

Supporting Information

Auger Recombination Dynamics in Hybrid Silica-Coated CdTe Nanocrystals

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Instrumentation

The absorption and fluorescence spectra were measured using Hitachi U-4100 and FluoroMax-2 (Jobin Yvon-Spex) spectrophotometers. The PL efficiencies were obtained from a comparison with the emission of a rhodamine B reference sample. Femtosecond transient absorption pump-probe experiments were performed with an amplified mode-locked Ti:Sapphire laser (Spitfire and Tsunami, Spectra-Physics). The pump beam was chopped by a New Focus Model 3501 Chopper and the repetition rate was 0.5 kHz. The excitation intensity was measured by a calibrated power meter (Orion/PD, Ophir). The transient absorption spectra were recorded over the 420-780 nm range by 100 fs pulses of white-light continuum generated by focusing the fundamental laser into a cell containing D₂O, and detected by a polychromator-CCD combination (Spectra Pro-275 and Spec-10, Acton Research Co. and Princeton Instruments).

Pump-dependent dynamics of NC populations

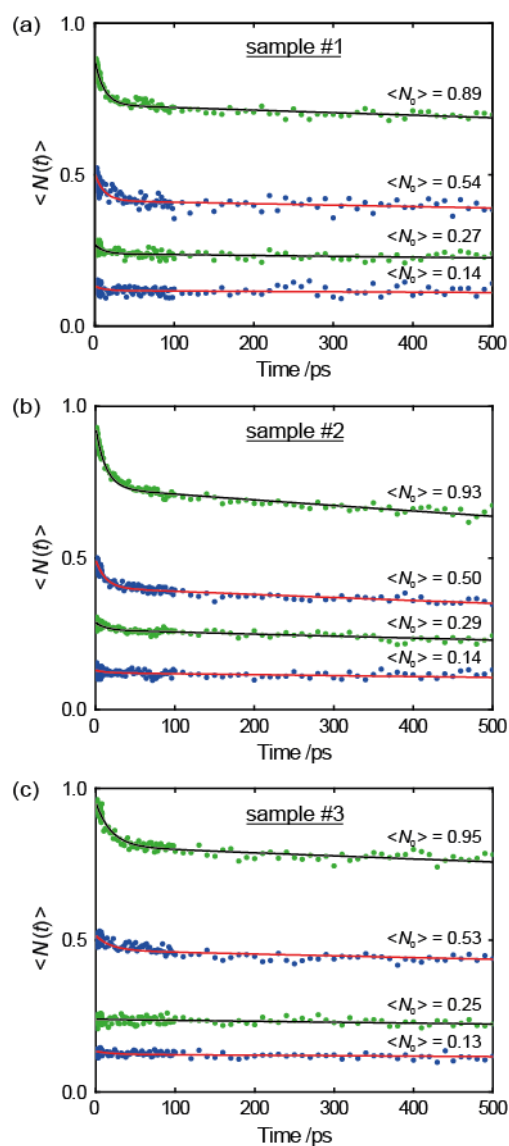


Figure S1. Pump-dependent dynamics of NC populations $\langle N(t) \rangle$. A global analysis was performed from these data, with a sum of exponential laws (solid lines). For each sample, all the datasets are simultaneously analyzed by constraining the decay times, but allowing a variation of the pre-exponential factors of the fitting law.