

## **Green preparation of nitrogen-doped carbon dots derived from silkworm chrysalis for in vitro cell imaging**

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## **Electronic Supplementary Information**

## Section 1. Purification of the SC-CDs by Sephadex G-25 gel filtration chromatography

The swelling Sephadex G-25 gel (ShanghaiYuanye Bio-Technique Co. Ltd, China) was packed into a chromatography column (10 mm i.d., 150 mm long). 1 mL of raw sample solution containing the SC-CDs was loaded onto the Sephadex G-25 chromatography column. Deionized water as mobile phase was controlled by a peristaltic pump (Gilson Minipuls Evolution, USA) to flow through the chromatography column at a flow rate of  $0.5 \text{ mL min}^{-1}$ . The effluent was collected by using a series of 5 mL centrifuge tubes, and each centrifuge tube collected 2.5 mL of the effluent. The various fractions of raw sample solution were separated and collected successively in terms of the difference of molecular size, and subsequently observed under an UV lamp at 365 nm. As illustrated in Fig S1, the set of fractions from No.5 to 12 presented a bright fluorescent. These fluorescent fractions (i.e., SC-CDs) were collected and freeze-dried for further experiments.

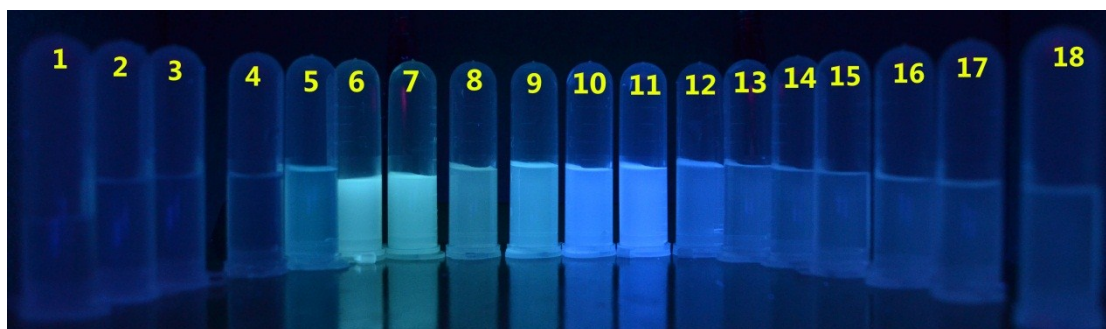


Fig. S1. Photograph of the various fractions derived from raw sample solution and observed under an UV lamp at 365 nm.

## Section 2. Quantum yield measurement

Table S1. Data for calculating the fluorescence quantum yield of the SC-CDs.

Sample	Absorbance (at 350nm)	Integrated area (361-600nm)	$\eta$	Q
Quinine sulfate	0.045	$2.05 \times 10^5$	1.33	0.54
SC-CDs	0.038	$1.47 \times 10^5$	1.33	0.46

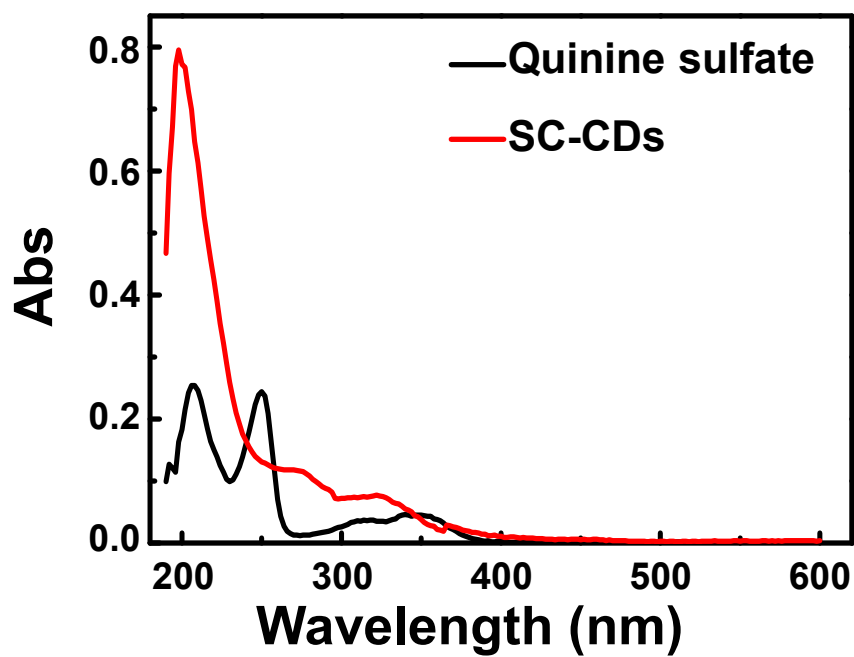


Fig. S2. UV-vis absorption spectra of quinine sulfate and SC-CDs.

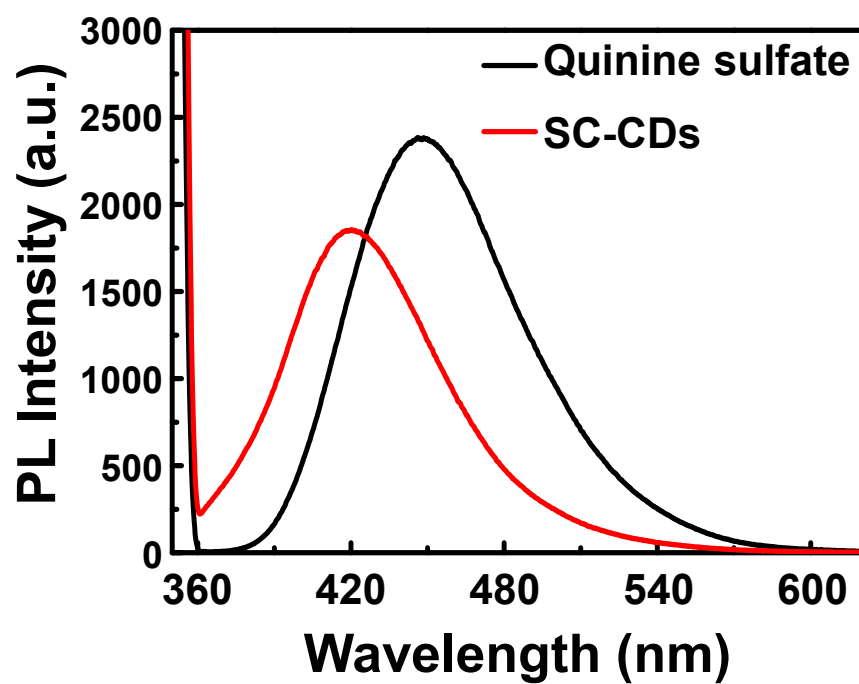


Fig. S3. PL emission spectra of quinine sulfate and SC-CDs.