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Supporting Information

Foxtail millet-derived highly fluorescent multi-heteroatoms doped carbon quantum dots towards fluorescent ink and smart nanosensor for selective ion detection

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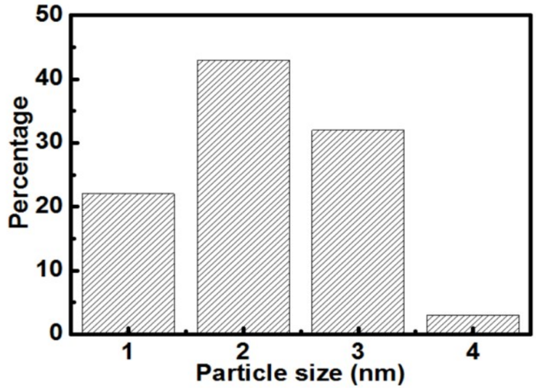

Fig. S1 Particle size distribution histogram of the as-prepared CQDs

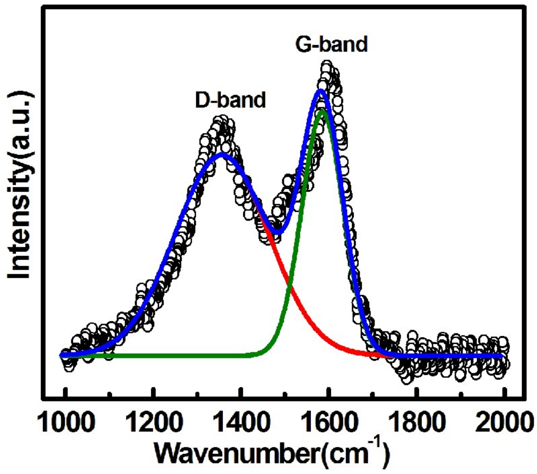

Fig. S2 Raman spectrum for the as-prepared CQDs

Table S1 Elemental compositions of our CQDs

Sample	C/at.%	O/at.%	N/at.%	S/at.%	P/at.%
CQDs	79.6	16.7	3.4	0.2	0.1

Fig. S3 Digital photograph of the handwrited words of “carbon quantum dots” on a filter paper radiated under daylight

Table S2 Comparison of various CQDs synthesized by other strategies in the detection of the Fe^{3+}

Method of Synthesis	Material / Probe	Linear Range (μM)	Detection Limit (μM)	Ref.
Hydrothermal method	N-doped CQDs	0-2	70	[1]
Hydrothermal method	N/S co-doped CQDs	0.002-3	0.22	[2]
Hydrothermal method	N/P co-doped CQDs	1-150	0.33	[3]
Hydrothermal method	N-doped CQDs	2-25	0.9	[4]
Hydrothermal method	N/S co-doped CQDs	1-500	0.014	[5]
Solid phase synthesis	Colistin-functionalized CQDs	0-48	0.056	[6]
Solvothermal method	S/N co-doped CQDs	0-4	0.0097	[7]
Electrochemical method	N-doped CQDs	5-600	1.2	[8]
Solid state synthesis	N/S co-doped CQDs	0.05-200	0.05	[9]
Pyrolysis	N/S co-doped graphene quantum dots	0-500	_	[10]
Hydrothermal method	N/S/P co-doped CQDs	5-150	0.046	Our work

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