

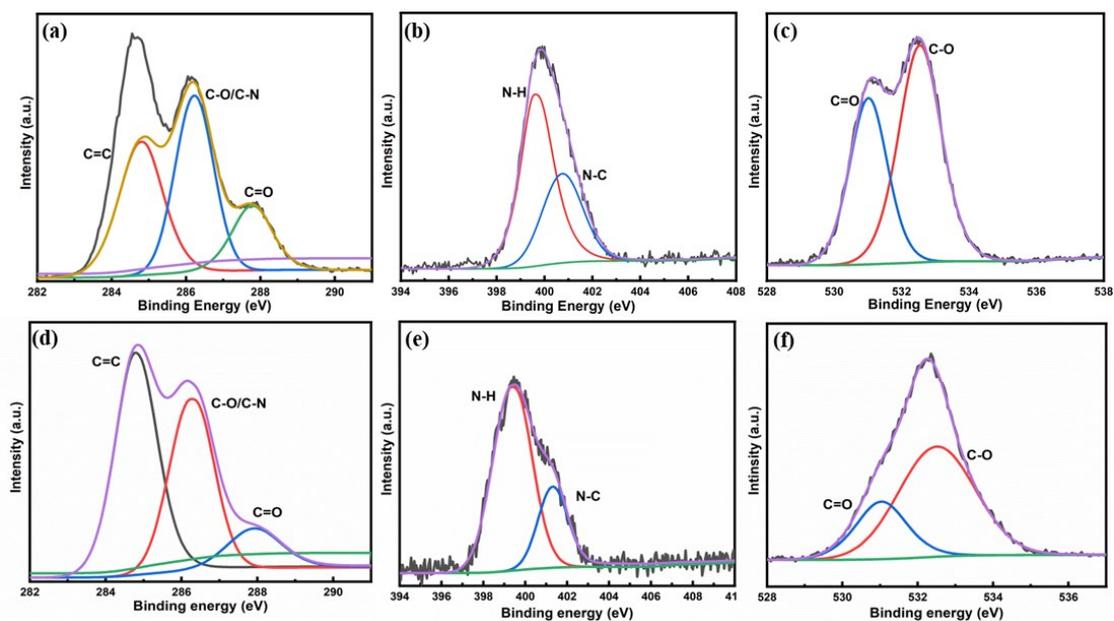
## Novel fluorescent nitrogen-doped carbon dots derived from *Panax notoginseng* for bioimaging and high selectivity detection of Cr<sup>6+</sup>

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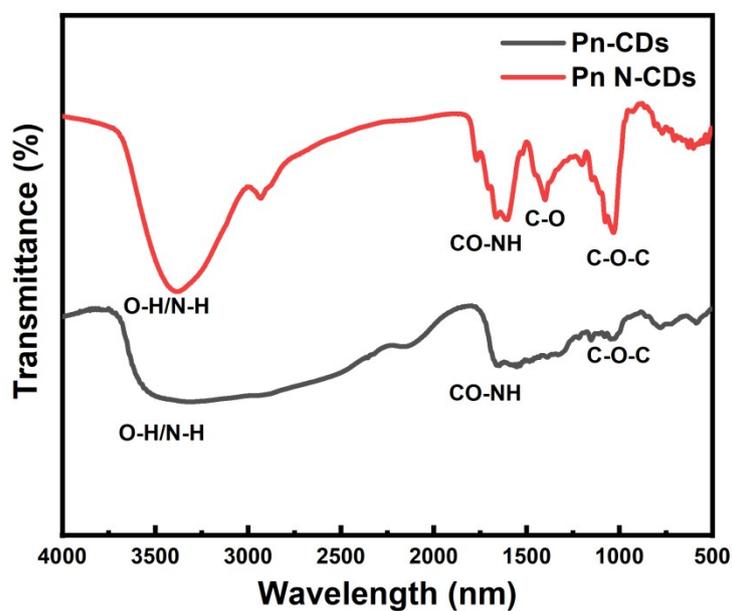
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**Table S1 Compare to atomic (%) of Pn-CDs and Pn N-CDs**

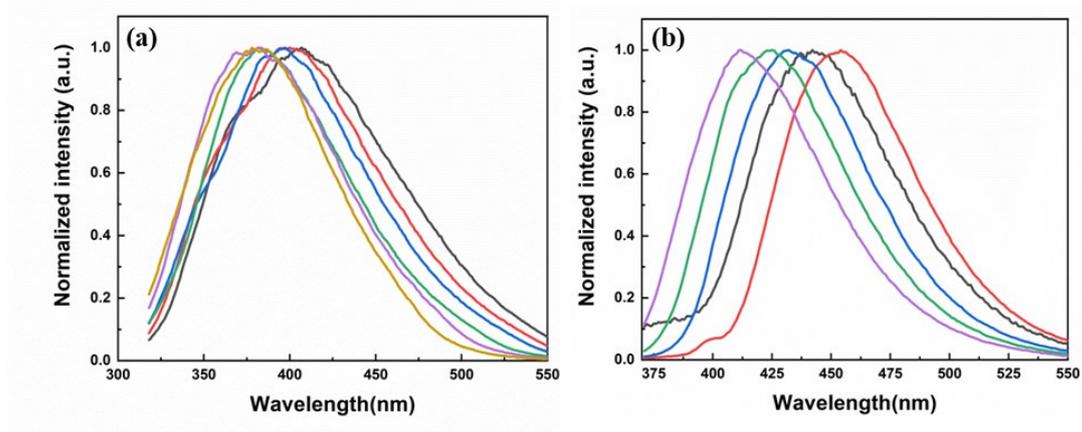
Name	Atomic (%) of Pn-CDs	Atomic (%) of Pn N-CDs
P2p	0.53	0.28
S2p	0.25	0.21
C1s	70.71	67.33
N1s	5.89	11.58
O1s	22.62	20.6



**Fig.S1** High-resolution C1s spectra (a), N1s spectra (b), and O1s spectra (c) of the prepared Pn N-CDs, high-resolution C1s spectra (d), N1s spectra (e), and O1s spectra (f) of the prepared Pn-CDs.



**Fig. S2** FTIR spectra of Pn-CDs and Pn N-CDs



Fi

g. S3 Normalized emission of Pn-CDs(a) and Pn N-CDs (b) at various excitation wavelengths.

Table S2 The relationship between time and QY at reaction temperature of 180 °C.

Time (h)	2	4	6	8	10	12	14	16	18
Pn-CDs	0.465	2.15	4.65	6.15	7.5	8.54	8.45	8.45	8.3
Pn N-CDs	0.9	3.9	7	11.05	15.5	18.41	18.15	18.	17.95

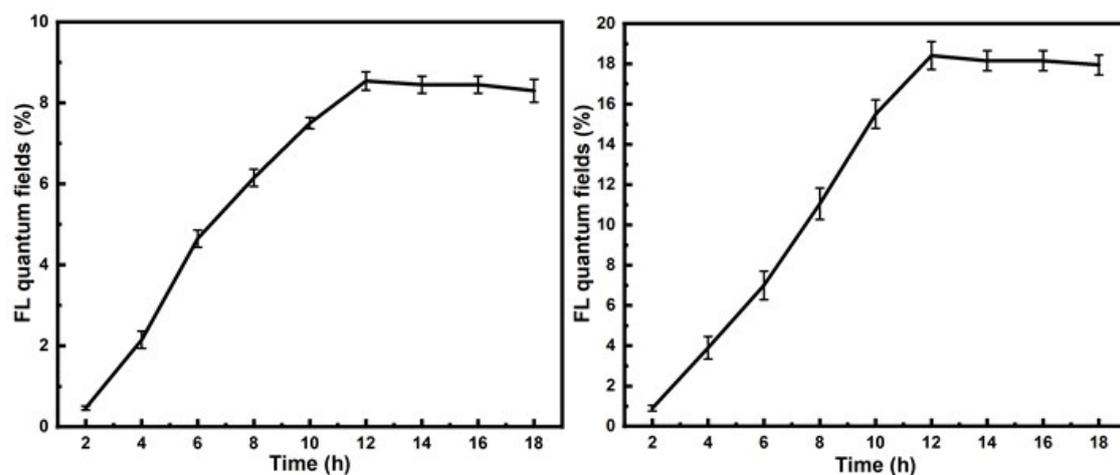
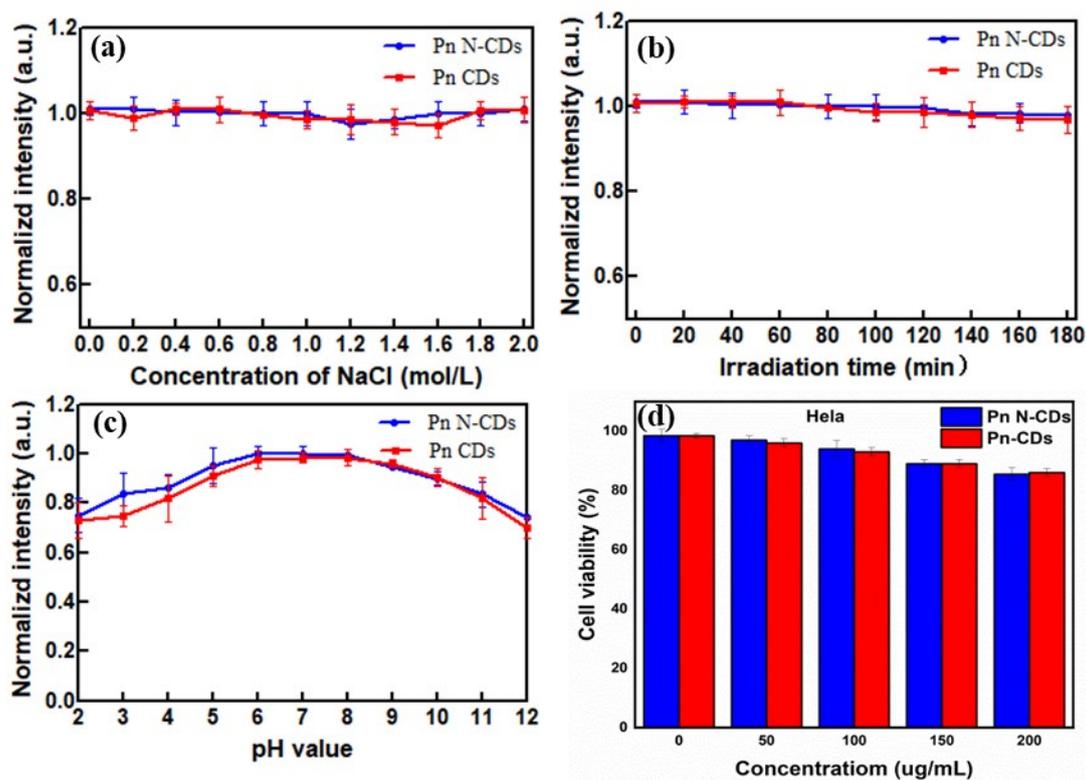
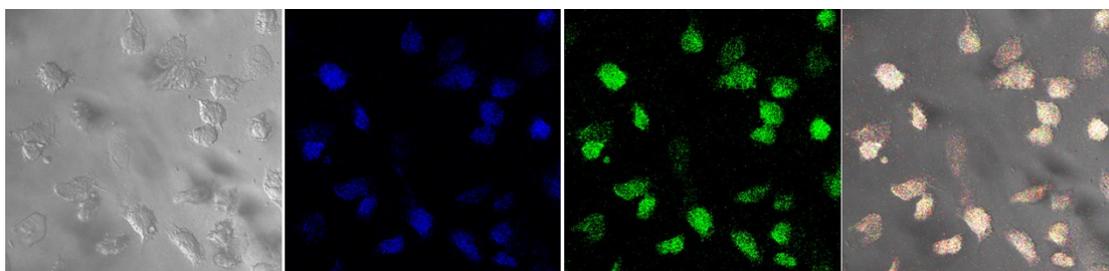


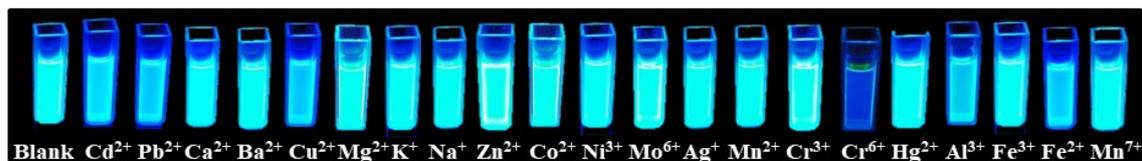
Fig. S4 The relationship between time and QY of Pn-CDs(a) and Pn N-CDs (b) at reaction temperature of 180 °C.



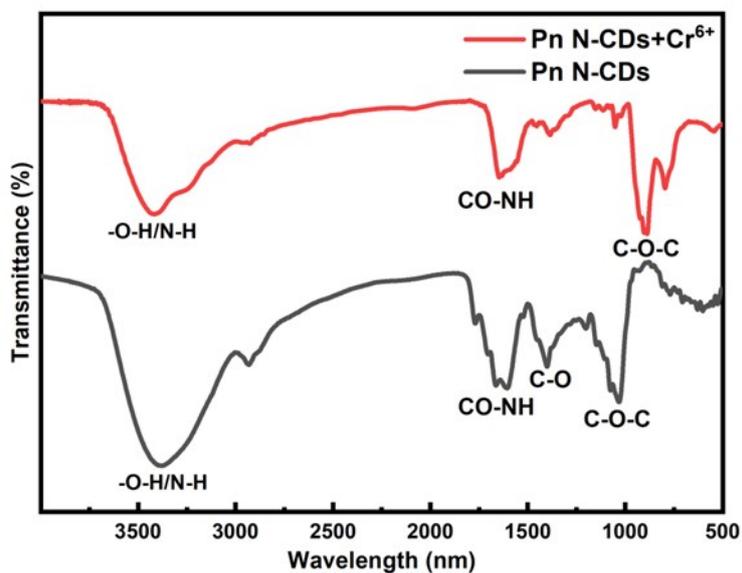
**Fig. S5** (a) Normalized fluorescence intensity of Pn-CDs and Pn N-CDs in different NaCl concentrations ranging from 0 to 10 M. (b) Normalized fluorescence intensity of Pn-CDs and Pn N-CDs under UV (365 nm) irradiation for 3h; (c) The fluorescence intensity of Pn-CDs and Pn N-CDs varying with the sample pH value from 2 to 12; (d) HeLa cell viability from MTT assays with different Pn-CDs and Pn N-CDs concentration after 24 h incubation.



**Fig. S6** The confocal imaging of HeLa cells after coculture with Pn N-CDs.



**Fig. S7** The fluorescence of Pn N-CD upon addition of different cation.



**Fig. S8** The IR spectrum of Pn N-CDs+Cr<sup>6+</sup> and the IR of Pn N-CDs.