

Supporting information for

Phenothiazine-Based Benzoxazole Derivates Exhibiting Mechanochromic Luminescence: Effect of Bromine Atom

*Pengchong Xue,^{*a,b} Boqi Yao,^a Jiabao Sun,^a Qiuxia Xu,^a Peng Chen,^c Zhenqi Zhang,^a*

*and Ran Lu^{*a}*

^a State Key Laboratory of Supramolecular Structure and Materials, College of Chemistry, Jilin University, Changchun, P. R. China

^b State Key Laboratory of Theoretical and Computational Chemistry, Jilin University, Changchun, P. R. China

^c Key Laboratory of Functional Inorganic Material Chemistry (MOE), School of Chemistry and Materials Science, Heilongjiang University, Harbin, P. R. China.

Table S1 Electronic transition data obtained by the TD/DFT-B3LYP/6-31G calculation for **PVB** and **BPVB**.

	Electronic transition	λ_{abs} (nm)	E (eV)	Oscillator strength	Transition assignment
PVB	1	433.82	2.8580	0.4620	HOMO→LUMO
BPVB	1	424.43	2.9212	0.6417	HOMO→LUMO

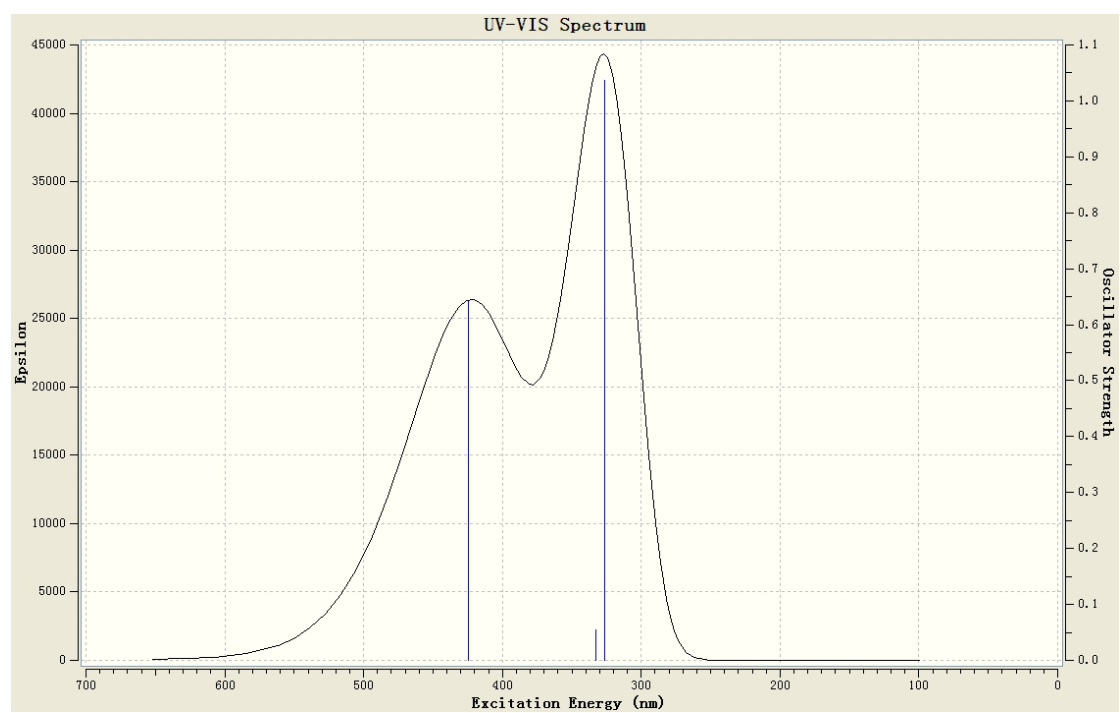
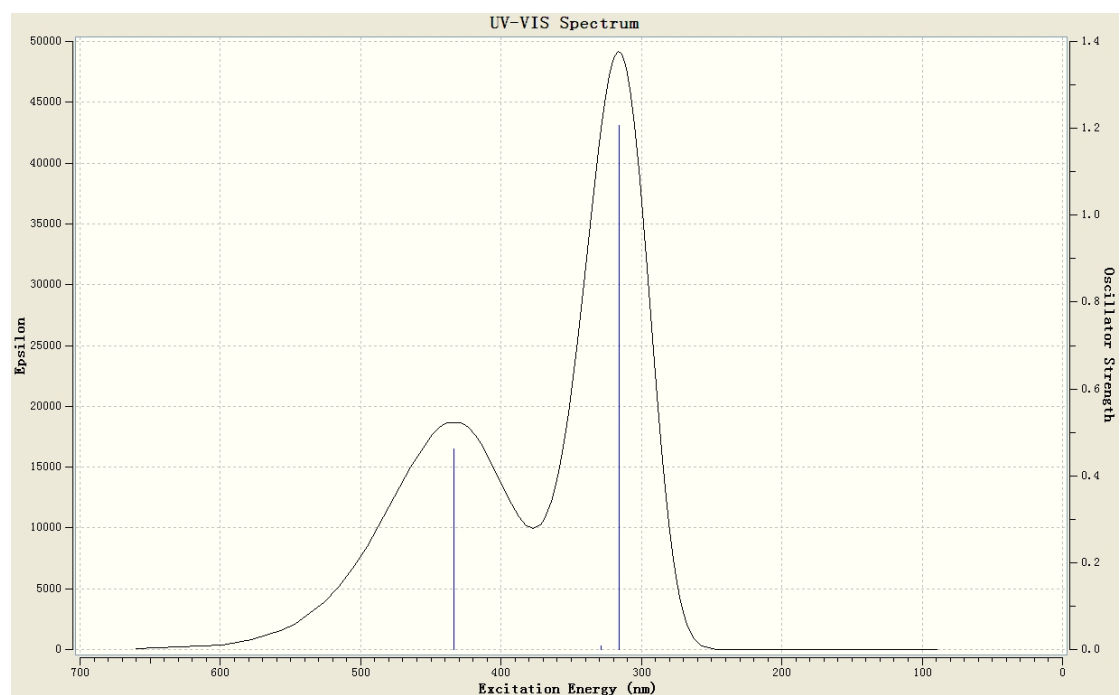


Fig. S1 Simulated UV-Vis absorption spectrum of **PVB** (top) and **BPVB** (bottom).

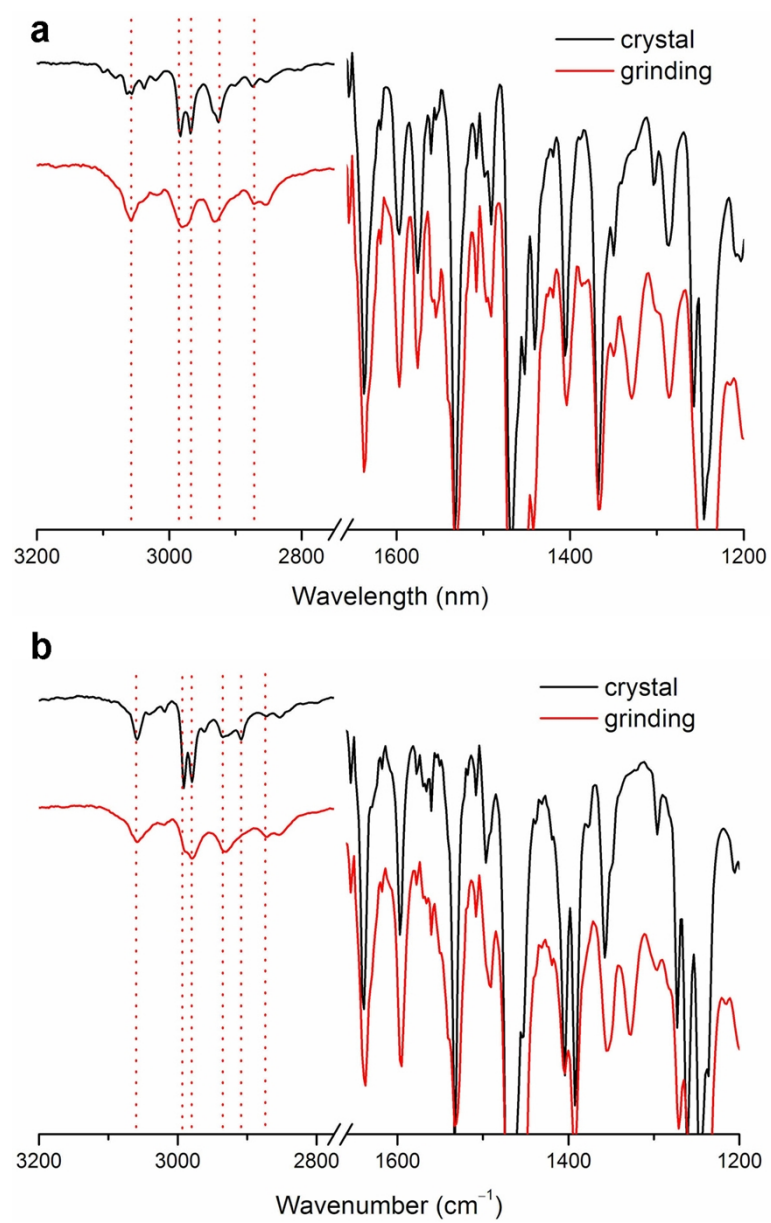


Fig. S2 IR spectra of **PVB** (a) and **BPVB** (b) before and after grinding.

Table S2. Crystal data of **PVB** and **BPVB**.

	PVB	BPVB
Formula sum	C ₂₃ H ₁₈ N ₂ OS	C ₂₃ H ₁₆ BrN ₂ OS
Formula weight	370.45	448.35
Crystal system	monoclinic	triclinic
Space group	<i>P</i> 21/c	<i>P</i> -1
Unit cell dimensions	<i>a</i> = 13.690(3) Å	<i>a</i> = 4.1159(8) Å
	<i>b</i> = 21.558(4) Å	<i>b</i> = 11.407(2) Å
	<i>c</i> = 6.2444(12) Å	<i>c</i> = 20.162(4) Å
	∠ = 95.33(3) °	∠ = 93.04(3) °
		∠ = 91.76(3) °
		∠ = 99.00(3) °
Cell volume	1834.94(60) Å ³	932.91(30) Å ³
<i>Z</i>	4	2
Density, calculated	1.341 g/cm ³	1.596 g/cm ³
R _{All}	0.076	0.076
Pearson code	mP180	aP88
Formula type	NOP2Q18R23	NOPQ2R23...
Wyckoff sequence	e ⁴⁵	i ⁴⁴

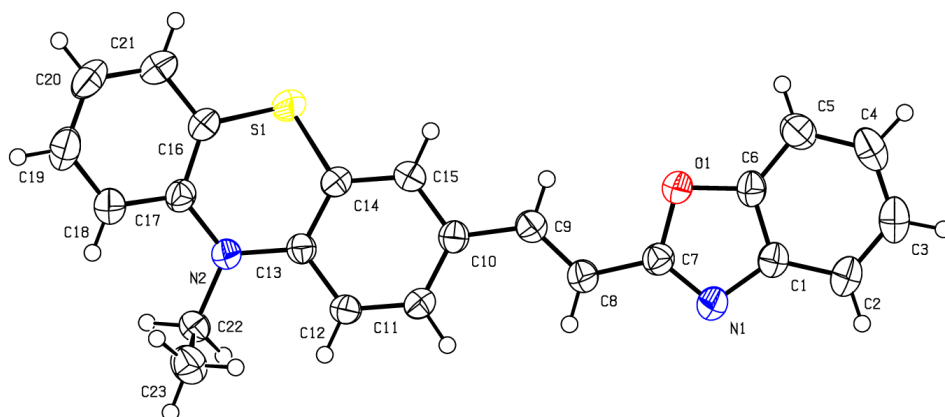


Fig. S3 Crystal structure of **PVB** (50% probability for thermal ellipsoids).

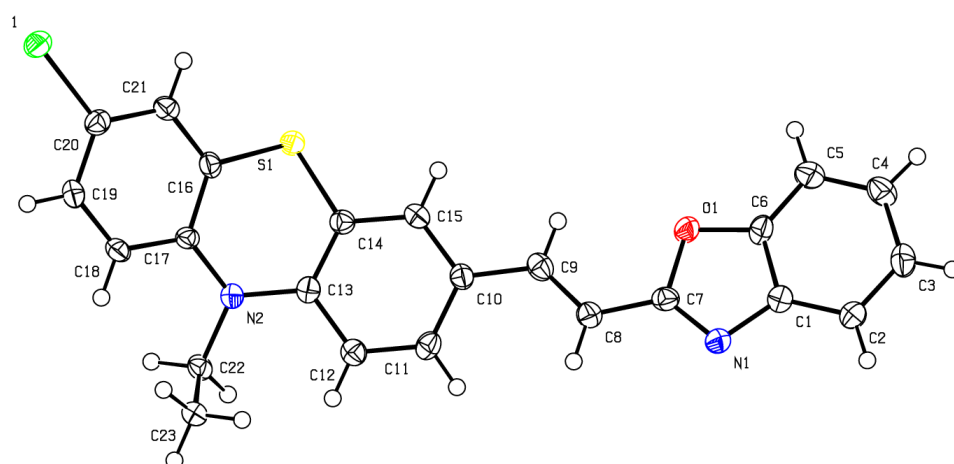


Fig. S4 Crystal structure of **BPVB** (50% probability for thermal ellipsoids).