

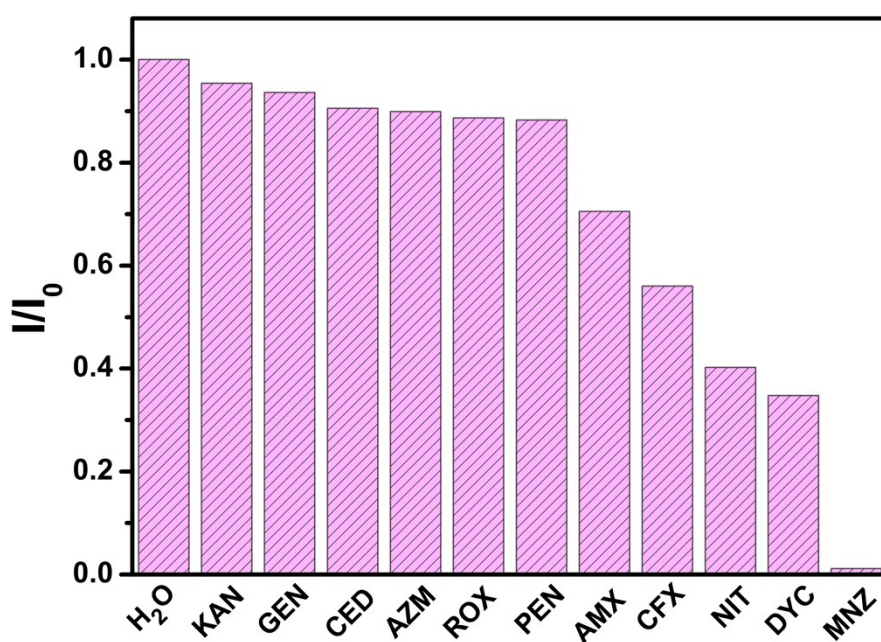
## Supporting Information

### Polyvinylpyrrolidone-assisted synthesis of a high water-stable Cadmium-based Metal-Organic Framework nanosheets for the detection of metronidazole

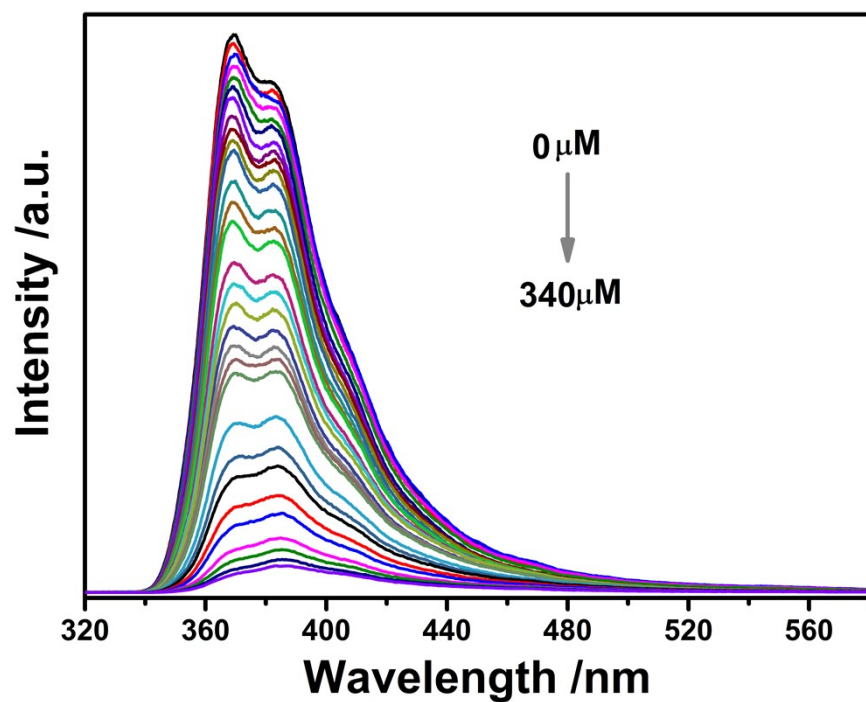
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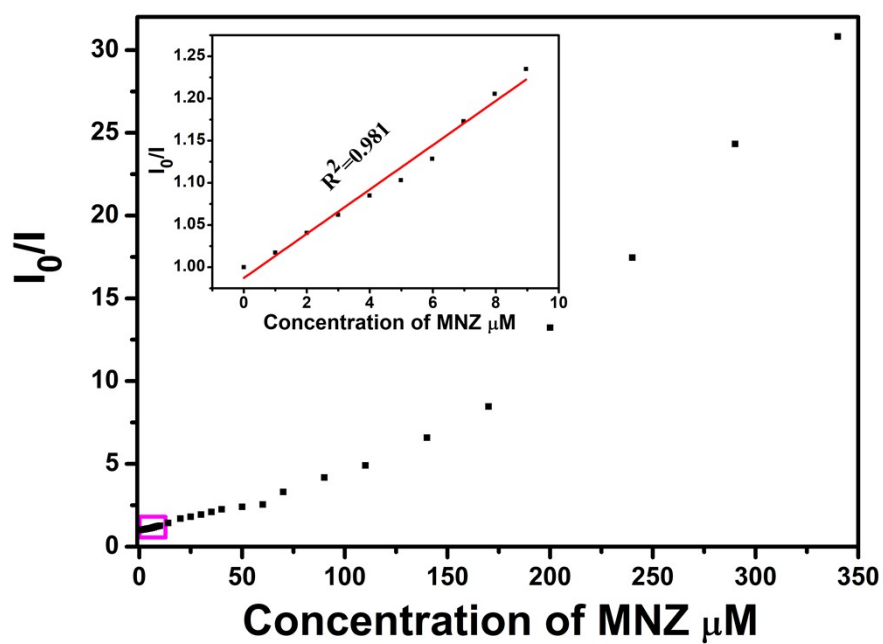
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**Figure S1.** fluorescence intensity ratio ( $I/I_0$ ) of Cd-MOF suspension after adding various antibiotics,  $I_0$  represents intensity of Cd-MOF nanosheets in water solution,  $I$  represents intensity of Cd-MOF nanosheets with antibiotics.



**Figure S2.** Concentration-dependent fluorescence spectra of bulk Cd-MOF with various concentrations of fluoride.



**Figure S3.** The correlation curve between the fluorescence intensity ratio ( $I_0/I$ ) of bulk Cd-MOF and the concentration of MNZ: inset: the corresponding linear relation in the low concentration region.

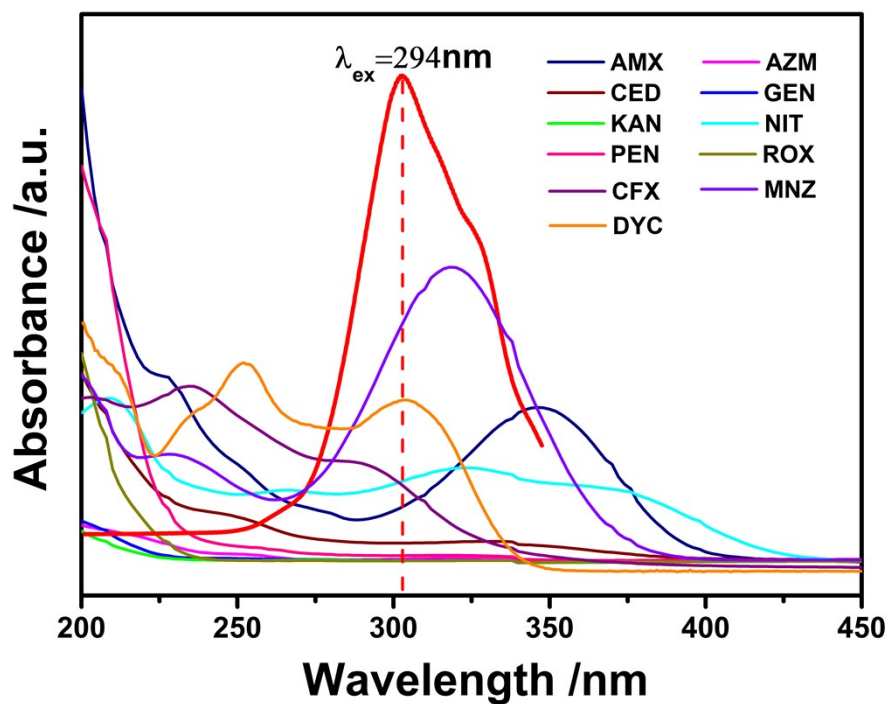


Figure S4. UV-vis absorption spectra of each antibiotic and the normalized excitation spectrum.

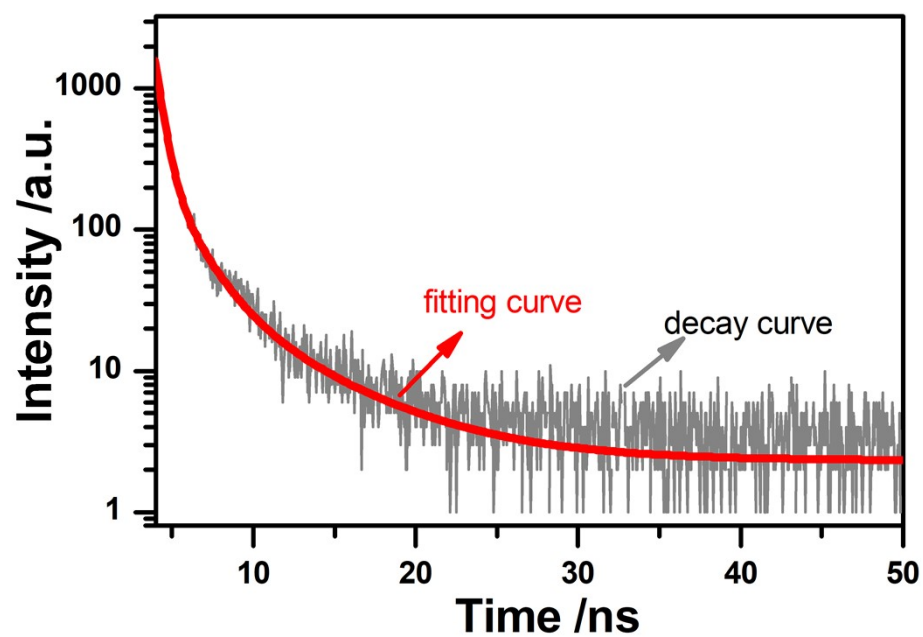


Figure S5. Time-resolved fluorescence decay of Cd-MOF nanosheets and the corresponding fitting curve.