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Fabrication of a carbon quantum dots-immobilized zirconium-based metal-organic framework composite fluorescence sensor for highly sensitive detection of 4-nitrophenol

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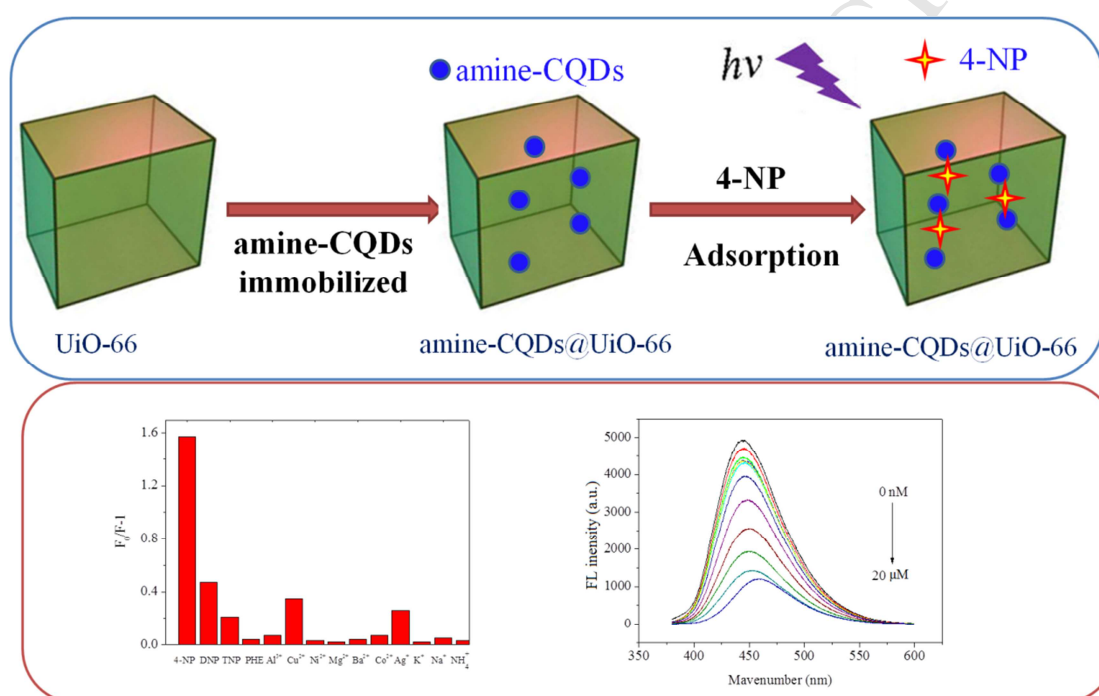
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Graphical abstract

We fabricated amine-CQDs@UiO-66 composites via a post-synthetic modification approach, incorporating amine-functionalized carbon quantum dots functional monomers that could respond to the analyte 4-nitrophenol (4-NP). We found it to be highly selective and sensitive for 4-NP, detecting this species even in mixtures of metal ions and other phenols.



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