Supporting Information

A new indoloquinoline-based fluorescence probe for imaging of hydrazine in vitro and in vivo

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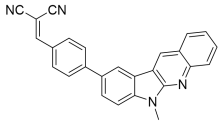
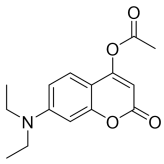
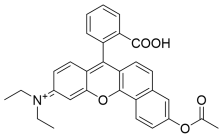
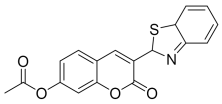
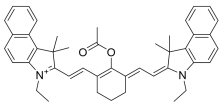
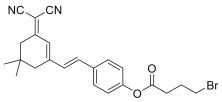
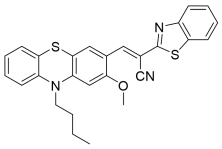
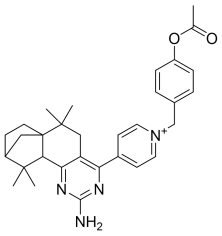
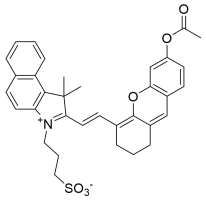
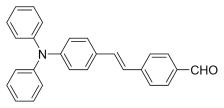
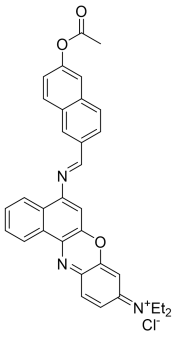
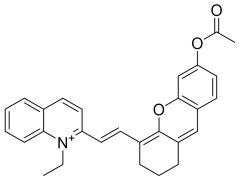
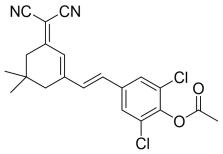
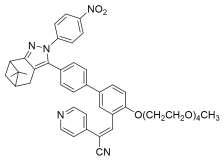
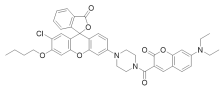
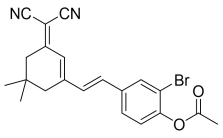
Table S1. Comparison of probe **1** with some hydrazine-detecting fluorescent probes

Name	Structure	Absorption/ emission (nm)	Type	LOD (nM)	Time (min)	Application	Ref.
1		410/615	Turn-off	680	< 2	MCF-7 tumor	The present word
6		382/470	Ratio	31000	7	HeLa cells	1
Rho-N_2H_4		575/645	Turn-on	365	40	4T1 cells, normal mice	2
Cou-1-N_2H_4		376/496	Turn-on	11.9	3	Hela cells	3
Cy-OAc		730/825	Ratio	~15	~60	SMMC-7721 cells, HepG2 cells kidney injury mice	4
DDPB		400/495	Turn-on	86.3	20	Hela cells	5
PBT		440/690	Ratio	0.11	40	HepG2 cells	6
PBQ-AB		373/595	Ratio	48	< 1	Hela cells	7
CyOE		606/705	Turn-on	82	15	HepG2 cells	8

TPA-CHO		~400/612		240	20	Hela cells	9
BPN		660/725	Turn-on	0.45	30	MDA-MB-231 cells	10
QLN-Hy		588/692	Turn-on	250	12	MCF-7 cells, normal mice	11
DCPBCl$_2$-Hz		388/490	Ratio	300	30	HepG2 cells	12
TOPIB-PAN		401/520	Turn-off	74.5	24	HeLa cells	13
RC-*n*-Bu		413/470	Ratio	98	20	HeLa cells	14
HB		390/675	Turn-on	31	12	HeLa cells, normal mice	15

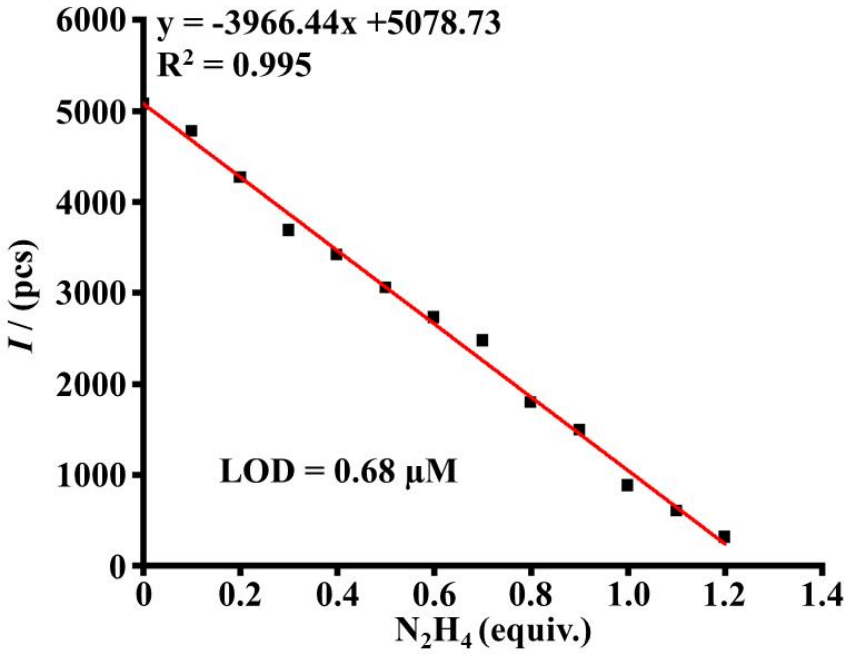


Figure S1. A linear relationship between fluorescence intensity at 615 nm and the equivalent of N_2H_4 for probe **1** (incubation time = 2 min at 25 °C).

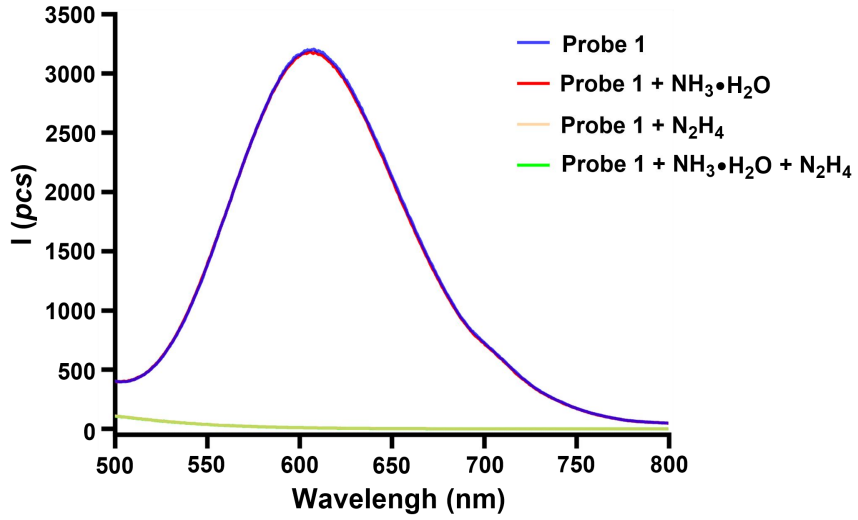


Figure S2. The fluorescence spectra of probe **1** (10 μM) after treatment with $NH_3 \cdot H_2O$ (10 equiv.) or $NH_3 \cdot H_2O$ + N_2H_4 (1.5 equiv.).

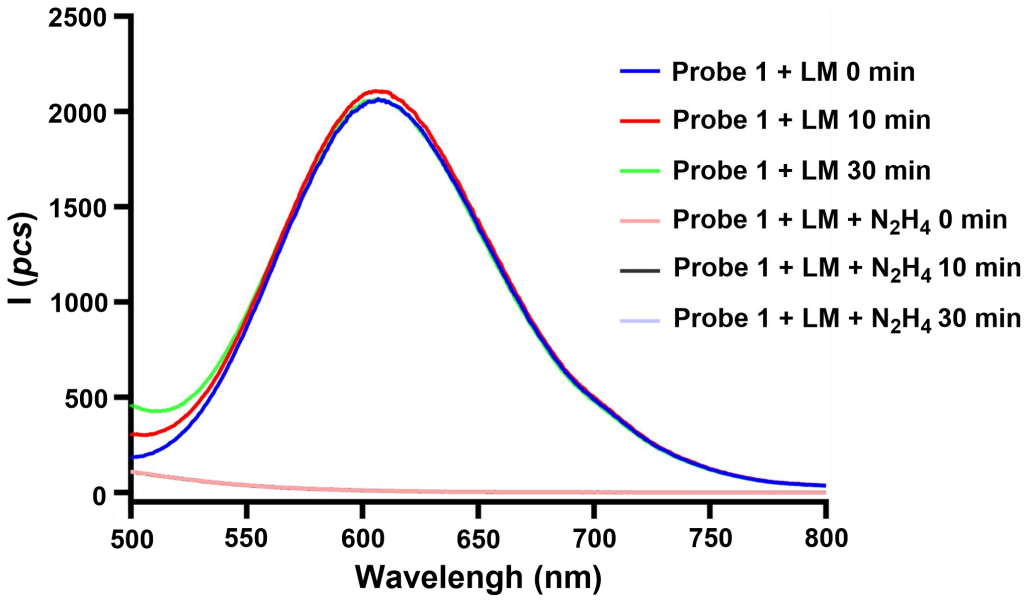


Figure S3. The fluorescence spectra of probe **1** (10 μM) after treatment with rat liver microsomes (LM) (10 equiv.) or LM + N_2H_4 (1.5 equiv.) at 0, 10 and 30 min.

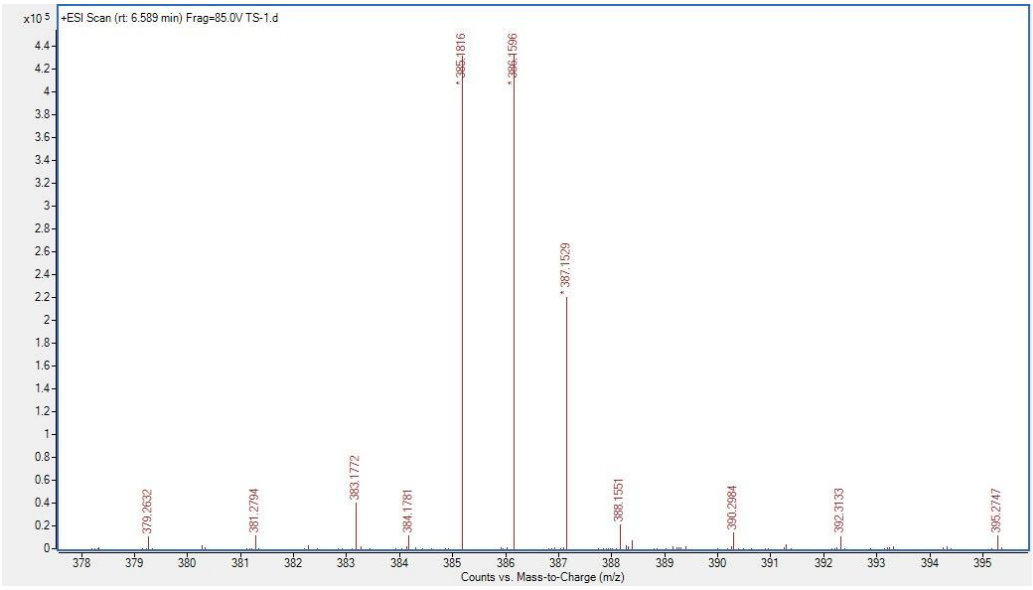


Figure S4. The HRMS spectra of probe **1**

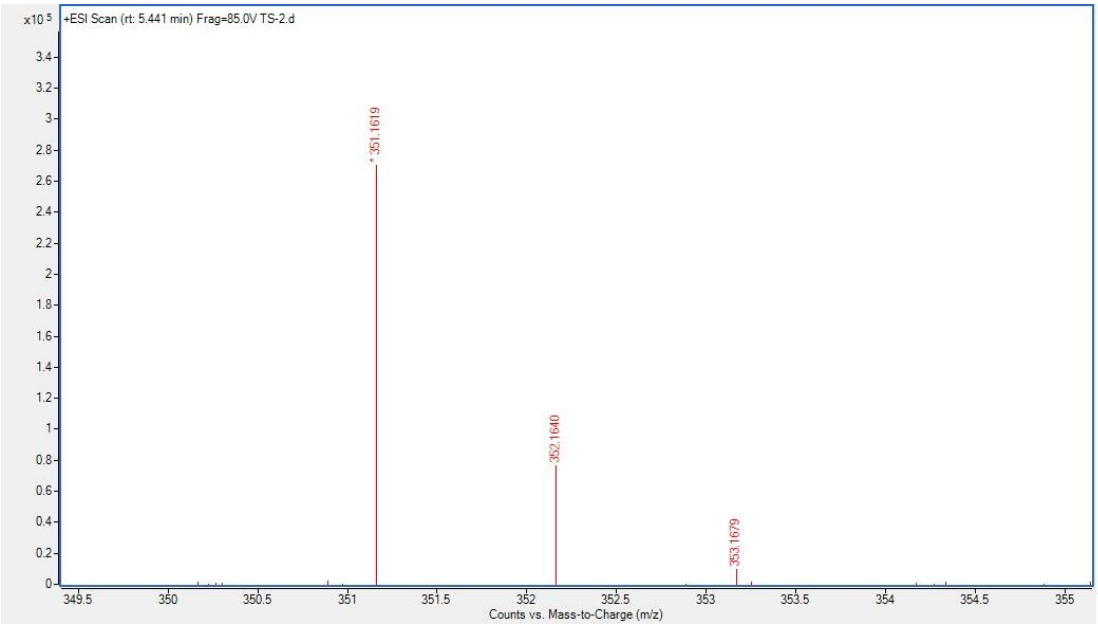


Fig. S5 The HRMS spectra of probe **1** after reacting with N_2H_4

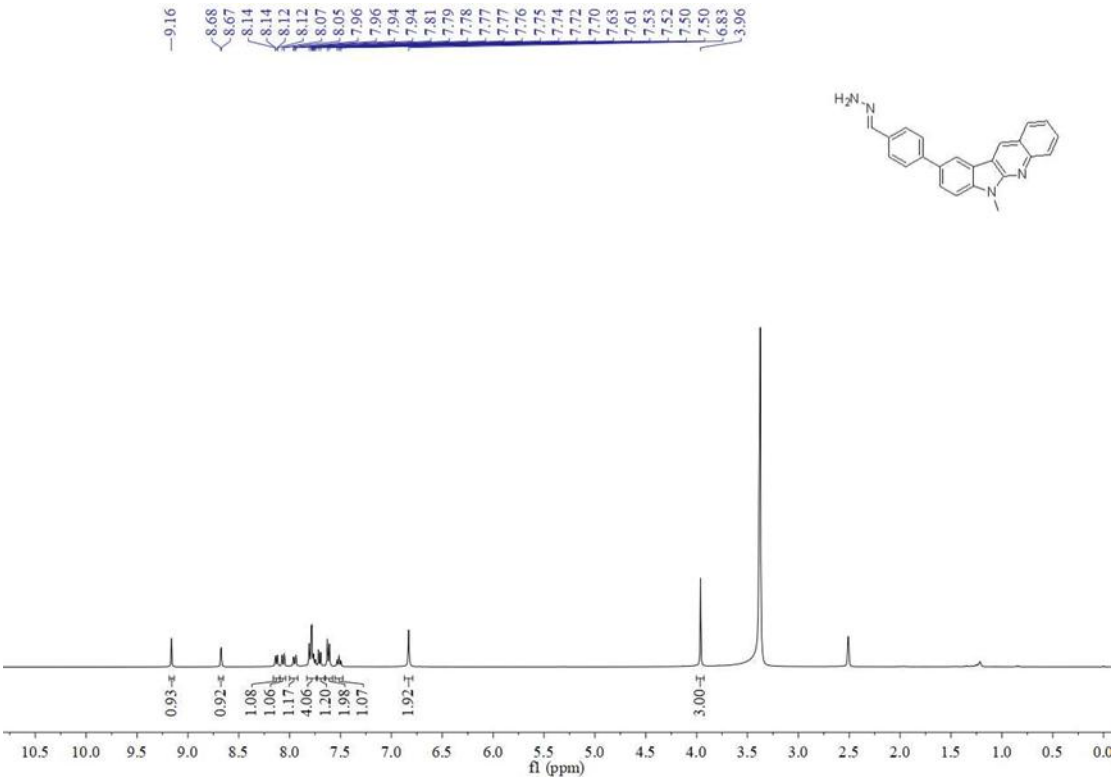


Fig. S6 The ^1H NMR spectra of probe **1** after reacting with N_2H_4

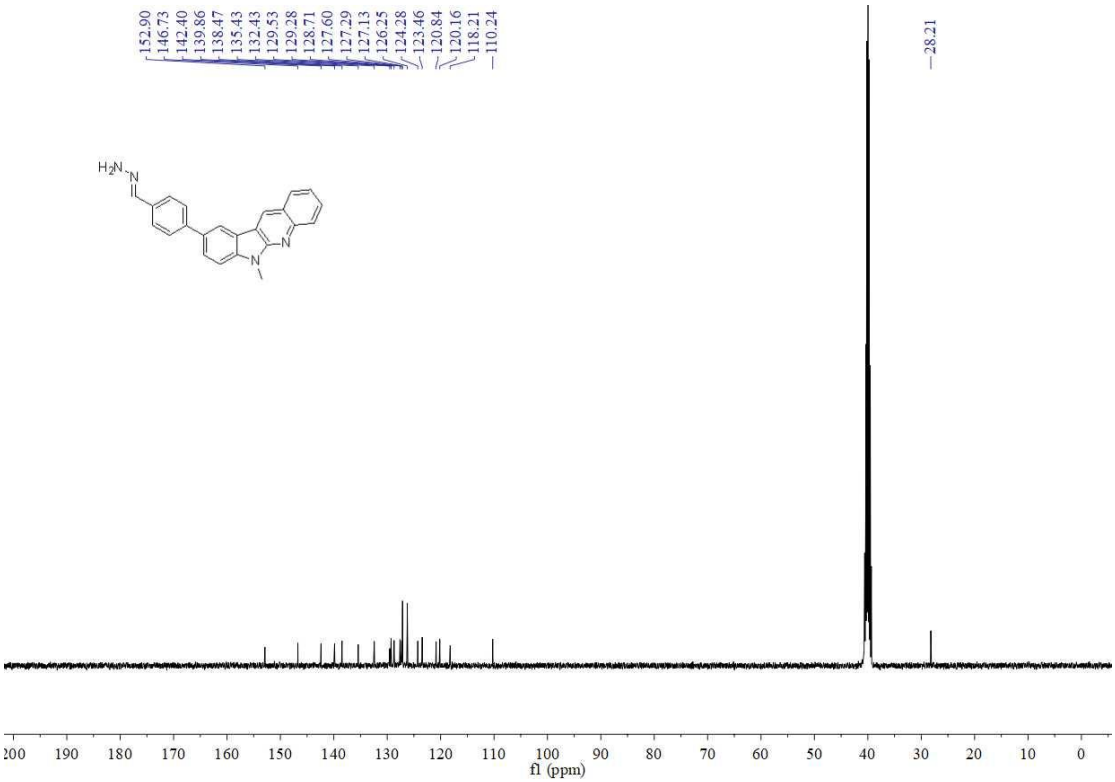


Fig. S7 The ^{13}C NMR spectra of probe **1** after reacting with N_2H_4

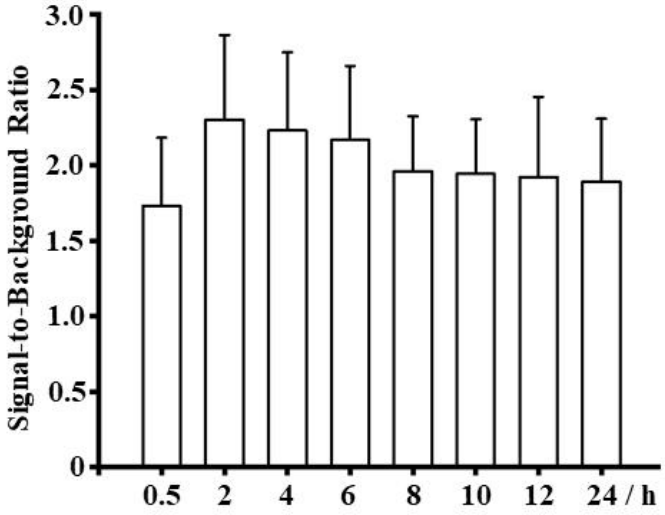
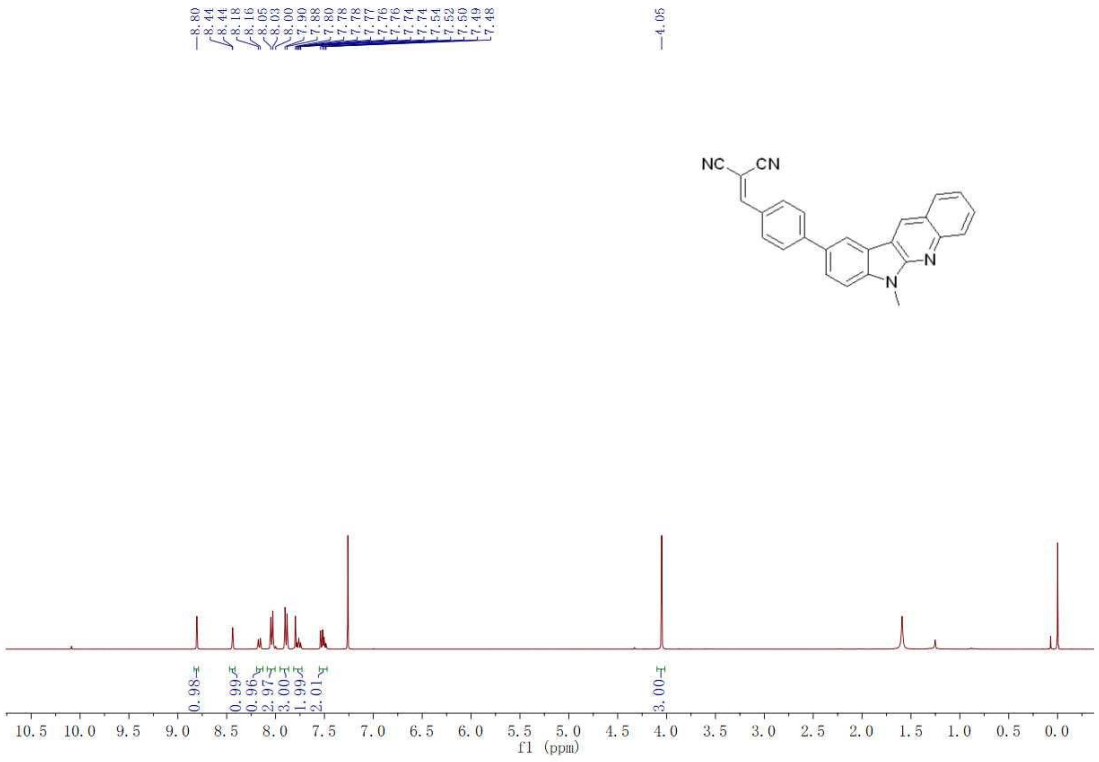
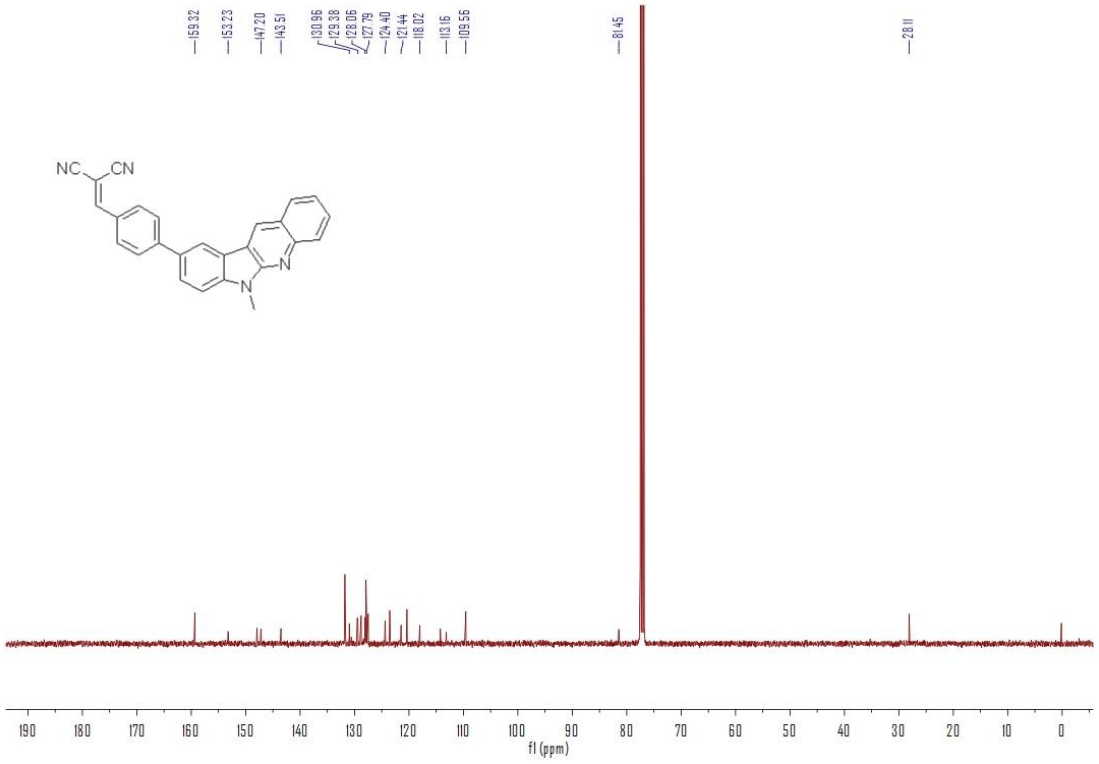


Fig. S8 Regions of interest (ROI) analysis of signal-to-background ratios.

The ^{1}H NMR spectra of probe **1**



The ^{13}C NMR spectra of probe **1**



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