

## **Broad-spectrum degradation of fluoroquinolone antibiotics by Hemin-His-Fe nanozymes with peroxidase-like activity**

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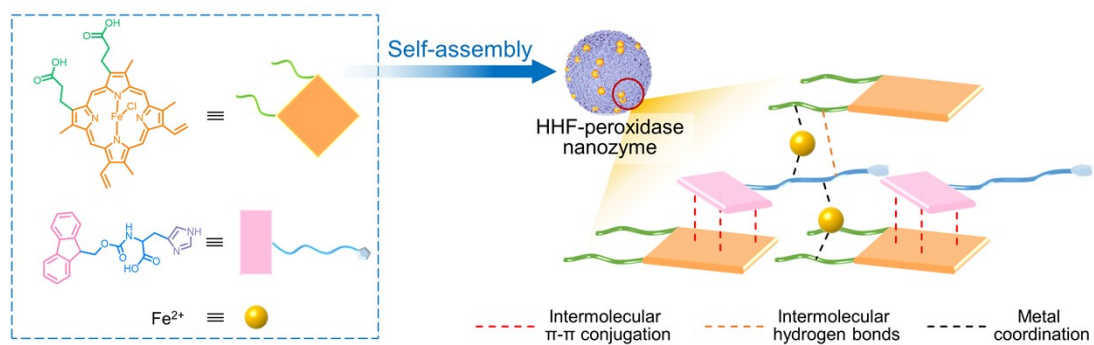


Figure S1. Schematic illustration of the self-assembly mechanism of HHF-peroxidase nanozyme.

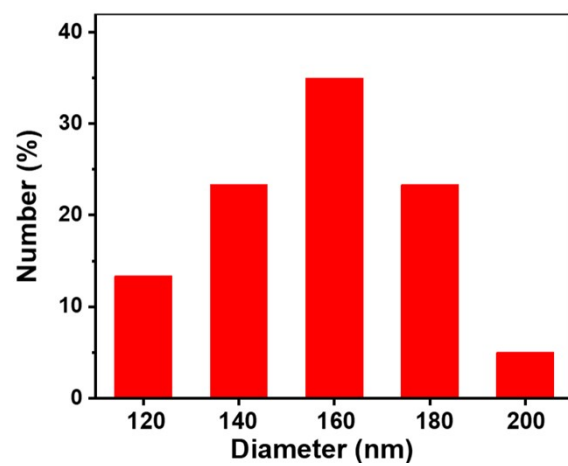


Figure S2. The diameter of HHF-peroxidase nanozyme according to TEM images.

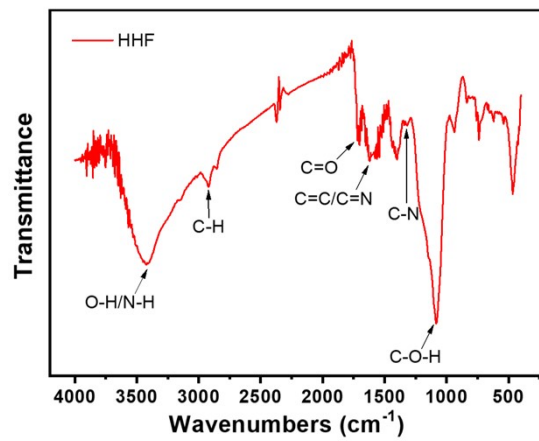


Figure S3. The FTIR spectrum of HHF-peroxidase nanozyme.

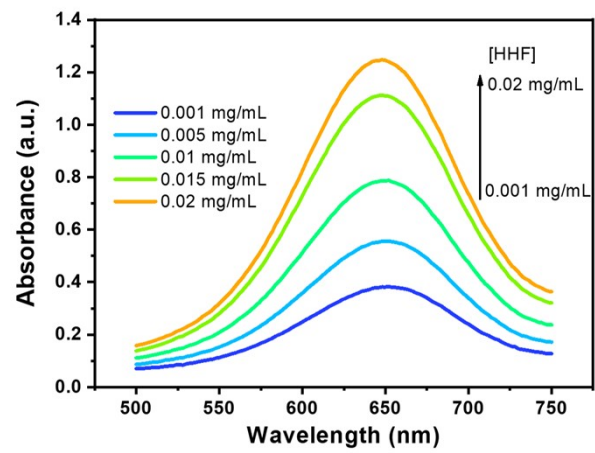


Figure S4. Peroxidase-like activity of HHF-oxidase nanozyme with different concentrations.

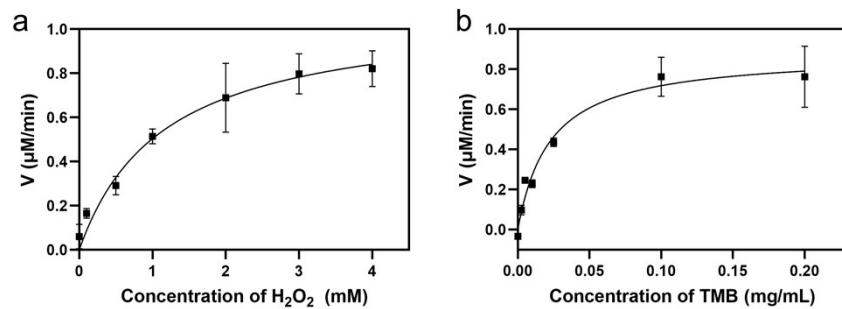


Figure S5. Kinetic assay for the peroxidase-like activity of HHF-peroxidase nanozyme with (a)  $\text{H}_2\text{O}_2$  and (b) TMB as substrate.

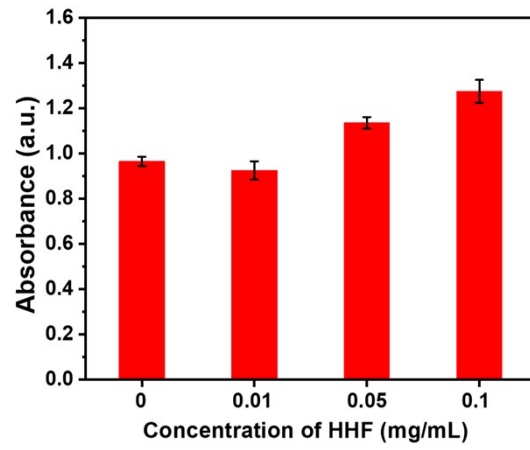


Figure S6. The absorbance of norfloxacin with different concentration of HHF-peroxidase nanozyme.

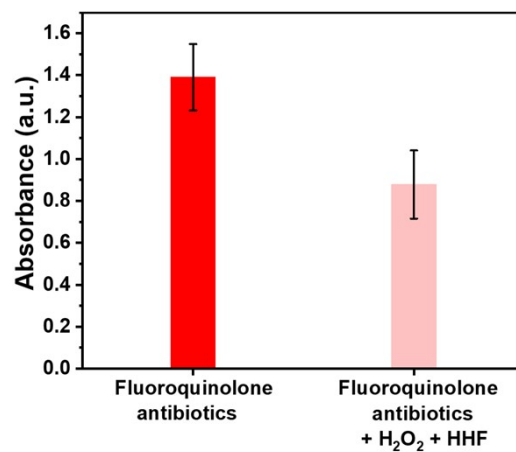


Figure S7. The absorbance of fluoroquinolone antibiotics without or with H<sub>2</sub>O<sub>2</sub> and HHF-peroxidase nanozyme.



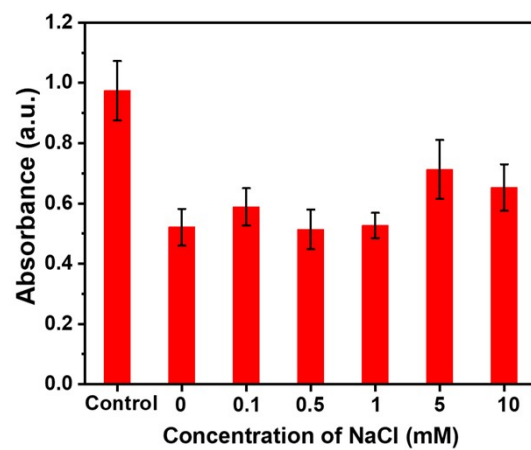


Figure S8. The absorbance of norfloxacin with H<sub>2</sub>O<sub>2</sub>, HHF-peroxidase nanozyme and different concentration of NaCl.

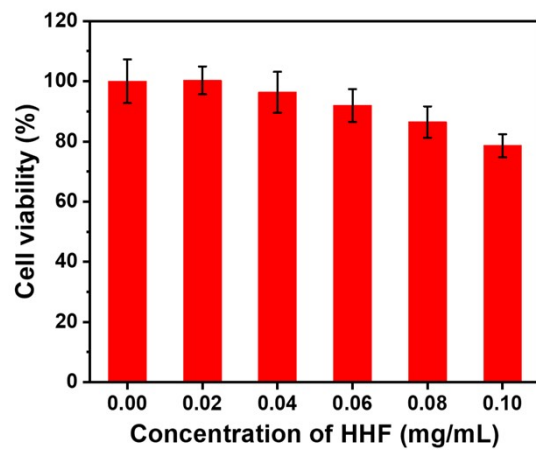


Figure S9. Cell viability of HUVEC cells treated with different concentration of HHF-peroxidase nanozyme.

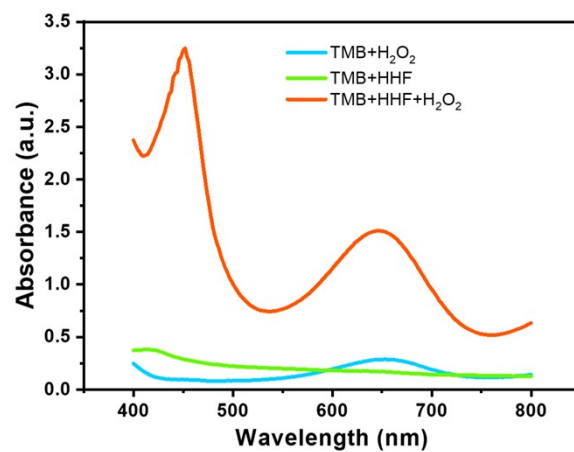


Figure S10. UV-vis absorbance spectra of TMB in different reaction systems of norfloxacin degradation conditions.

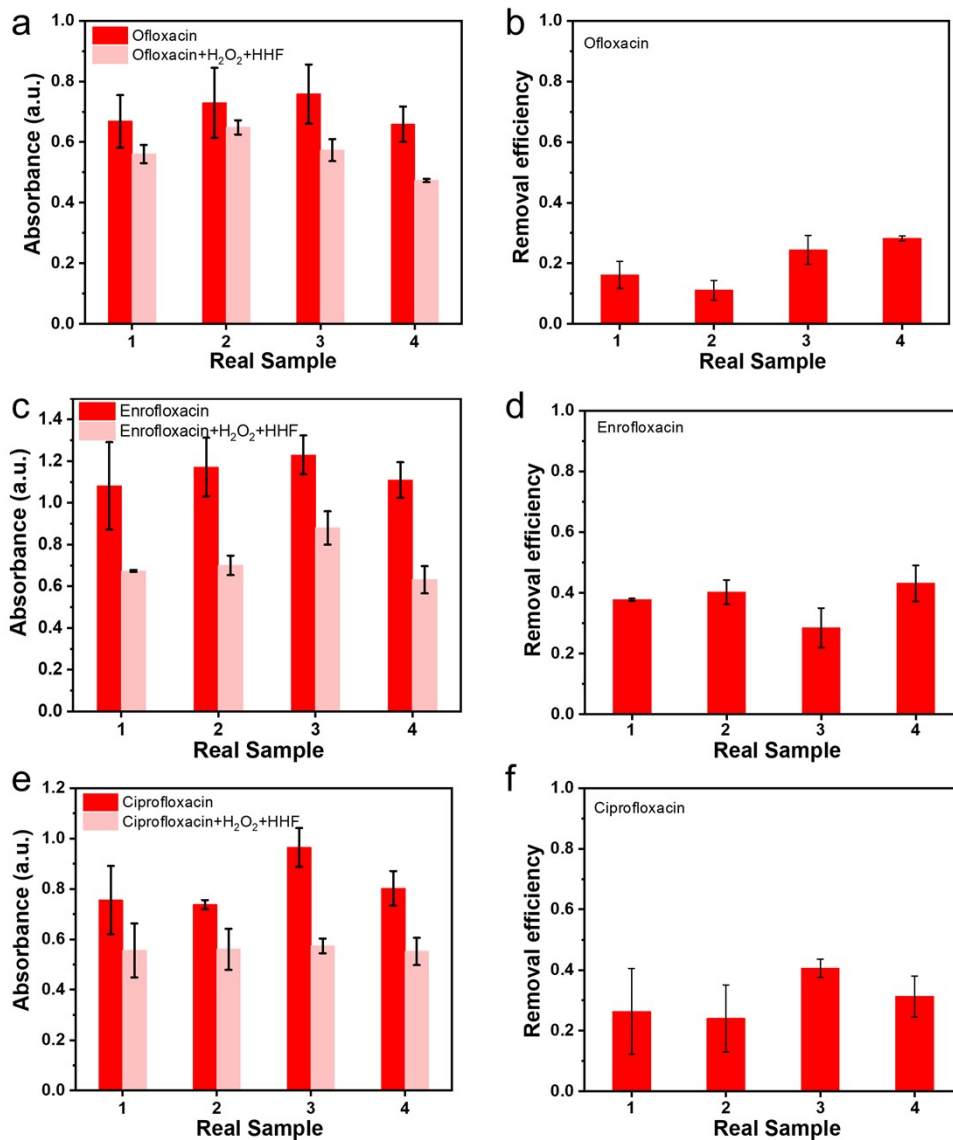


Figure S11. The absorbance and the removal efficiency of (a-b) ofloxacin, (c-d) enrofloxacin, (e-f) ciprofloxacin without or with H<sub>2</sub>O<sub>2</sub> and HHF-peroxidase nanozyme in four different real water samples.