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Supporting Information

**Red-emissive nitrogen doped carbon quantum dots for
highly selective and sensitive fluorescent detection of
alachlor herbicide in soil samples**

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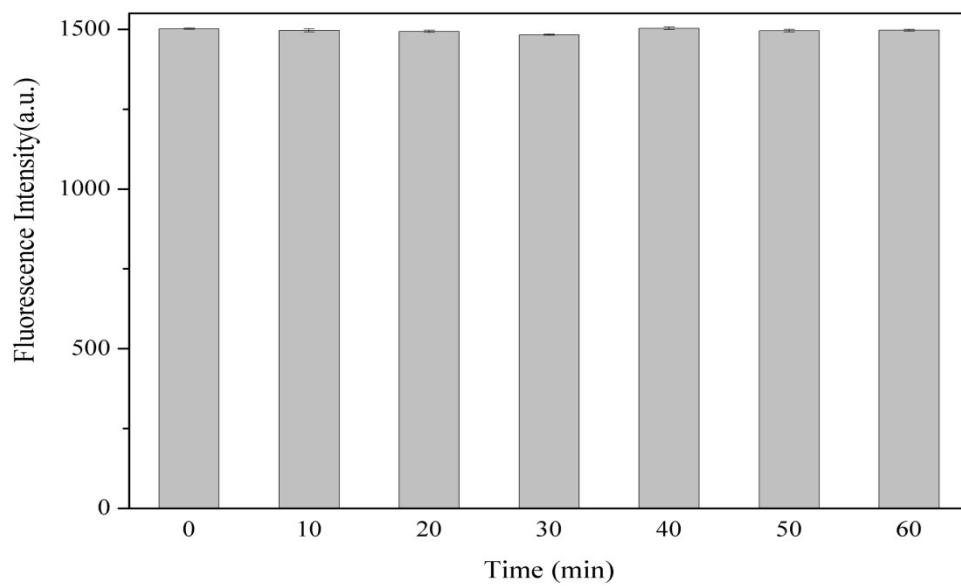
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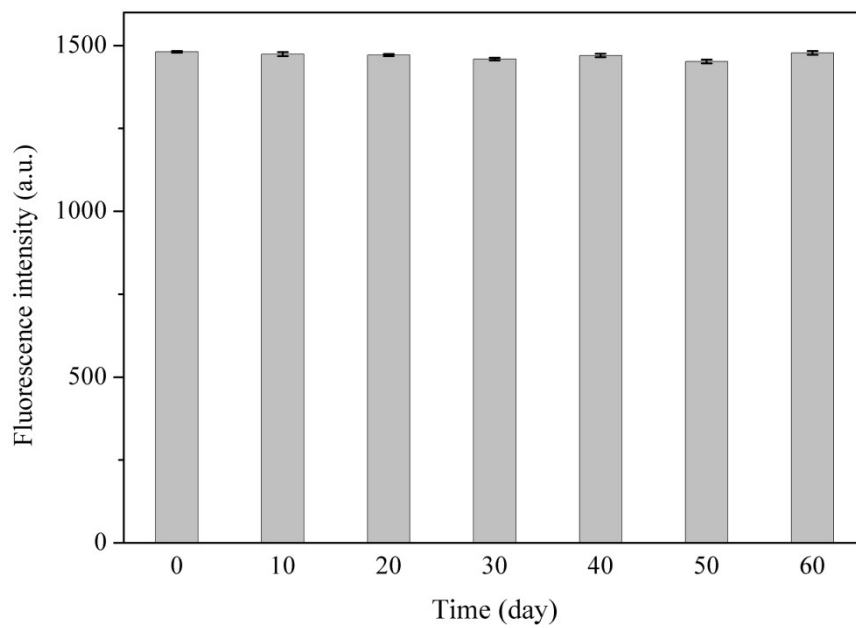


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23 Figure S1 Effect of UV irradiation time on the fluorescence intensity of N-CQDs

24 from 0 to 60 min. Here the concentration of N-CQDs was 0.2 mg mL⁻¹.

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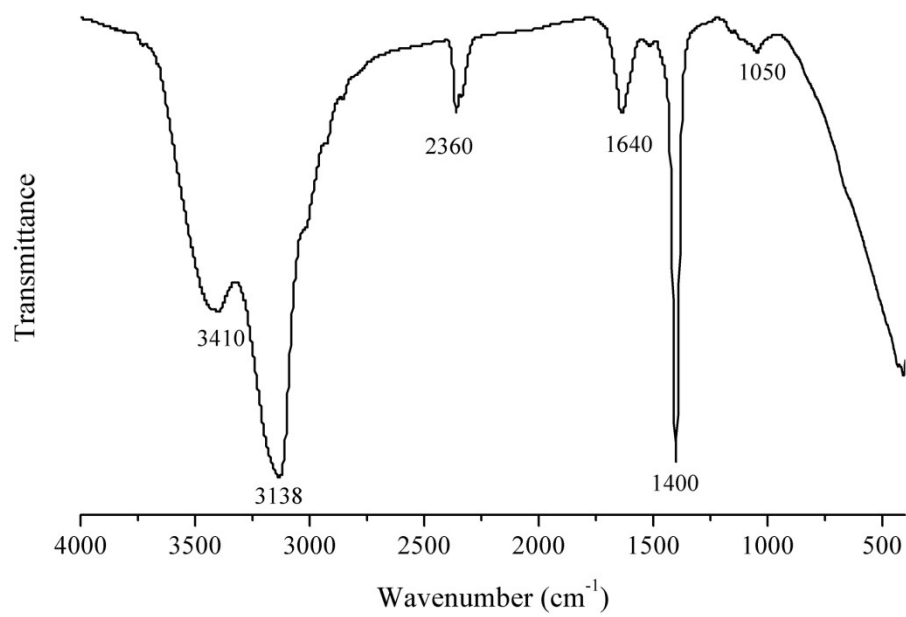


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27 Figure S2 Effect of storing time on the fluorescence intensity of N-CQDs at room

28 temperature from 0 to 60 day. Here the concentration of N-CQDs was 0.2 mg mL⁻¹.

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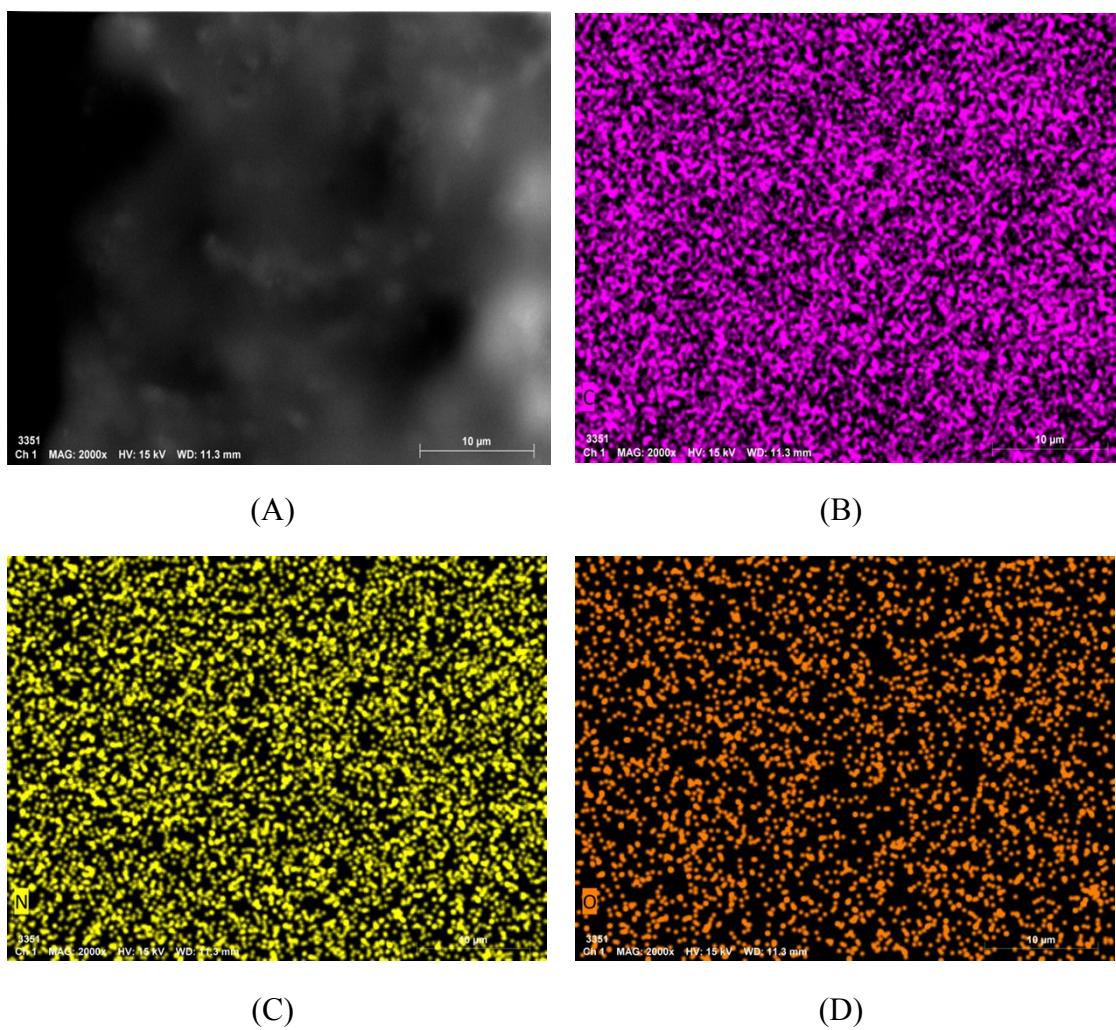


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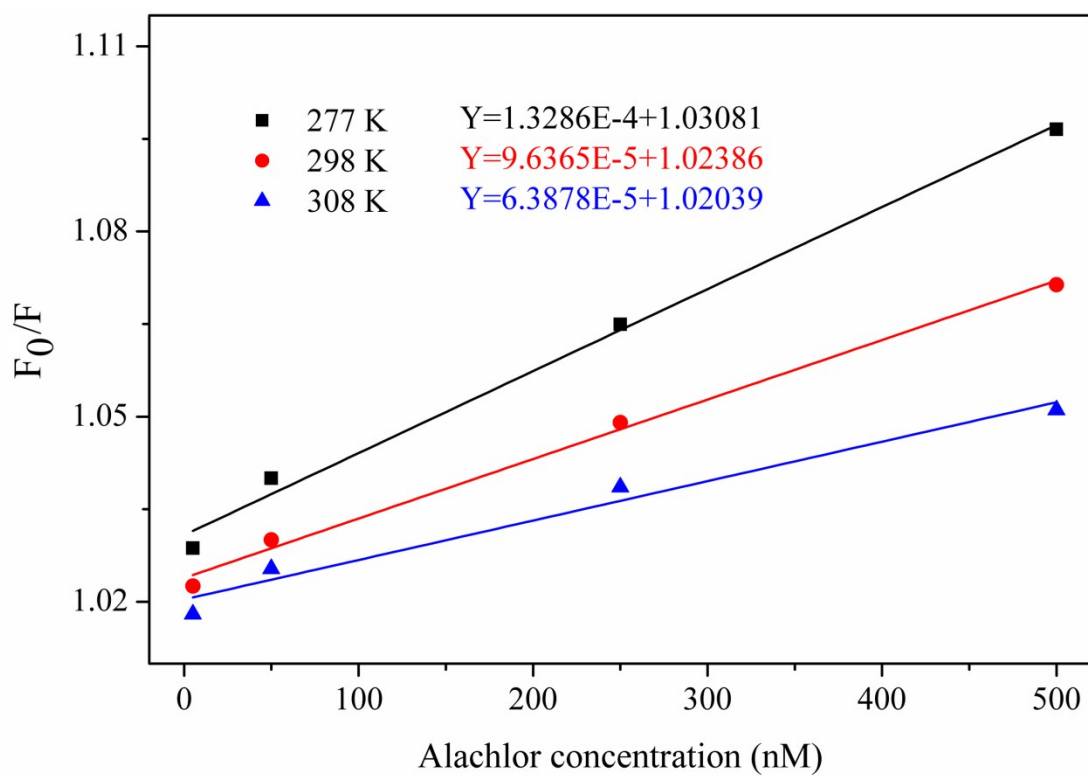
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Figure S3 FT-IR spectra of N-CQDs

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34 Figure S4 (A) SEM image of N-CQDs particles for EDS; (B–D) EDS element
35 mapping data of C, N, and O elements throughout N-CQDs particles
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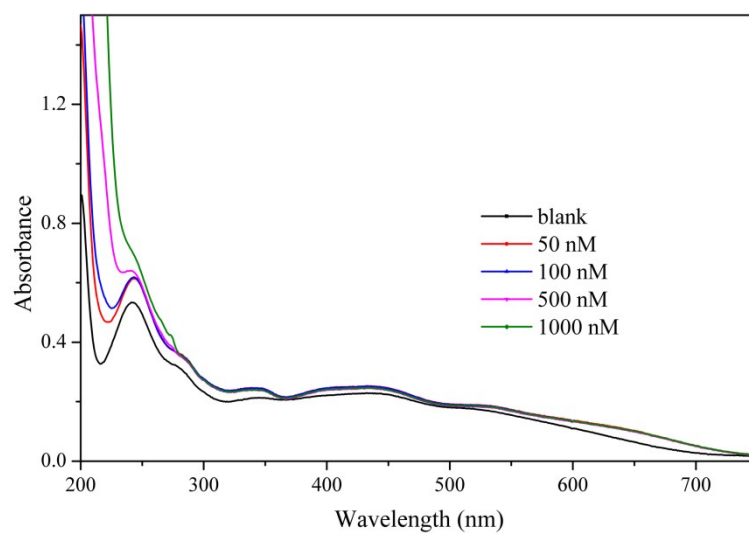


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39 Figure S5 the Stern-Volmer curves of alachlor quenched N-CQDs at different
40 temperature (277, 298 and 308 K)

41 (Here alachlor concentration was 5.0, 50, 250, and 500 nM, respectively)

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45 Figure S6 The UV-vis absorption spectra of N-CQDs in the presence of alachlor

46 (Here the concentration of N-CQDs was 0.1 mg/mL, and the concentration of alachlor (C_{paraquat})

47 from a to f was 0, 50, 100, 500, and 1000 nM, respectively)