A "Turn-On" Michler's Ketone-Benzimidazole Fluorescent Probe for Selective Detection of Serum Albumins

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Supporting information

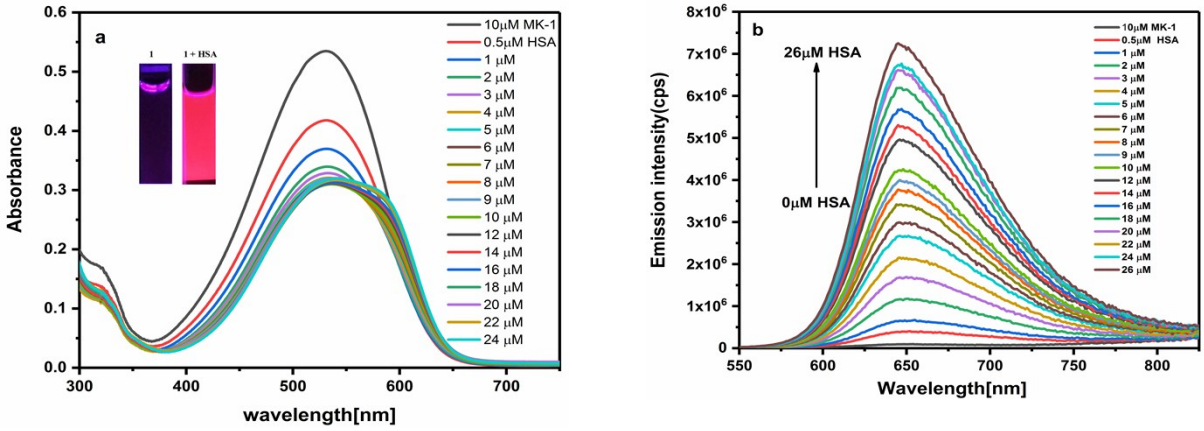

Fig. S1 a) Absorption spectra b) Emission spectra of MK-**1** in the presence of HSA

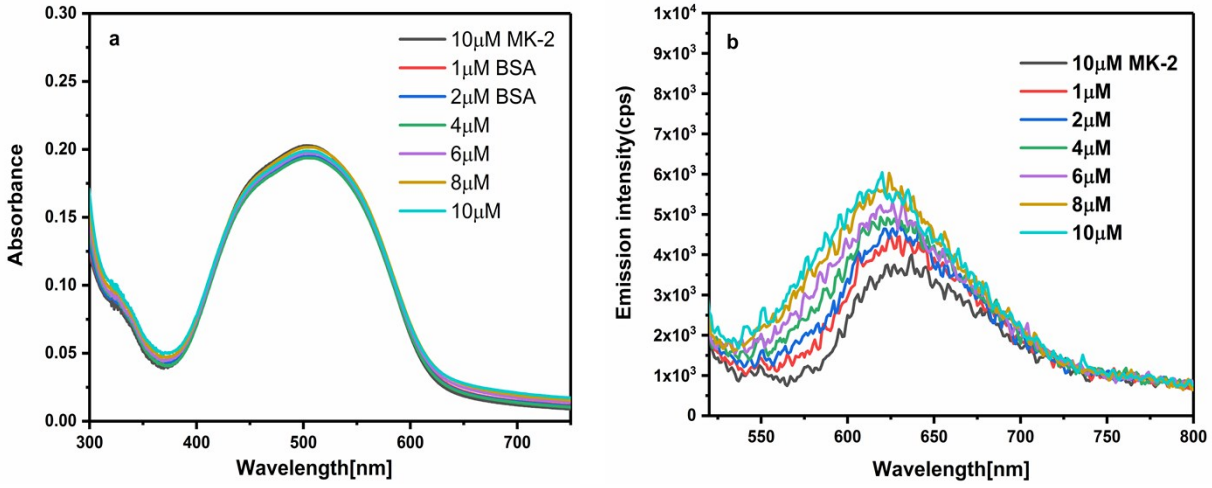

Fig. S2 a) Absorption spectra b) Emission spectra of MK-**2** in the presence of BSA

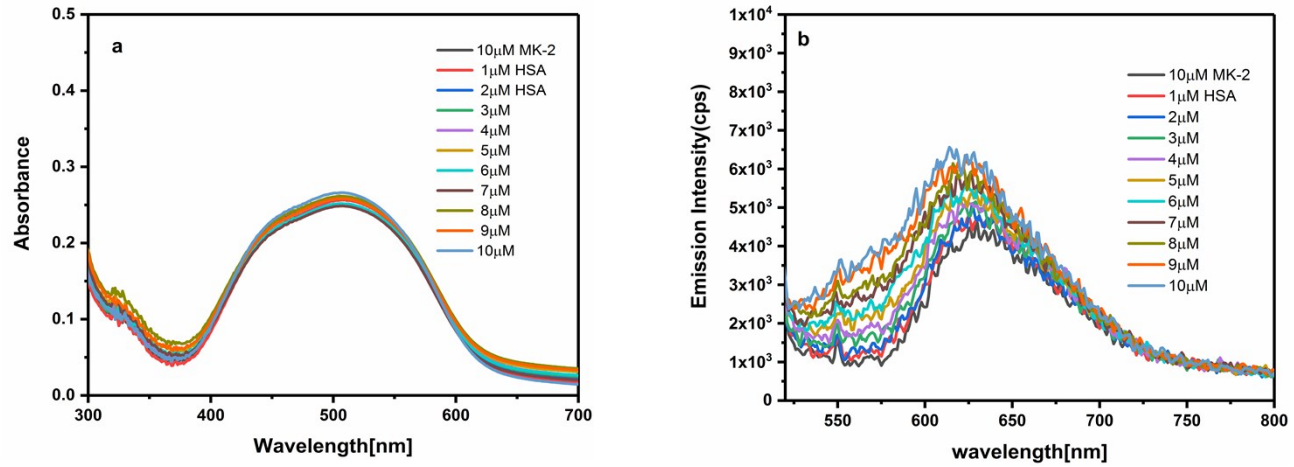

Fig. S3 a) Absorption spectra b) Emission spectra of MK-**2** in the presence of HSA

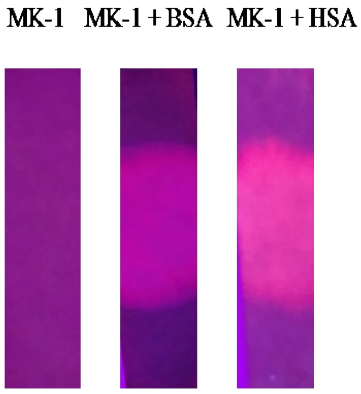

Fig. S4 Detection of albumin through strip test in the presence of UV light (365nm). Changes can be seen post addition of albumin

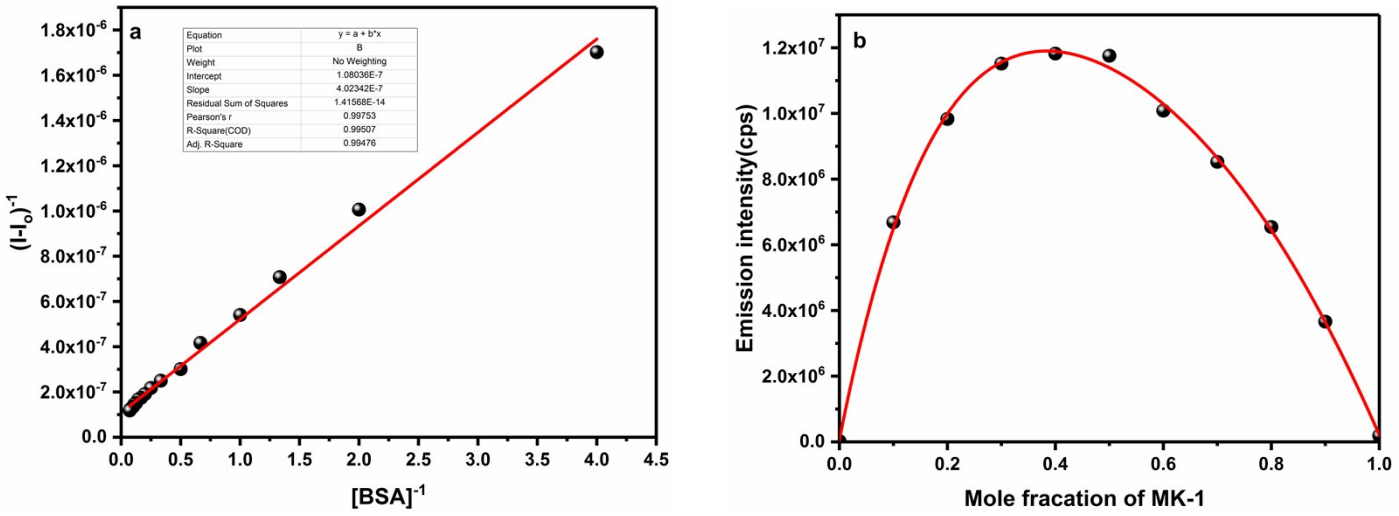

Fig. S5 a) Binding constant of BSA with MK-**1** b) Job's plot of MK-**1** in the presence of BSA

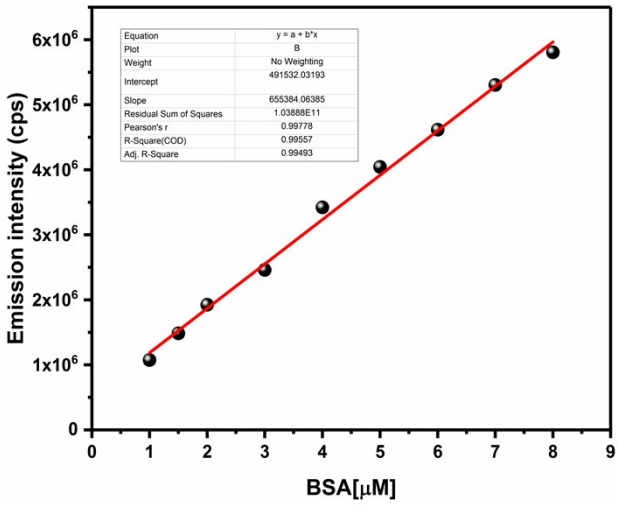

Fig. S6 The relationship between fluorescence intensity of MK-**1** [at 650nm] in the presence of 1-10μM concentration of BSA with 10mM PBS buffer concentration. The detection limit of BSA was 816 nM.

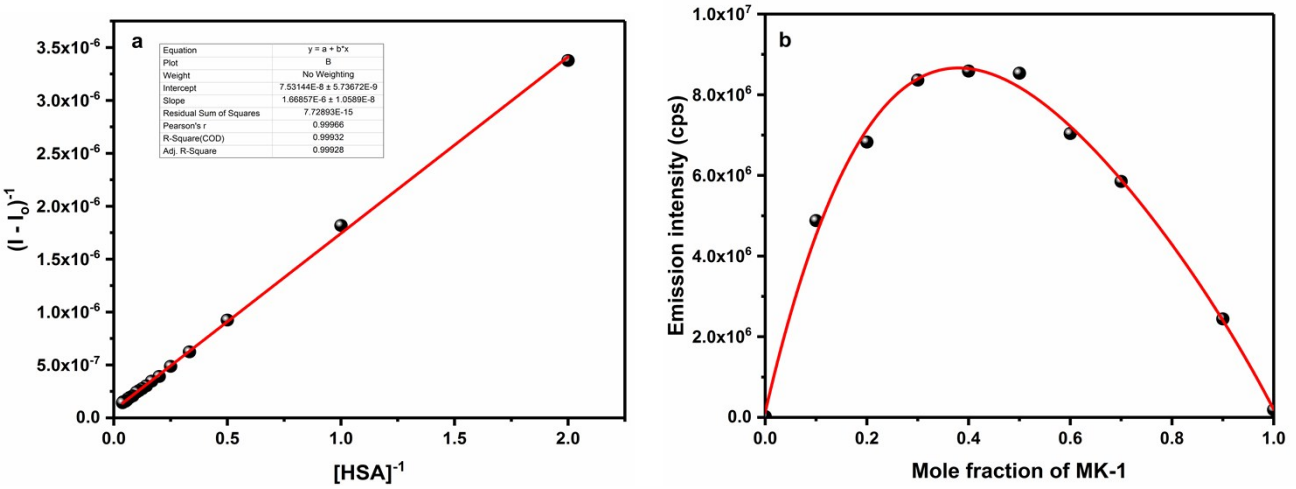

Fig. S7 a) Binding constant of HSA with MK-**1** b) Job's plot of MK-**1** in the presence of HSA

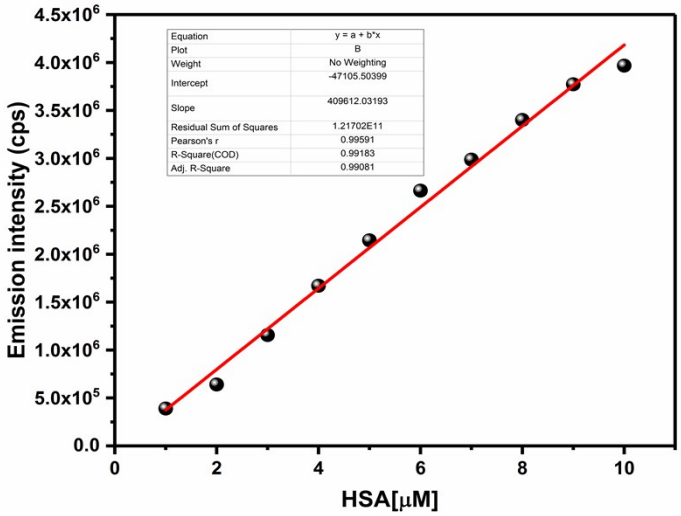

Fig. S8 The relationship between fluorescence intensity of MK-**1** [at 650nm] in the presence of 1-10μM concentration of HSA with 10mM PBS buffer concentration. The detection limit of HSA was 1.3μM

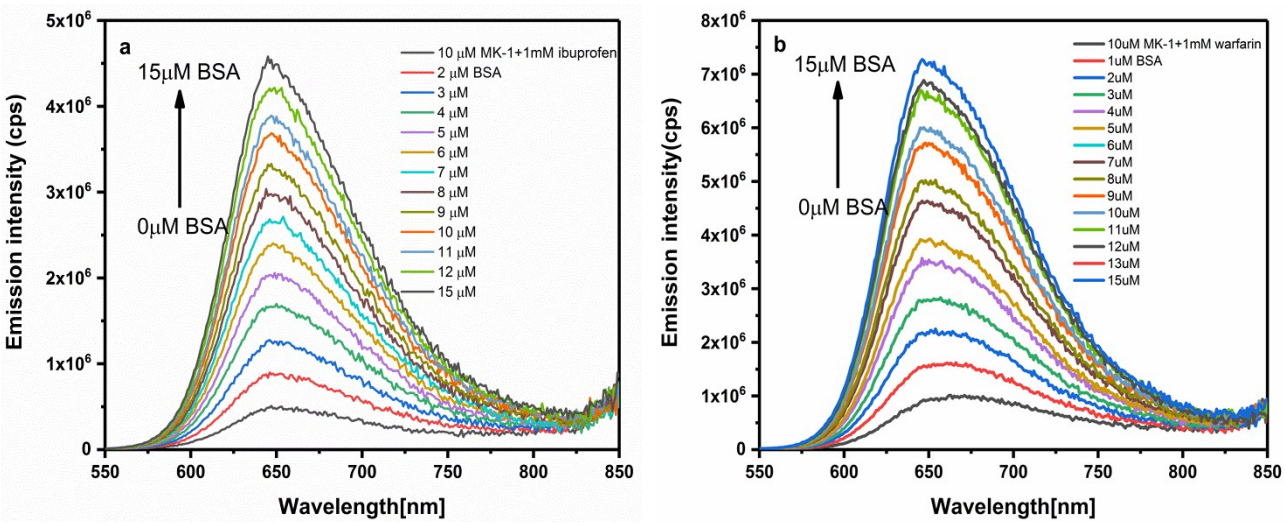

Fig. S9 Titration of BSA in the presence of a) ibuprofen & MK-**1** b) warfarin & MK-**1** in 10mM PBS buffer solution.

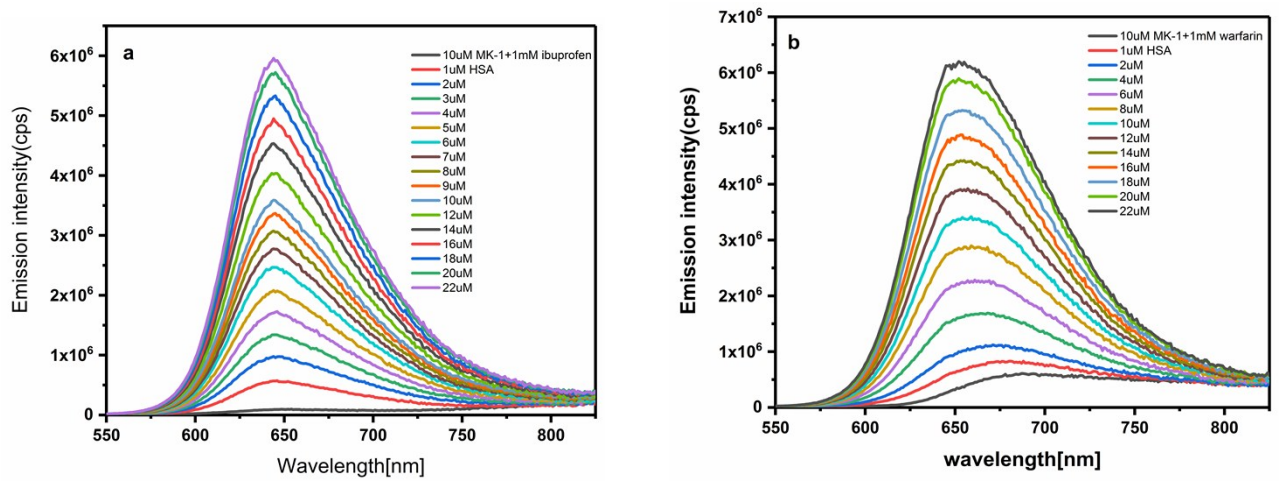

Fig. S10 Titration of HSA in the presence of a) ibuprofen & MK-**1** b) warfarin & MK-**1** in 10mM PBS buffer solution

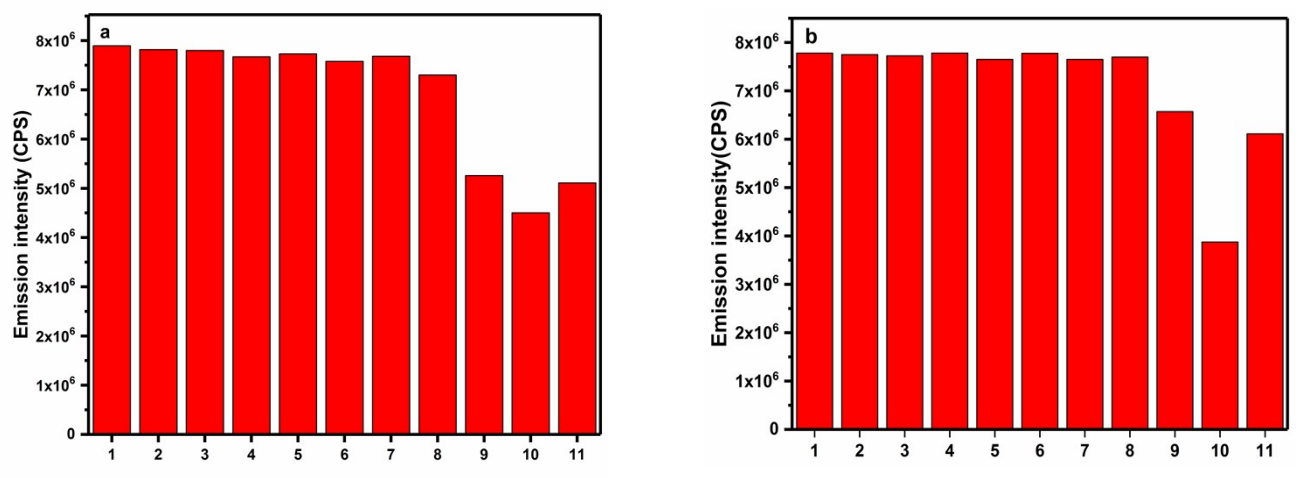

Fig. S11 Competitive experiment: Fluorescence intensity of MK-**1**(10μM) measured at 650nm in PBS buffer solution (10mM pH 7.4, containing 1% DMSO) with various analytes with the concentration of a) BSA(15μM) b) HSA (24μM).The secondary analytes used are 1) blank 2) Aspartic acid(0.5M) 3) Histidine (0.5M) 4) Cysteine(0.5M) 5) KCl(0.5M) 6) NaCl(0.5M) 7) $CaCl_2$(0.5M) 8) Lysozyme (15μM) 9) Trypsin (15μM) 10) Hemoglobin (15μM) 11) Catalase (15μM)

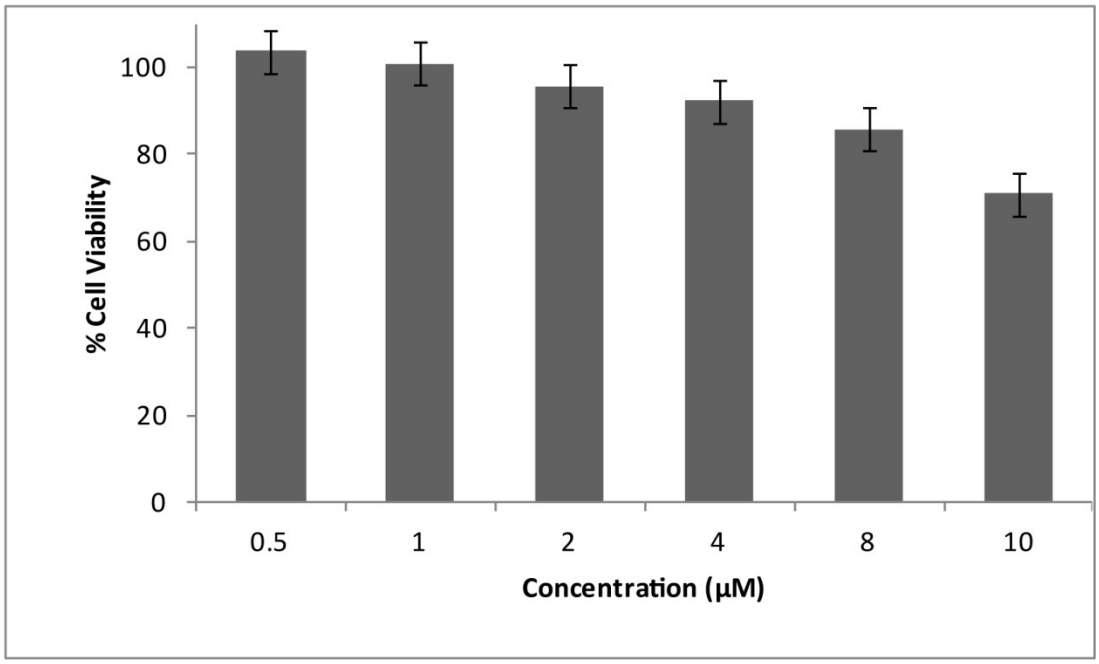

Fig.S12 Cytotoxicity assay for MK-1. Standard MTT assay was performed to test cytotoxicity of MK-1 in HeLa cells. Incubation of MK-**1**with cells was for 24 h after treatment. Experiment was performed three times in triplicates.

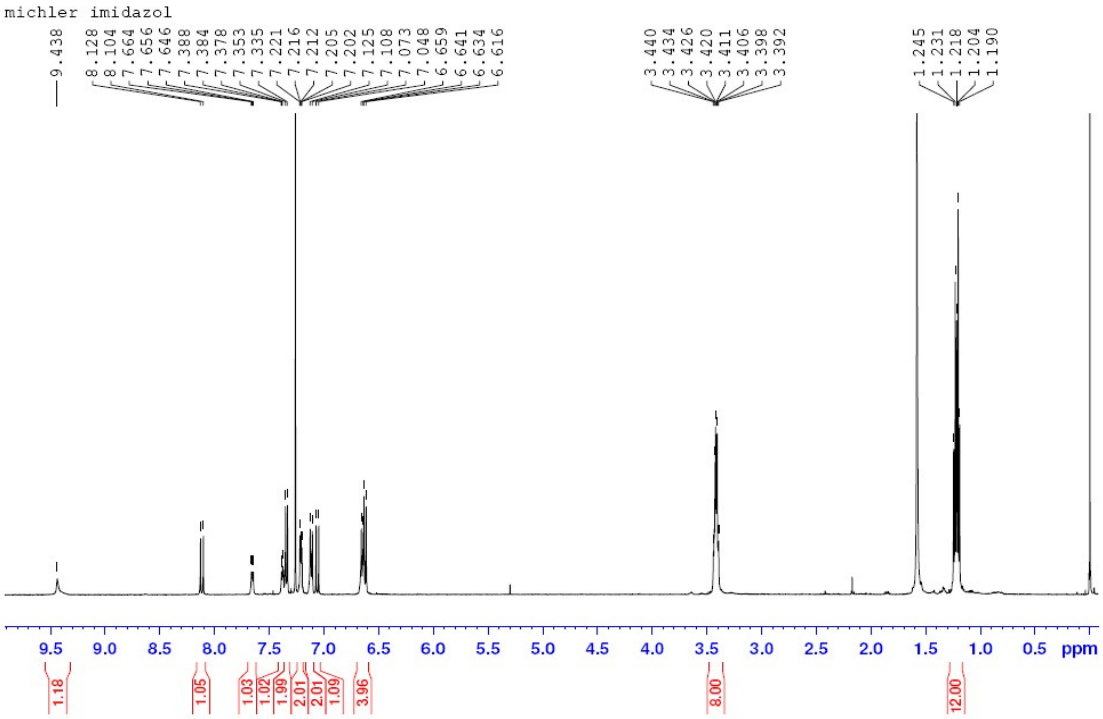

Fig.S13[1]H-NMR spectra of MK-**2**

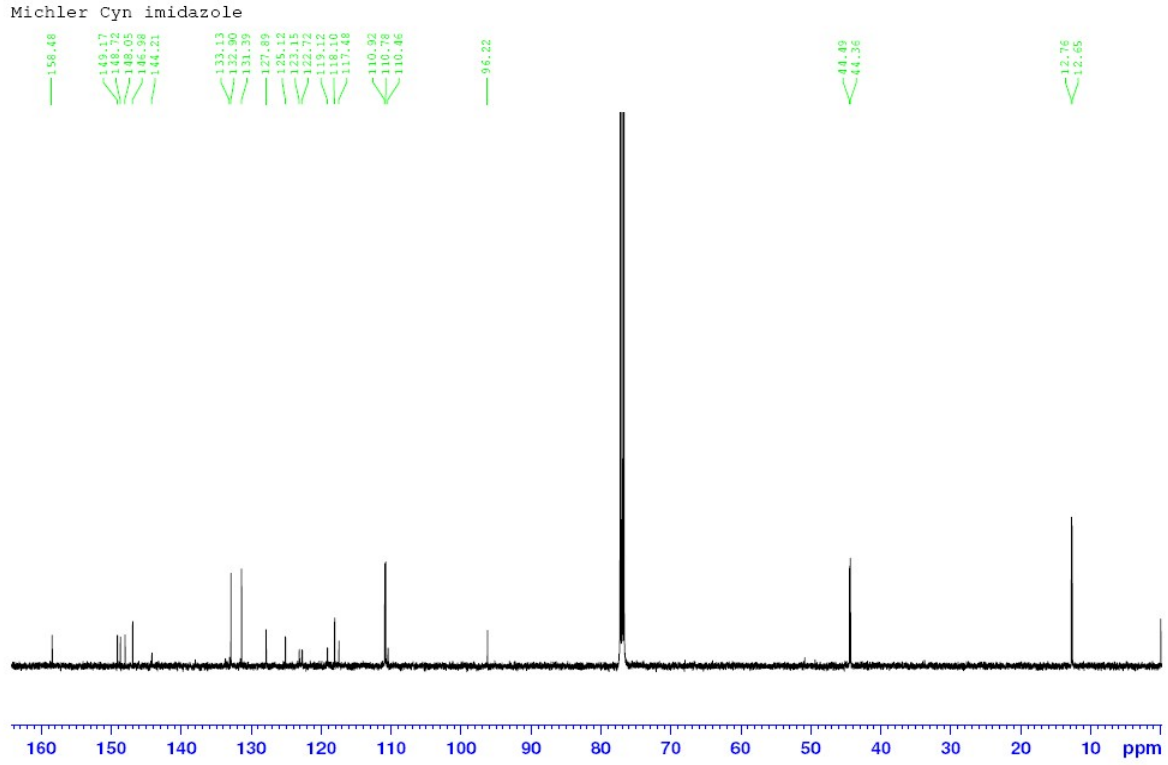

Fig.S14[13]C-NMR spectra of MK-**2**

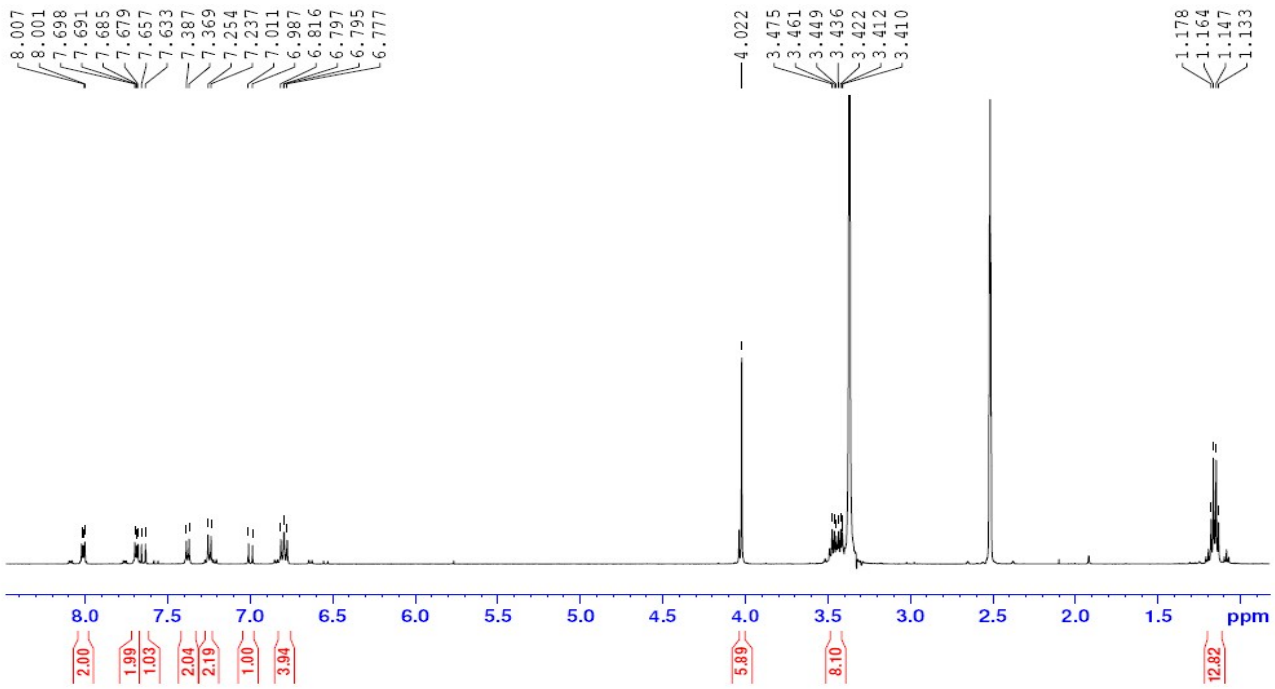

Fig. S15[1]H-NMR spectra of MK-**1**

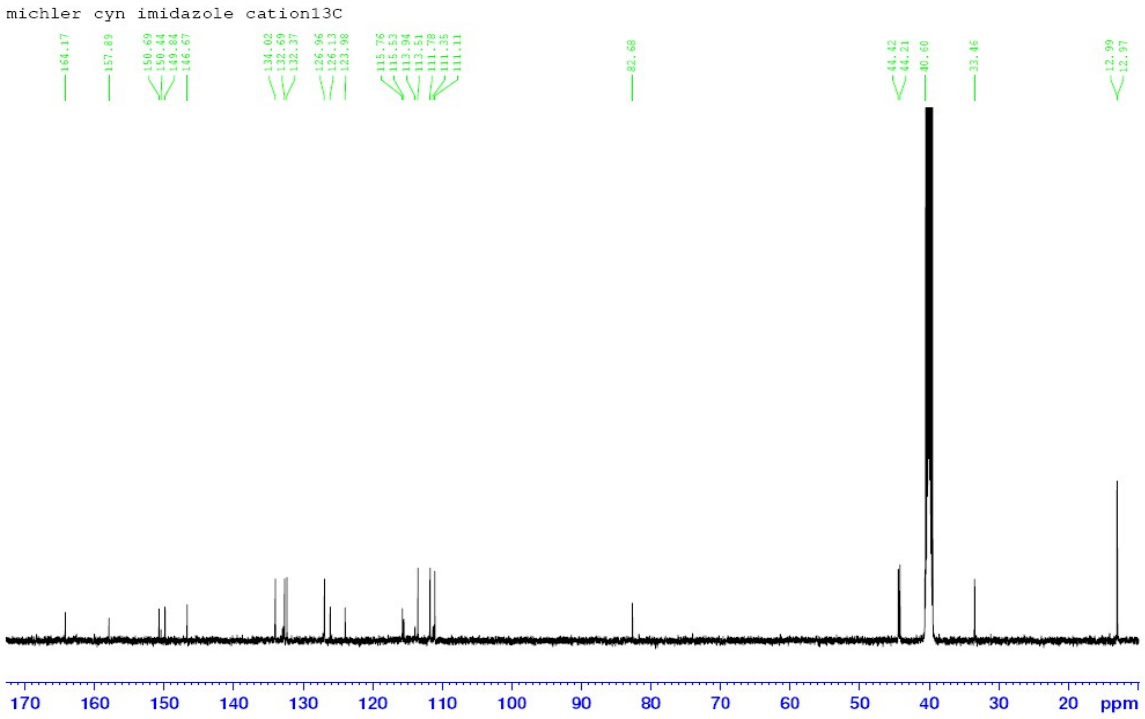

Fig. S16[13]C-NMR spectra of MK-**1**