

Supplementary Information

Modulation of the spectroscopic property of Bodipy derivatives through tuning the molecular configuration

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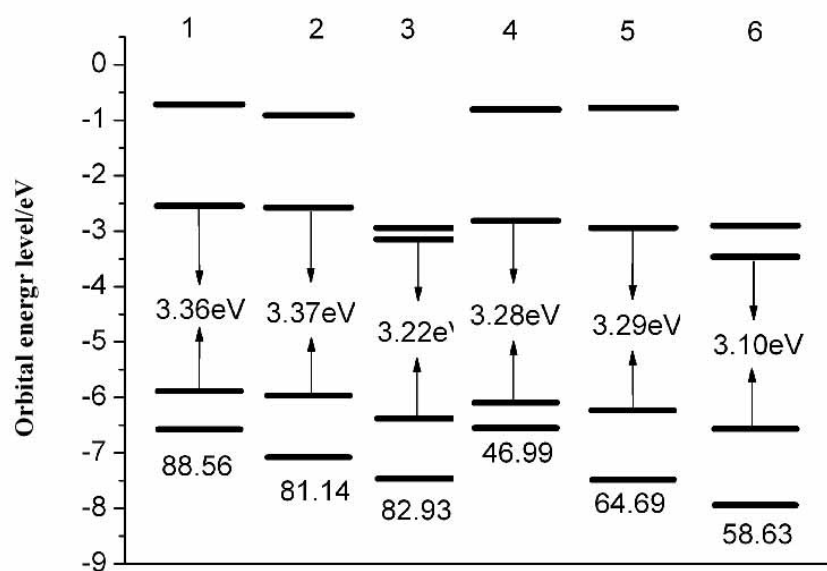


Figure S1. The orbital energies from HOMO to LUMO for Bodipy compounds **1-6**.

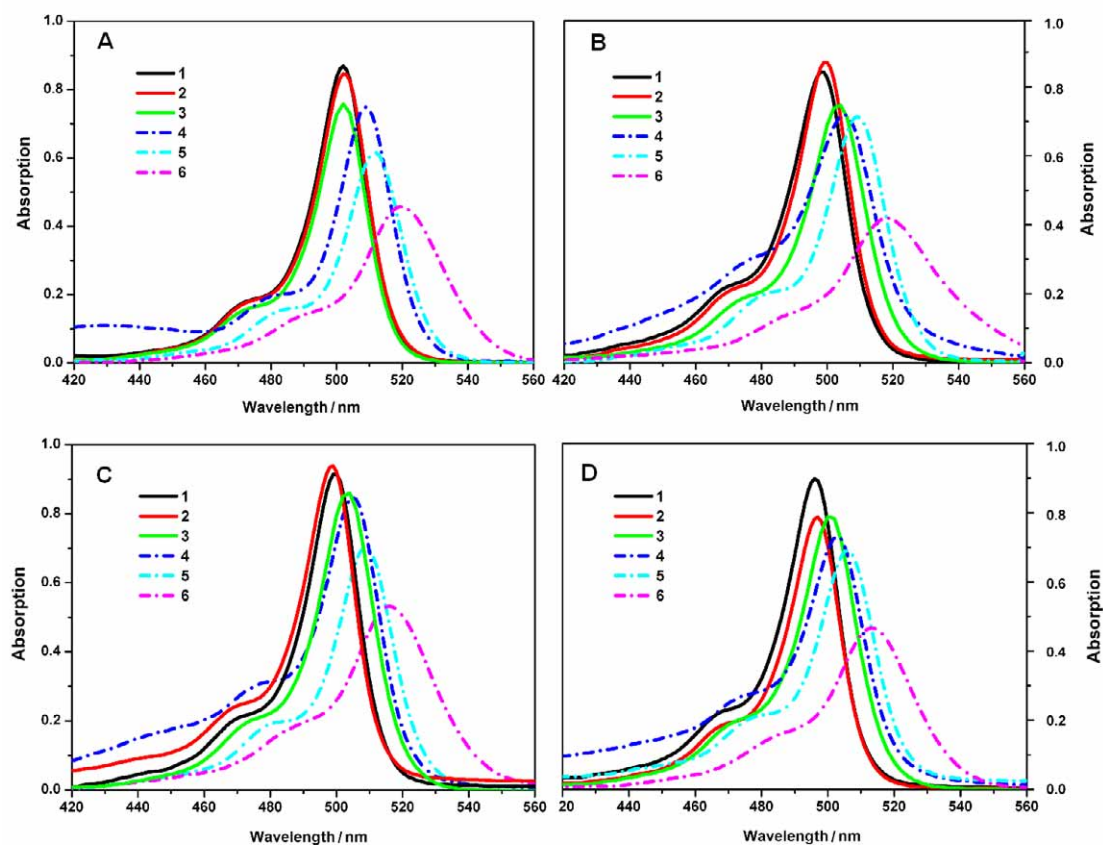


Figure S2. The electronic absorption spectra of **1-6** at the concentration of 1×10^{-5} M in toluene (A), DMF (B), THF (C), and MeOH (D), respectively.

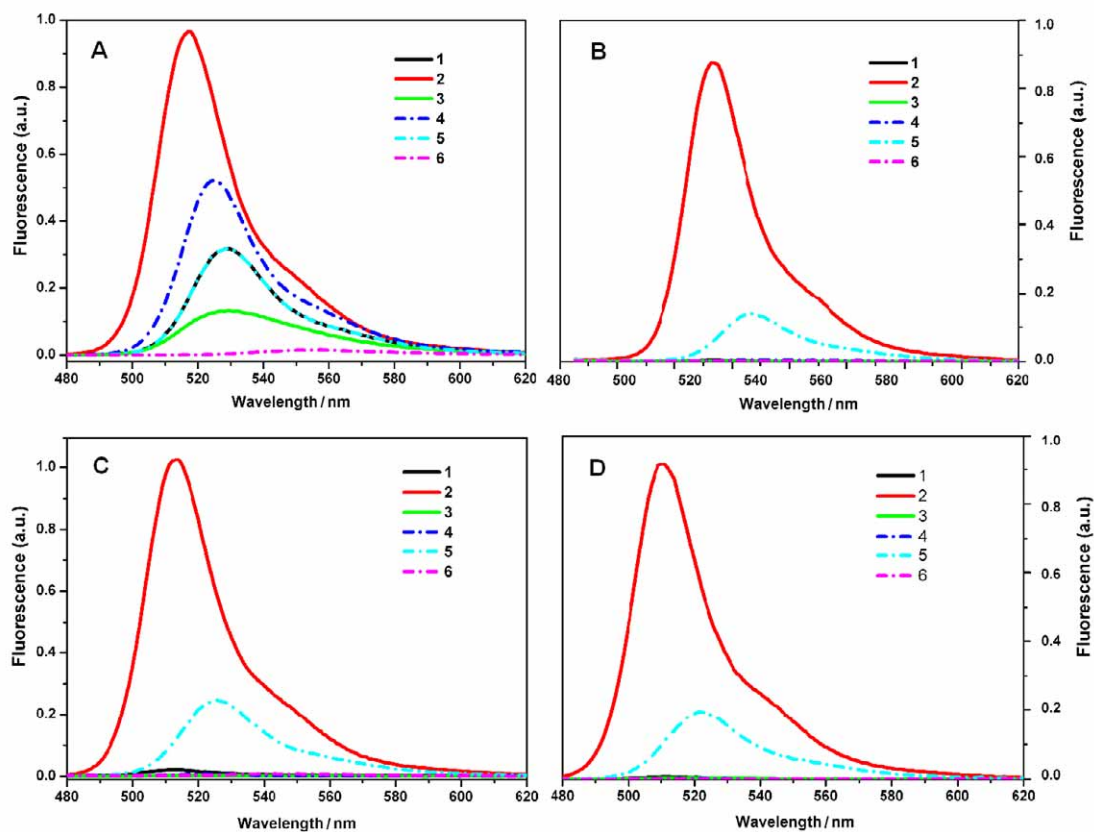


Figure S3. The fluorescence emission spectra of **1-6** at the concentration of 1×10^{-5} M in toluene (A), DMF (B), THF (C), and MeOH (D), respectively, with the excitation wavelength of 450 nm.

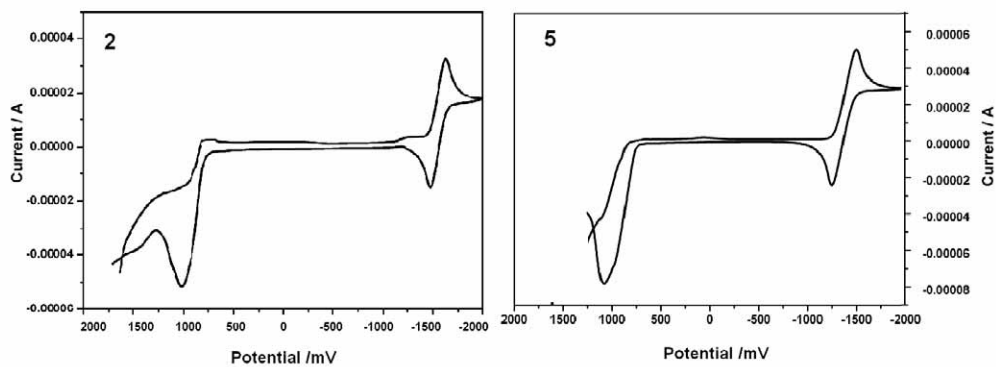


Figure S4. Cyclic voltammetry of CH₃-substituted **2** and **5** in CH₂Cl₂ containing 0.1 M [NBu₄][ClO₄] at the scan rate of 20 mV s⁻¹.

Table S1. The spectral parameters of Bodipy compounds **1-6** in different solvents.

compounds	solvent	λ_{Abs} (max/nm)	λ_{em} (max/nm)	$\Delta\lambda_{\text{max}}$ (cm^{-1})	Φ_{f}
1	CH ₃ CN	495	512	17	0.021
	MeOH	496	511	15	0.003
	DMF	498	512	14	0.023
	THF	499	512	13	0.006
	CH ₂ Cl ₂	500	513	13	0.491
	toluene	502	516	14	0.558
2	CH ₃ CN	496	510	14	0.461
	MeOH	497	510	13	0.559
	DMF	499	513	14	0.505
	THF	500	513	13	0.502
	CH ₂ Cl ₂	500	514	14	0.600
	toluene	502	517	15	0.720
3	CH ₃ CN	500	519	19	0.015
	MeOH	501	520	19	0.004
	DMF	503	523	20	0.001
	THF	503	526	23	0.002
	CH ₂ Cl ₂	505	527	22	0.009
	toluene	507	528	21	0.143
4	CH ₃ CN	502	520	18	0.008
	MeOH	503	520	17	0.007
	DMF	505	522	17	0.004
	THF	505	522	17	0.002
	CH ₂ Cl ₂	507	523	16	0.198
	toluene	509	525	16	0.394
5	CH ₃ CN	506	521	15	0.189
	MeOH	506	521	15	0.111
	DMF	509	524	15	0.152
	THF	509	525	16	0.214
	CH ₂ Cl ₂	510	526	16	0.292
	toluene	512	529	17	0.414
6	CH ₃ CN	513	547	34	0.011
	MeOH	513	550	37	0.006
	DMF	515	556	41	0.004
	THF	516	557	41	0.014
	CH ₂ Cl ₂	518	555	37	0.002
	toluene	520	557	37	0.005