

## Supporting Information

### **Preparation of yellow emissive nitrogen-doped carbon dots from o-phenylenediamine and their applications in curcumin sensing**

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## **Experimental Section**

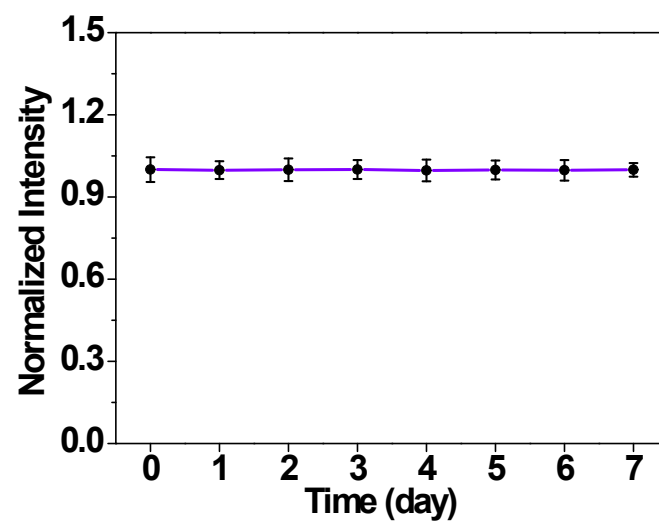
### **Chemicals and materials**

O-phenylenediamine (o-PD) is purchased from Aladdin Chemistry Co., Ltd. (Shanghai, China).  $\text{AgNO}_3$ ,  $\text{Al}(\text{NO}_3)_3$ ,  $\text{BaCl}_2$ ,  $\text{CaCl}_2$ ,  $\text{CdCl}_2$ ,  $\text{Co}(\text{NO}_3)_2$ ,  $\text{CrCl}_3$ ,  $\text{CuCl}_2$ ,  $\text{HgCl}_2$ ,  $\text{KCl}$ ,  $\text{MgCl}_2$ ,  $\text{MnCl}_2$ ,  $\text{NaCl}$ ,  $\text{NiCl}_2$ ,  $\text{Pb}(\text{NO}_3)_2$ , and  $\text{ZnCl}_2$  are obtained from Sinopharm Chemical Reagent Co., Ltd. (Shanghai, China). All reagents are of analytical grade and used as received. Deionized (DI) water (18 M $\Omega$  cm) is used throughout all experiments.

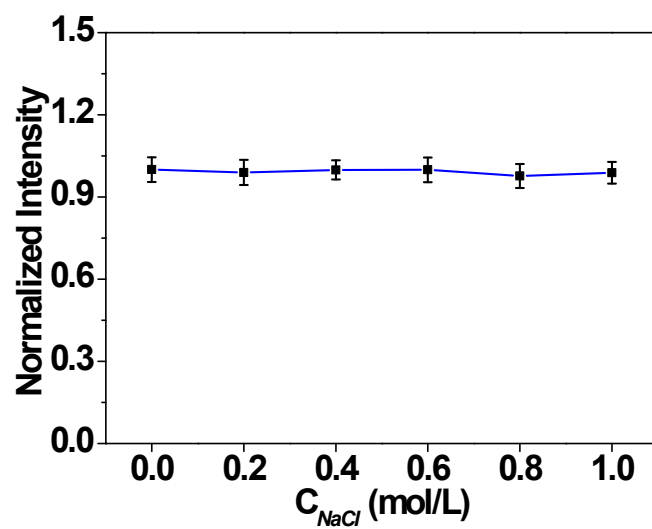
### **Instrumentation**

Ultraviolet-visible (UV-vis) spectra are recorded on a Hitachi U-3900 UV-Vis spectrophotometer (Hitachi High Technologies, Japan). PL spectra are collected on an F-7000 spectrophotometer (Hitachi High Technologies, Japan). PL lifetime is measured using a FluoroMax-4TCSPC spectrofluorometer (HORIBA Jobin Yvon, USA). Transmission electron microscopy (TEM) is performed using a JEM 2100F transmission electron microscope (JEOL, Japan). Fourier-transform infrared (FT-IR) spectra are recorded on a Nicolet-6700 FT-IR spectrophotometer (Thermo Instruments Inc., USA). X-ray photoelectron spectroscopy (XPS) is performed on an ESCALAB 250 Xi system (Thermo Instruments Inc., USA). Zeta potential measurements are performed using a Malvern Nano-ZS instrument (Malvern, England).

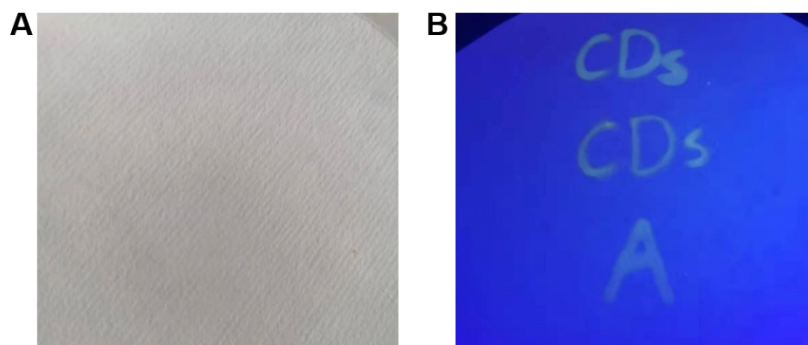




**Fig. S1** Comparisons of PL intensity of the freshly-prepared and the stored (7 days) YNCDs.



**Fig. S2** Photostability of the YNCDs under different salt solution concentrations.



**Fig. S3** The image using YNCDs as PL ink on the filter paper under daylight and ultraviolet light.