## Electronic Supplementary Information

## Carbon Dots Prepared in Different Solvents with Controllable

## Structures: Optical Properties, Cellular Imaging and

## Photocatalysis

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Fig. S1. TEM images of (a) ZIF-8 rhombic dodecahedra, and (b) and (d) N-doped porous carbons without and with treatment of diluted nitric acid. HRTEM images of (c) and (e) N-doped porous carbons without and with treatment of diluted nitric acid.



Fig. S2. Raman spectra of (1) N-doped porous carbons, (2) N-doped porous carbons treated by diluted nitric acid, (3) CDs-*w*, (4) CDs-*d*, and (5) CDs-*m*.



Fig. S3. FTIR spectra of (1) N-doped porous carbons, (2) N-doped porous carbons treated by diluted nitric acid, (3) CDs-w, (4) CDs-d, and (5) CDs-m.



Fig. S4. Raman spectra of (a) commercial graphite with and without treatment of diluted nitric acid, and (b) N-doped porous carbons prepared by carbonization of ZIF-8 at 1100 °C with and without treatment of diluted nitric acid.



Fig. S5. Steady state PL spectra of methanol and samples originated from methanol by solvothermal treatment at 120  $^{\circ}$ C and 200  $^{\circ}$ C.



Fig. S6. TEM images of three CD samples and corresponding particle size distribution histograms of CDs measured from the TEM images (inclusion of Figure 2d, e, and f) using **Nano Measurer** software.



Fig. S7. Particle size distribution of CDs-*w* (bottom), CDs-*d* (middle) and CDs-*m* (top) measured by dynamic light scattering.



Fig. S8. Time-resolved PL spectra of (a) CDs-*w*, (b) CDs-*d*, and (c) CDs-*m* in water under 405 nm excitation.



Fig. S9. Steady state PL spectra of CDs in water prepared via solvothermal treatment (a) in ethanol and (b) in diethylformamide at 120 °C and (c) hydrothermal treatment at 180 °C.



Fig. S10. Viability of Hela cells incubated with CDs at different concentrations