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Surface modification and intrinsic green fluorescent emission of detonation nanodiamond

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Supplementary Information

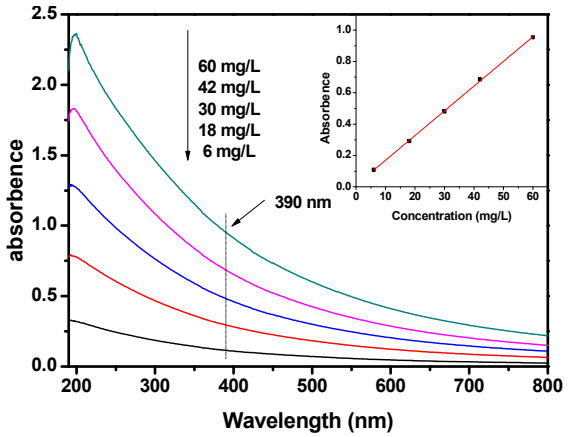

Figure S1. UV-vis absorption spectra of modified DND in water for different concentrations. Shown in the inset is Lambert-Beer's plot for the absorption at 390 nm.

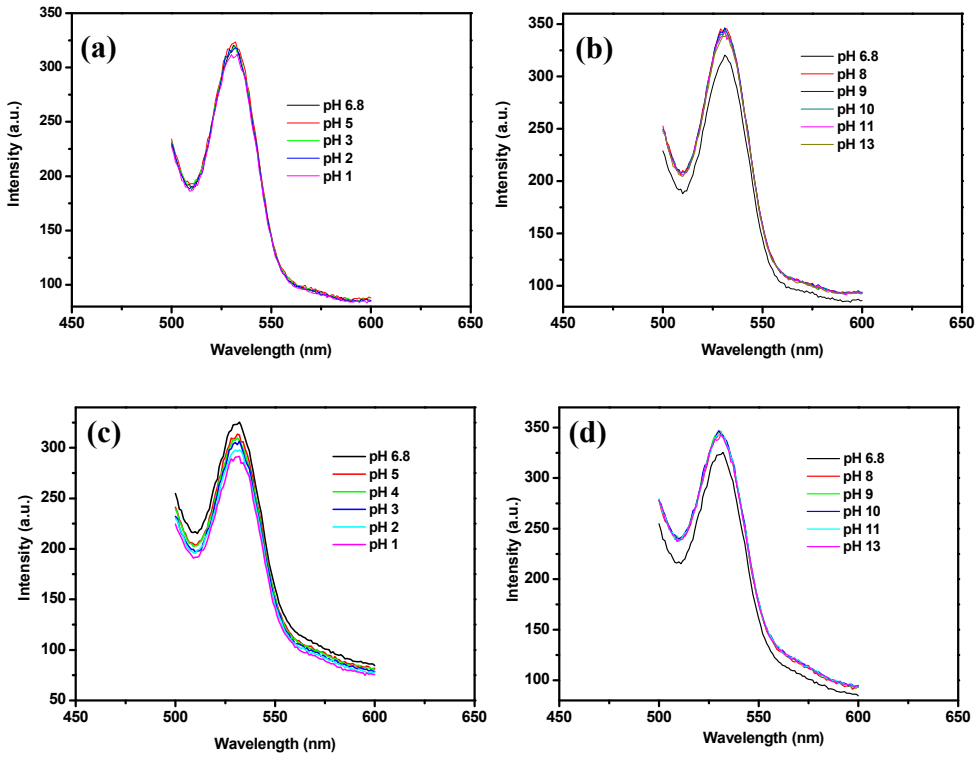

Figure S2. Effect of pH on the fluorescent properties of pristine (a and b) and modified DND (c and d) at the same concentration in water (0.3 mg mL^{-1}): (a) Effect of acidic pH on the fluorescent properties of pristine DND; (b) Effect of basic pH on the fluorescent properties of pristine DND; (c) Effect of acidic pH on the fluorescent properties of modified DND; (d) Effect of basic pH on the fluorescent properties of modified DND.

Table S1. Fluorescence quantum yields of pristine and modified DND

sample	Emission intensity(***I***)	Abs at 390 nm (***A***)	Refractive index of solvents (***η***)	Quantum yield (***Q***)
quinine sulfate	152.6	0.036	1.33	0.54 (known)
Pristine DND	12.3	0.116	1.33	0.0135(calculated)
Modified DND	13.5	0.121	1.33	0.0142(calculated)