Supporting Information

A highly selective A-π-A' "turn-on" fluorescent probe for hypochlorite in tap water

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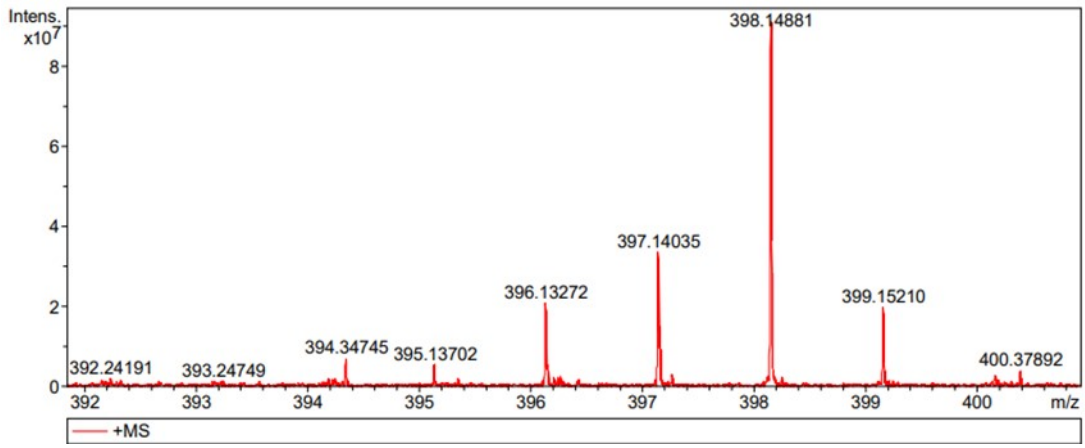

Fig. S1 MS data of **BODIPY-CHO**

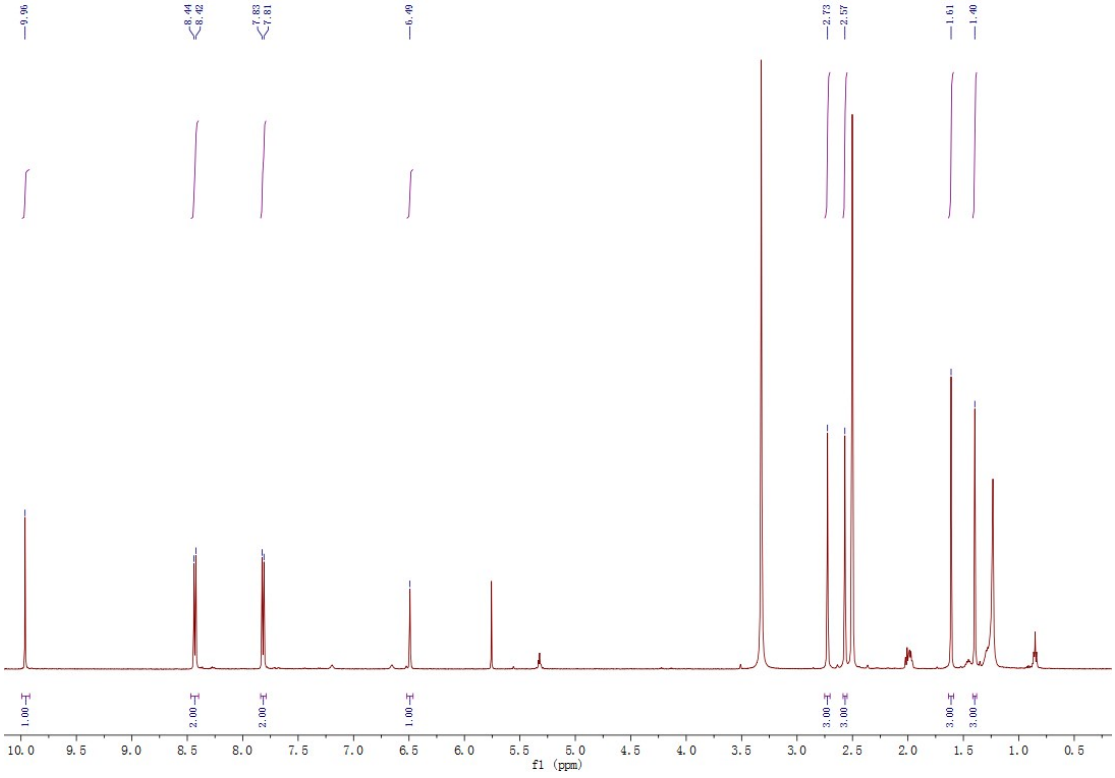

Fig. S2 ^{1}H-NMR data of **BODIPY-CHO**

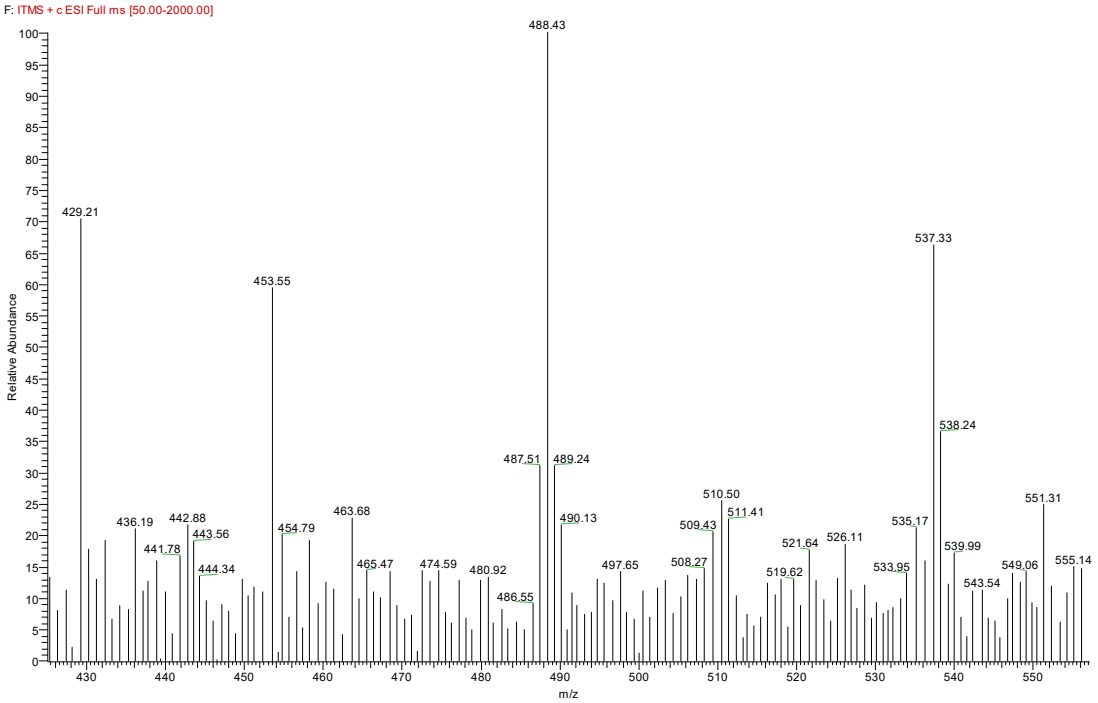

Fig. S3 MS data of the probe **BON**

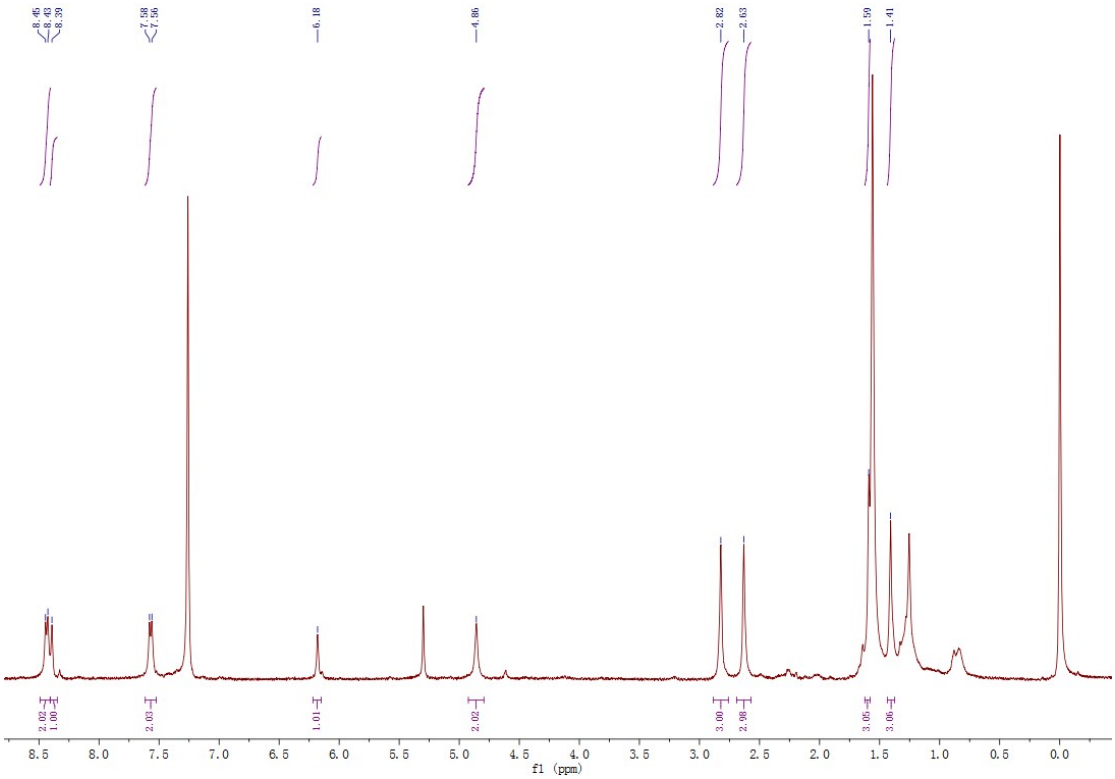

Fig. S4 ^{1}H-NMR data of the probe **BON**

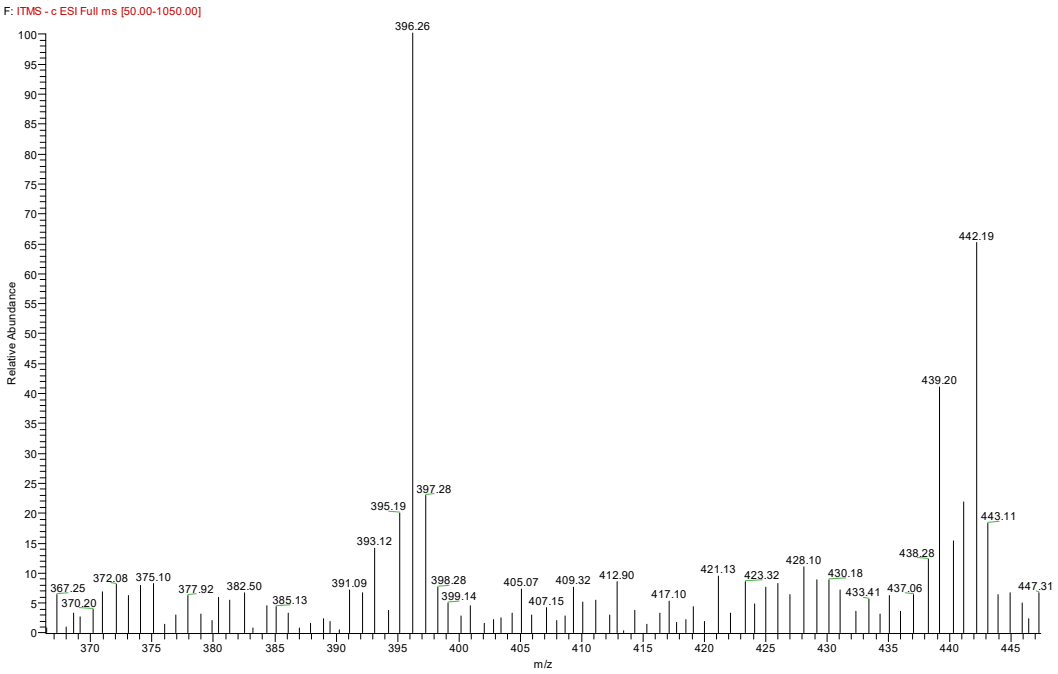

Fig. S5 MS data of **BON** with ClO^-

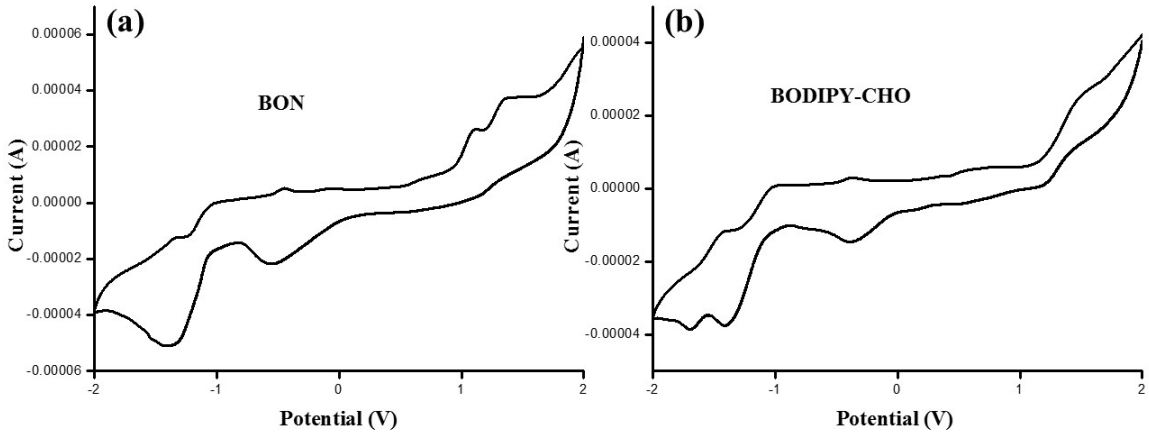

Fig. S6 Cyclic voltammograms of 1 mM **BON** (a) and **BODIPY-CHO** (b) measured in dichloromethane solution, containing 0.1 M tetrabutylammonium hexafluorophosphate ($TBAPF_6$) as the supporting electrolyte at room temperature. The glassy carbon electrode as the working electrode. The Ag/Ag^+ electrode as the reference electrode. The platinum wire as the counter electrode.

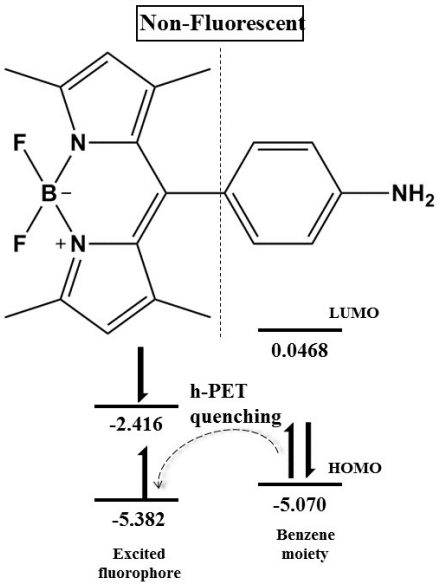

Fig. S7 Photoinduced electron transfer (PET) mechanism between BODIPY moiety and phenylamino.

Tab. S1 Quantum yields of **BODIPY-CHO** in different solvents.

Solvents	EtOH	DCM	Toluene
(φ)	8.9%	21.4%	35.6%

Tab. S2. Electrochemical data acquired at 50 mV/s, and HOMO-LUMO Gaps determined from spectroscopy of dyes **BON**, **BODIPY-CHO**.[a]

dye	E_{red}^{onset} (V)	E_{ox}^{onset} (V)	LUMO (eV)	HOMO (eV)	E_g^e (eV)
BON	-1.383	1.356	-3.027	-5.766	2.739
BODIPY-CHO	-1.404	1.523	-3.006	-5.906	2.927

[a] E_{red}^{onset} = the onset reduction potentials; E_{ox}^{onset} = the onset oxidation potentials; E_{LUMO} = -e(E_{red}^{onset} -$E_{Fc/Fc+}$+4.80); By assuming the energy level of ferrocene/ferrocenium (*Fc/Fc*$^+$) to be 4.8 eV below the vacuum level [1]， $E_{Fc/Fc+}$ is the potential of *Fc/Fc*$^+$ against the Ag/Ag+ reference electrode which is measured to be 0.39 eV [2]; E_{HOMO} = -e(E_{ox}^{onset} -$E_{Fc/Fc+}$+4.80); E_g^e = bandgap, obtained from the intercept of the electrochemical data; E_g^e = E_{LUMO} - E_{HOMO}.

Tab. S3 Results of spiked recovery of hypochlorite in tap water

Water samples	ClO^- spiked (μM)	Recovered (μM)	Recovery (%)
Tap water sample 1	1	1.8±0.02	91.0
Tap water sample 2	2	2.7±0.01	90.5
Tap water sample 3	3	3.7±0.02	93.6

References

1. M. Soltani, R. Minakar, H. R. Memarian and H. Sabzyan, *J. Phys. Chem. A*, 2019, **123**, 2820-2830.
2. M. X. Lu, W. Wang, L. Y. Liang, S. H. Yan and Q. D. Ling, *Polym. Bull.*, 2017, **74**, 603-614.