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## Supporting information

Color-tunable luminescent CdTe quantum dots membranes based on bacterial cellulose (BC) and application in ion detection

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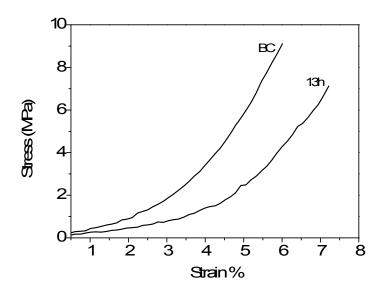


Fig. S1 Tensile stress-strain behaviors of pure BC and CdTe/BC nanocomposites (13 h).

Some BC substrates sized 2cm × 8cm were prepared for mechanical measurements.

The mechanical properties of samples were measured using a WDT Universal Testing Machine at room temperature and a crosshead speed of 20 mm/min.

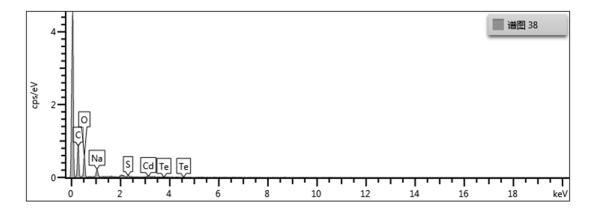


Fig. S2 EDX spectra for CdTe/BC nanocomposite.

Table S1 Results of EDX analysis for CdTe/BC nanocomposite.

Element	Wt%	Atom%
С	54.63	64.64
О	35.75	31.76
Na	4.24	2.62
S	1.00	0.44
Cd	3.68	0.47
Те	0.70	0.08
Total:	100.00	100.00

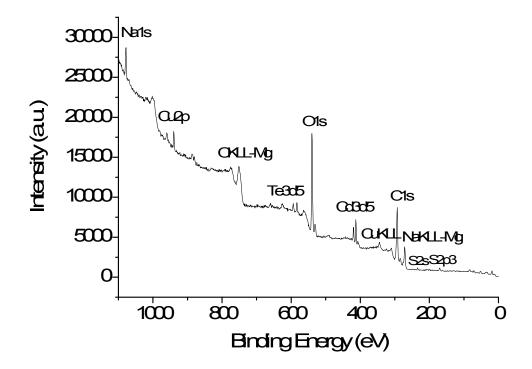


Fig. S3 XPS spectrum for green luminescent membrane after treatment with  $Cu^{2+}$  (1mM)