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Supporting Information



Figure SI-1: Comparison under daylight and 365 nm UV irradiation of two colloidal suspensions made by one-step alkali-assisted ultrasonic treatment with different ultrasonic power: 1) 100% power = 750 W (our work) and 2) 20% = 150 W.¹



Figure SI-2: Zeta potential and fluorescence emission intensity of CDs at pH 2 to 11. Insets: CD suspensions at different pHs under daylight and 365 nm UV irradiation.



Figure SI-3: Δ T values in PT mode under 808 and 680 nm laser (power densities: 0.3, 1, and 1.9 W cm⁻²) measured in exponential and stationary phase of *E. coli*: a) with CDs; b) without CDs.

Video SI-1



Video SI-2

(see attached video)