, $\lambda_{\text{ex}}=405$ nm.

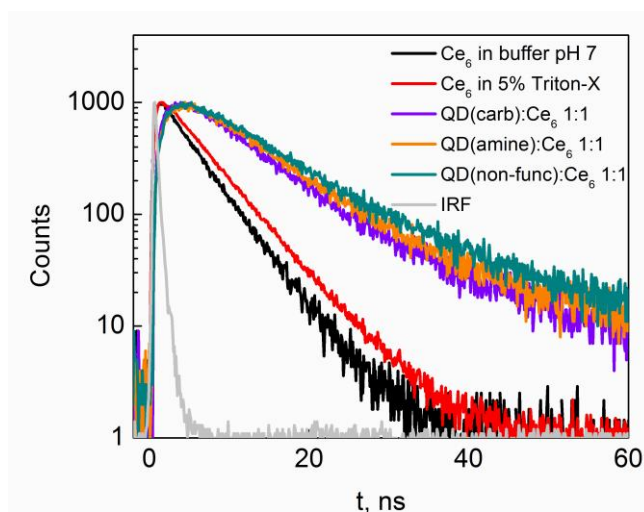


Figure S6. Fluorescence decay of 0.02 μM Ce_6 in buffer, 5% Triton-X 100 and in QD- Ce_6 solutions (QD: Ce_6 molar ratio 1:1) registered at $\lambda_{\text{em}}=670$ nm with $\lambda_{\text{ex}}=470$ nm.