Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C

Multi-Stimuli-Responsive Fluorescence Switching of A Divinylanthracene Derivative：Piezochromism and Vapochromism

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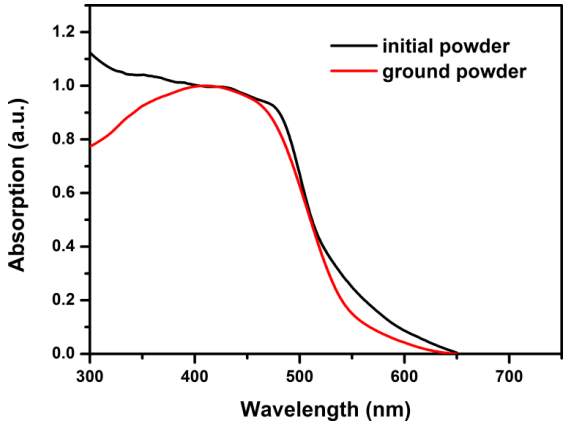

FigureS1: UV-vis absorption of unground and ground powders of BP4VA.

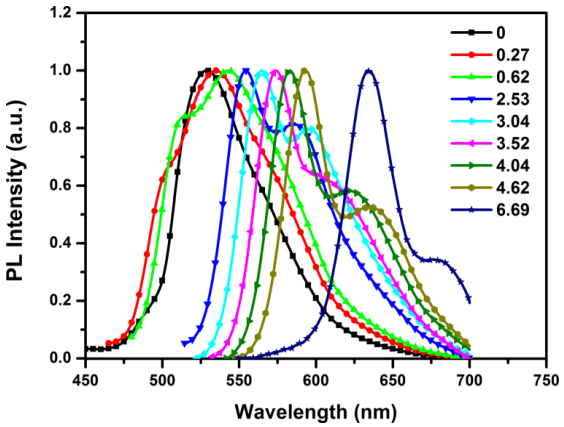

Figure S2. Normalized solid-state PL spectra of BP4VA crystal (C2) after application of pressure (GPa).

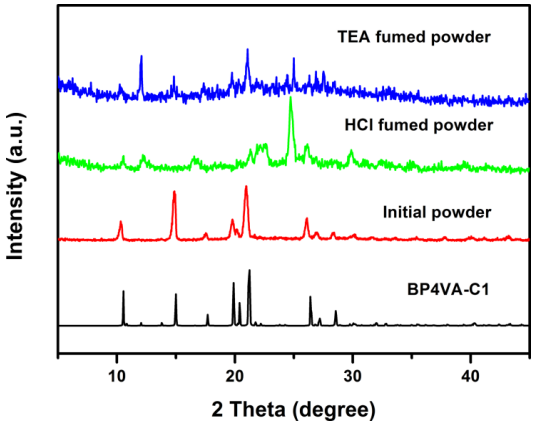

Figure S3. PXRD patterns of BP4VA powders treated by HCl vapor and then TEA vapor, as well as the simulated patterns obtained from the data of single crystal.

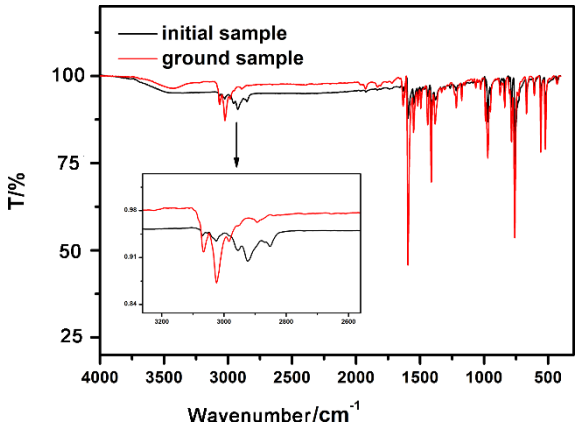

Fig. S4 FT-IR absorption spectra (KBr pellets) of BP4VA.

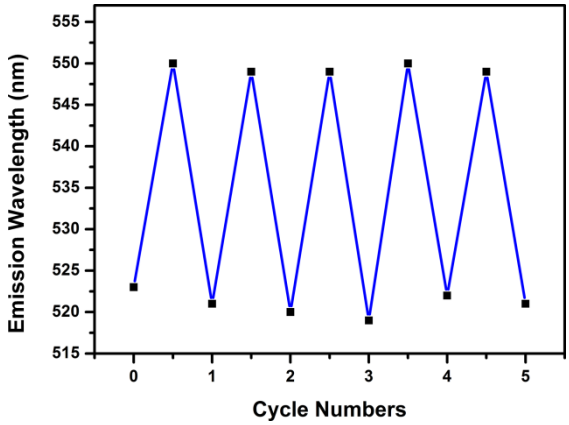

Fig. S5 The emission wavelength of the repeated conversion between ground (around 550 nm) and heated (around 520 nm) states (excited at 365 nm).

Table S1: Crystal Data and Structure Refinements of Two Crystals

	BP4VA-C1	BP4VA-C2
CCDC No.	943524	943525
empirical formula	C_{28} H_{20} N_2	C_{28} H_{20} N_2
formula wt	384.46	384.46
T, K	293(2) K	293(2) K
crystal system	triclinic	monoclinic
space group	P-1	$P2_1/c$
a, Å	6.850(7)	7.5957(15)
b, Å	9.230(12)	5.7108(11)
c, Å	9.341(10)	22.899(5)
α,deg	65.88(4)	90.00
β,deg	69.95(4)	95.95(3)
γ,deg	77.39(5)	90.00
V,Å3	504.2(10)	987.9(3)
Z	1	2
density, Mg/m^3	1.266	1.292
M (Mo K α), mm^{-1}	0.074	0.076
θ range, deg	3.18 - 27.48	3.08 – 27.48
no. of reflcns collected	4939	9226
no. of unique reflcns	2274	2253
R(int)	0.0219	0.0213
GOF	1.077	1.081
R1 [$I > 2\sigma(I)$]	0.0463	0.0428
wR2 [$I > 2\sigma(I)$]	0.1496	0.1269
R1 (all data)	0.0726	0.0596
wR2 (all data)	0.1889	0.1380