Supplementary Information

New Cu^{2+}-specific "turn-on" fluorescent probe based on [5]helicene with very large Stokes shift and its potential in living cell

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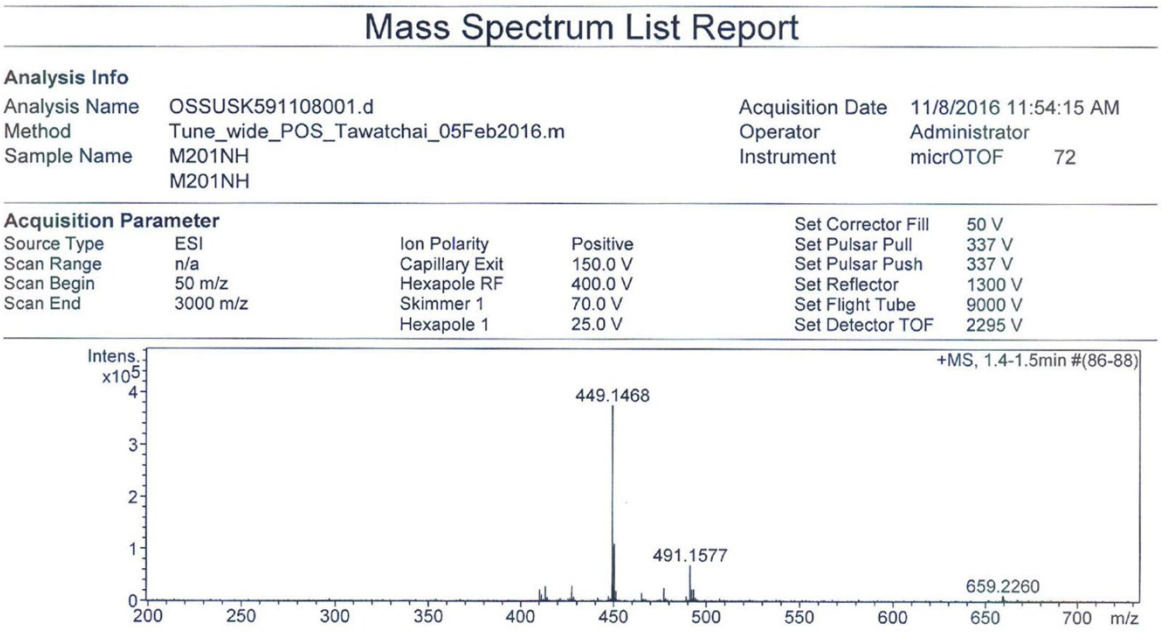

Fig. S1 HR–ESI MS of sensor **1**: $C_{26}H_{22}N_2O_4Na^+$ calcd. 449.1472 ; m/z $[M+Na]^+$ found 449.1468.

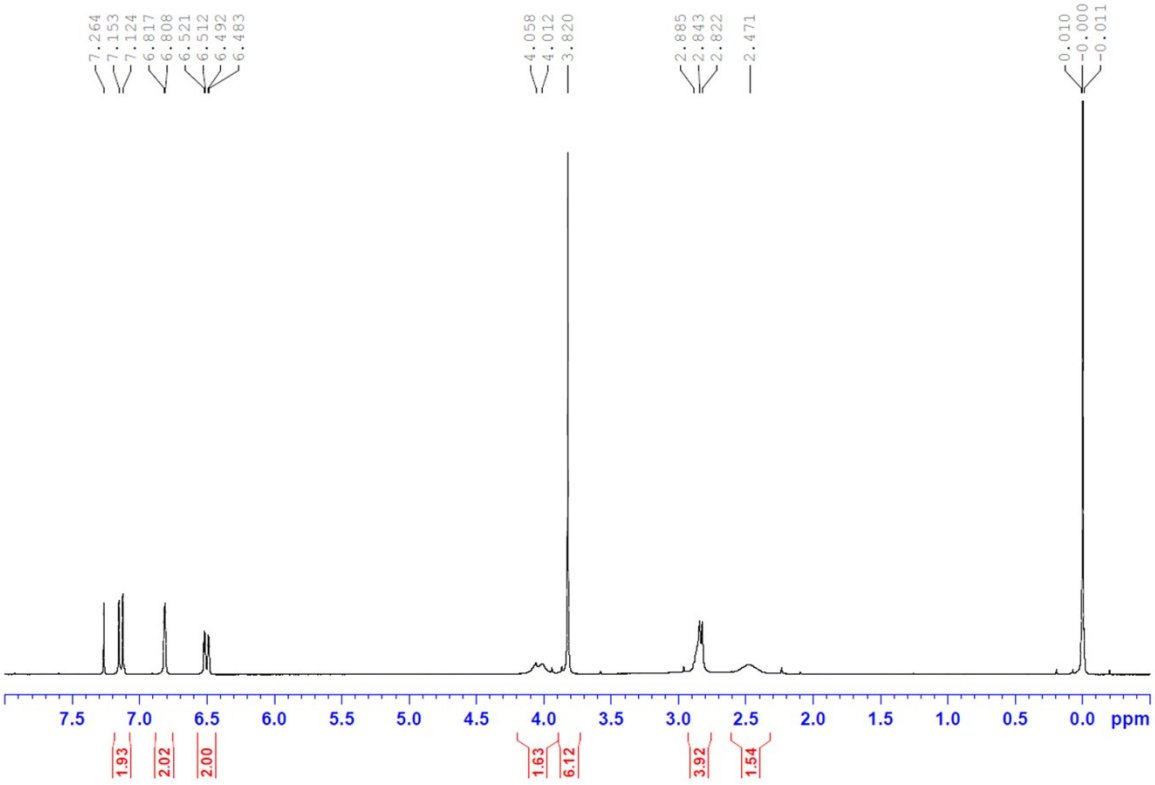

Fig. S2 ^{1}H–NMR spectrum of sensor **1** in $CDCl_3$.

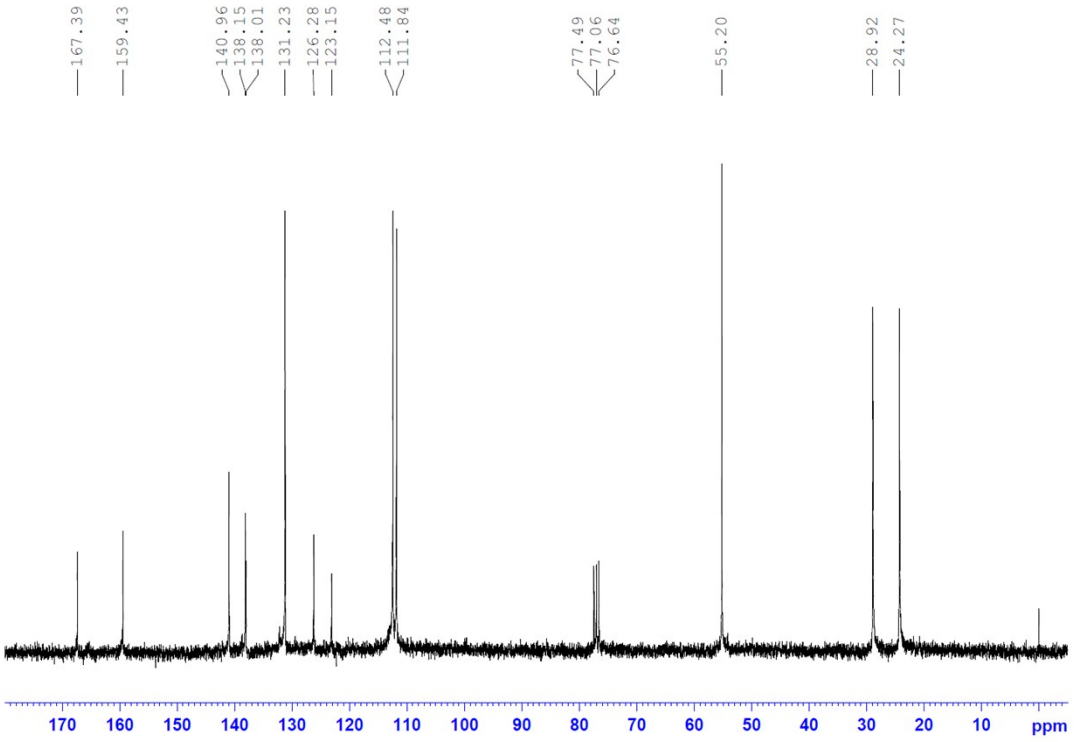

Fig. S3 ^{13}C–NMR spectrum of sensor **1** in $CDCl_3$.

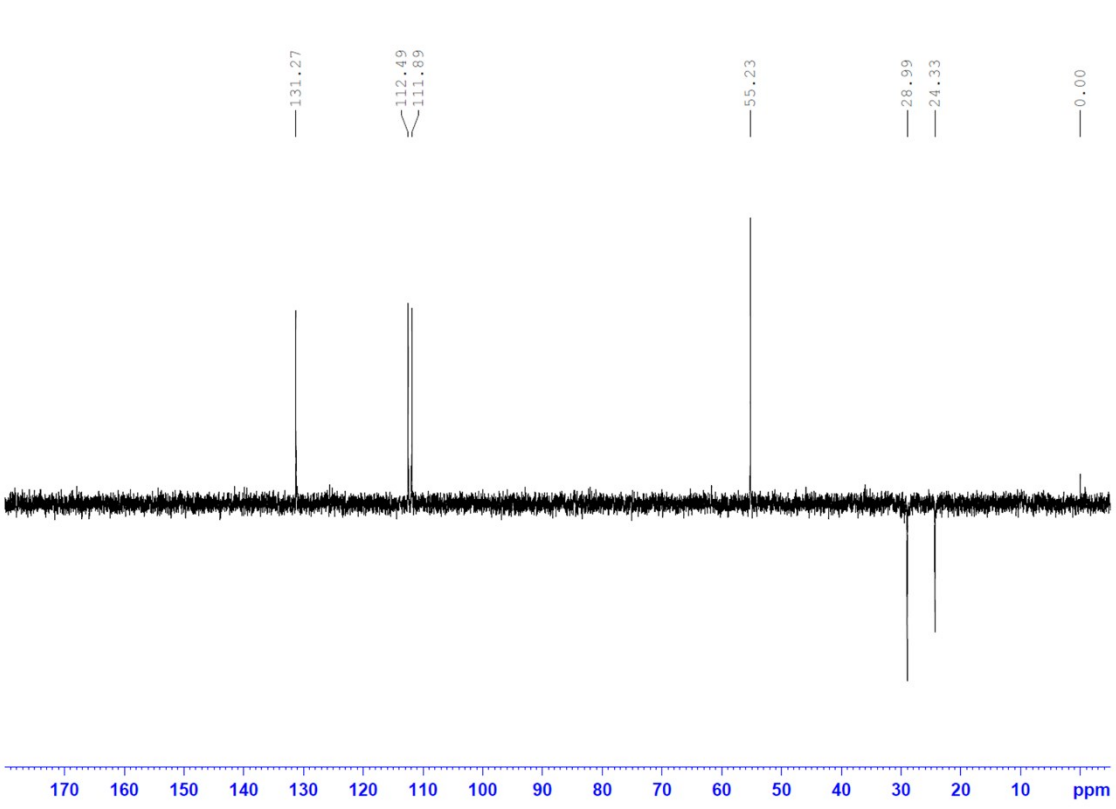

Fig. S4 DEPT−135 NMR spectrum of sensor **1** in $CDCl_3$ (75 MHz).

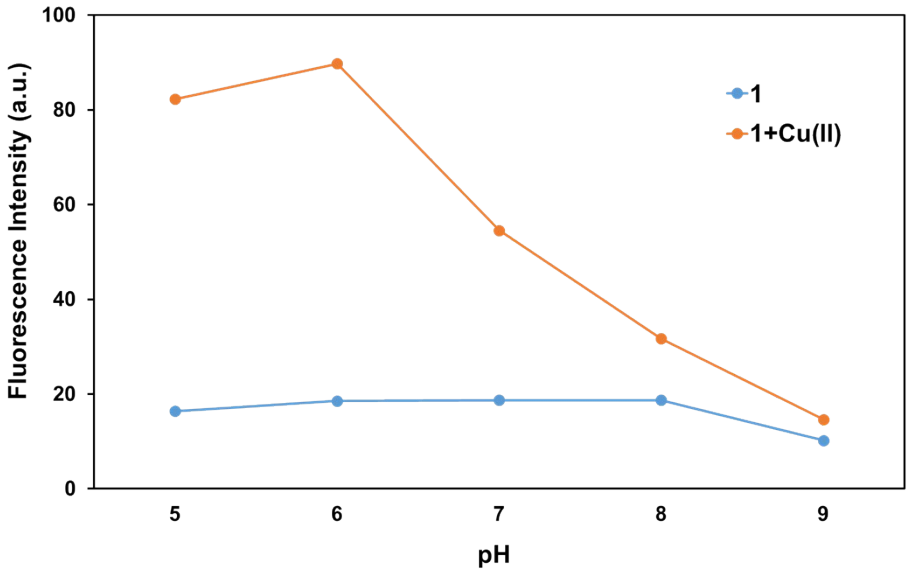

Fig. S5 Fluorescence emissions (λ_{em}= 556 nm) of **1** (2.40 µM) and the emissions after addition of Cu^{2+}(66.7 µM) in HEPES buffer as function of pH (λ_{ex}= 373 nm).

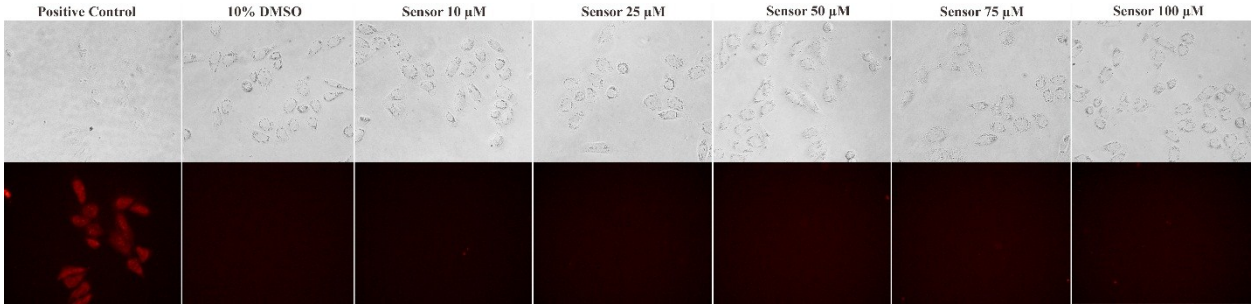

Fig. S6 Negative propidium iodide stain of HepG2 cells after sensor exposure showed that cells were viable with plasma membrane integrity. For positive control cells were treated with 10% TritonX-100. 10% DMSO the solvent of sensor was used as negative control.

Table S1. Crystallographic data for sensor **1**

Bond precision: C-C = 0.0020 A Wavelength=1.54178

Cell: a=21.755(4) b=11.303(2) c=16.615(3)
alpha=90 beta=90 gamma=90
Temperature: 273 K

	Calculated	Reported
Volume	4085.6(13)	4085.8(14)
Space group	P b c n	P b c n
Hall group	-P 2n 2ab	-P 2n 2ab
Moiety formula	C26 H22 N2 O4	C26 H22 N2 O4
Sum formula	C26 H22 N2 O4	C26 H22 N2 O4
Mr	426.46	426.46
Dx,g cm-3	1.387	1.387
Z	8	8
Mu (mm-1)	0.766	0.766
F000	1792.0	1792.0
F000'	1797.56	
h,k,lmax	26,13,20	26,13,20
Nref	4044	4010
Tmin,Tmax	0.795,0.795	0.656,0.754
Tmin'	0.795	

Correction method= # Reported T Limits: Tmin=0.656 Tmax=0.754
AbsCorr = MULTI-SCAN

Data completeness= 0.992 Theta(max)= 72.430

R(reflections)= 0.0429(3276) wR2(reflections)= 0.1221(4010)

S = 1.036 Npar= 292