Electronic Supplementary Information for:

Banana-shaped biphotonic quadrupolar chromophores: from fluorophores to biphotonic photosensitizers

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Table 1S. Photophysical properties of compound **Q1** in different solvents.

Solvent	λ_{abs} (nm)	λ_{em} (nm)	Stokes shift (cm^{-1})	Φ_f [a]	τ (ns)	k_r [b] (10^9 s^{-1})	k_{nr} [b] (10^9 s^{-1})	τ_o [c] (ns)	r [d]
Toluene	386.5	431	2670	0.82	0.75	1.09	0.24	0.91	0.24
Bu_2O	383	427	2690	0.86	0.75	1.16	0.19	0.86	0.25
$CHCl_3$	389.5	465	4170	0.84	1.11	0.76	0.14	1.31	0.21
AcOEt	388	488	5280	0.85	1.5	0.57	0.10	1.77	0.16
THF	387	496.5	5700	0.75	1.77	0.42	0.14	2.36	0.15
DCM	391	495.5	5395	0.87	1.72	0.50	0.08	1.99	0.14
Acetone	390	549.5	7445	0.44	1.82	0.24	0.31	4.15	0.12

[a] Fluorescence quantum yield determined relative to quinine in 0.5 M H_2SO_4. [b] Radiative (k_r) and non-radiative (k_{nr}) decay rates. [c] Radiative lifetime. [d] Fluorescence anisotropy.

Table 2S. Photophysical properties of compound **Q2** in different solvents.

Solvent	λ_{abs} (nm)	λ_{em} (nm)	Stokes shift (cm^{-1})	Φ_f [a]	τ (ns)	k_r [b] (10^9 s^{-1})	k_{nr} [b] (10^9 s^{-1})	τ_o [c] (ns)	r [d]
Toluene	410.5	461.5	2690	0.61	0.97	0.63	0.40	1.59	0.23
Bu_2O	408.5	457.5	2620	0.58	0.78	0.75	0.55	1.34	0.25
$CHCl_3$	414	496.5	4015	0.51	0.74	0.69	0.66	1.44	0.22
AcOEt	407.5	512	5010	0.65	1.12	0.58	0.31	1.72	0.18
THF	412	522.5	5135	0.58	1.26	0.46	0.33	2.16	0.18
DCM	420	525.5	4780	0.61	1.26	0.48	0.31	2.08	0.17
Acetone	414	565.5	6470	0.37	1.13	0.33	0.56	3.04	0.16

[a] Fluorescence quantum yield determined relative to quinine in 0.5 M H_2SO_4. [b] Radiative (k_r) and non-radiative (k_{nr}) decay rates. [c] Radiative lifetime. [d] Fluorescence anisotropy.

Table 3S. Photophysical properties of compound **Q'2** in different solvents.

Solvent	λ_{abs} (nm)	λ_{em} (nm)	Stokes shift (cm^{-1})	Φ_f [a]	τ (ns)	k_r [b] (10^9 s^{-1})	k_{nr} [b] (10^9 s^{-1})	τ_o [c] (ns)	r [d]
Toluene	407	461.5	2900	0.74	0.73	1.01	0.36	0.99	0.19
Bu_2O	403	461.5	3145	0.53	0.87	0.61	0.54	1.64	0.21
$CHCl_3$	406	489.5	4200	0.63	0.97	0.65	0.38	1.54	0.18
AcOEt	405.5	513	5170	0.73	1.24	0.59	0.22	1.70	0.14
THF	411	518.5	5045	0.61	1.55	0.39	0.25	2.54	0.14
DCM	407	515.5	5170	0.68	1.31	0.52	0.24	1.93	0.13
Acetone	409	567.5	6830	0.29	1.03	0.28	0.69	3.55	0.14
CH_3CN	411.5	572	6820	0.052	0.56	0.09	1.69	10.71	0.23
DMSO	416	583.5	6900	0.045	0.44	0.10	2.17	9.78	0.32

[a] Fluorescence quantum yield determined relative to quinine in 0.5 M H_2SO_4. [b] Radiative (k_r) and non-radiative (k_{nr}) decay rates. [c] Radiative lifetime. [d] Fluorescence anisotropy.

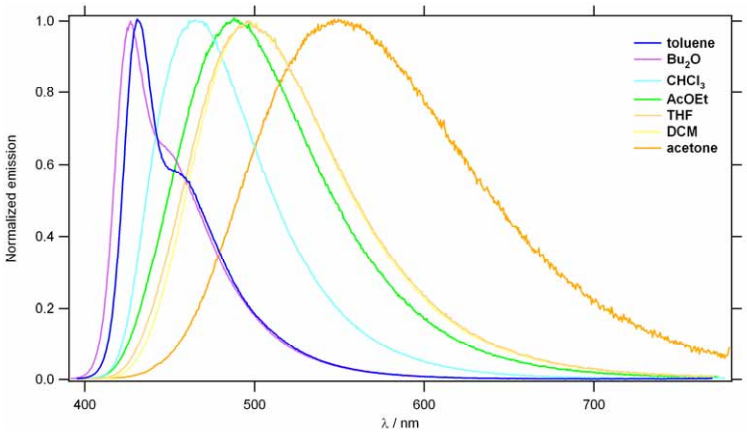

Figure 1S. Normalized emission spectra of fluorophore **Q1** in solvents of increasing polarity.

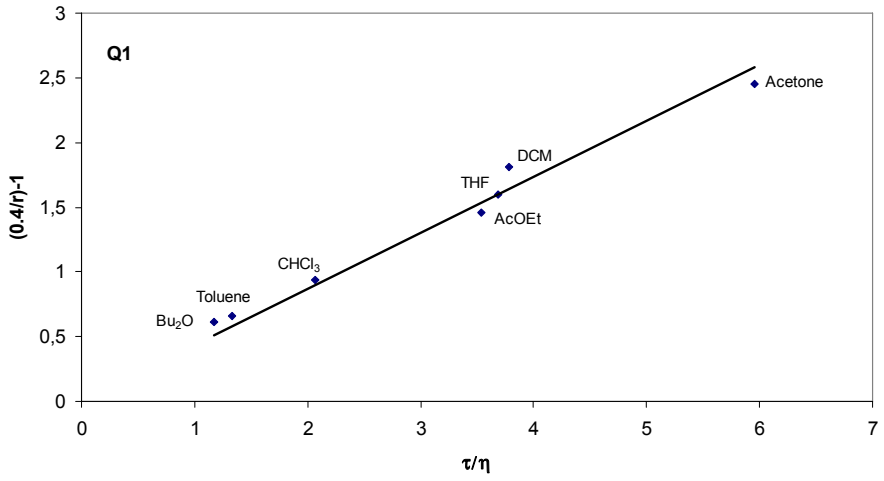

Figure 2S. Perrin plot from the variation of the fluorescence anisotropy of **Q1** in a series of solvents of different viscosity

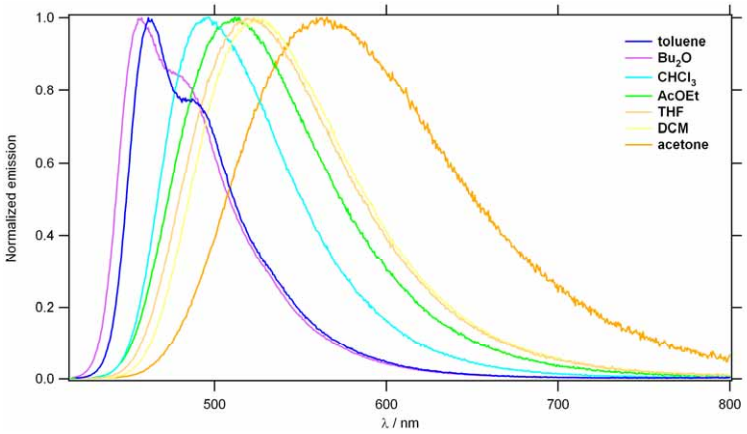

Figure 3S. Normalized emission spectra of fluorophore **Q2** in solvents of increasing polarity.

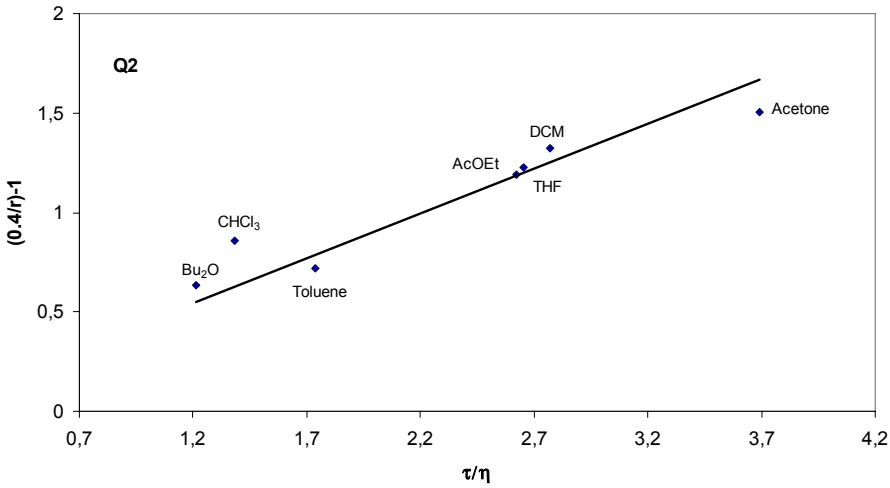

Figure 4S. Perrin plot from the variation of the fluorescence anisotropy of **Q2** in a series of solvents of different viscosity

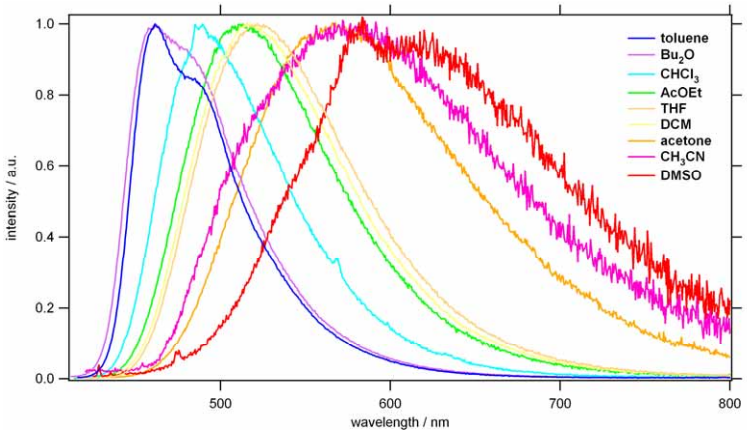

Figure 5S. Normalized emission spectra of fluorophore **Q'2** solvents of increasing polarity.

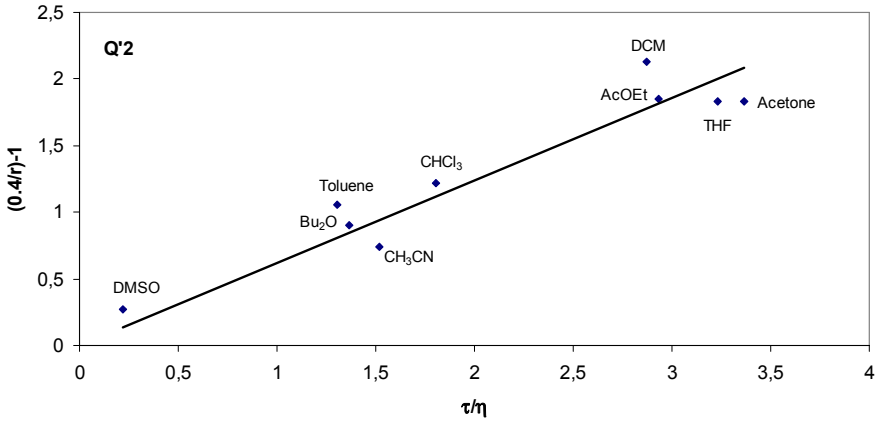

Figure 6S. Perrin plot from the variation of the fluorescence anisotropy of **Q2** in a series of solvents of different viscosity