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**Supporting information**

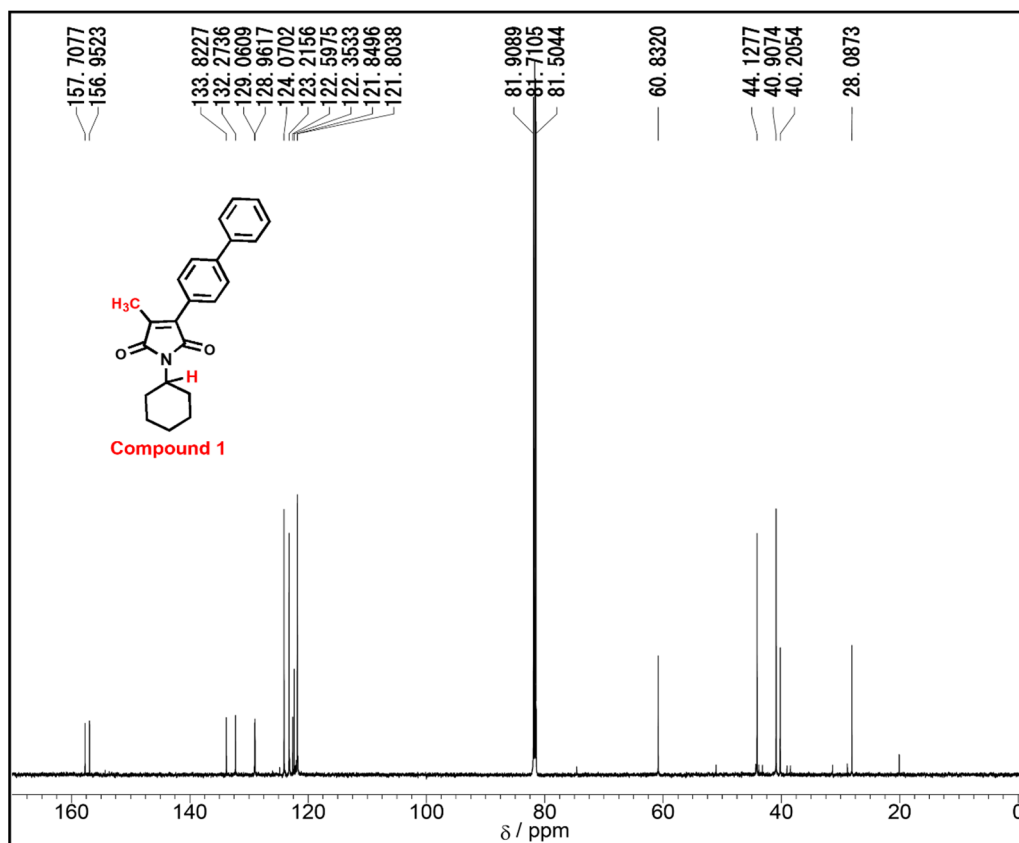
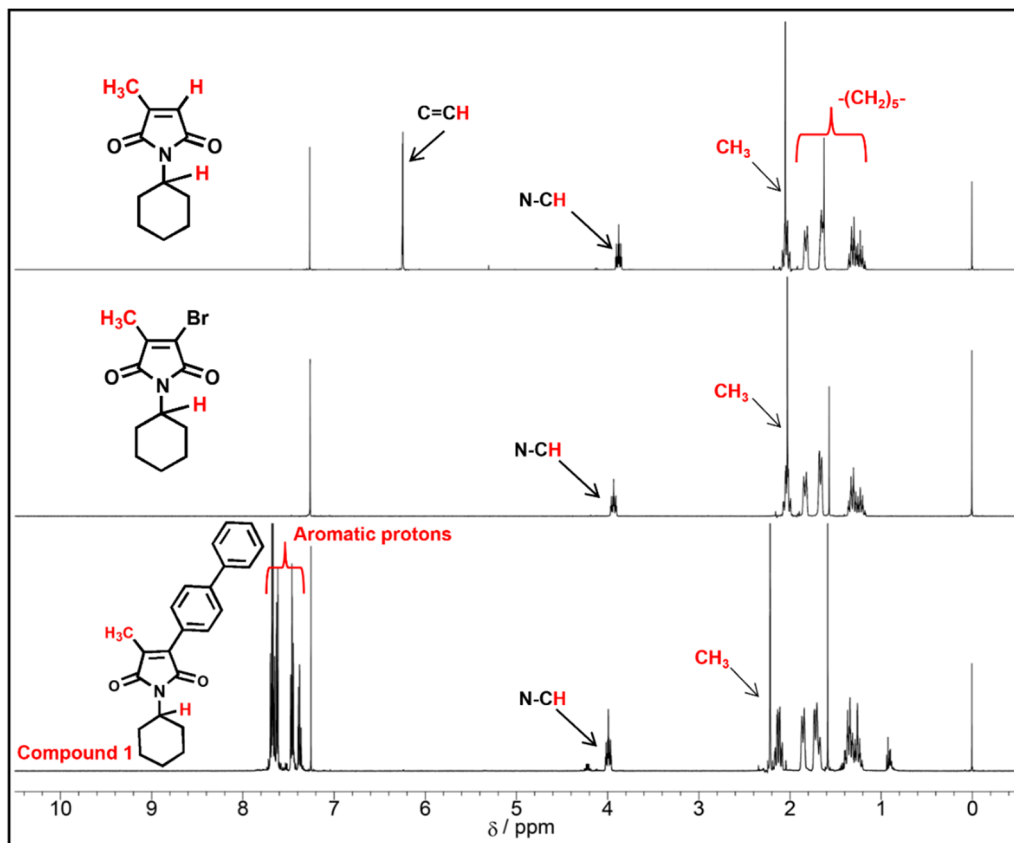
**Synthesis and photophysical properties of blue emission maleimide  
molecules with Dual-State Emission (DSE) effects**

Xiaodong Yang, Kazuhiro Yamabuki and Kenjiro Onimura<sup>†</sup>

Department of Applied Chemistry, Graduate School of Sciences and Technology for Innovation,  
Yamaguchi University  
2-16-1 Tokiwadai, Ube, Yamaguchi 755-8611, Japan

<sup>†</sup>To whom correspondence should be addressed (TEL: +81-836-85-9283, FAX: +81-836-85-9201, E-mail: [onimura@yamaguchi-u.ac.jp](mailto:onimura@yamaguchi-u.ac.jp))

1.  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of compound 1.



2.  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of compound 2.

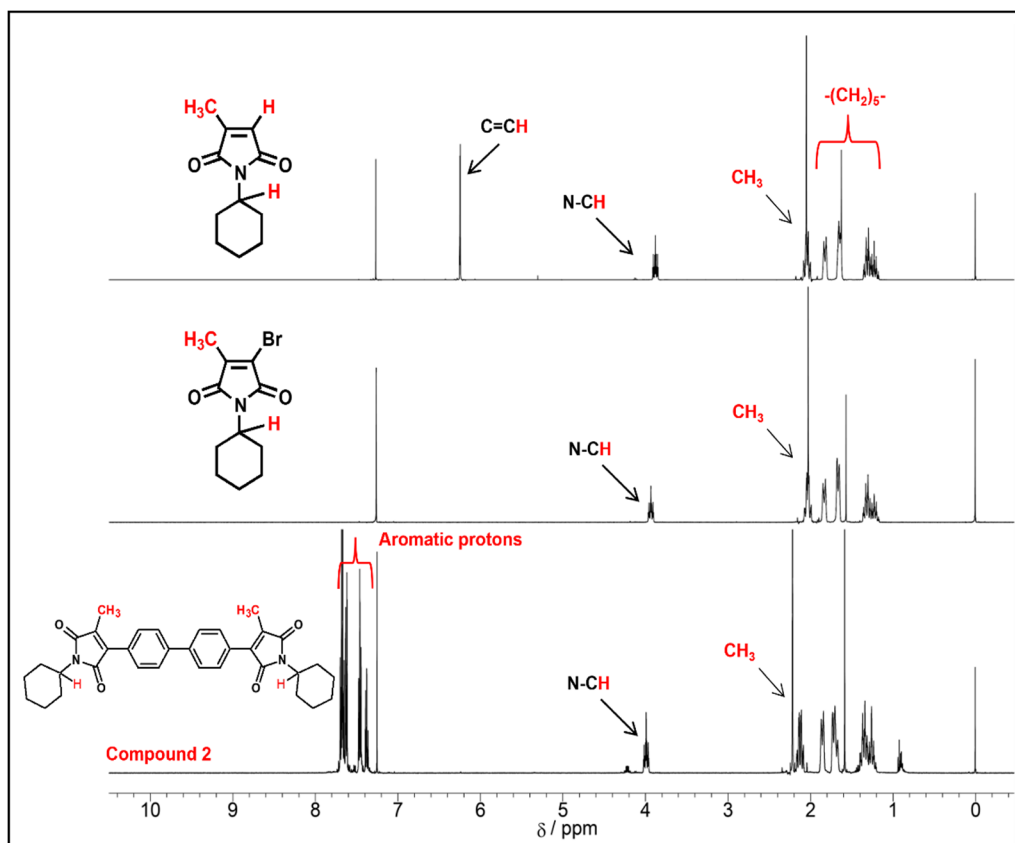


Figure S3.  $^1\text{H}$  NMR Spectrum of compound 2 in  $\text{CDCl}_3$ .

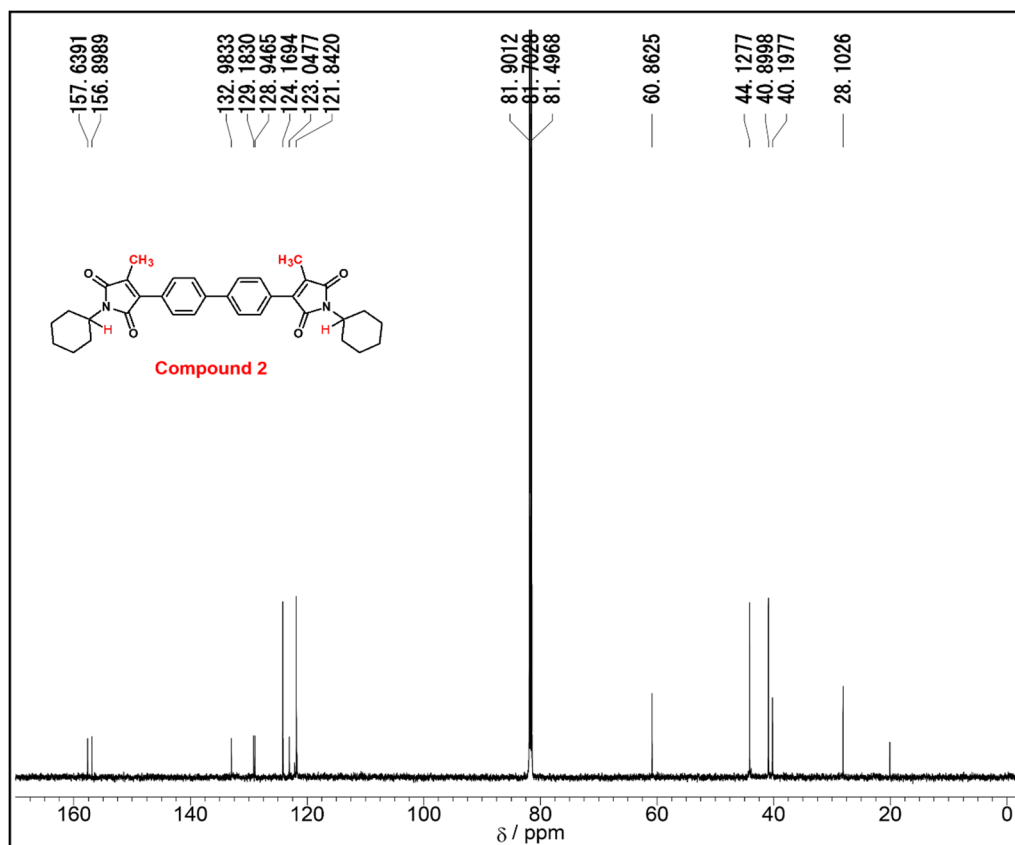
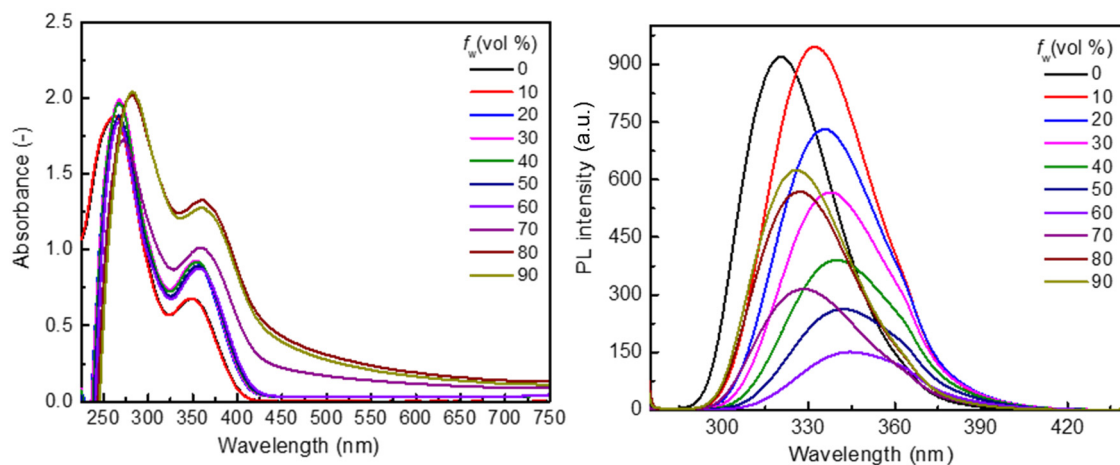
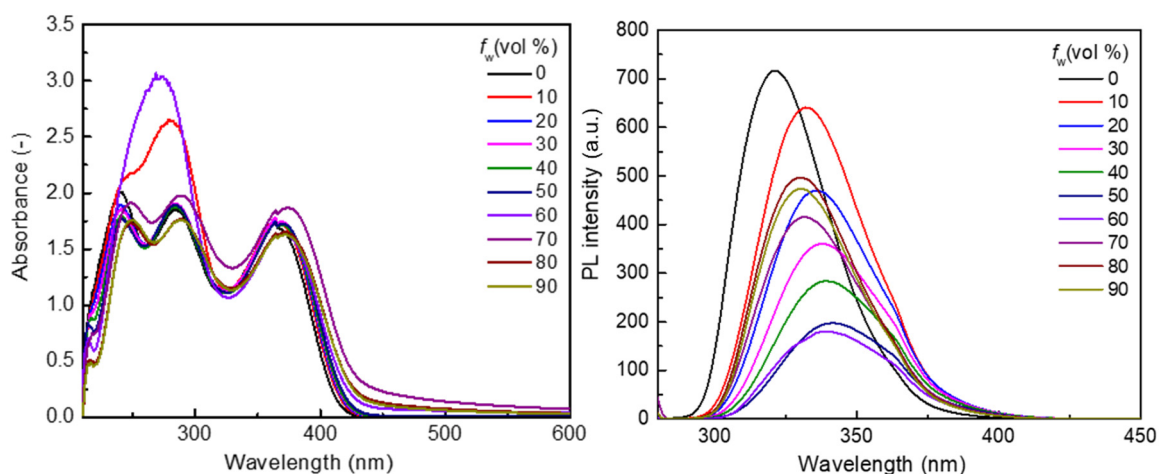


Figure S4.  $^{13}\text{C}$  NMR Spectrum of compound 2 in  $\text{CDCl}_3$ .

### 3. Optical properties of fluorophores in water-THF mixtures.



**Figure S5.** Absorption spectrum and emission spectrum of compound **1** in a mixture of water-THF.



**Figure S6.** Absorption spectrum and emission spectrum of compound **2** in a mixture of water-THF.

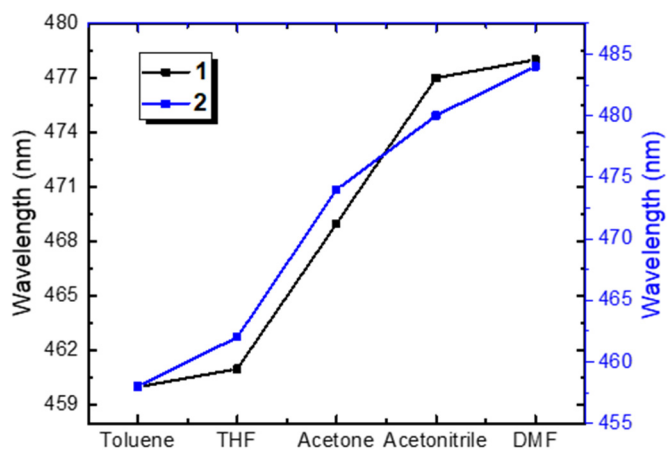
### 4. Optical properties of fluorophores in different solvent.

**Table S1**

Solvent	<b>1</b>					<b>2</b>				
	$\lambda_{\text{abs}}^{\text{a}}$ (nm)	$\lambda_{\text{em}}^{\text{a}}$ (nm)	$\Delta s$ ( $\text{cm}^{-1}$ )	CIE (x,y)	$\mu_e - \mu_g^{\text{b}}$	$\lambda_{\text{abs}}^{\text{a}}$ (nm)	$\lambda_{\text{em}}^{\text{a}}$ (nm)	$\Delta s$ ( $\text{cm}^{-1}$ )	CIE (x,y)	$\mu_e - \mu_g^{\text{b}}$
Toluene	353	460	6590	0.14, 0.14	1.23 D	368	458	5340	0.14, 0.13	2.09 D
THF	349	461	6961	0.14, 0.15	5.03 D	365	461	5705	0.15, 0.16	8.62 D
Acetone	348	469	7414	0.14, 0.19	6.09 D	360.5	474	6642	0.15, 0.23	10.9 D
Acetonitrile	349	472	7467	0.15, 0.24	6.36 D	359.5	480	6983	0.15, 0.28	11.5 D
DMF	351	478	7569	0.15, 0.25	6.13 D	364.5	484	6774	0.16, 0.30	11.1 D

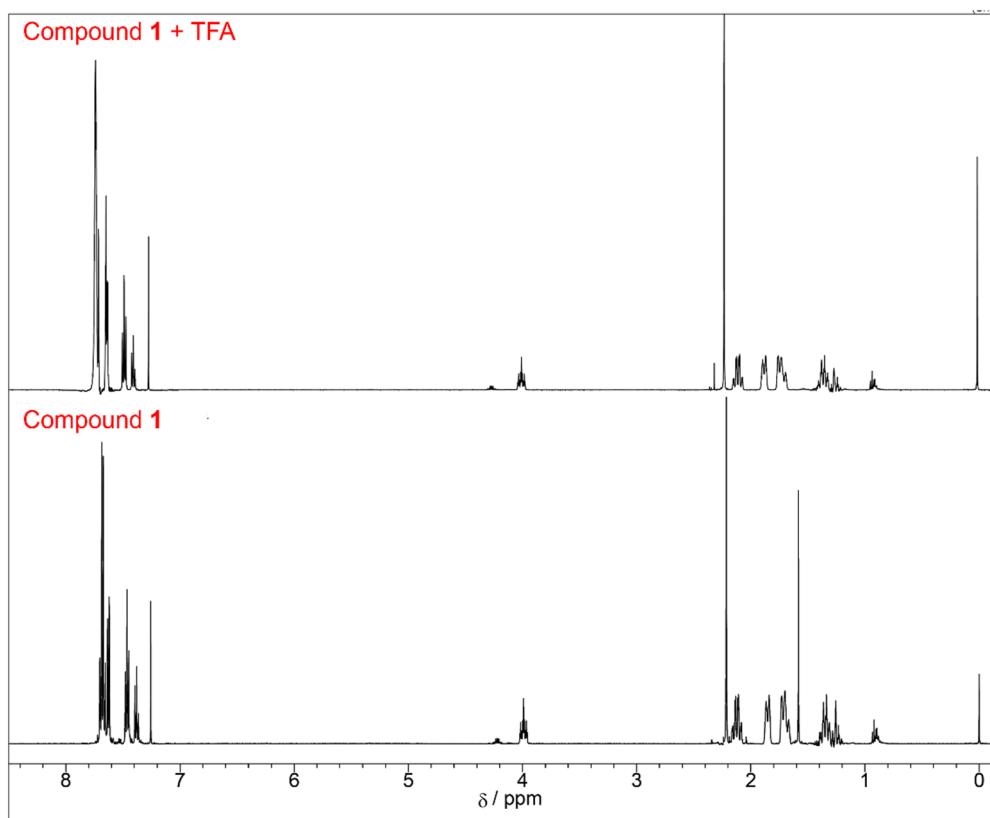
a)  $1.0 \times 10^{-5}$  mol/L

b)  $\mu_e$  and  $\mu_g$  represents the Dipolar moments in the excited (e) and ground (g) states, respectively.

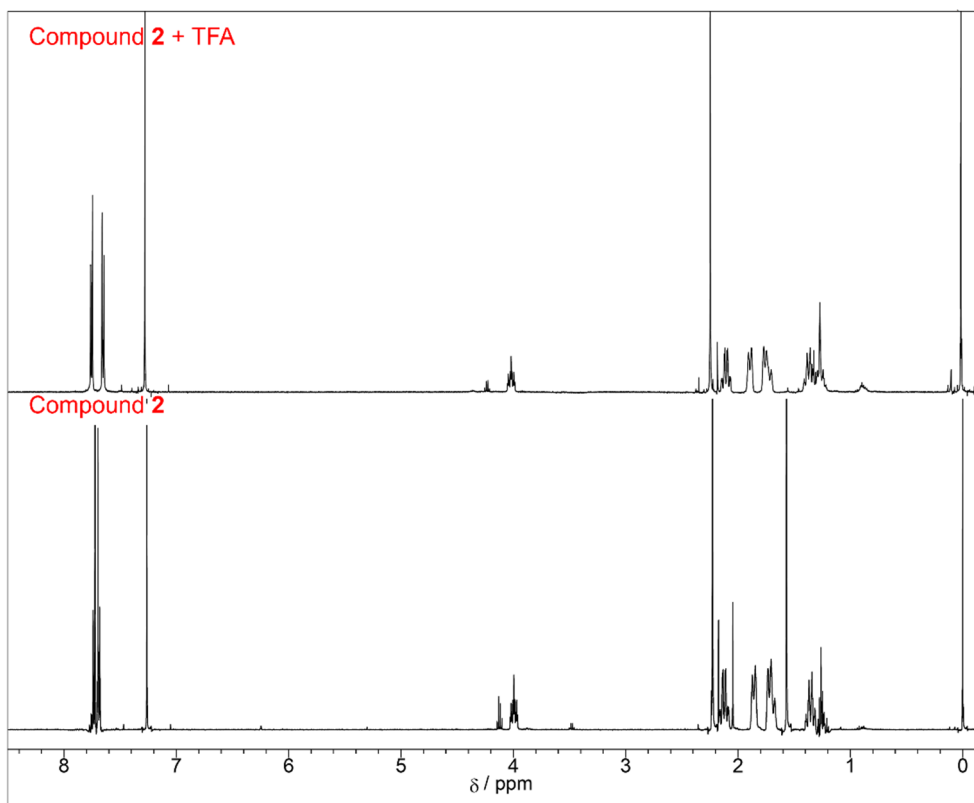


**Figure S7.** The change of the emission maximum wavelength of fluorophore **1** and **2** in solvent of different polarity (*conc.*:  $1.0 \times 10^{-5}$  mol/L).

5.  $^1\text{H}$  NMR Spectra of fluorophores on addition of TFA in  $\text{CDCl}_3$ .



**Figure S8.**  $^1\text{H}$  NMR Spectrum of compound **1** on addition of TFA in  $\text{CDCl}_3$ .



**Figure S9.** <sup>1</sup>H NMR Spectrum of compound **2** on addition of TFA in CDCl<sub>3</sub>.