

One-step synthesis of nitrogen, sulfur co-doped carbon nanodots and application for Fe³⁺ detection

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Supplementary Figures and Tables

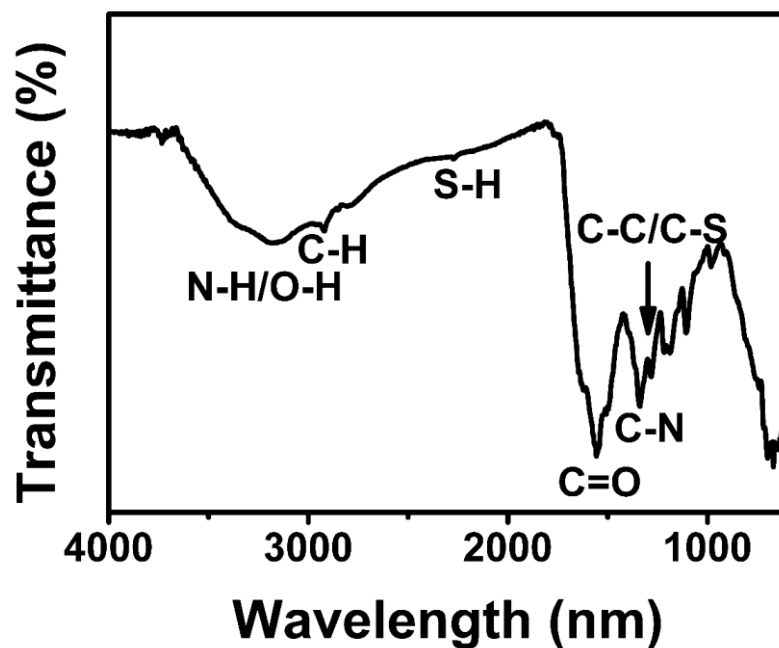


Figure S1. FTIR spectrum of the prepared N, S-CDs

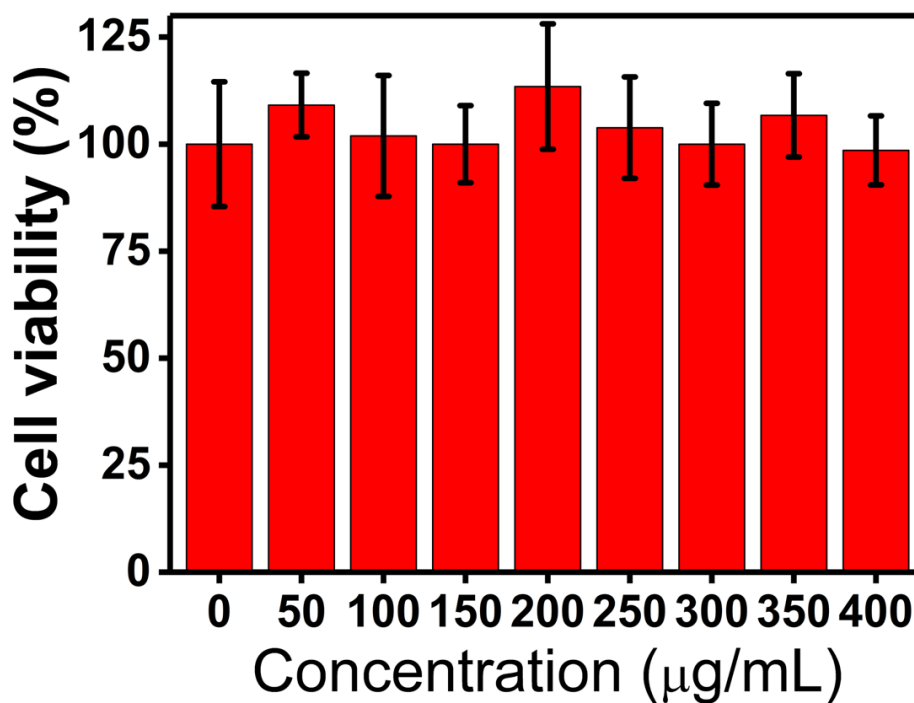


Figure S2. Cell viability assay of HeLa S3 cells treated with different concentrations of N, S-CDs.

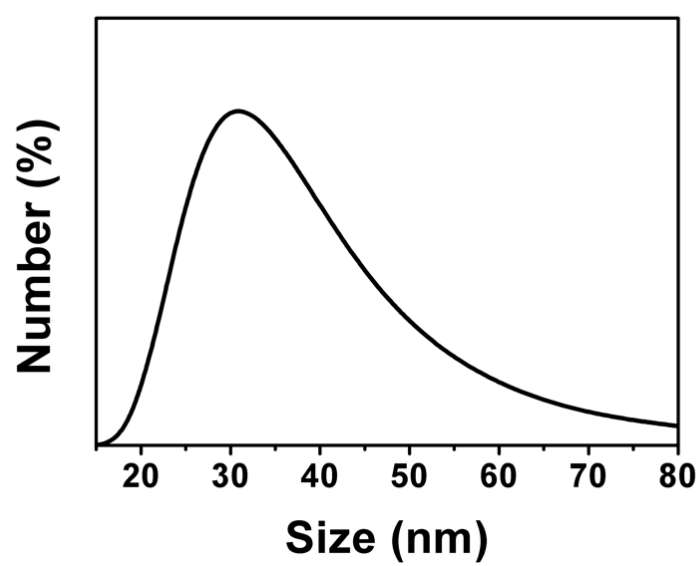


Figure S3. DLS spectrum of the prepared N, S-CDs with Fe^{3+} .

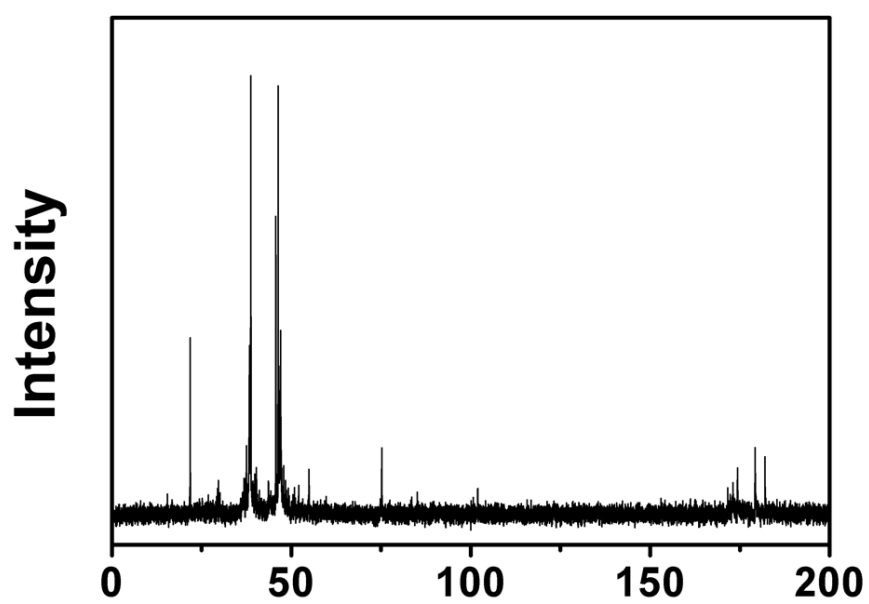


Figure S4. ^{13}C NMR spectrum of N, S-CDs.

Table S1. Fluorescence quantum yield of N, S-CDs prepared from different reaction ratios for 8 h.

Sample	mCA : mThiourea	QY (%)
1	2:1	10
2	1:1	15
3	2:1	14

Table S2. Fluorescence quantum yield of N, S-CDs prepared from different reaction time with the reaction ratio of 1:1.

Sample	Reaction time (h)	QY (%)
1	6	12.1
2	8	15
3	10	13.5

Table S3. Comparison of the detection limit of prepared CDs-based nanosensor with other reported Fe³⁺ nanosensors.

probe	Linear range (μM)	Detection limit (μM)	References
Graphene quantum dots	Less than 80	7.22	1
CDs	0-20	0.32	2
CDs	0-7.0	0.2	3
S-CDs	1.0-500	0.1	4
N, S-CDs	25-500	4	5
N, S-CDs	0.1-3.5	0.0173	This study

References:

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