

Supporting Information for:

Synthesis and characterization of a novel cyanostilbene derivative and its initiated polymers: aggregation-induced emission enhancement behaviors and light-emitting diode applications

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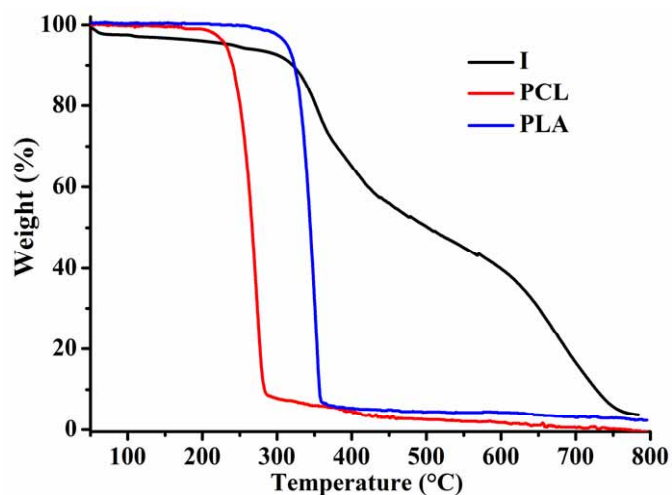


Fig. S1 TGA curves of compounds

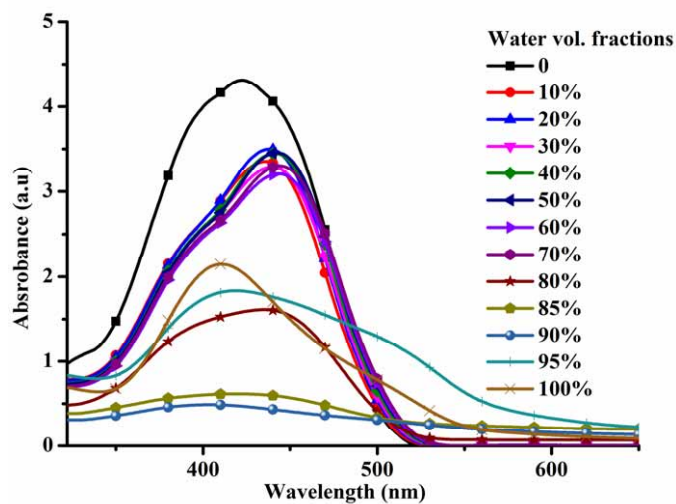


Fig. S2 UV-Vis absorption spectra changes of **I** in THF/water mixtures with different water volume fractions.

Table S1 The volume fractions of water effect on the absorption and fluorescence spectra of **I** in THF/water mixtures

Compound	Water vol. fraction /%	λ_{ex} / nm ^[a]	λ_{em} / nm ^[b]
I	0	422	522
	10	436	523
	20	438	526
	30	440	532
	40	441	532
	50	442	534
	60	443	533
	70	444	533

	80	440	537
	85	421	560
	90	403	562
	95	416	579
	100	409	581
	Thin film		
	[a] Absorption maximum. [b] Emission maximum.		

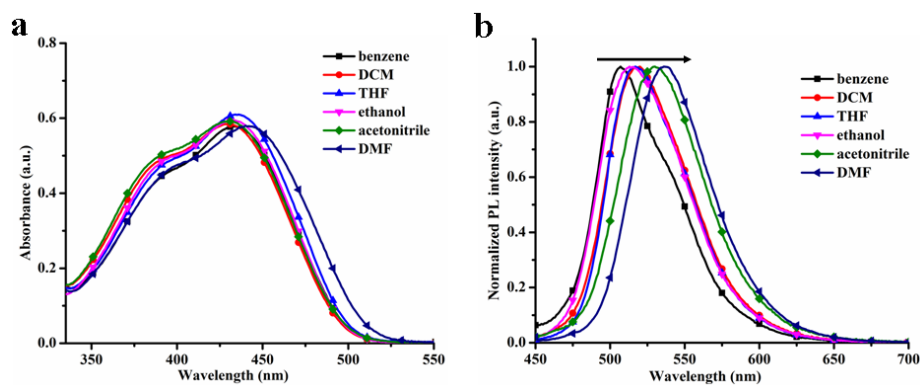


Fig. S3 UV-Vis absorption (a) and PL emission spectra (b) of **I** in solvents with different polarity ($1 \times 10^{-5} \text{ mol} \cdot \text{L}^{-1}$)

Table S2 Optical properties of **I** in different solvents.

<i>Comp.</i>	<i>Solvent</i>	λ_{ex} / nm [a]	$\epsilon / 10^3 [\epsilon]$ [b]	λ_{em} / nm [c]	$\Delta\nu / \text{cm}^{-1}$ [d]
I	benzene	433	578	507	3370.82
	DCM	431	584	519	3934.03
	THF	436	610	517	3624.00
	ethanol	434	594	515	3624.00
	acetonitrile	432	592	530	4280.22
	DMF	440	580	536	4070.56

[a] Absorption maximum. [b] Maximum molar extinction coefficient. [c] Emission maximum. [d] Stokes shift (cm^{-1}).

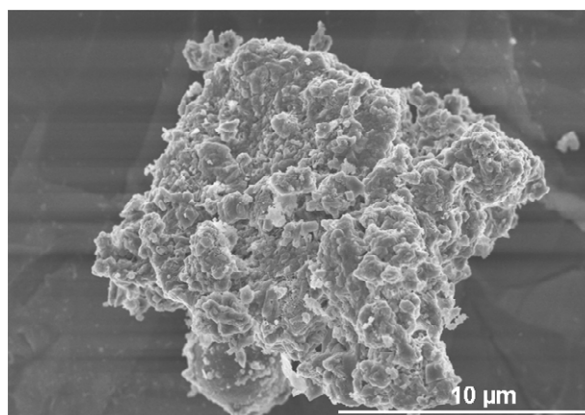


Fig. S4 SEM images of the self-organized structures of **I** formed in the THF/water mixture at the concentration of $5 \times 10^{-5} \text{ mol} \cdot \text{L}^{-1}$ at $f_w = 95\%$

Table S3 Bond lengths [Å] and angles [°] for **I**

C(13)-C(14)	1.391(6)	C(13)-C(11)	1.358(6)
C(19)-N(3)	1.355(6)	C(19)-C(24)	1.412(6)
N(3)-C(17)	1.445(6)	C(25)-H(25)	0.9300
C(4)-N(1)	1.372(6)	N(1)-C(7)	1.439(7)
C(12)-N(2)	1.139(6)	C(17)-H(17A)	0.9700
C(27)-N(4)	1.145(6)	C(7)-H(7A)	0.9600
O(1)-C(9)	1.439(8)	O(1)-H(1)	0.8200
C(14)-C(13)-C(11)	122.6(4)	C(11)-C(10)-C(1)	131.7(4)
N(3)-C(19)-C(20)	122.0(4)	C(19)-N(3)-C(17)	121.5(4)
C(23)-C(22)-C(25)	126.4(4)	C(4)-N(1)-C(7)	121.2(4)
N(3)-C(17)-H(17B)	108.7	N(4)-C(27)-C(26)	177.2(5)
C(9)-O(1)-H(1)	109.5	C(8)-C(9)-O(1)	112.6(6)
O(1)-C(9)-H(9B)	109.1	C(17)-C(18)-O(2)	115.0(6)