

Supplementary Materials

Simultaneous synthesis of luminescent carbon nanoparticles and CNCs by laser ablation of carbon black suspension and their optical limiting properties

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Fluorescence Quantum Yield

The quantum yield was measured based on the following equation. The detail method has been reported in our previous work (Hu et al. *J. Mater. Chem.* 2009, **19**, 484).

$$Q = Q_R \frac{I \cdot A_R \cdot \eta^2}{I_R \cdot A \cdot \eta_R^2} \quad (1)$$

where Q is the quantum yield, I is the measured integrated emission intensity, η is the refractive index, and A is the optical density. The subscript R refers to the reference fluorophore of known quantum yield.

Table 1S Quantum yield of luminescent CNPs

Sample	Integrated Emission Intensity (I)	Absorption at 400 nm (A)	Refractive Index of solvent (η)	Quantum yield (Q)
Quinine sulfate	281.23	0.067	1.33	54% (known)
Sample A	41.7	0.065	1.36	8.63% (calculated)

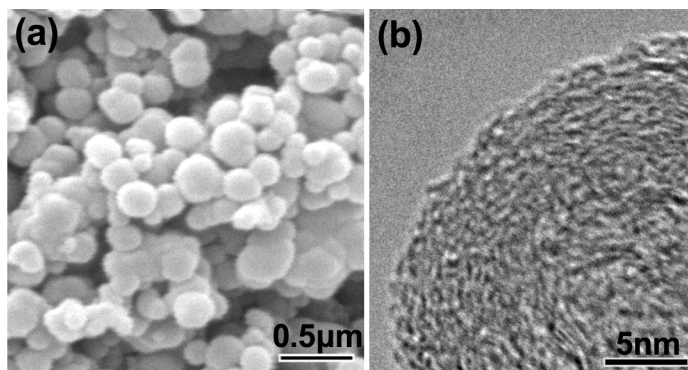


Fig. 1S Morphology and microstructure of carbon black used in the experiment. (a) SEM images of the used carbon black. (b) HRTEM image of the microstructure of carbon black.

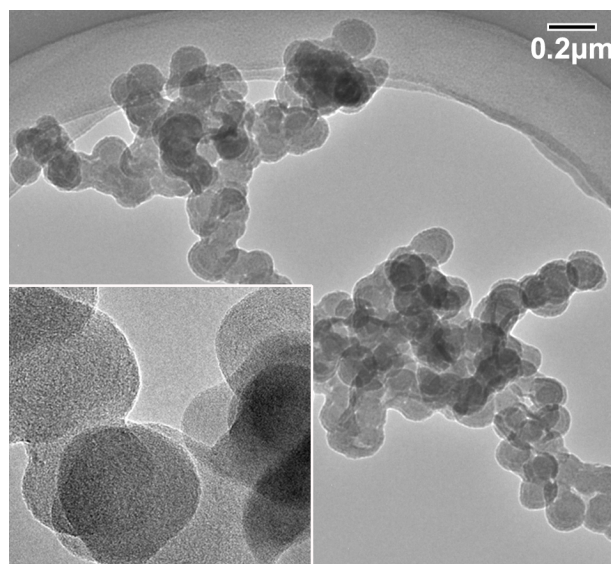


Fig. 2s TEM images of carbon black treated by violent ultrasonic dispersion; the inset shows the HRTEM images of microstructures between carbon black.

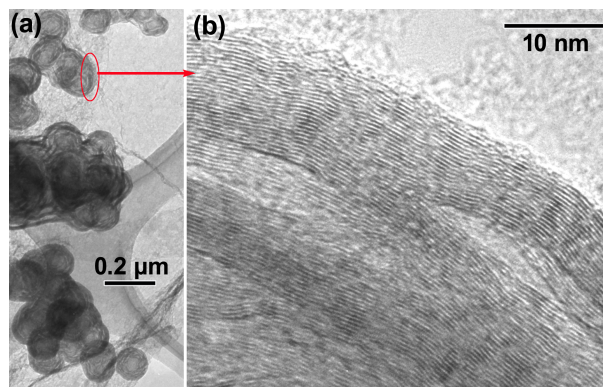


Fig. 3S TEM and HRTEM images of the samples obtained at LPD of $6 \times 10^5 \text{ W} \cdot \text{cm}^{-2}$.