

Electronic Supplementary Information (ESI)

for

**A Novel Colorimetric and Near-infrared Fluorescent Probe for
Hydrogen Peroxide Imaging in Vitro and in Vivo**

Peng Wang,^{*a} Ke Wang,^a Dan Chen,^a Yibo Mao,^a Yueqing Gu^{*a}

^a *Department of Biomedical Engineering, School of Engineering, China*

Pharmaceutical University, 210009 Nanjing, China

Contents

1. Additional spectra.....	Page S2-S3
2. Structure characterizations of probe DCM-B1 and DCM-B2.....	Page S4-S8

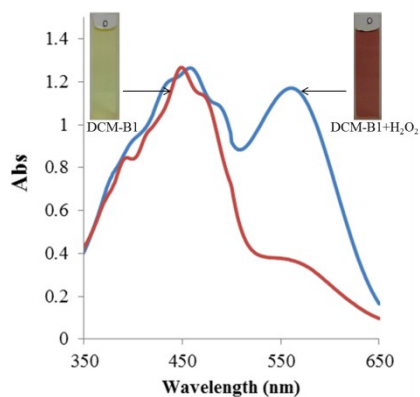


Fig. S1 Absorption spectra of probe DCM-B1 (5 μM) before (red line) and after reacting with H_2O_2 (100 μM , blue line).

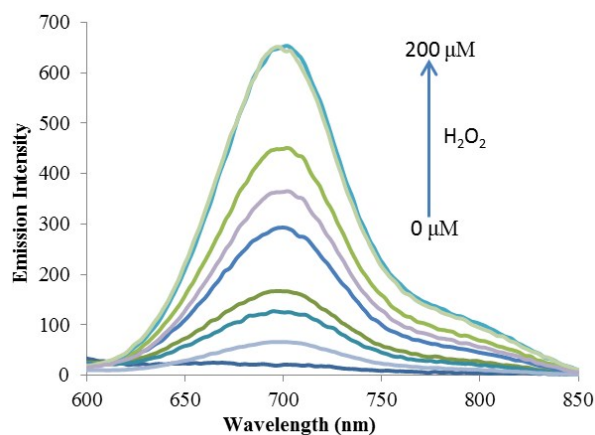


Fig. S2 Emission spectra of probe DCM-B1 in the presence of different equivalents of H_2O_2 (0, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 15.0, 20.0 eq, 30 min) excited at 560 nm.

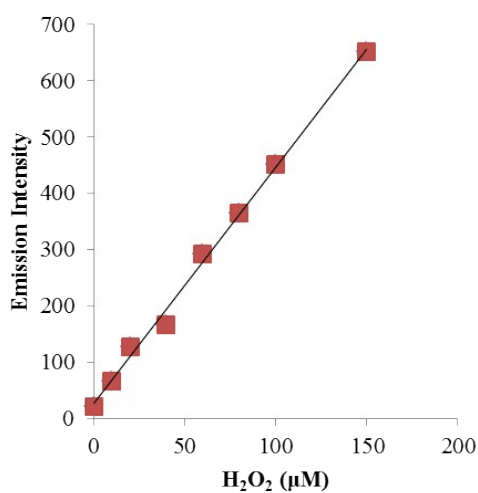


Fig. S3 A linear correlation between emission intensities and concentrations of H_2O_2 .

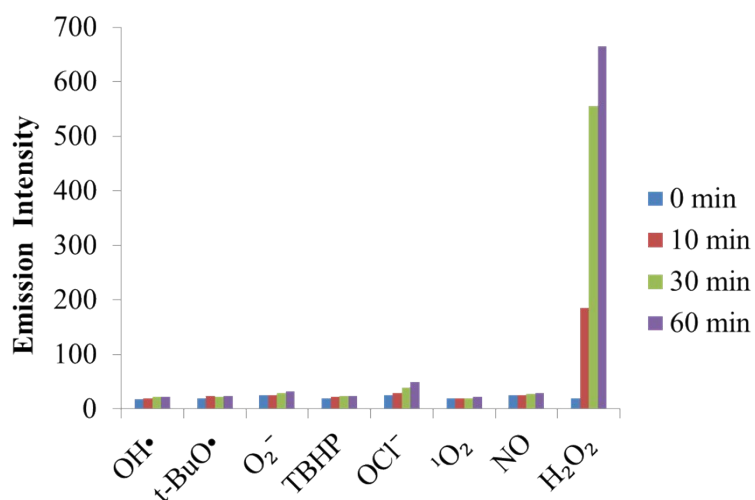


Fig. S4 Fluorescence intensity of 5 μM DCM-B1 to the testing species in PBS buffer solution (20 mM, 50% DMSO, pH 7.4) at 700 nm excited at 560 nm. Bars represent fluorescence intensity during 0, 10, 30 and 60 min after addition of various compounds excited at 560 nm.

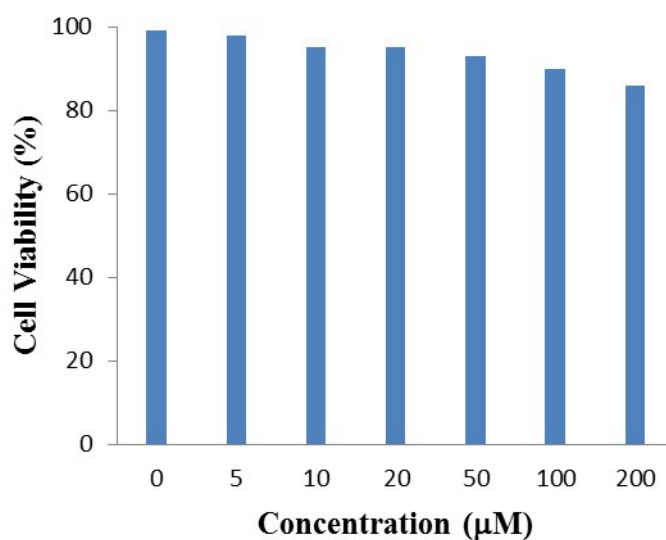


Fig. S5 cytotoxicity of DCM-B2 probe. Cell viability of MCF-7 cells incubated with different concentration DCM-B2 probe.

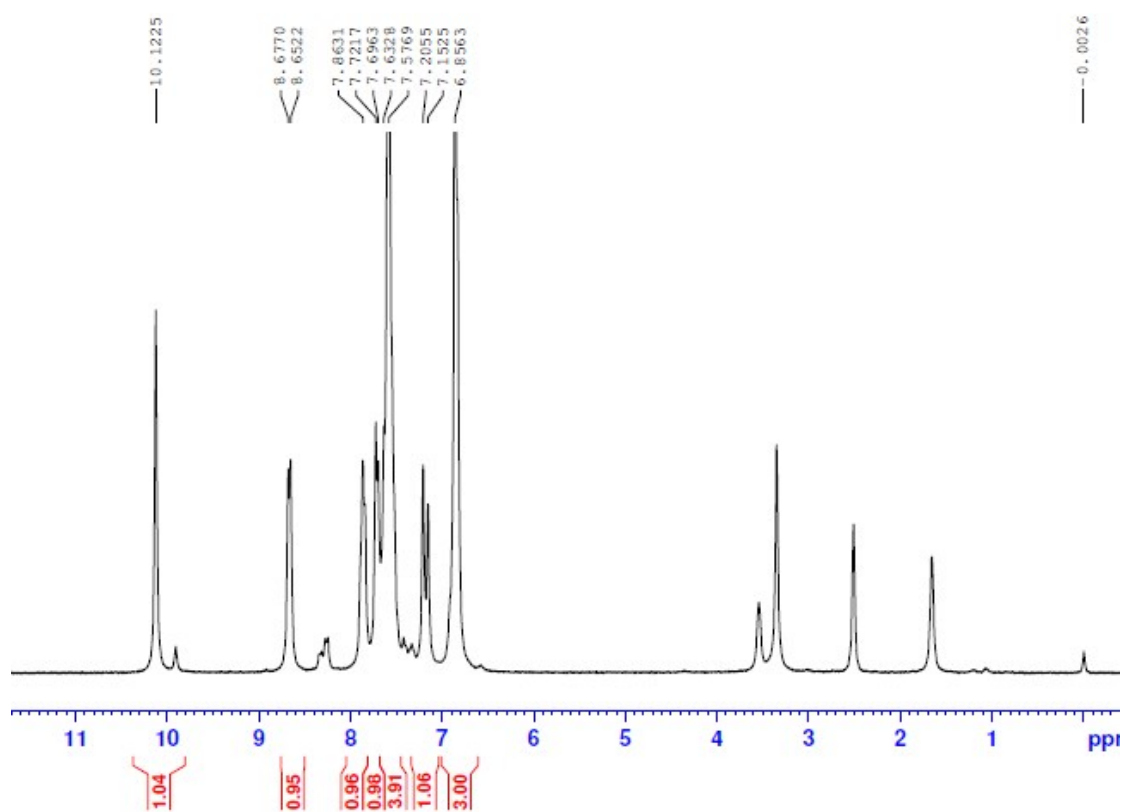


Fig. S6 ^1H NMR spectrum of compound DCM-OH

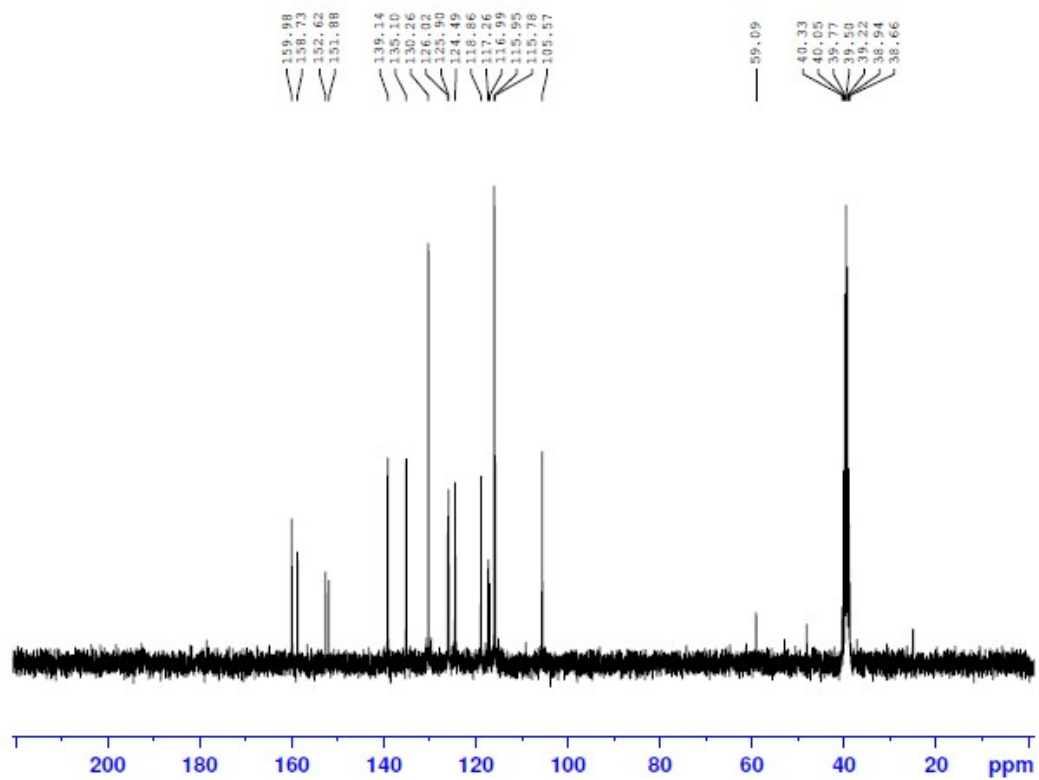


Fig. S7 ^{13}C NMR spectrum of compound DCM-OH

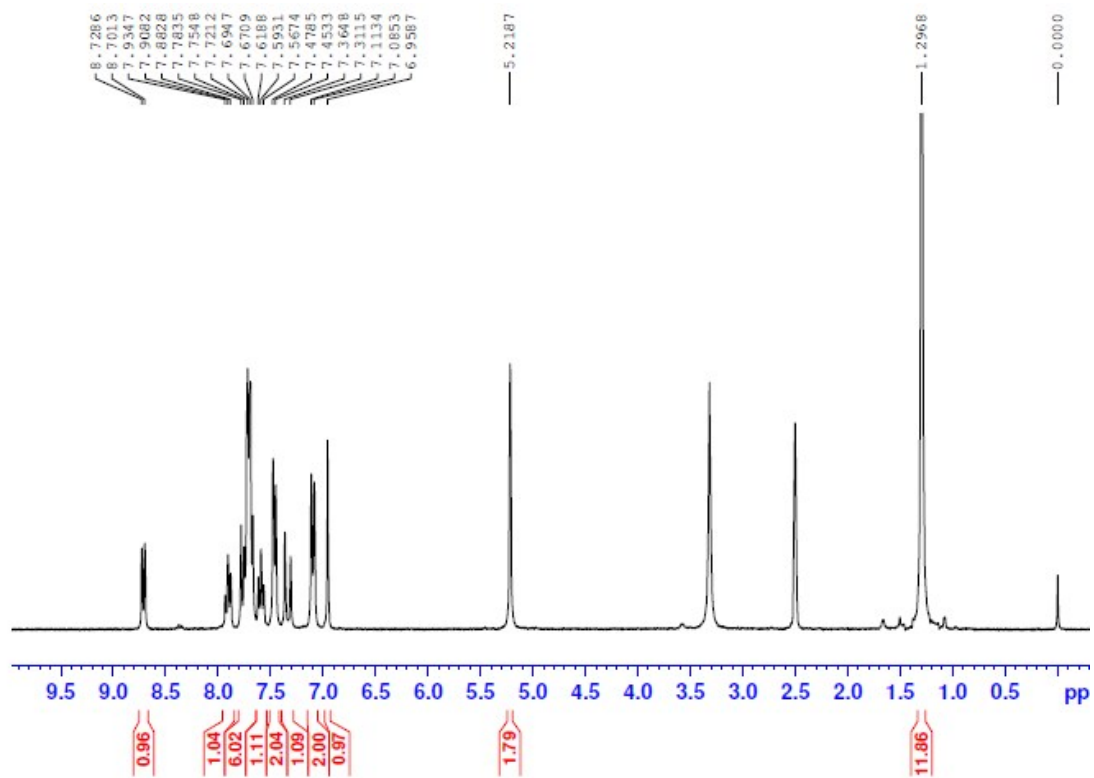


Fig. S8 ^1H NMR spectrum of compound DCM-B1

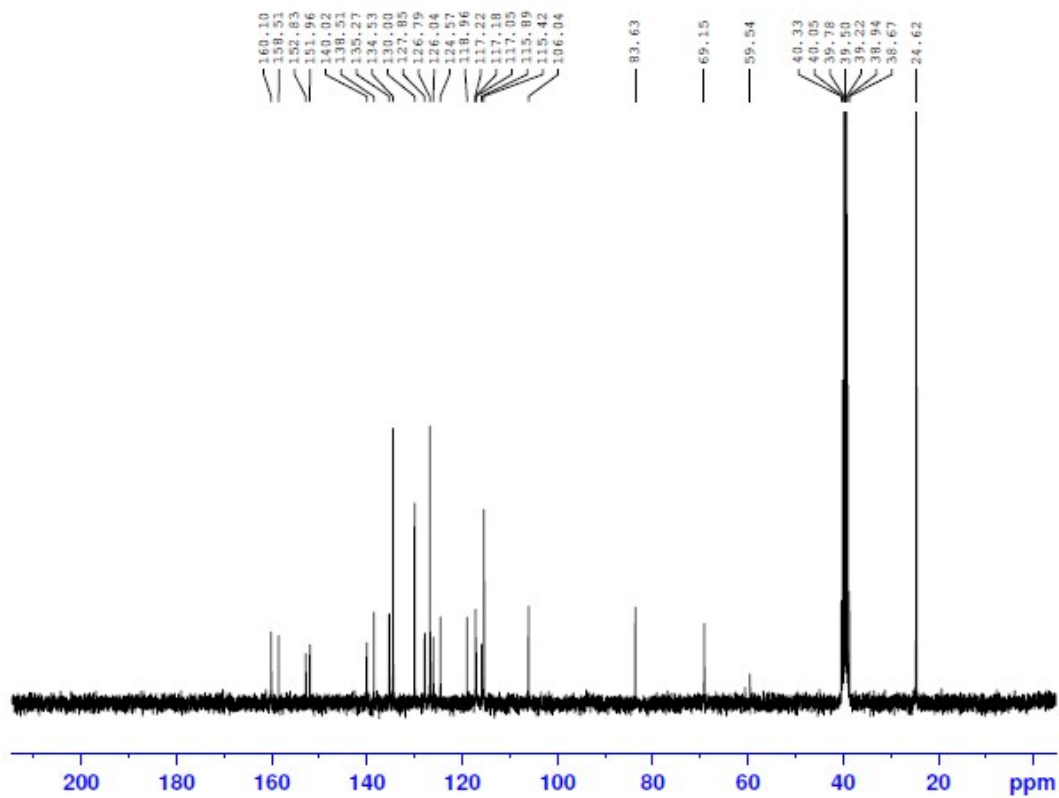


Fig. S9 ^{13}C NMR spectrum of compound DCM-B1

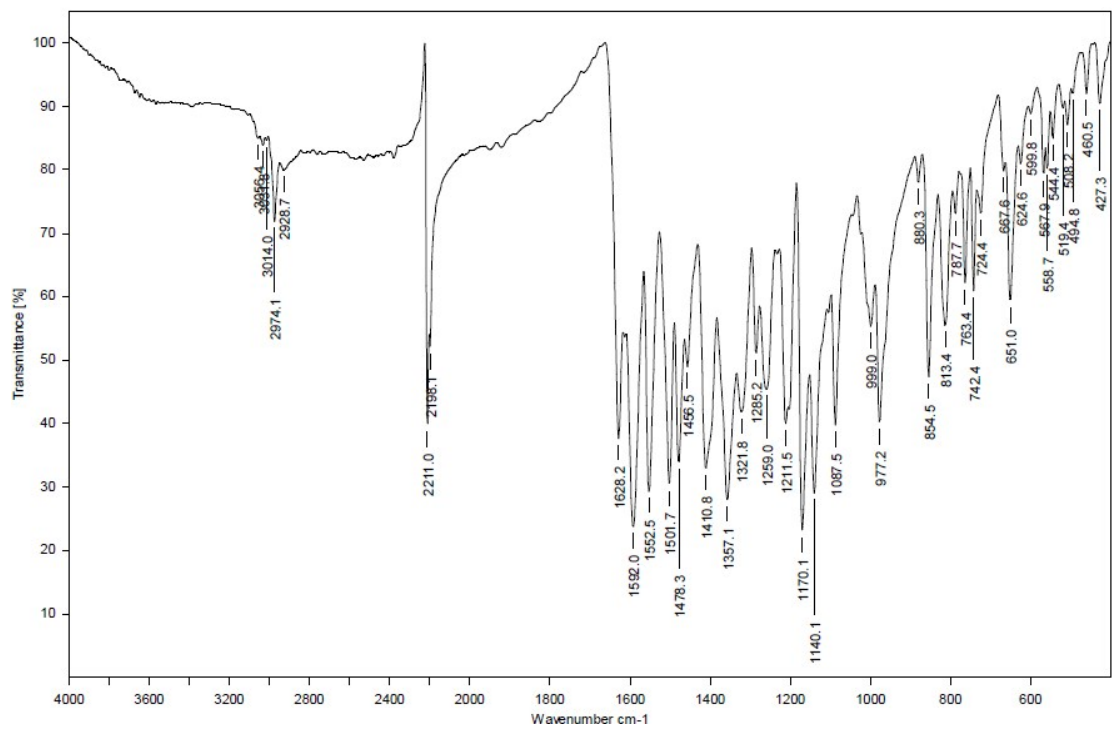


Fig. S10 IR spectrum of compound DCM-B1

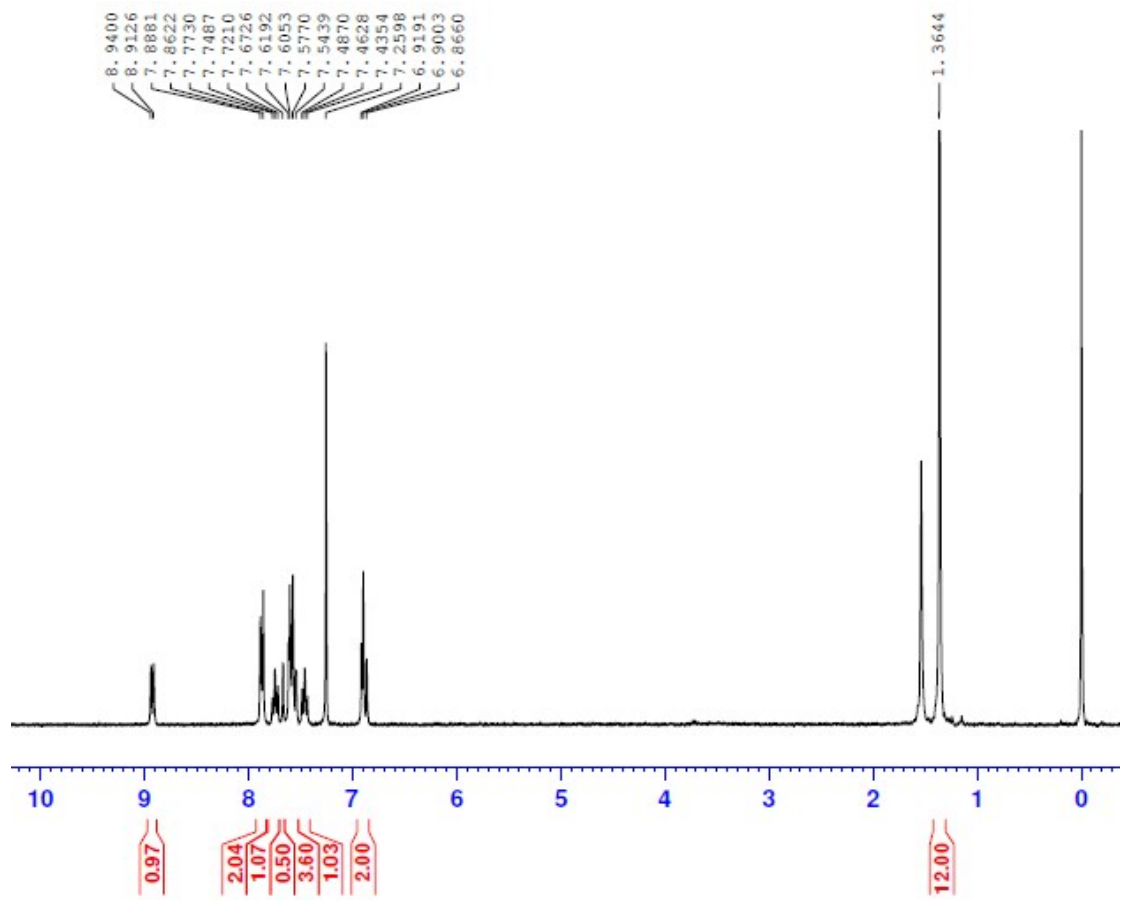


Fig. S11 ¹H NMR spectrum of compound DCM-B2

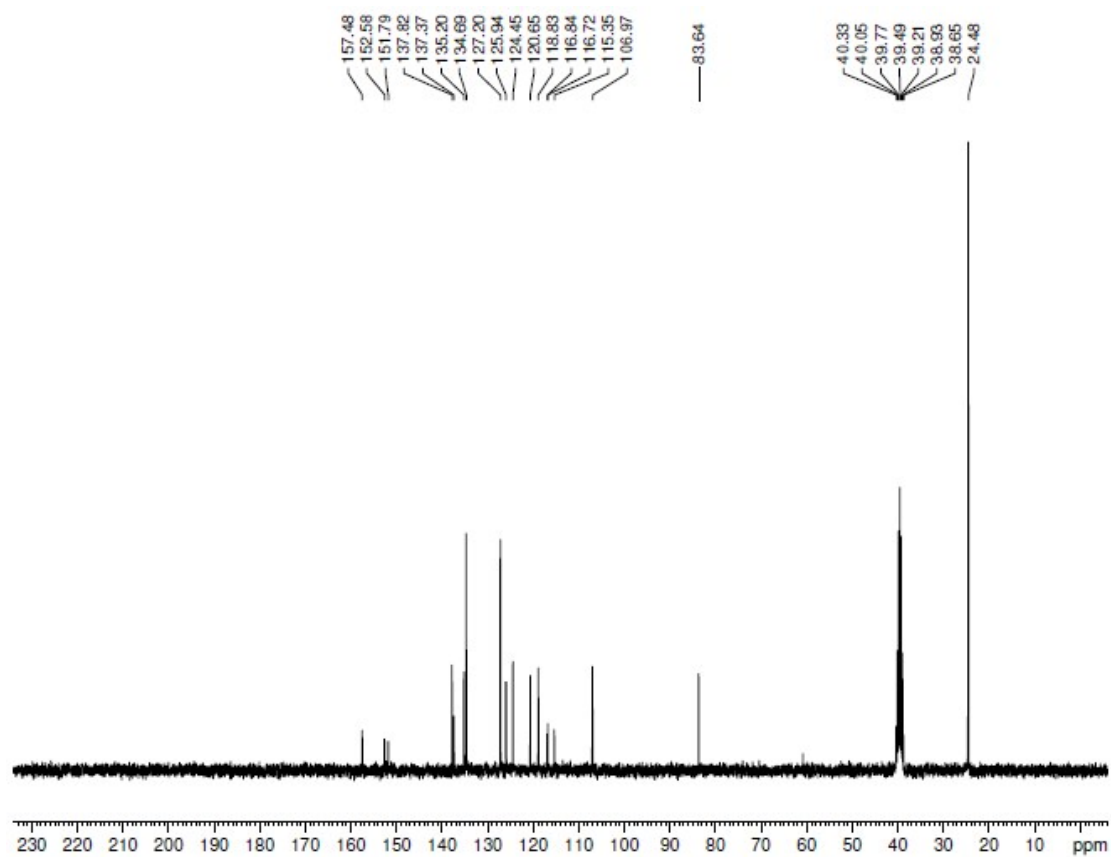


Fig. S12 ^{13}C NMR spectrum of compound DCM-B2

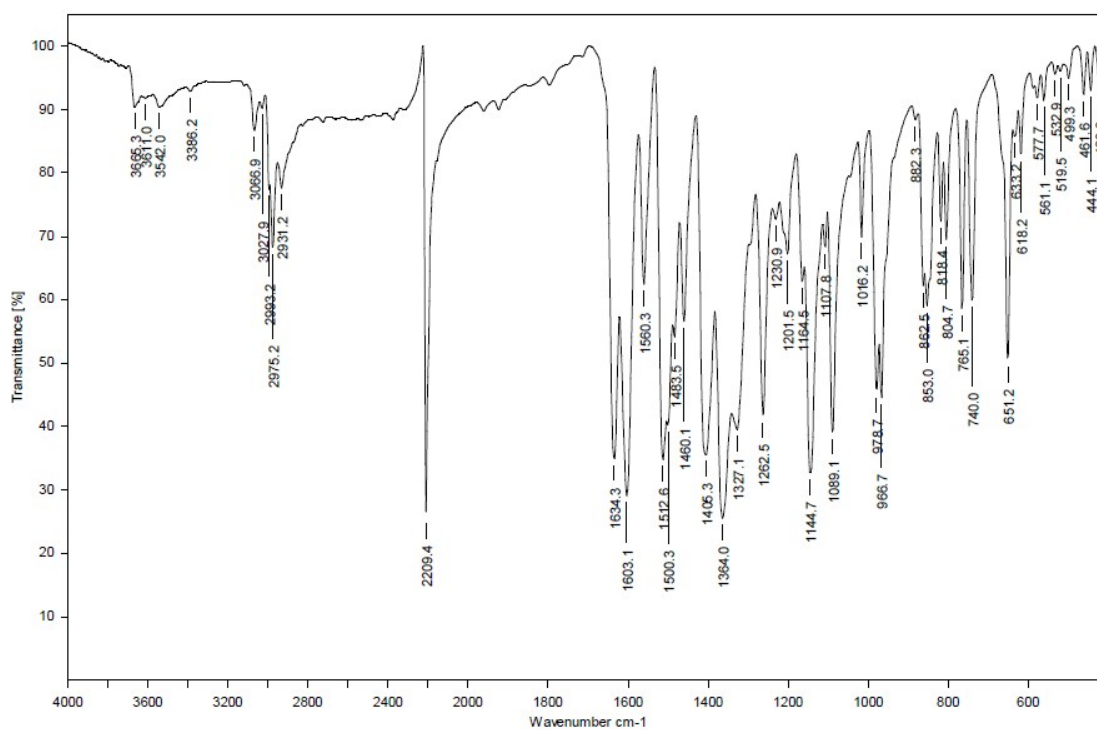


Fig. S13 IR spectrum of compound DCM-B2

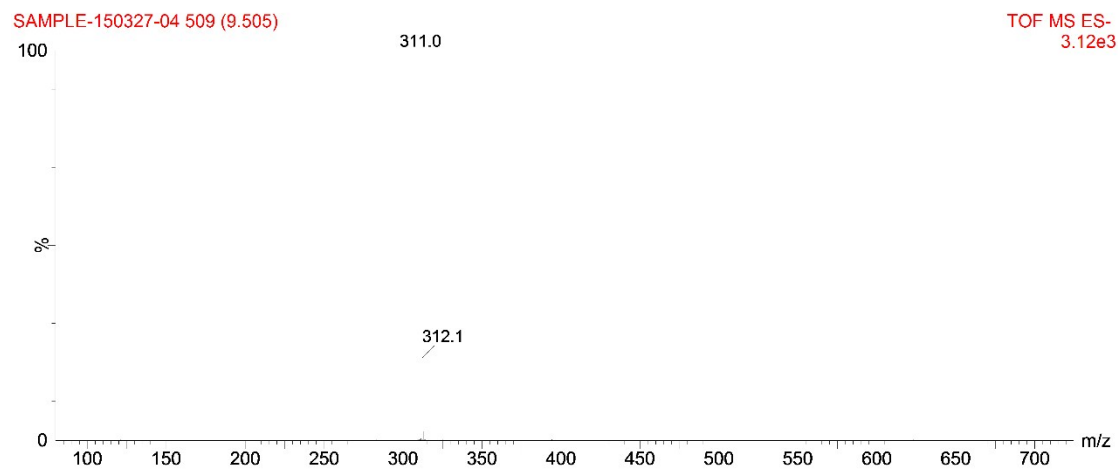


Fig. S14 Mass spectrum of compound DCM-OH

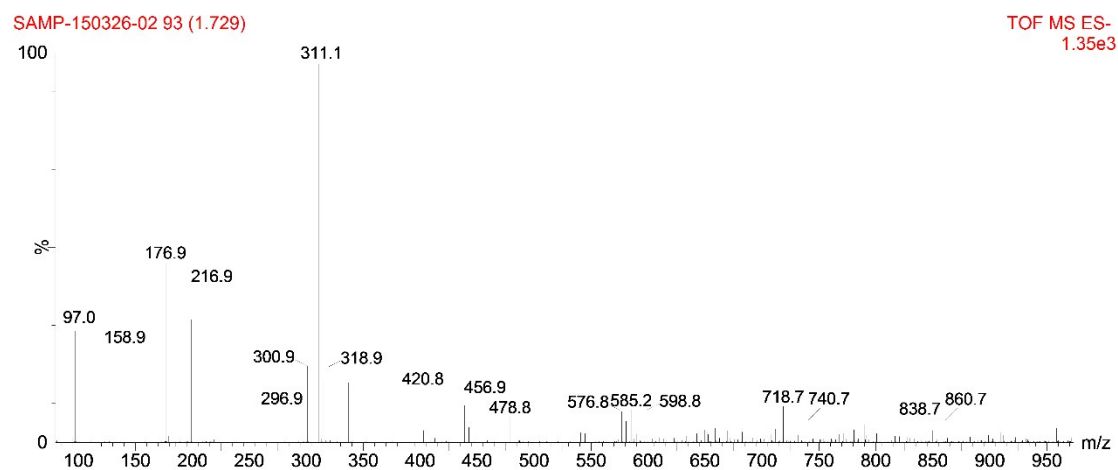


Fig. S15 Mass spectrum of the solution of compound DCM-B2 after treated with H_2O_2