

**Cross-linkable phthalonitrile derivative as precursor to synthesize  
nitrogen doped carbon nanodots for Ni ions detection**

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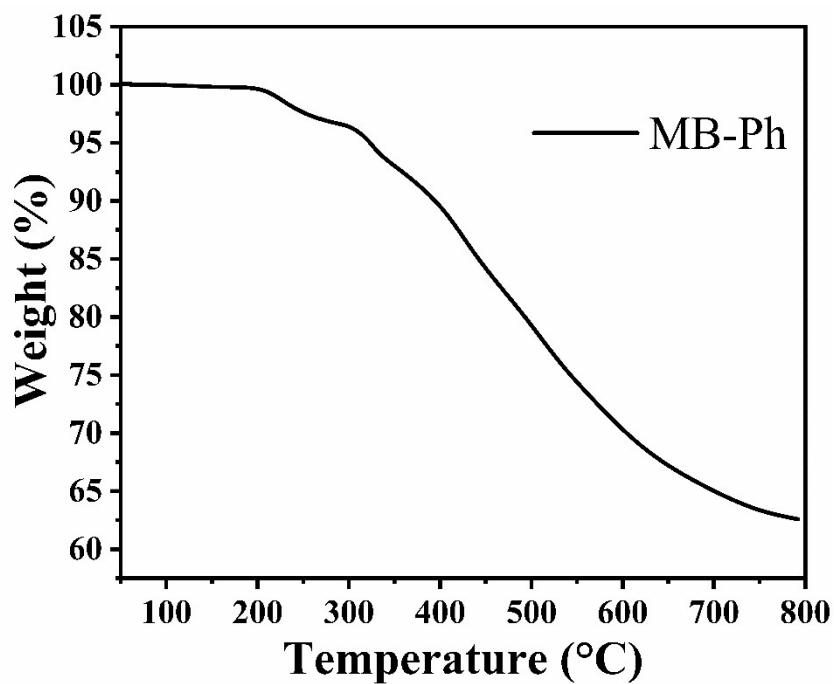


Fig.S1 The TGA curve of MB-Ph precursor.

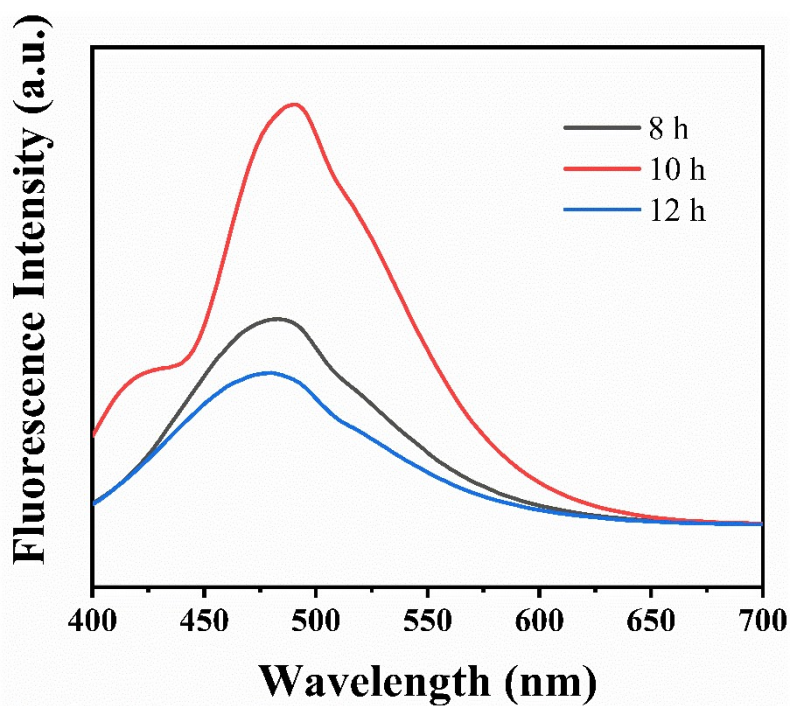
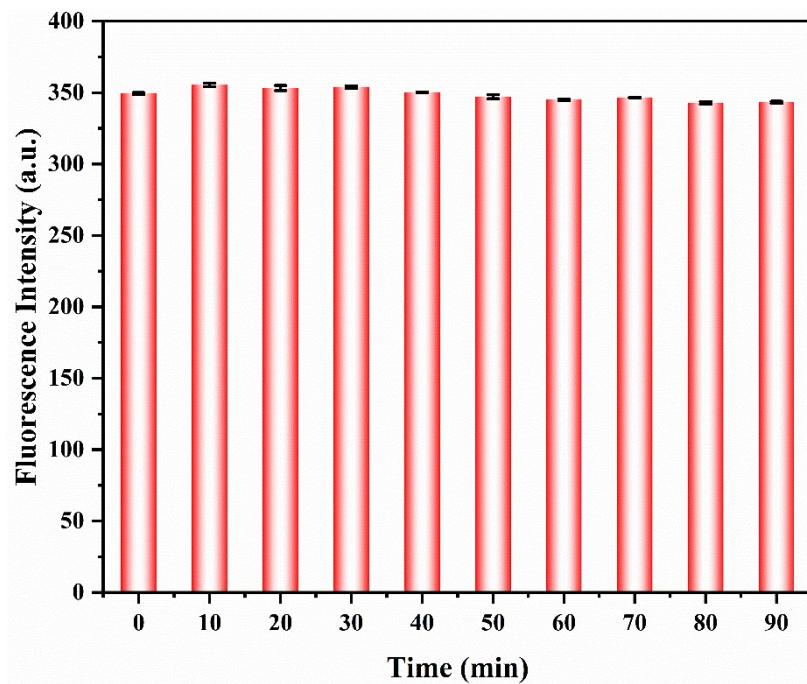
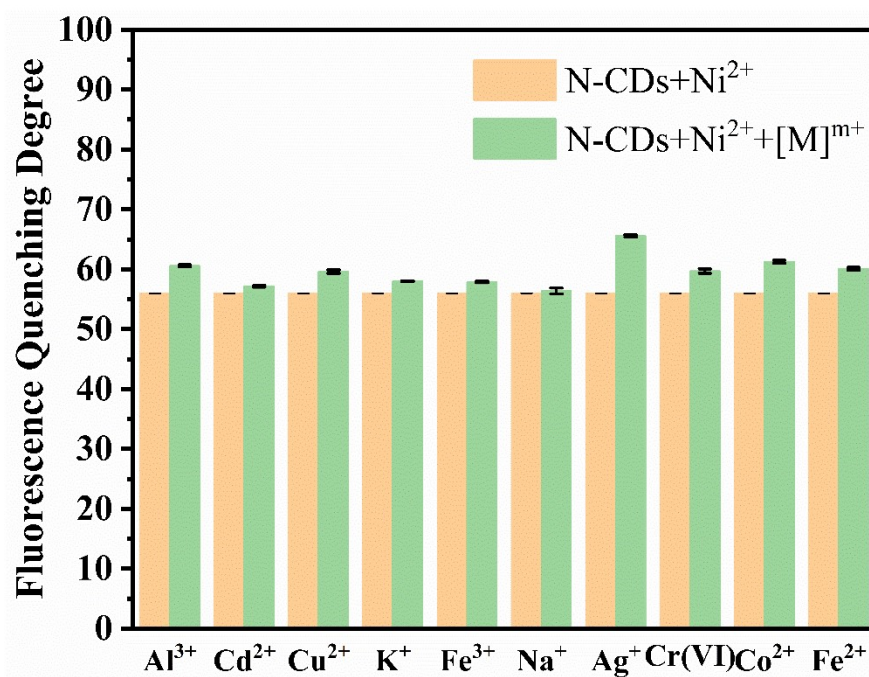


Fig.S2 The fluorescence emission curves of N-CDs synthesized for different time.



**Fig.S3** Effect of UV light irradiation time on the fluorescence intensity of the optimized N-CDs.



**Fig.S4** The effect of Ni<sup>2+</sup> alone or its mixtures with other metal ions on the fluorescence quenching of N-CD.

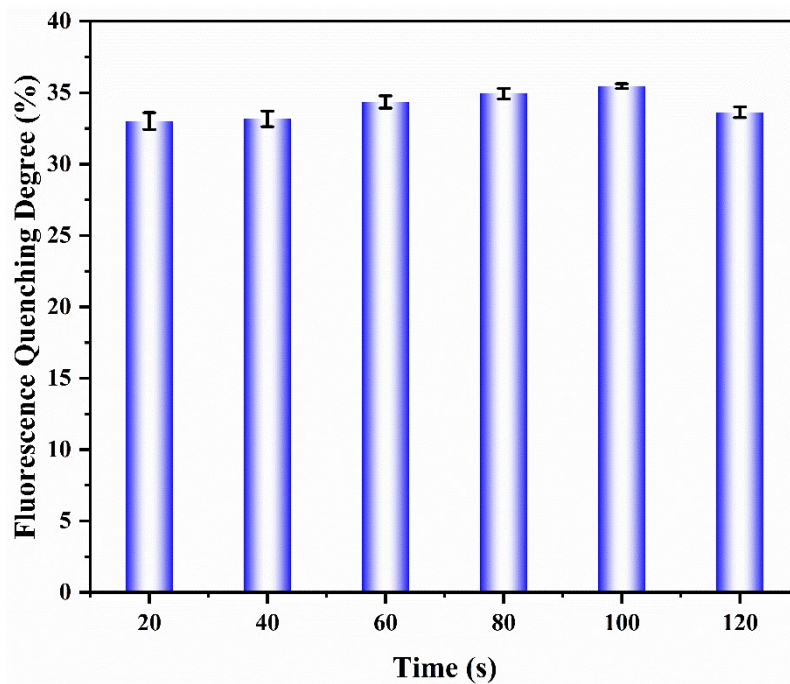


Fig.S5 Fluorescent quenching degree of N-CDs by Ni(II) upon different incubation time.

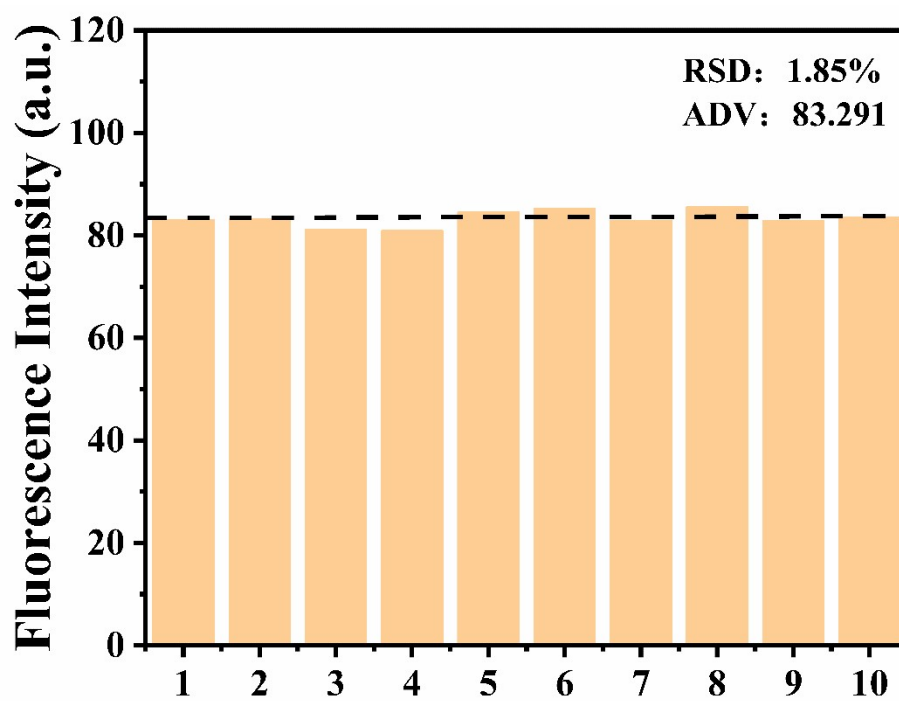


Fig.S6 Fluorescence spectrogram of Ni(II) for repeated detection of N-CDs.

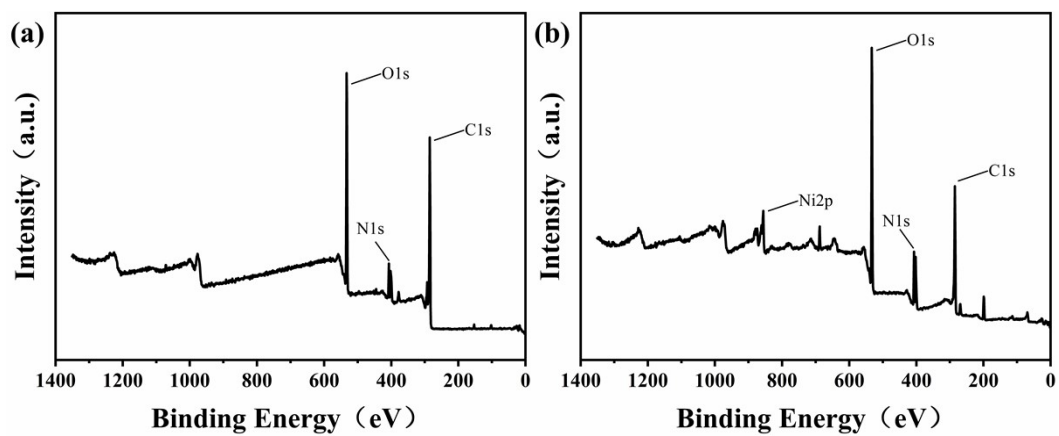


Fig.S7 XPS spectrum of the pristine N-CDs (a) and N-CDs after interacted with Ni(II) (b).