Electronic Supplementary Material (ESI) for New Journal of Chemistry.

A ratiometric hypochlorite sensor guided by PET controlled ESIPT output with real time application in commercial bleach

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Influence of pH on ratiometric fluorescence output:

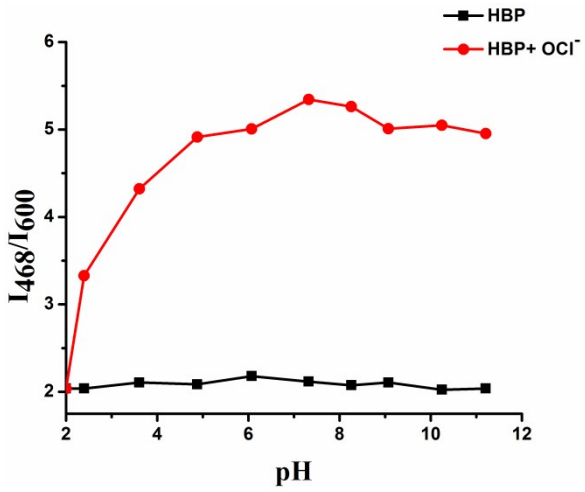

Figure S1: Ratio of emission intensities at 468nm and 600nm as a function of pH in aqueous DMSO medium (λ_{ex}=400nm).

Fluorescence titration with OCl^- in aqueous acetonitrile:

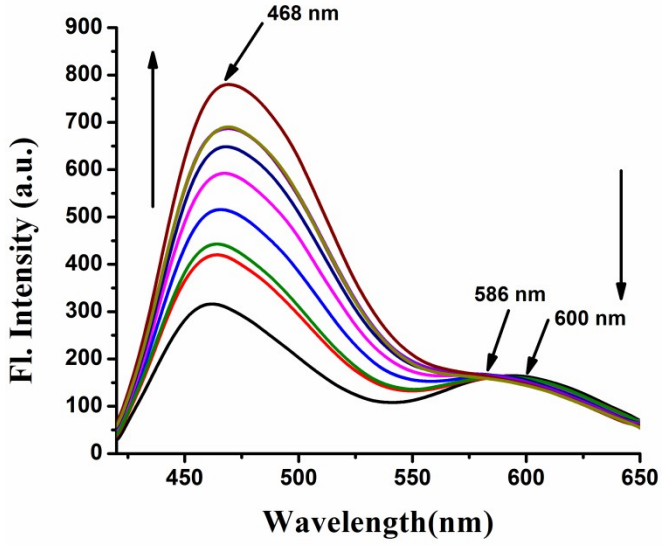

Figure S2: Fluorescence changes of **HBP** (1.0 μM) upon the addition of increasing amounts of NaOCl in CH_3CN–H_2O (CH_3CN /H_2O = 1 : 1 v/v, 10 mM HEPES buffer, pH = 7.4). (λ_{ex}=400nm).

Calculation of pseudo first order rate constant:

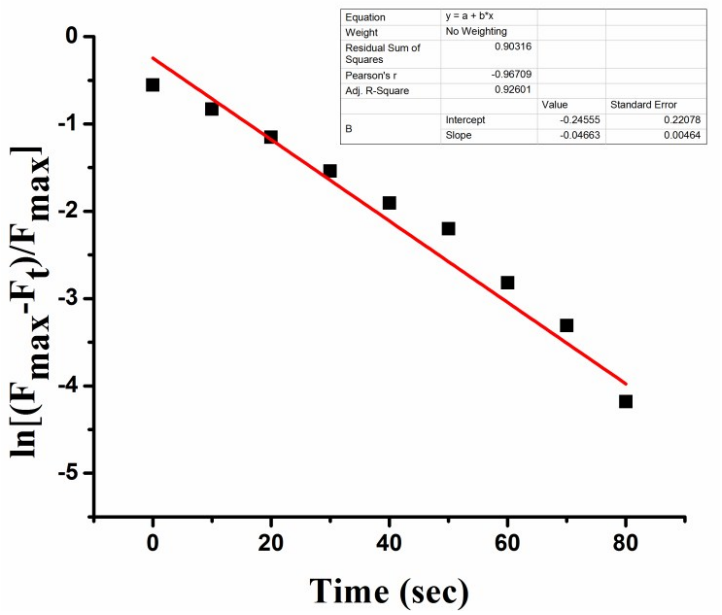

Figure S3: Pseudo first order kinetic plot of reaction of HBP (1.0 μM) with an excess of OCl^{-} (50.0 μM).

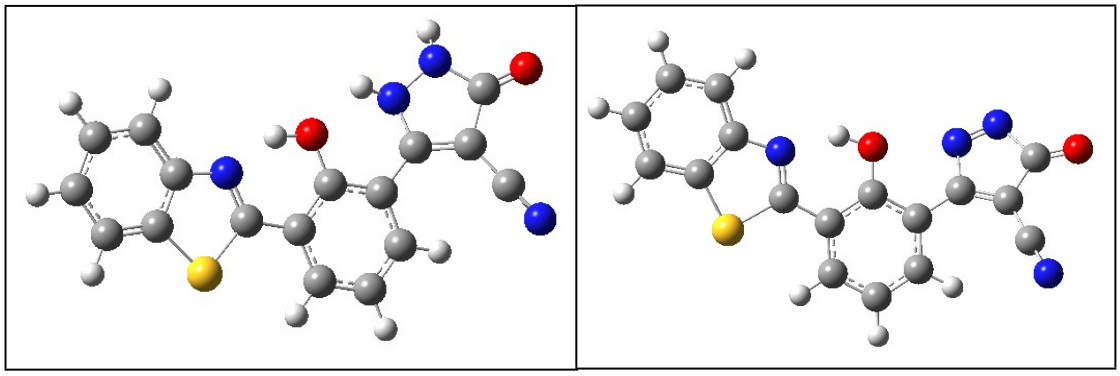

Figure S4: Energy optimized structures of **HBP** and **HBP-OCl**

Species	ʎ(nm)	E(eV)	Oscillator strength (f)	Key electronic transition
HBP	296.41	4.1828	0.1014	HOMO-5→LUMO-1(49.79%)
	341.28	3.6329	0.0939	HOMO-1→LUMO (47.11%)
	345.54	3.5881	0.0177	HOMO-5→LUMO (42.39%)
HBP-OCl	401.99	3.0843	0.1167	HOMO-4→LUMO (69.54%)
	335.76	3.6926	0.5749	HOMO→LUMO+1 (68.15%)

Table S5: Selected vertical electronic transitions of **HBP** and **HBP-OCl** calculated by TDDFT method. [B3LYP/6-31G(d)]

Study of cytotoxic effect of HBP

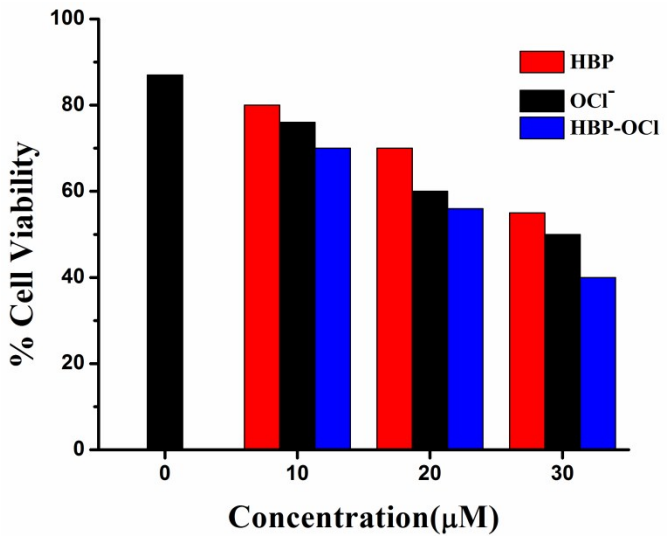

Figure S6: Cell viability assay of **MG-63** cells to observe the cytotoxic effect of **HBP** and **OCl¯.**

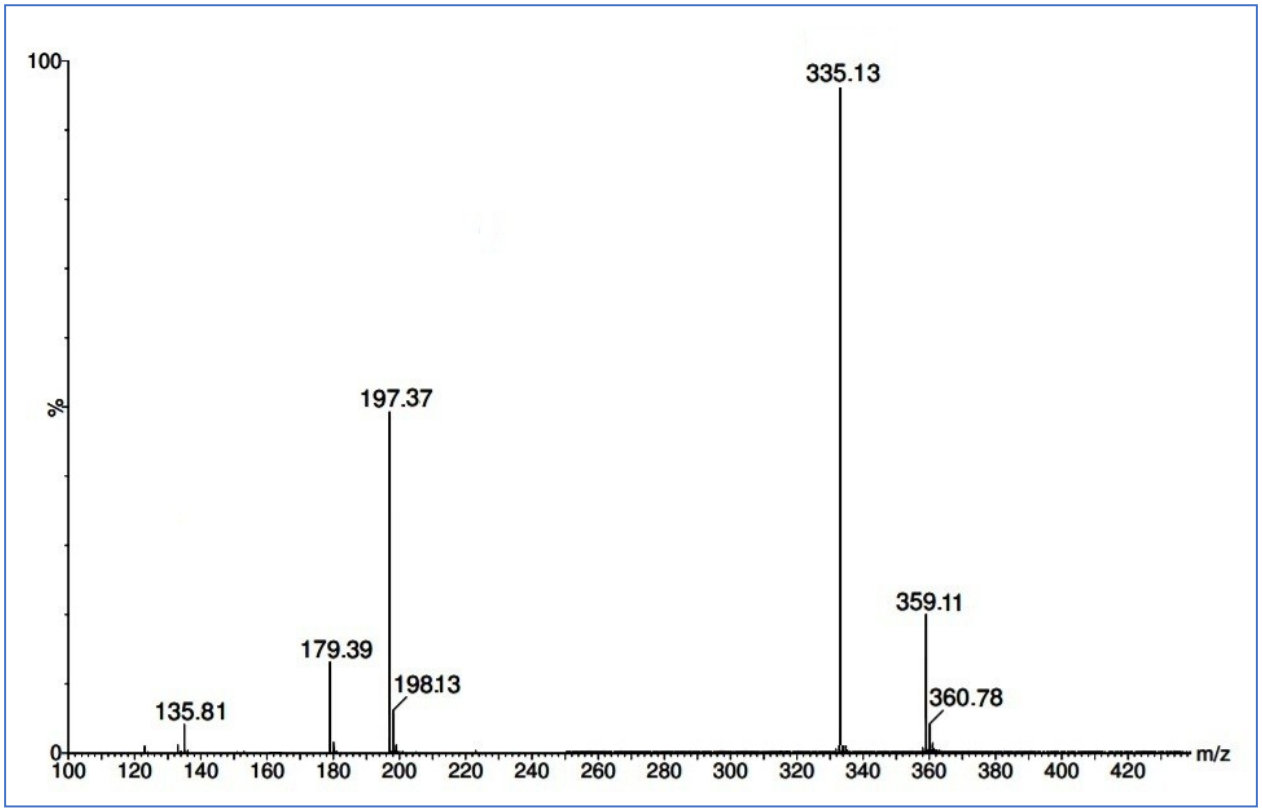

Figure S6: ESI-MS of **HBP**

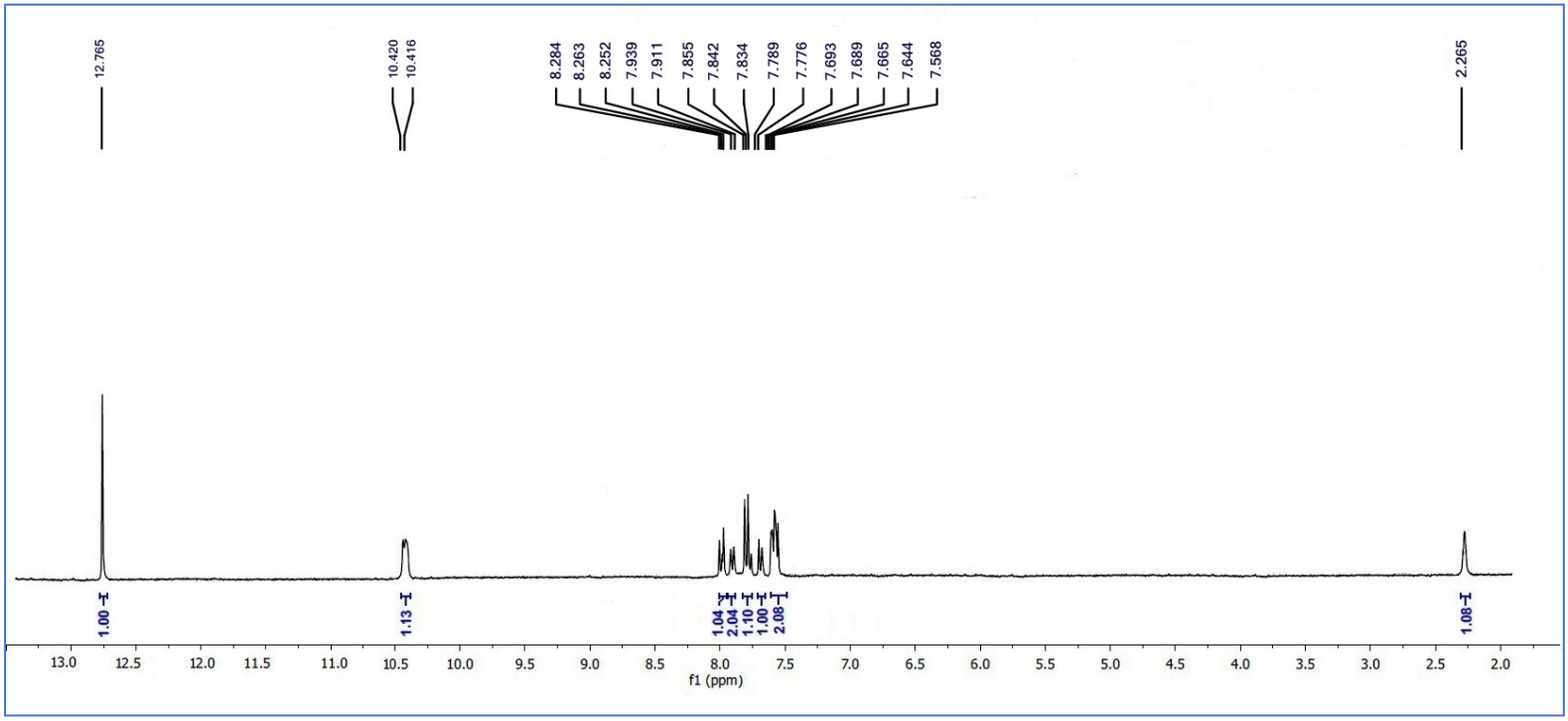

Figure S8: ^{1}H NMR of **HBP** in DMSO-d_6

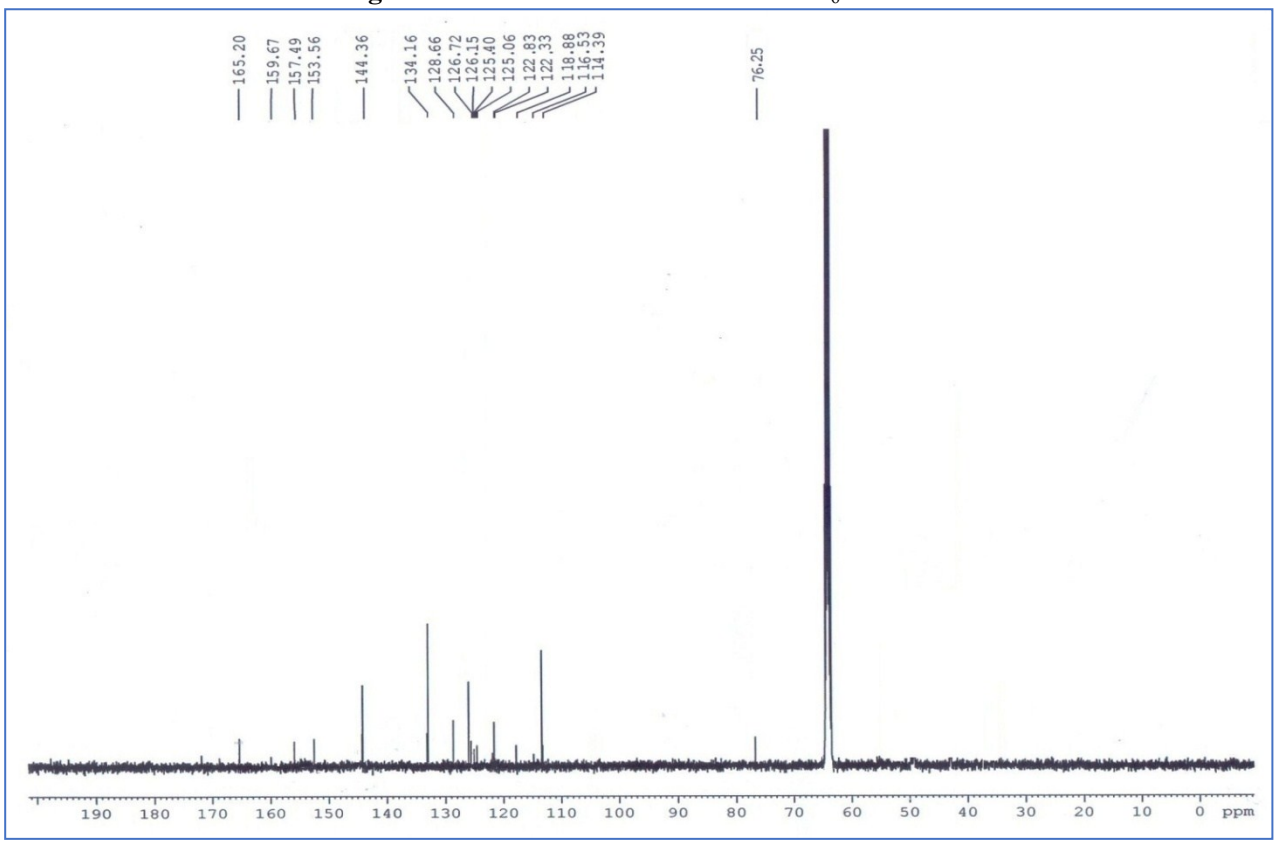

Figure S9: ^{13}C-NMR of **HBP** in DMSO-d_6