

# Supporting information

## **Fe doped carbonized polymer dots based fluorescent sensor with “turn-on” property for hydrazine hydrate detection**

Pengjun Li,<sup>a</sup> Zili Li,<sup>a</sup> Xirui Miao,<sup>a</sup> Haoting Hou,<sup>a</sup> Mao Wang,<sup>a</sup> Xudong Yang<sup>\*a</sup>

<sup>a</sup> *School of Chemical Engineering, Advanced Institute of Materials Science, Changchun University of Technology,  
Changchun 130012, P. R. China.*

*E-mail: yangxudong10@163.com.*

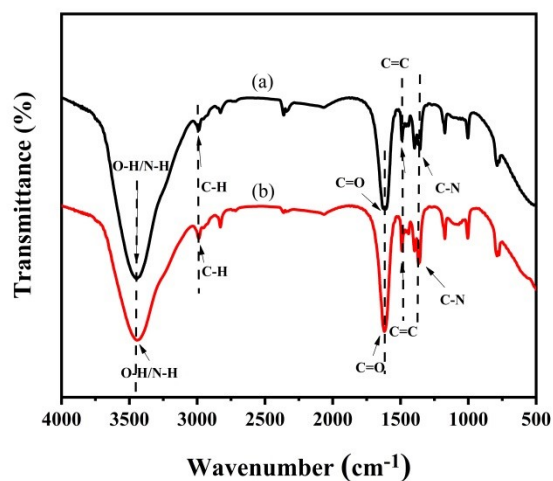


Figure. S1 FT-IR spectra of (a) CPDs and (b) rCPDs.

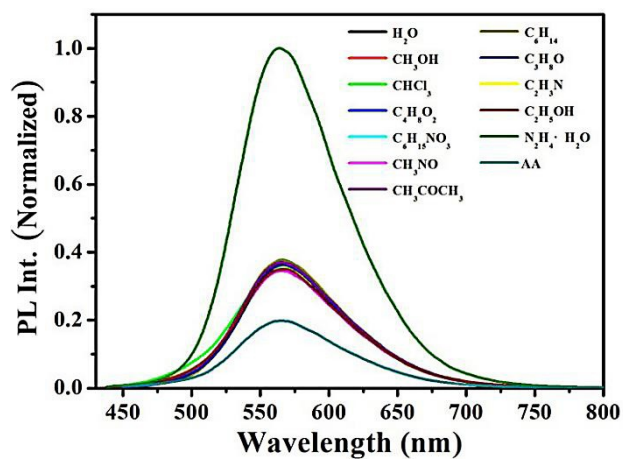


Figure. S2 Fluorescence spectra of CPDs after addition of other solvents(30  $\mu$ M) and  $N_2H_4 \cdot H_2O$  (3  $\mu$ M)

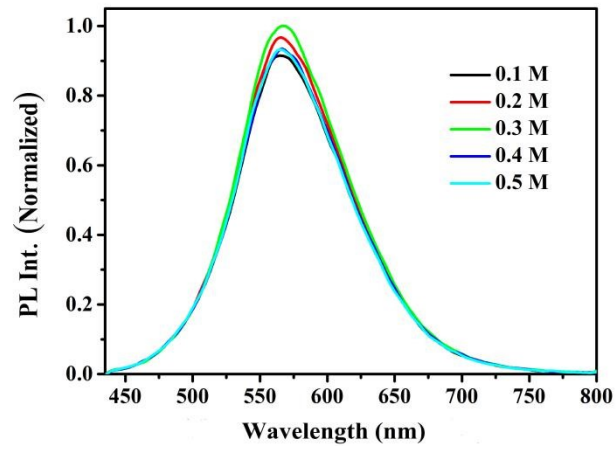


Figure. S3 fluorescence spectra of CPDs under the influence of different concentrations of NaCl

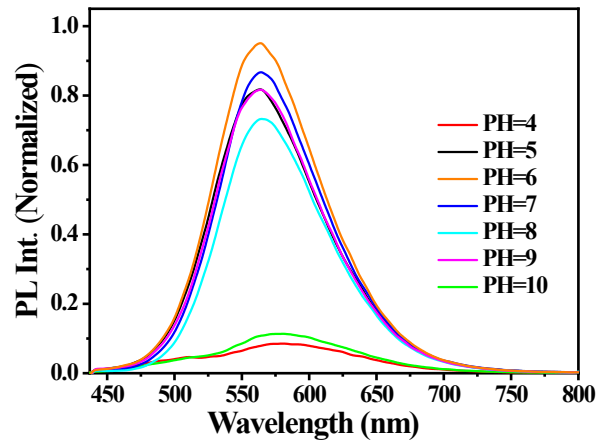
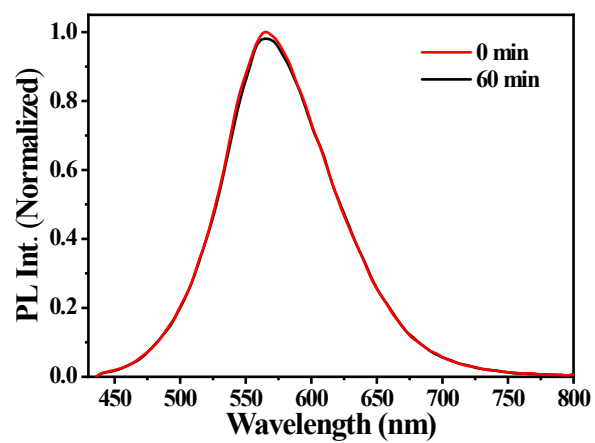
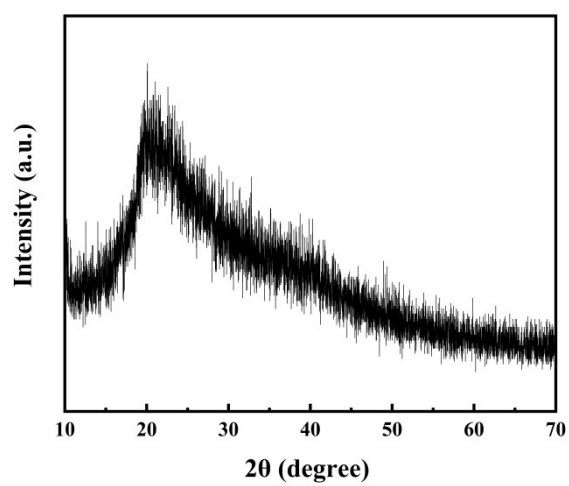


Figure. S4 The fluorescence spectra of CPDs under the influence of pH 4.0-10.0;



**Figure. S5** Fluorescence spectra after 60 minutes of ultraviolet light exposure.



**Figure. S6** XRD spectra of CPDs.

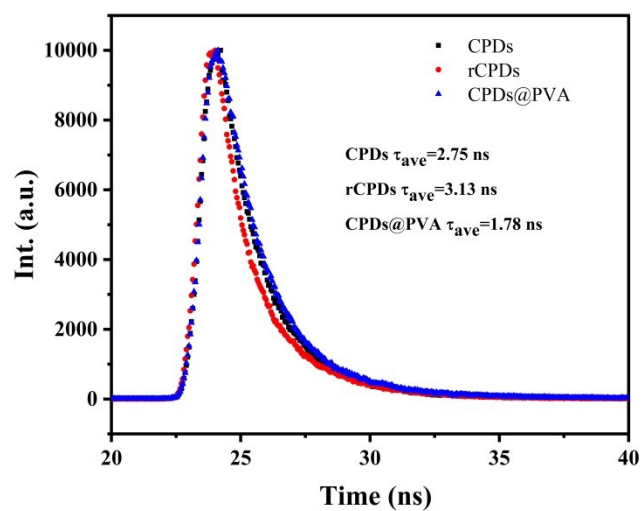


Figure. S7 Fluorescence lifetime spectra of CPDs, rCPDs and CPDs@PVA.

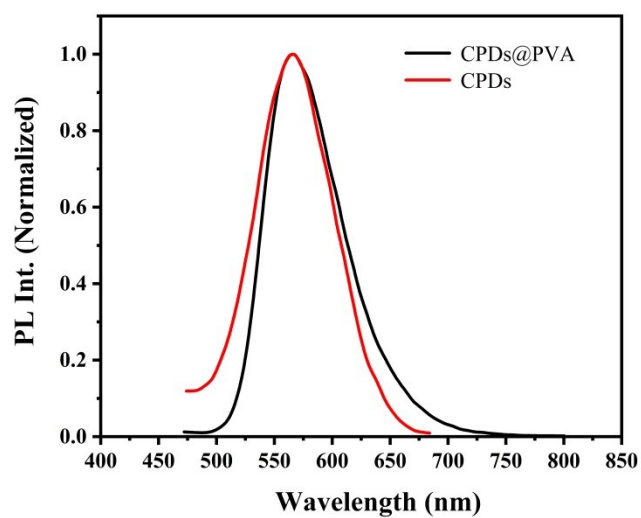
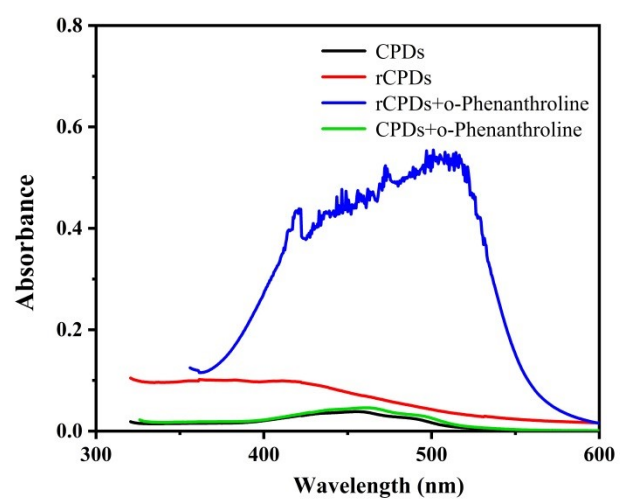


Figure. S8 Fluorescence emission spectra of CPDs and CPDs@PVA.



**Figure. S9** Effect of wavelength on absorbance.