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A water-stable luminescent metal-organic framework for effective detection of Aflatoxin B1 in walnut and almond beverages

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Author Contributions

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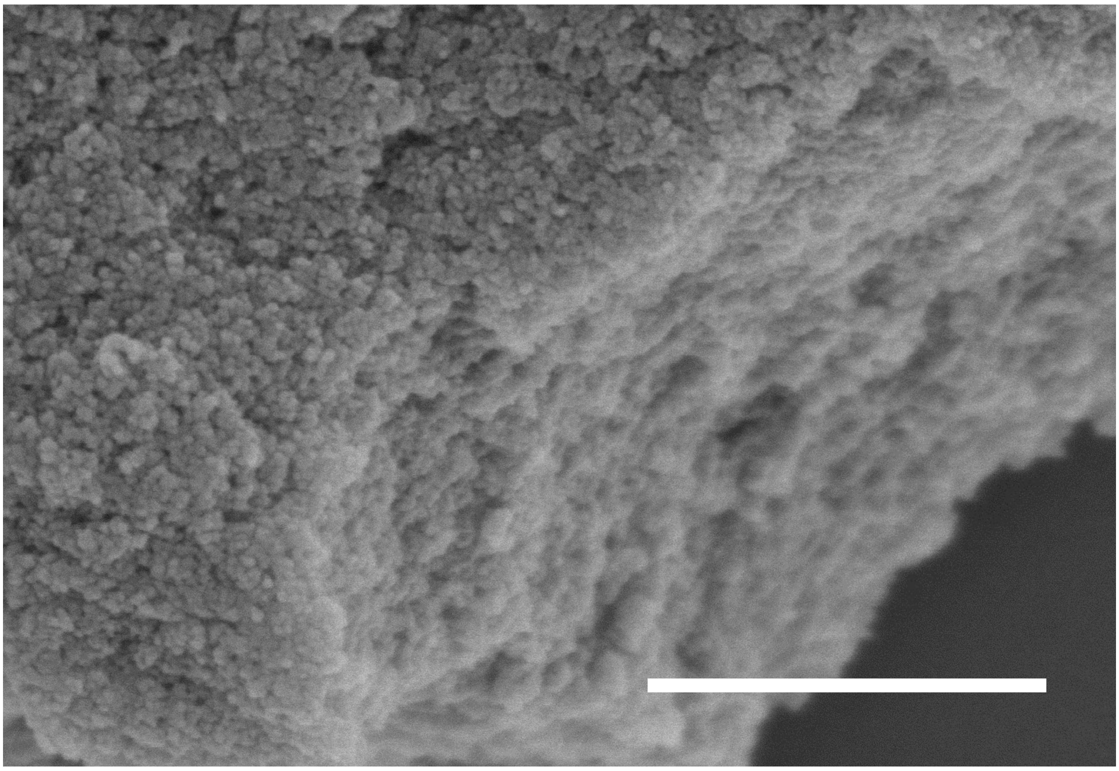

Figure S1. Nano-Zr-CAU-24 crystals prepared without benzoic acid. Scale bar: 1 μM.

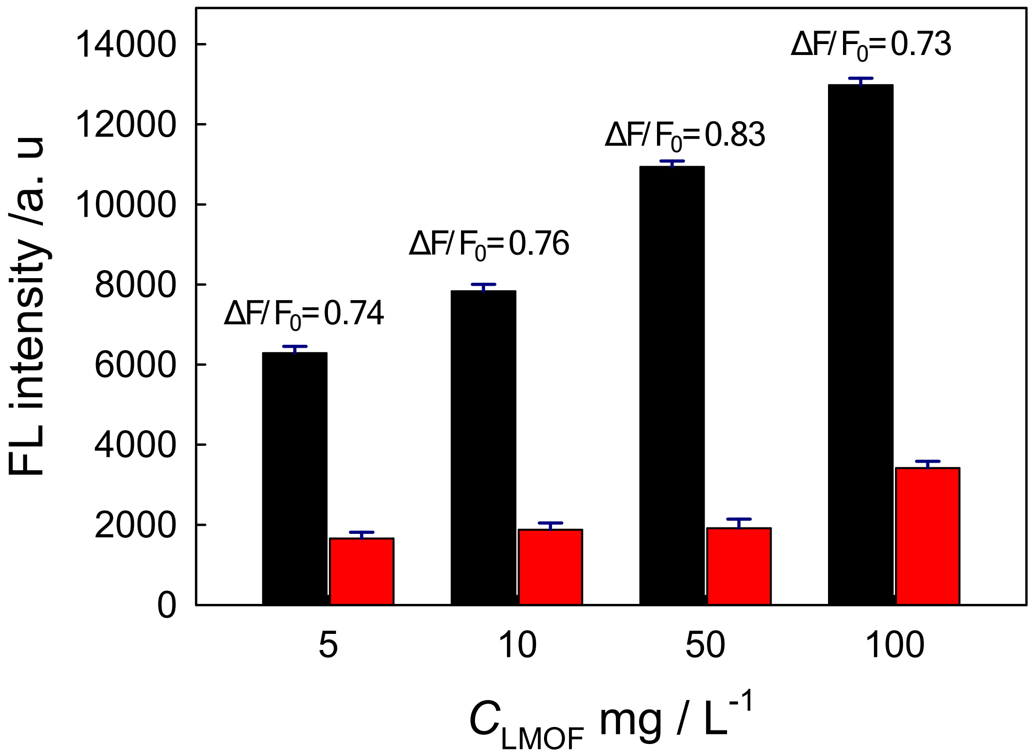

Figure S2. FL fading efficiency of 50 μM AFB1 with 5, 10, 50 and 100 μg mL^{-1} Zr-CAU-24 crystals, respectively. FL intensity of Zr-CAU-24 before (black bars) and after (red bars) quenching.

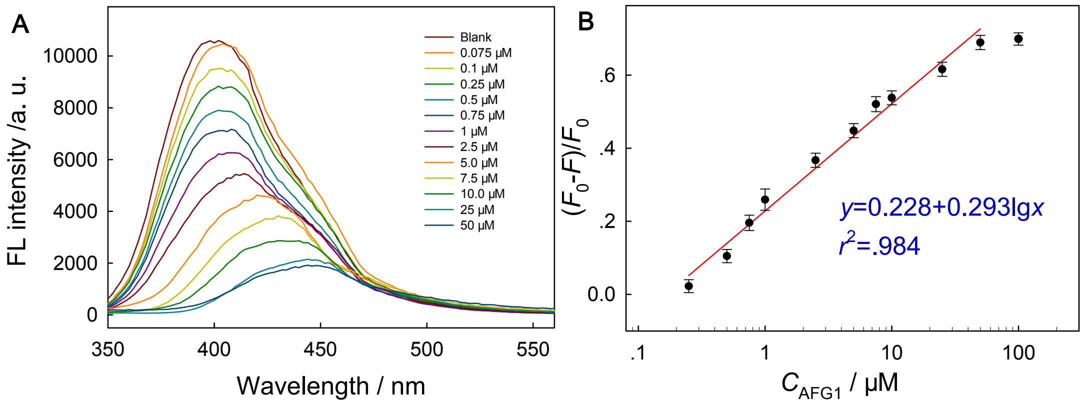

Figure S3. Emission spectra of Zr-CAU-24 with the incremental addition of AFG_1 in water, with toxin concentrations given from 0 to 100 μM (A). The linear relationship between *lg* C_{AFG1} and the ratio of FL intensity (B).

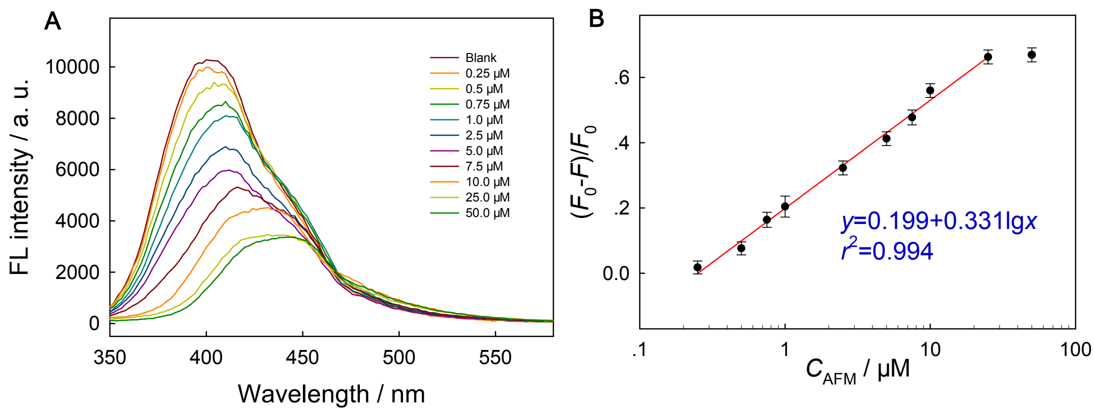

Figure S4. Emission spectra of Zr-CAU-24 with the incremental addition of AFM in water, with toxin concentrations given from 0 to 50 μM (A). Linear relationship between *lg* C_{AFM} and the ratio of FL intensity (B).

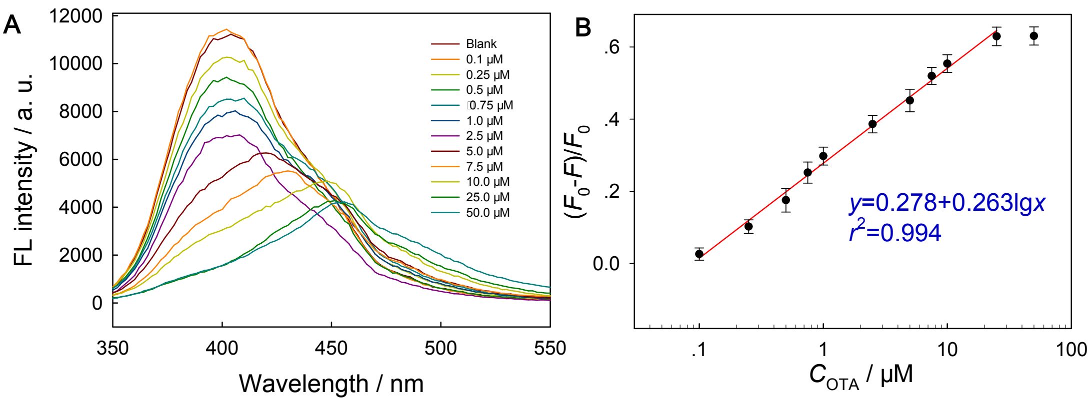

Figure S5. Emission spectra of Zr-CAU-24 with the incremental addition of OTA in water, with toxin concentrations given from 0 to 50 μM (A). Linear relationship between $lg\ C_{\mathrm{OTA}}$ and the ratio of FL intensity (B).

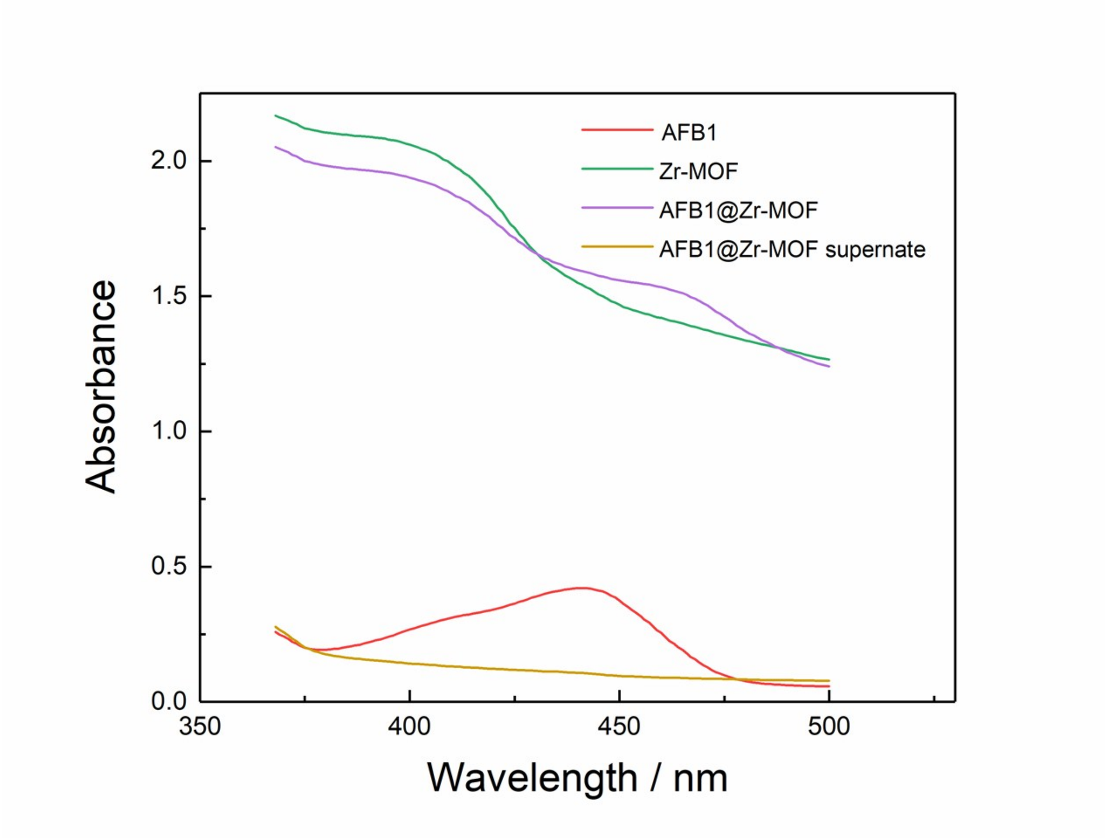

Figure S6 Absorbance of AFB1, Zr-MOF, AFB1@Zr-MOF and the supernate after MOF-AFB1 interaction

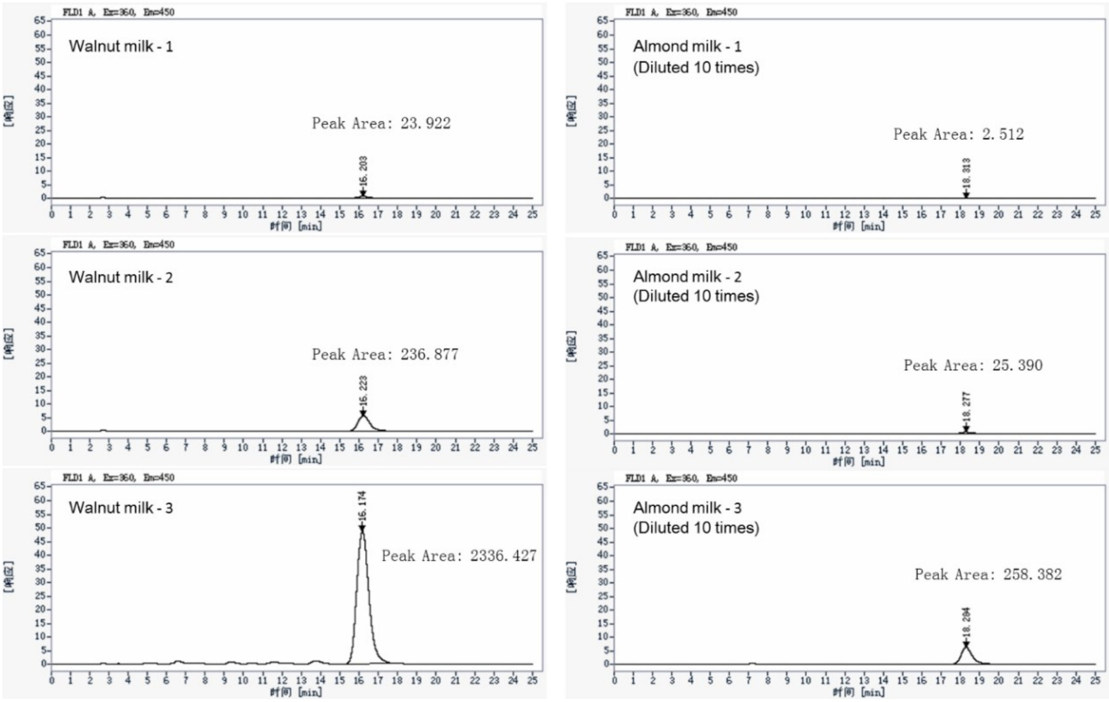

Figure S7 Detection of 0.1 μM, 1 μM, and 10 μM AFB1 in spiked walnut and almond beverage samples using HPLC method.