Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Chromogenic and fluorescence sensing of pH with a Schiff-base molecule†

Shibashis Halder[a], Aradhita Bhattacharjee[a], Ankita Roy[a], Sompriya Chatterjee[a,b] and Partha Roy[a,*]

[a] Department of Chemistry, Jadavpur University, Jadavpur, Kolkata-700 032, India

E-mail: proy@chemistry.jdvu.ac.in; Tel: +91-33-2457-2970; Fax: +91-33-2414-6414

[b] Department of Pharmaceutical Technology, NSHM Knowledge Campus, 124, B.L. Saha Road, Kolkata-700 053, India

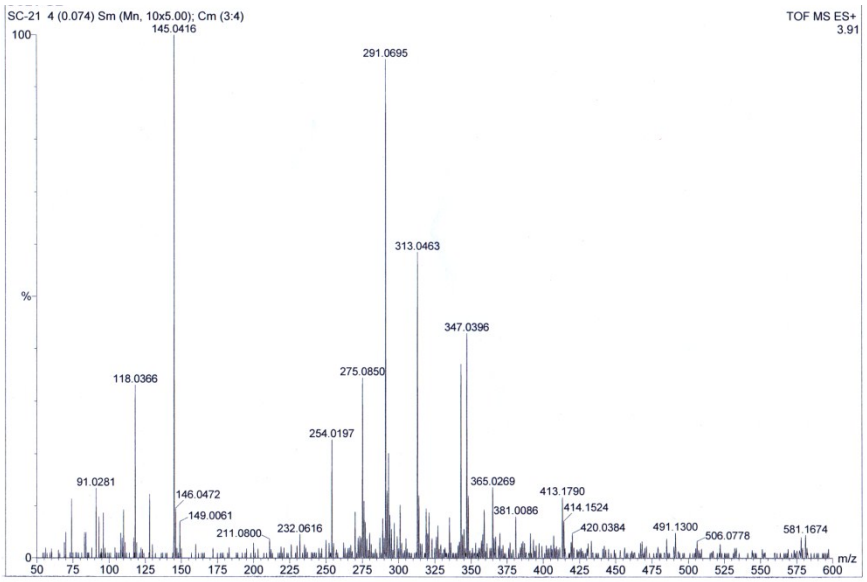

Fig. s1: Mass spectrum of HMQB

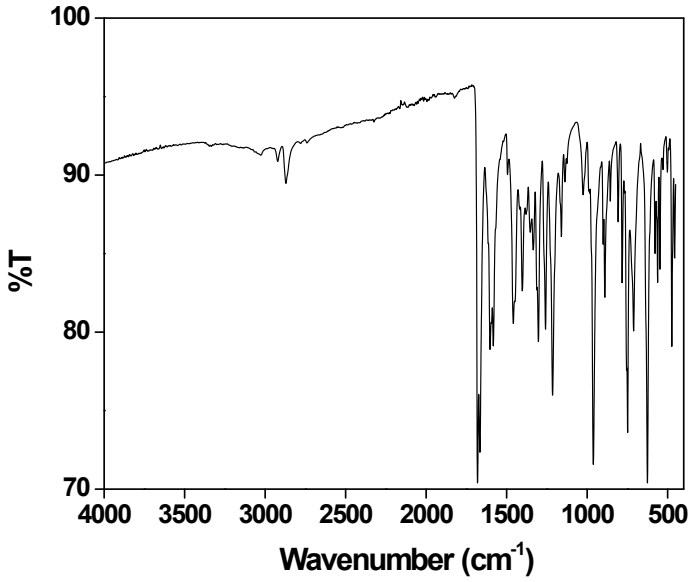

Fig. s2: FT-IR spectrum of HMQB

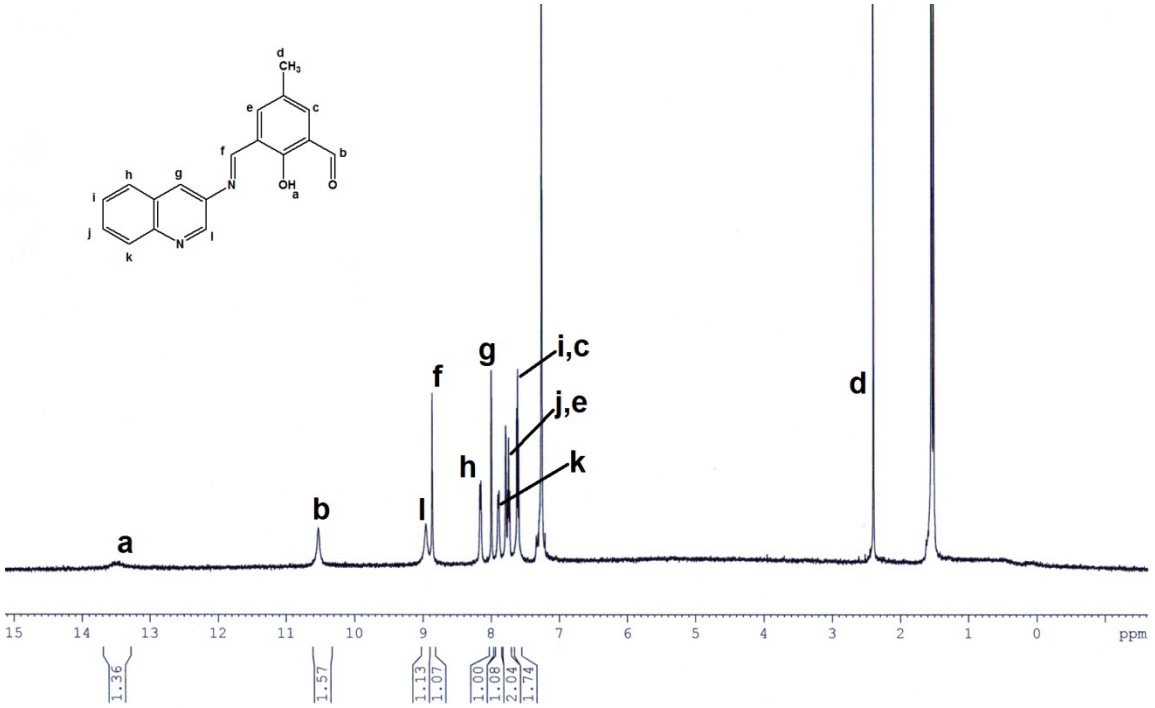

Fig. s3: ^{1}H NMR spectrum of HMQB in $CDCl_3$

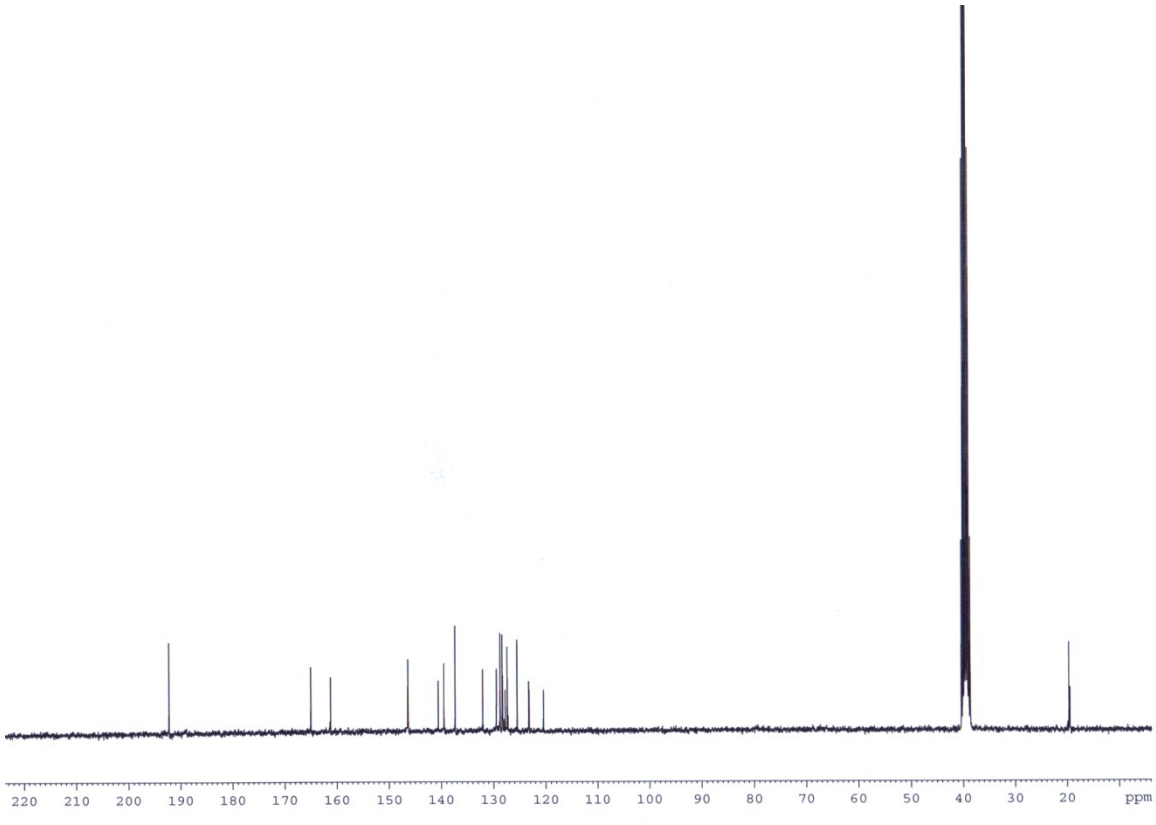

Fig. s4: ^{13}C NMR spectrum of HMQB in DMSO-d_6

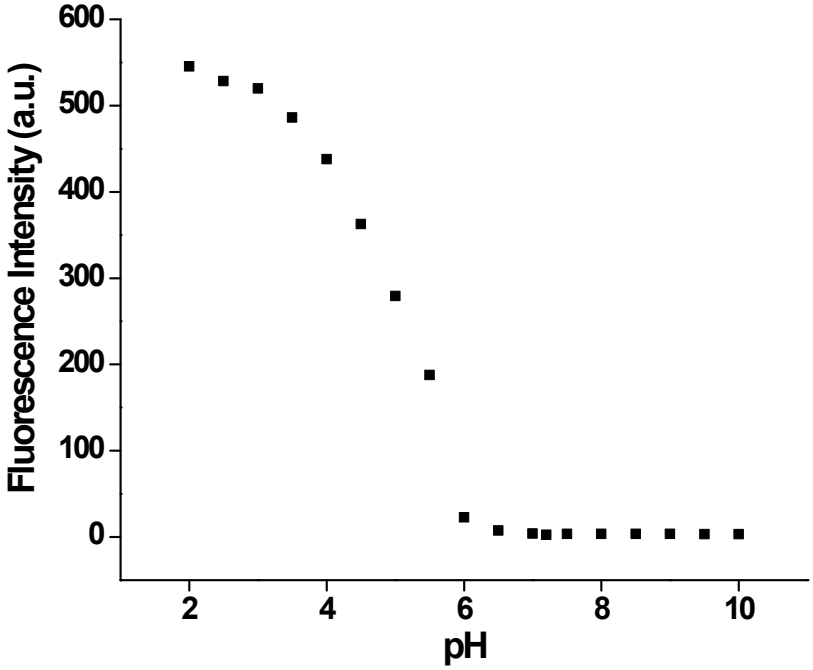

Fig. s5: The plot of emission intensities at 464 nm vs pH of the medium

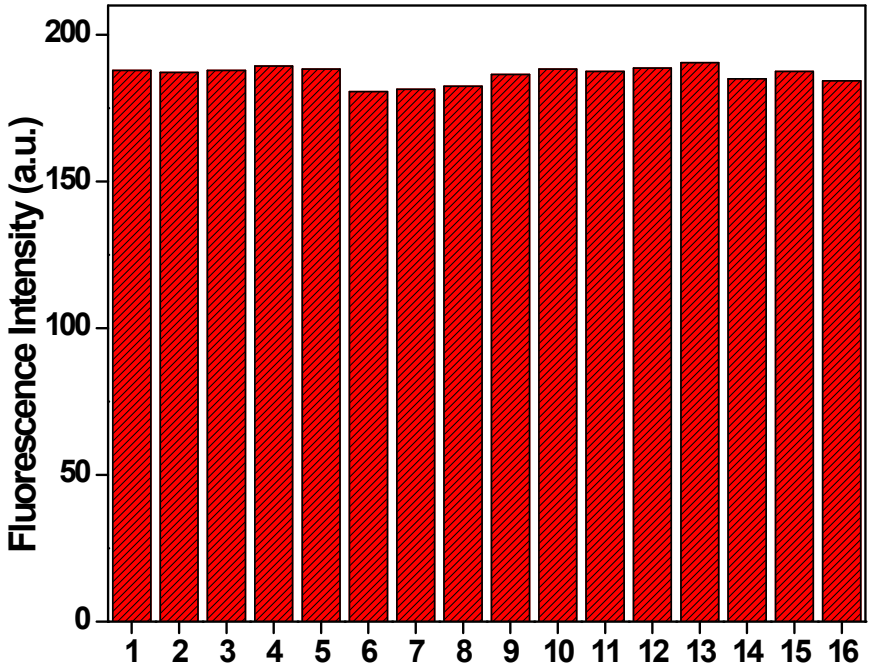

Fig. s6: Fluorescence intensity of (1) HMQB and HMQB in the presence of (2) Na^{+}, (3) K^{+}, (4) Zn^{2+}, (5) Mg^{2+}, (6) Cu^{2+}, (7) Mn^{2+}, (8) Fe^{3+}, (9) Co^{2+}, (10) Ca^{2+}, (11) Ni^{2+}, (12) NO_3^{-}, (13) Cl^{-}, (14) SO_4^{2-}, (15) PO_4^{3-} and (16) BO_3^{3-} at pH 5.0

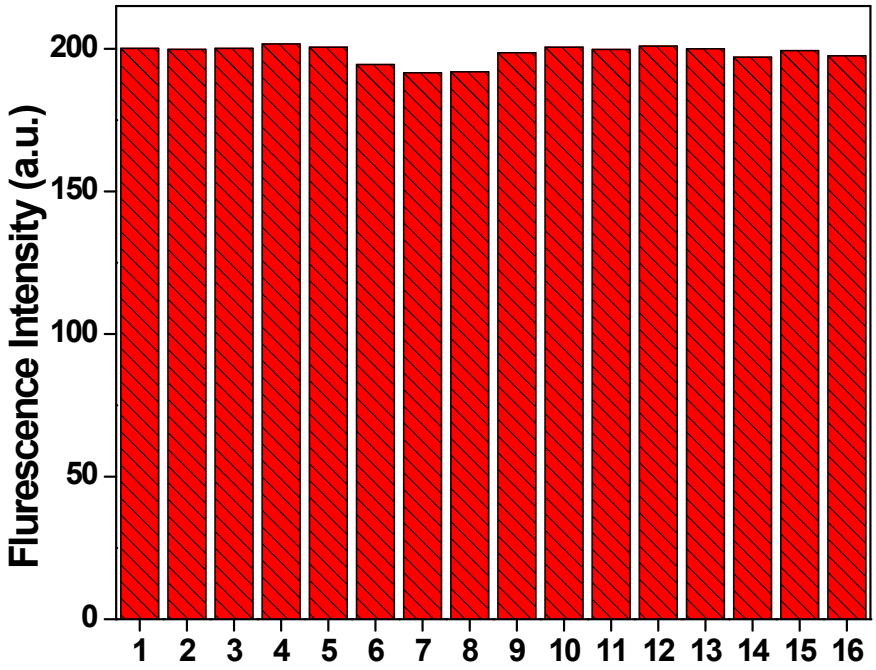

Fig. s7: Fluorescence intensity of (1) HMQB and HMQB in the presence of (2) Na^{+}, (3) K^{+}, (4) Zn^{2+}, (5) Mg^{2+}, (6) Cu^{2+}, (7) Mn^{2+}, (8) Fe^{3+}, (9) Co^{2+}, (10) Ca^{2+}, (11) Ni^{2+}, (12) NO_3^{-}, (13) Cl^{-}, (14) SO_4^{2-}, (15) PO_4^{3-} and (16) BO_3^{3-} at pH 8.0

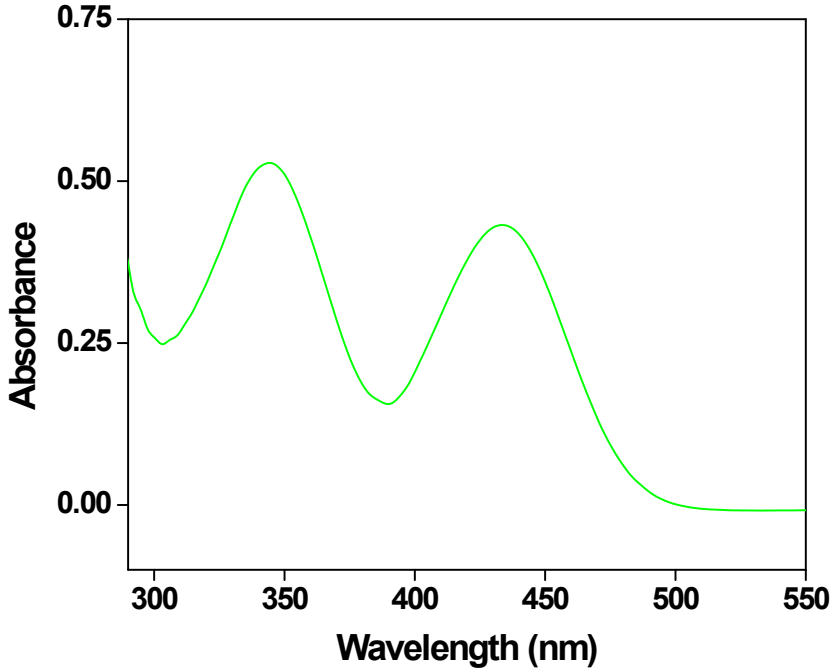

Fig. s8: UV-visible spectrum of HMQB (1×10^{-4} M) in water of river Ganga at room temperature

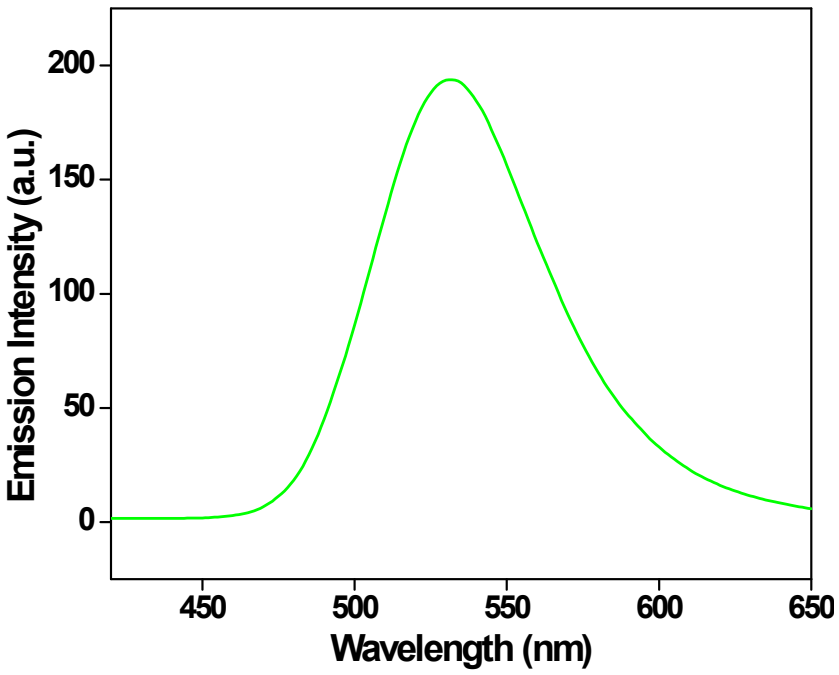

Fig. s9: Fluorescence spectrum of HMQB (1×10^{-4} M) in water of river Ganga at room temperature

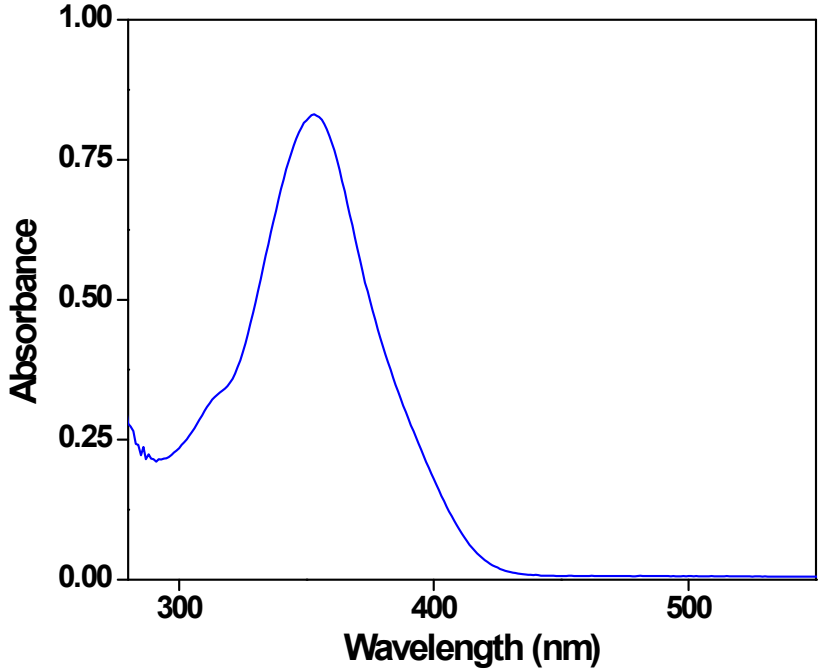

Fig. s10: UV-visible spectrum of HMQB (1×10^{-4} M) in lemon juice at room temperature

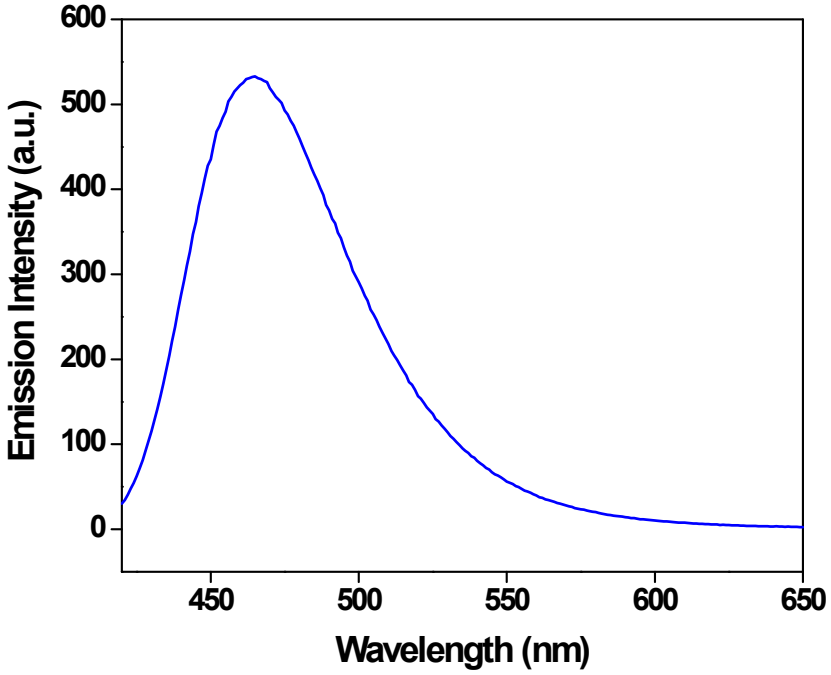

Fig. s11: Fluorescence spectrum of HMQB (1×10^{-4} M) in lemon juice at room temperature

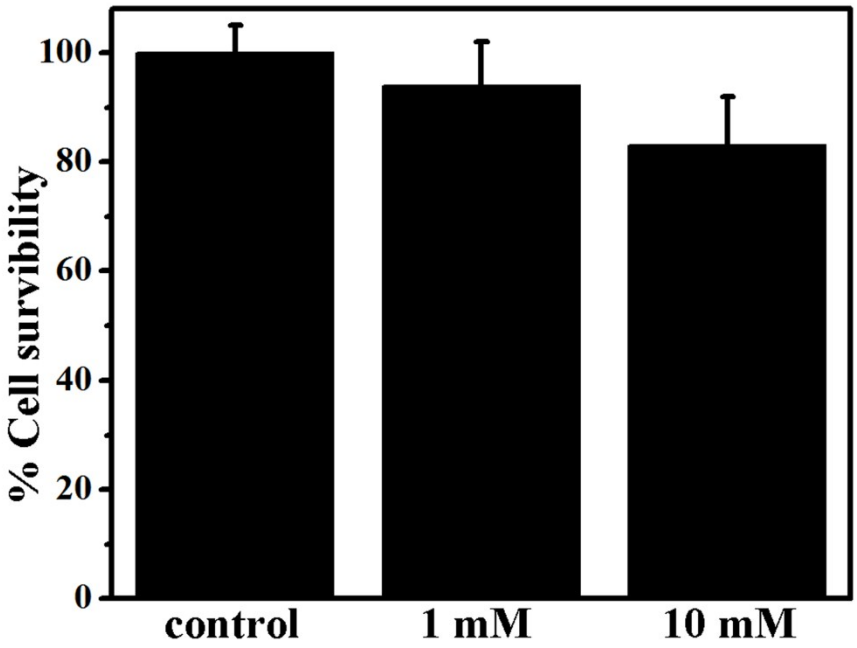

Fig. s12: % cell viability of HeLa cells treated with different concentrations (1 mM and 10 mM) of HMQB for 12 h determined by MTT assay. Results are given here as mean ± S.D. of three independent experiments.