

## **Synthesis of fluorescent nitrogen-doped carbon dots from dried shrimps for cell imaging and boldine drug delivery system<sup>†</sup>**

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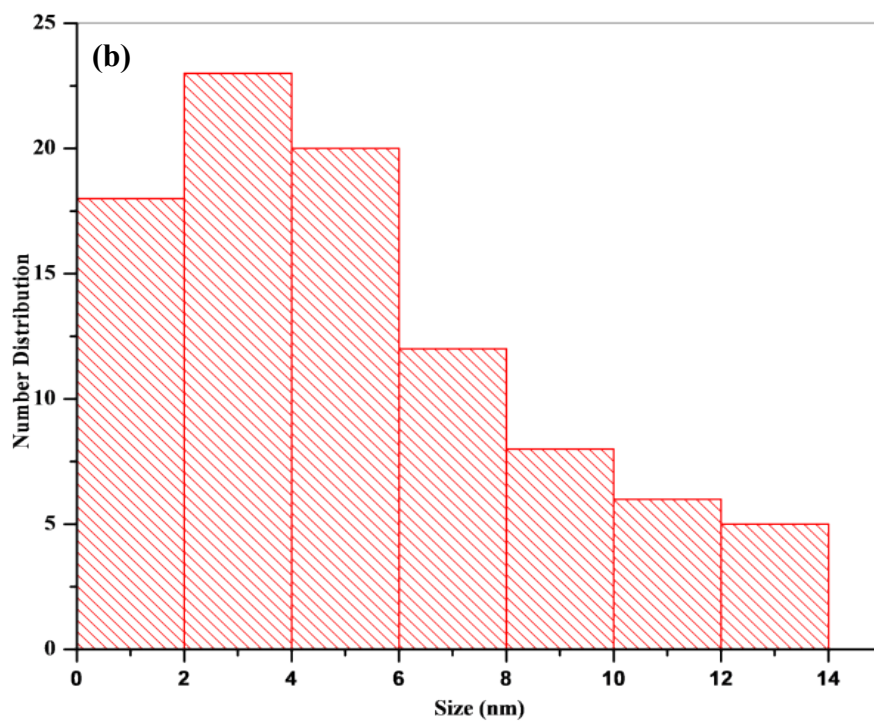
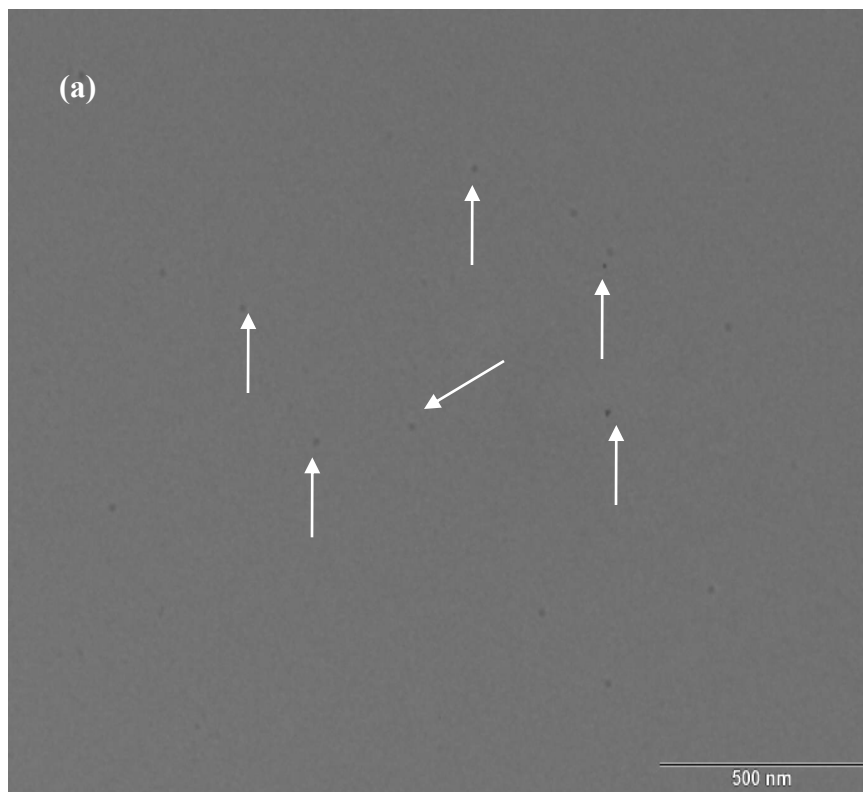
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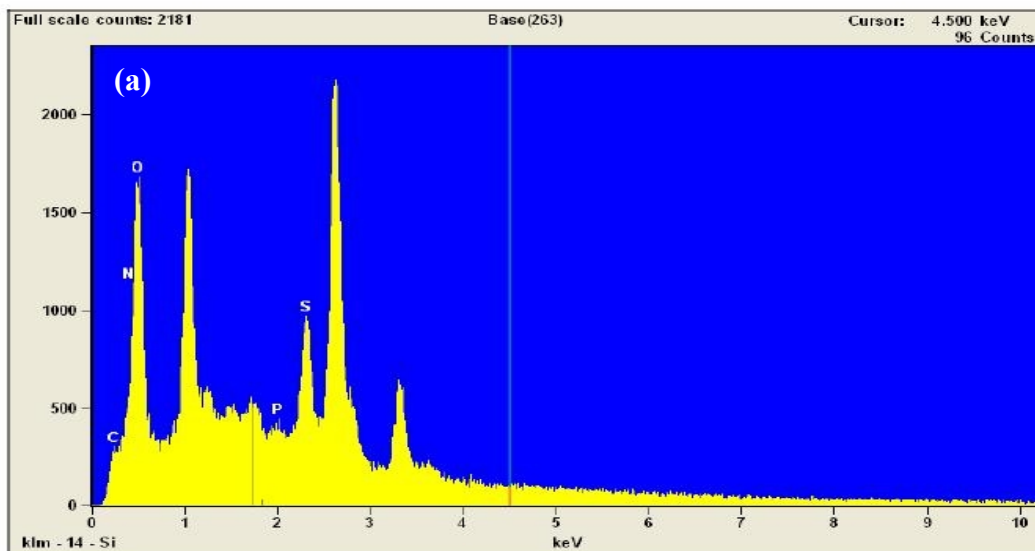
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*<sup>†</sup>This work is dedicated to Ms. Stephanie L. D'souza, who was listed as a First co-author, DST-Inspire Ph.D student in the Department of Applied Chemistry, SVNIT from 2012 to 2015, passed away on 3<sup>rd</sup> May 2015 in Ahmedabad, due to heart stroke.*

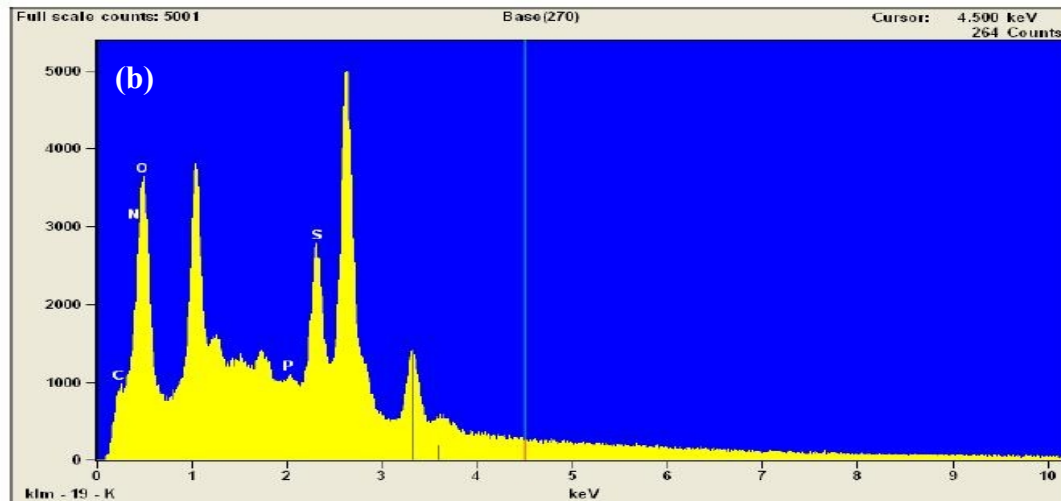


**Fig. S1.** (a) TEM image of CDs and (b) particle size distribution of CDs.



Quantitative Results Base (263)

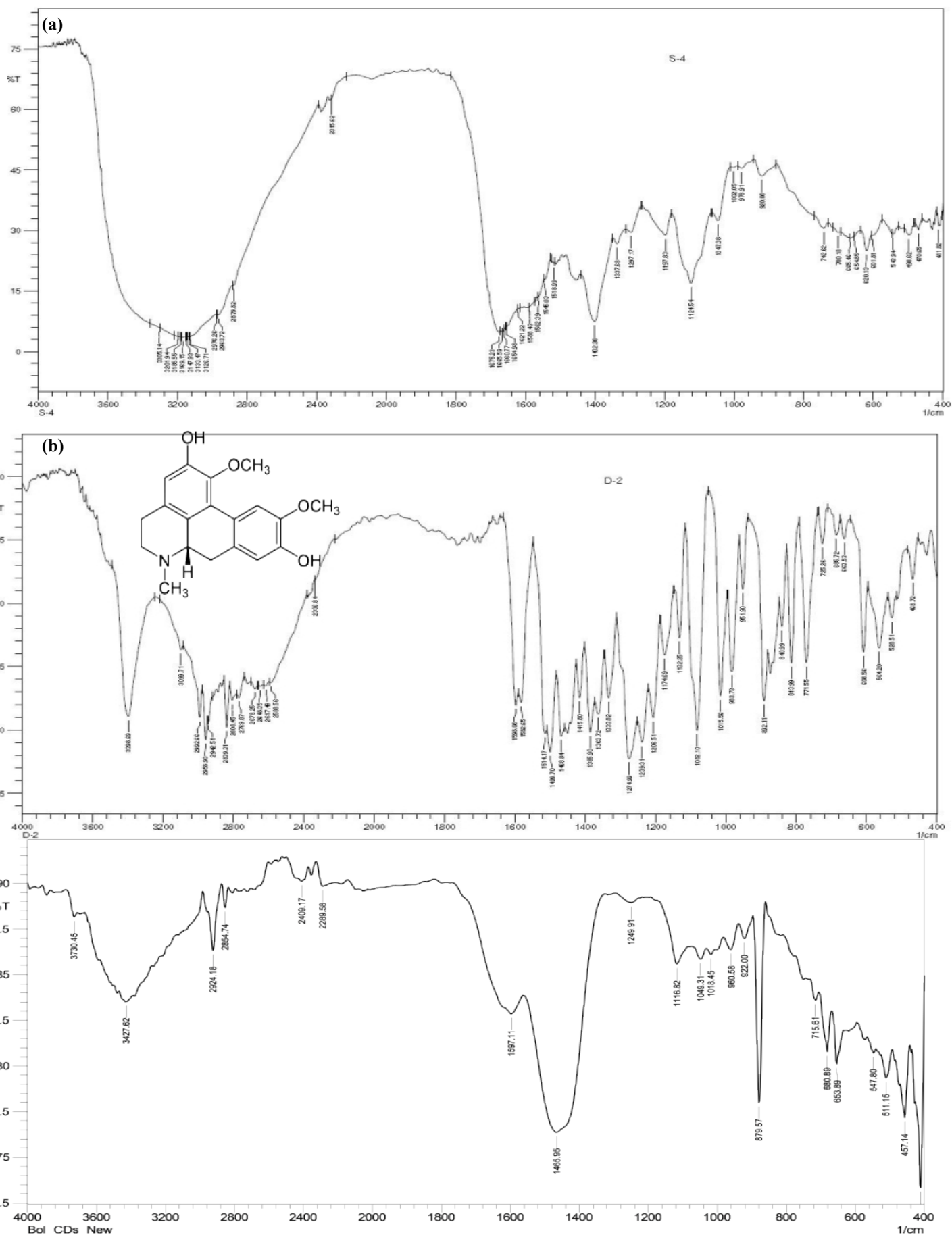
Element	Net Counts	Net Counts Error	Weight %	Atom %
C	3133	+/- 190	21.24	26.40
N	3270	+/- 269	23.57	25.13
O	15670	+/- 260	48.65	45.41
P	676	+/- 124	0.32	0.15
S	12229	+/- 312	6.22	2.90
S	0	0	---	---
<b>Total</b>			100.00	100.00



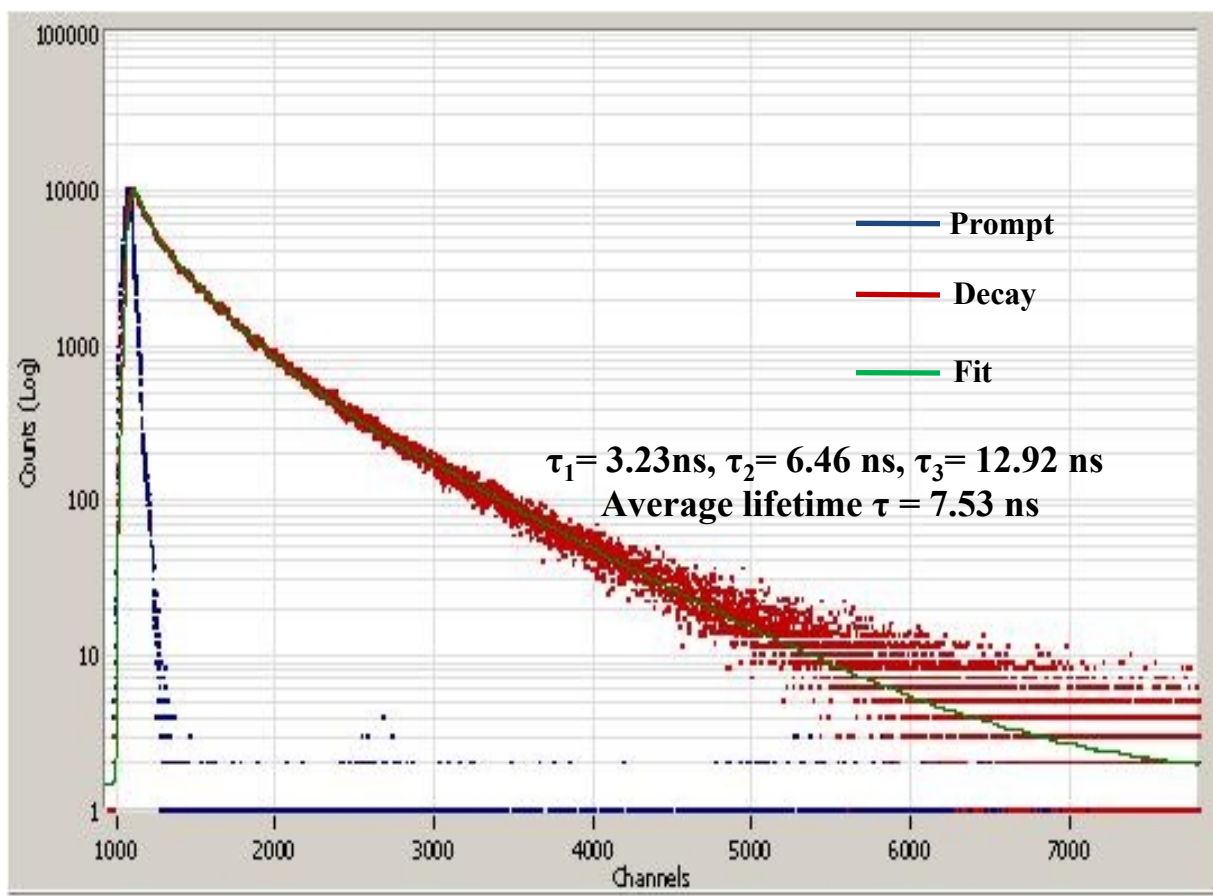
Quantitative Results Base (270)

Element	Net Counts	Net Counts Error	Weight %	Atom %
C	13221	+/- 348	26.29	32.08
N	8566	+/- 419	22.37	23.41
O	44355	+/- 564	45.85	42.00
P	1542	+/- 257	0.23	0.11
S	32322	+/- 664	5.26	2.40
S	0	0	---	---
<b>Total</b>			100.00	100.00

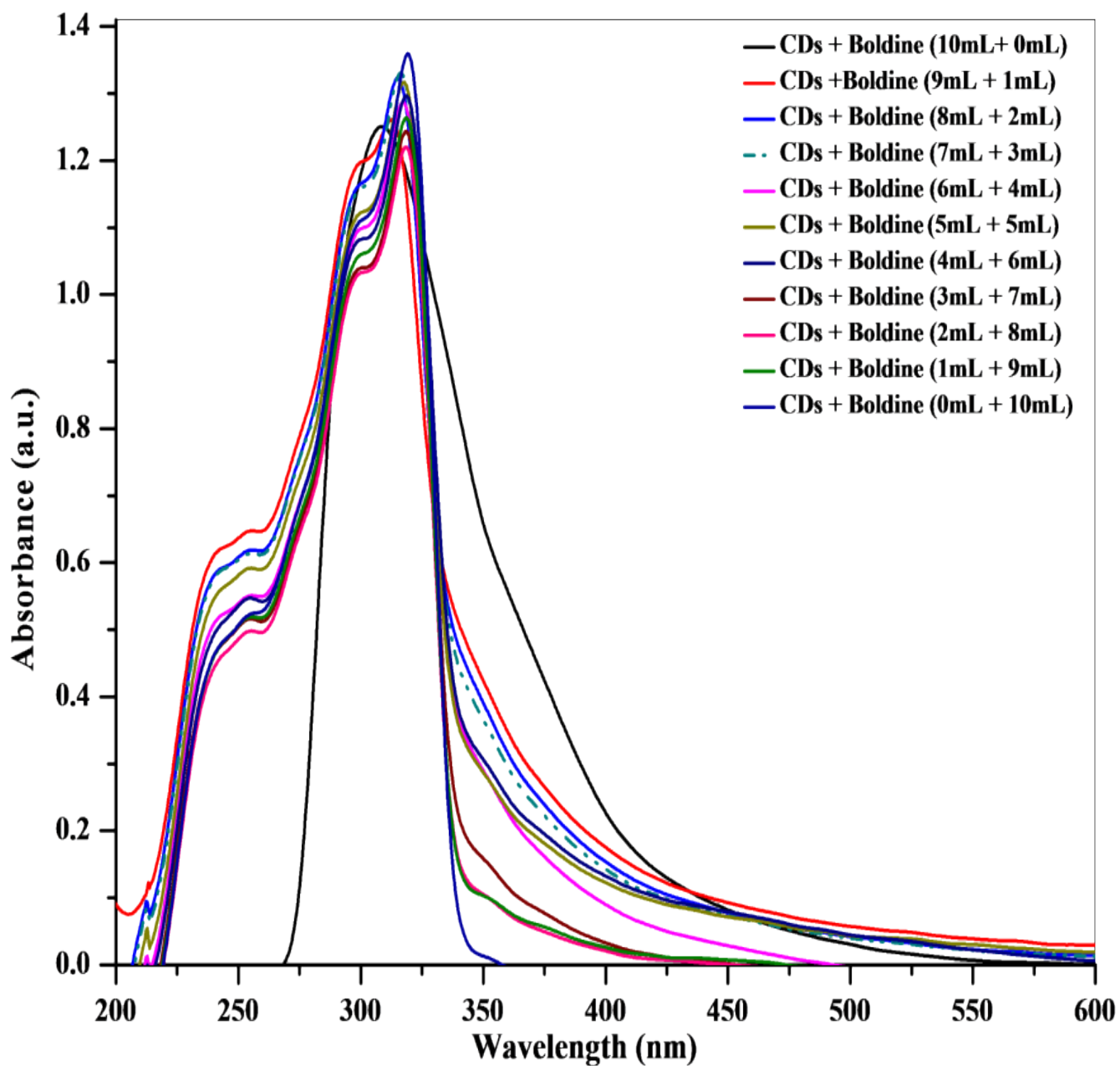
Fig. S2. EDX spectra of (a) blank CDs and (b) boldine-CDs,



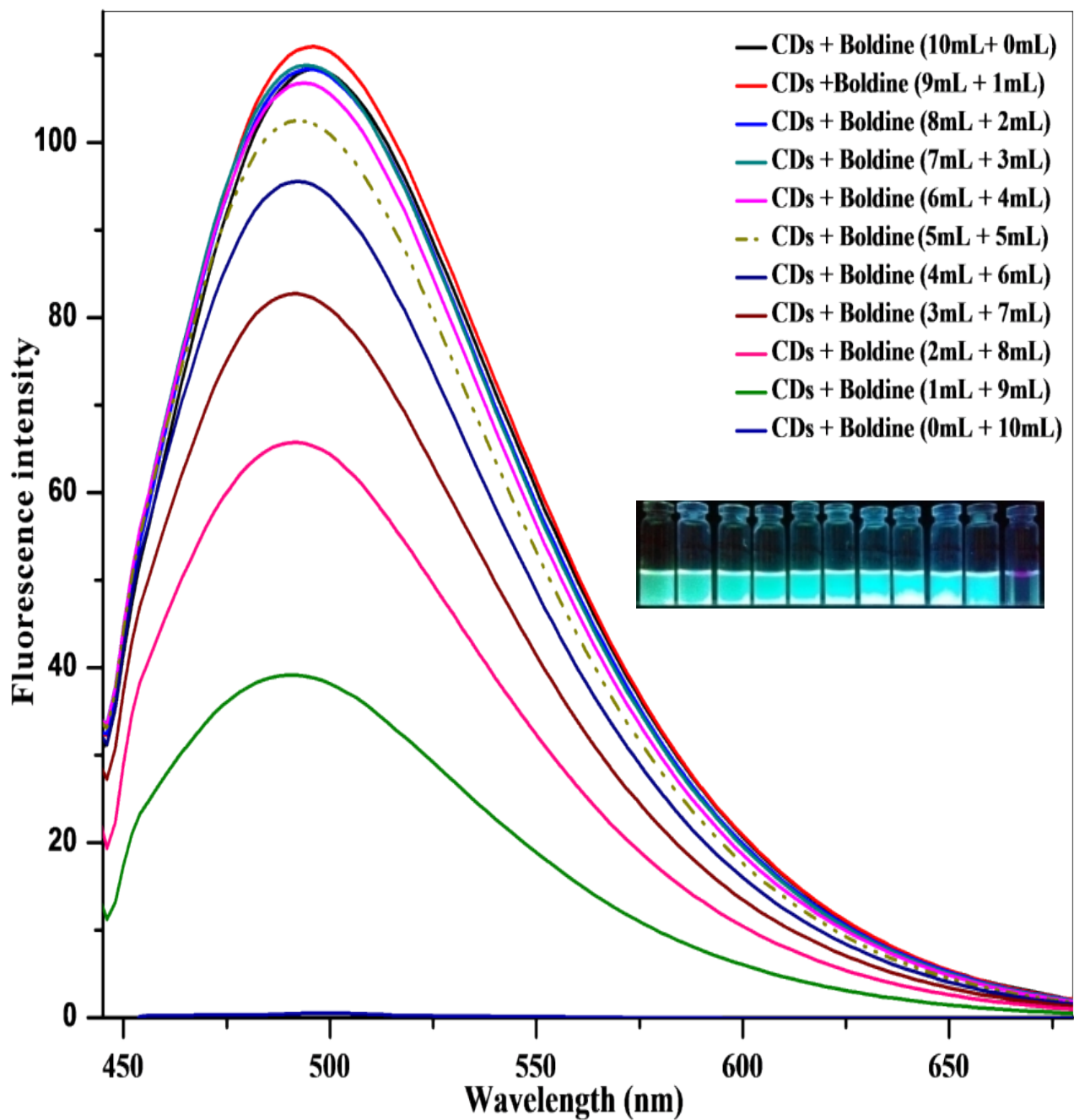
**Fig. S3.** FT-IR spectra of (a) blank CDs, (b) free boldine and (c) boldine-CDs



**Fig. S4.** The fluorescence decay (life time) curve of the CDs solution derived from prawn shrimp as a precursor upon excitation at 430 nm.



**Fig. S5.** UV-visible spectra of CDs at different volume ratios of boldine from 10:0 to 0:10 (CDs:boldine, v/v)



**Fig. S6.** Emission spectra of CDs at different volume ratios of boldine from 10:0 to 0:10 (CDs:boldine, v/v)