Supporting information

Design and synthesis of fluorenone-based dyes: two-photon excited fluorescent probes for imaging of Lysosomes and Mitochondria in living cells

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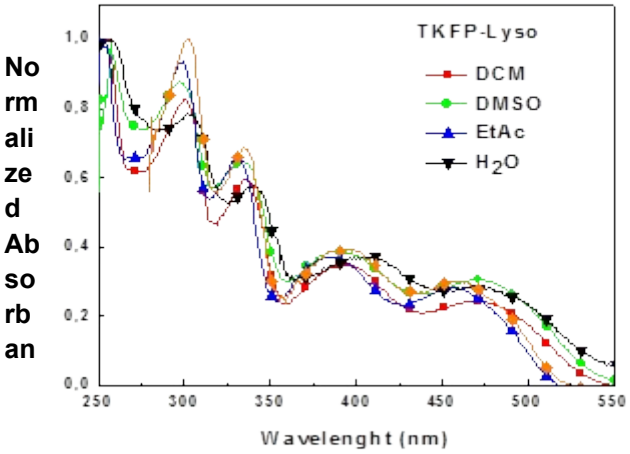
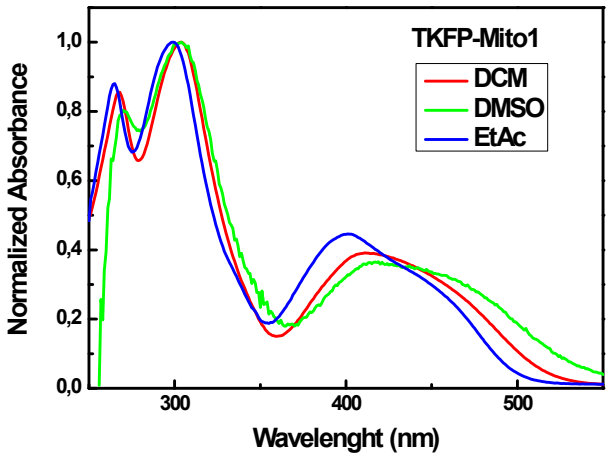




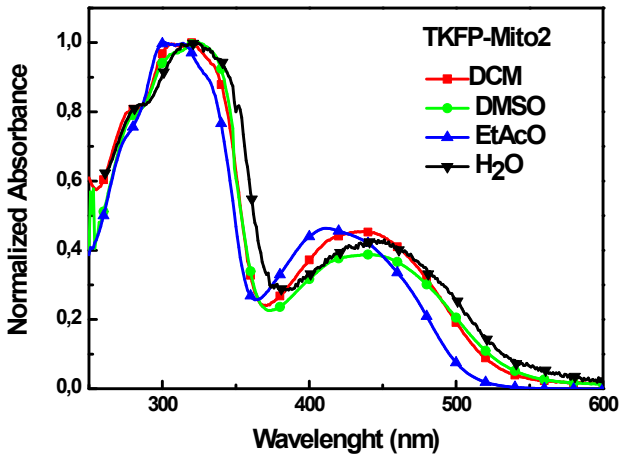


Fig. S3 UV-vis absorption spectra of **TK** dyes

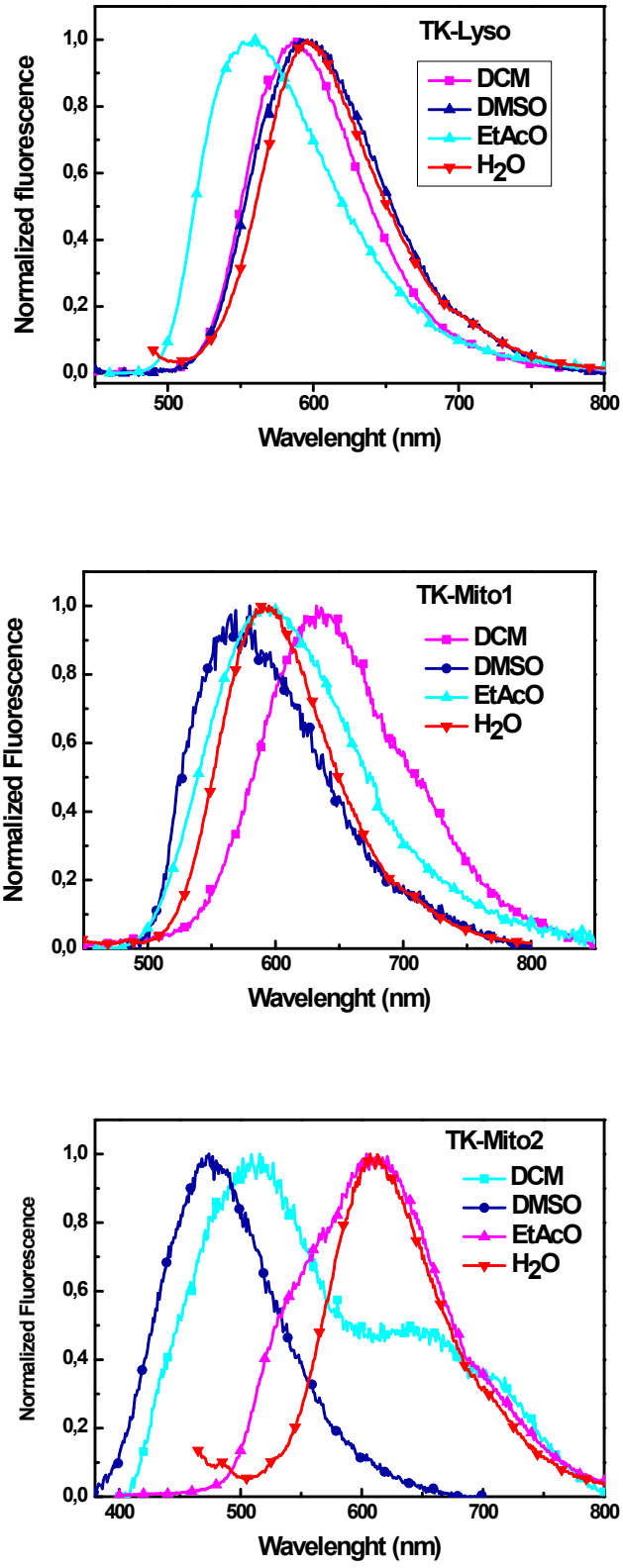


Fig. S4 Emission spectra of **TK** dyes.

Table S5 Summary of spectroscopic data of **TK** dyes.

TK dyes	Solvents	λ_{max} (ε_{max} ×10^3)	λ_{max}	$\Delta\lambda$	Φ	$\sigma\Phi$	σ
	Dichloromethame	470(5.1)	587	117	0,37		
	Ethyl acetate	455 (6.9)	556	101	0,38		
TK-Lyso	Toluene	457(7.4)	533	76	0,45	151	308
	Water	495(37)	600	105	0,07		
	Dimethyl sulfoxide	470 (15)	593	123	0,016		
	Dichloromethame	412 (23)	523	111	0,15		
	Ethyl acetate	400 (4.1)	591		0,46		
TK-Mito1	Toluene	424 (20.3)	517	93	0,54	298	551
	Water	425(15.4)	594	169	0,043		
	Dimethyl sulfoxide	411 (4.4)	568	157	<1		
	Dichloromethame	434 (7.8)	508	74	0,02		
	Ethyl acetate	411 (4.9)	610	199	<1		
TK-Mito2	Toluene	412(31.9)	525	113	0,59	519	880
	Water	450(18.5)	606	156	0,018		
	Dimethyl sulfoxide	437 (27)	473	36	0,14		

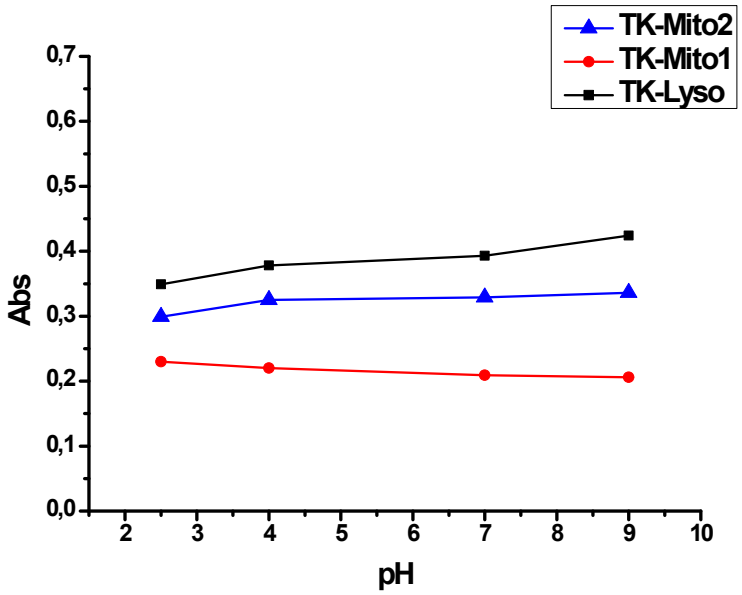


Fig. S6 pH sensitivity of **TK** dyes.

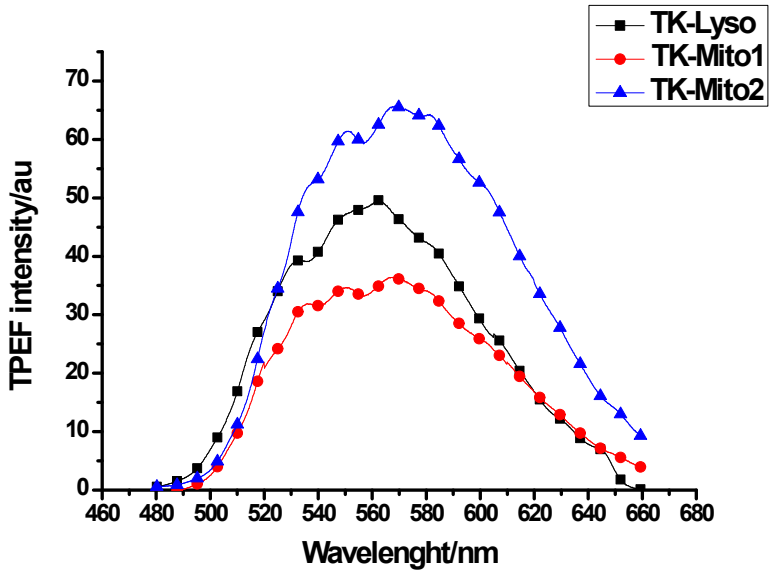
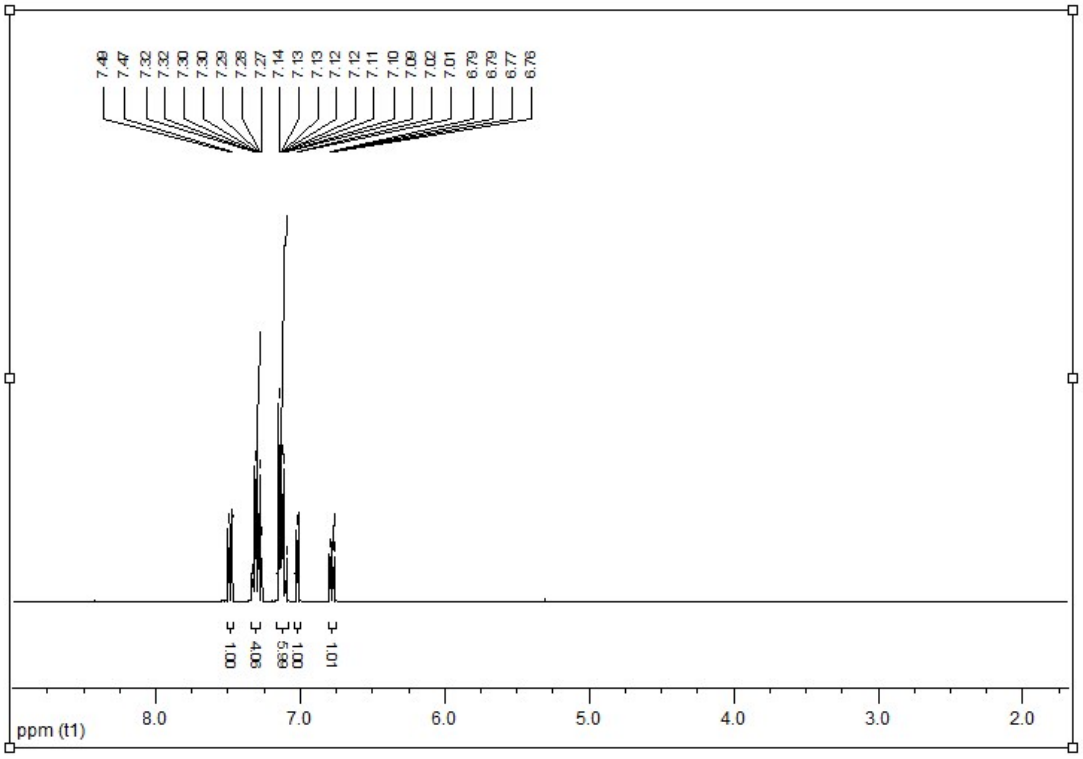


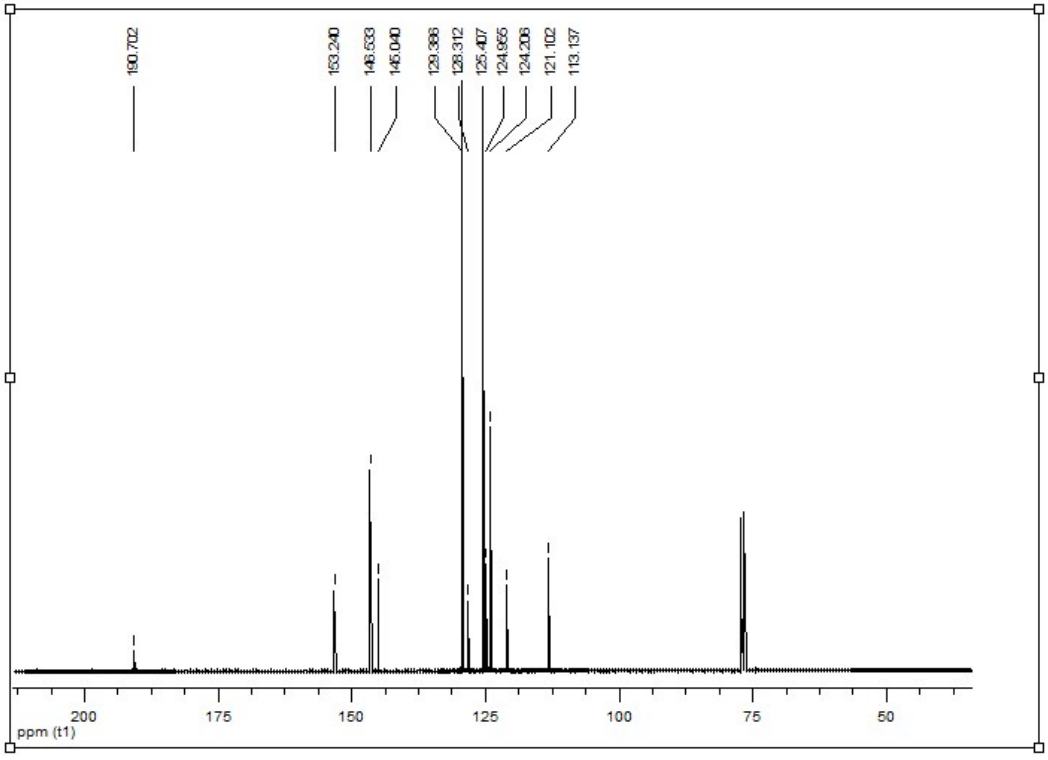
Fig S7 The two-photon fluorescence spectra excited at 800 nm fs laser pulses

TK-Lyso

^{1}H-NMR

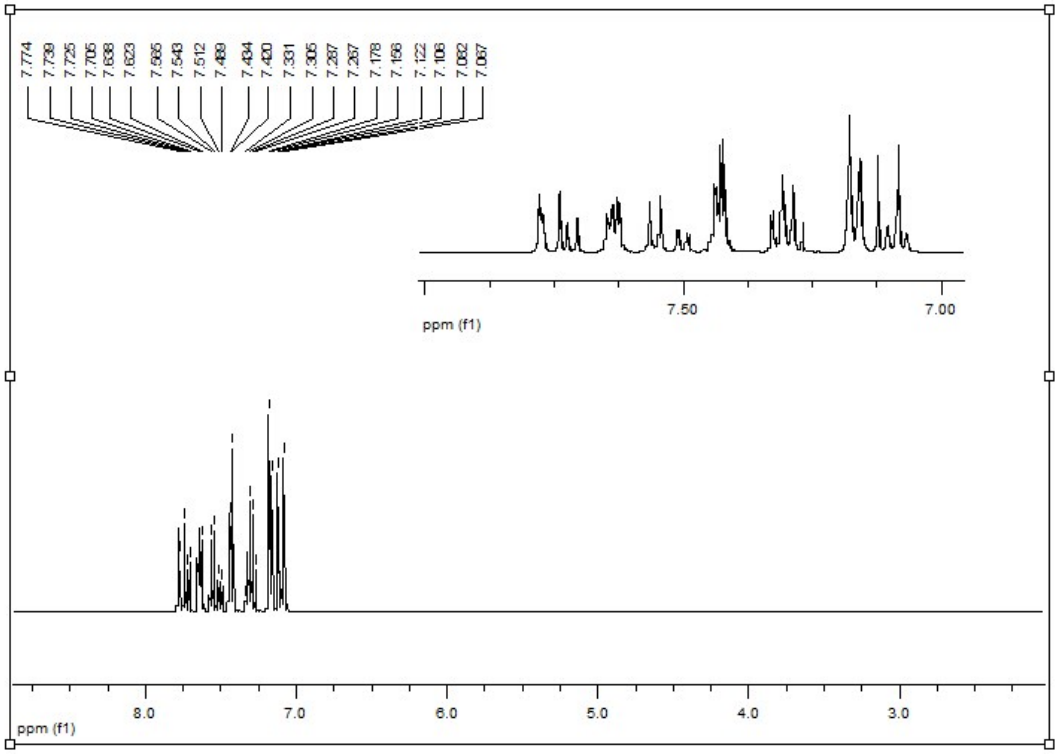


^{13}C-NMR

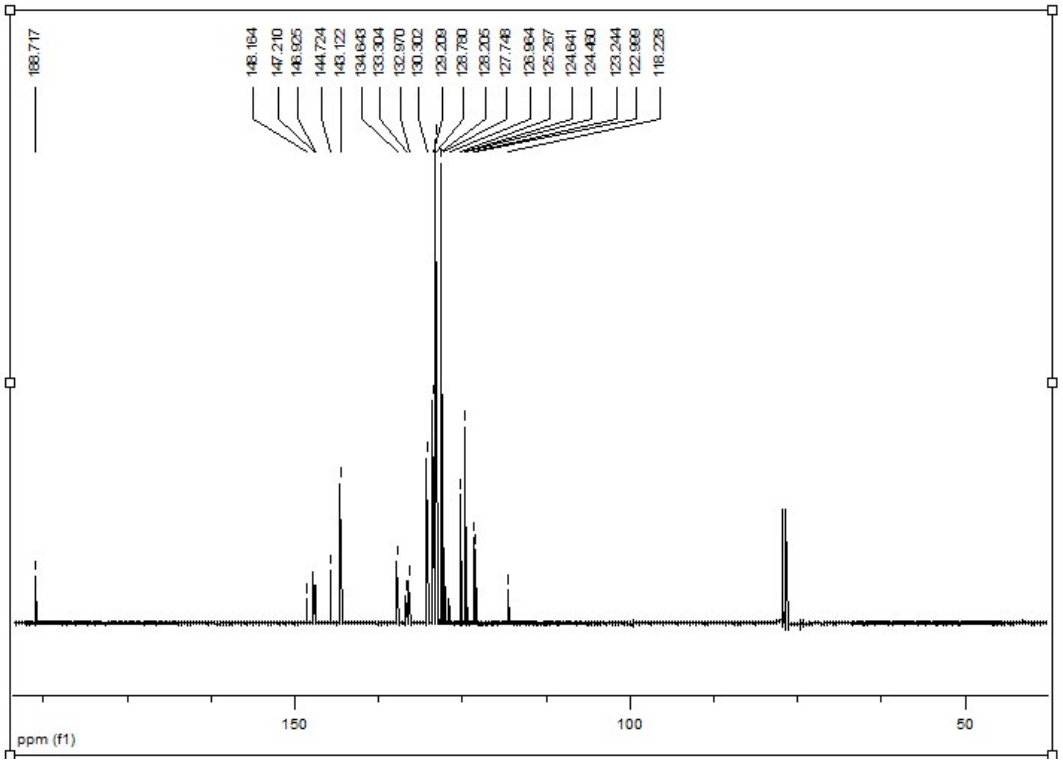


TK-Mito1

1H NMR

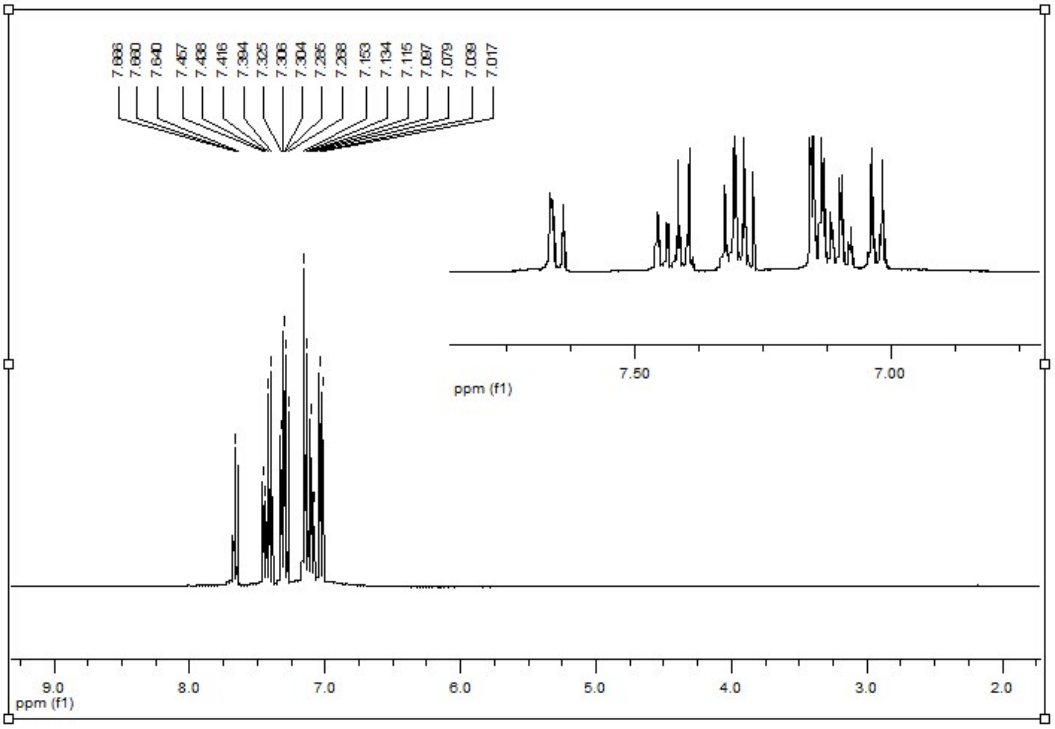


13C NMR



TK-Mito2

1H NMR



13C NMR