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Supporting information

A fast-responsive fluorescent probe based on terpyridine-Zn²⁺ complex for sensing hypochlorous acid in aqueous solution and its application in real water samples and bioimaging

Yaping Pan,^a Yang Yan,^a Yang Li,^a Xue-wang Gao^c and Duobin Chao *^b

^aSchool of Petroleum and Chemical Engineering, Dalian University of Technology, Panjin, Liaoning 124221, China.
^bSchool of Materials Science and Chemical Engineering, Ningbo University, Zhejiang 315211, China. E-mail: chaoduobin@nbu.edu.cn
^cKey Laboratory of Photochemical Conversion and Optoelectronic Materials Technical Institute of Physics and Chemistry, University of Chinese Academy of Sciences Chinese Academy of Sciences, Beijing 100190, China.

Probe	Response time	Solution	LOD	Reference
DFP	90 min	DMF/HEPES buffer (v/v 25:75)	0.2 μΜ	Talanta., 2017, 165, 625–631.
Zcp-Me	15 min	EtOH/PBS buffer (v/v 5:95)	0.089 µM	Sens. Actuators B: Chem., 2018, 276, 8–12.
но Сон на Гон F-BH	2 min	Tris–HCl/CH ₃ CN buffer (v/v 3:7)	0.0175 μM	Sens. Actuators B: Chem., 2018, 265, 84–90.
	1 min	PBS buffer /C ₂ H ₅ OH (v/v 1:1)	0.034 µM	Spectrochim. Acta, Part A., 2018, 203, 415– 420.
TpyZnS	within seconds	Water (100 %)	0.16 µM	This work

Table S1. Comparison with other recent HClO fluorescent probes.



Fig. S1 Absorption spectra of **TpyZnS** (20 μ M) upon addition of various relevant analytes in aqueous solution. (Fe³⁺, Cu²⁺, Hg²⁺, Mg²⁺, Zn²⁺, Ca²⁺, Mn²⁺, K⁺, Na⁺, glutathione (GSH), cysteine (Cys), homocysteine (Hcy), ClO₄⁻, SO₄²⁻, Br⁻, NO₃⁻, NO₂⁻, CO₃²⁻, CH₃COO⁻, t–BuOOH, H₂O₂, ·OH, HClO).



Fig. S2 Fluorescence intensity at 525 nm of TpyZnS (20 μ M) in the absence (black) and presence (red) of NaClO (20 μ M) under different pH values. $\lambda_{ex} = 380$ nm.



Fig. S3 The HRMS spectrum of TpyZnS with treated by NaClO.







Fig. S5 ¹³C NMR spectrum of TpyZnS in DMSO-d₆.



Fig. S6 HRMS spectrum of TpyZnS in CH₃OH.



Fig. S7 Cytotoxicity assays of probe TpyZnS at various concentrations (0 μ M, 10 μ M, 20 μ M, 40 μ M and 60 μ M) in living HeLa cells.