

Supporting Information

An AIEE-active triphenylethylene derivative with photoresponsive character for latent fingerprints detection via a simple soaking method

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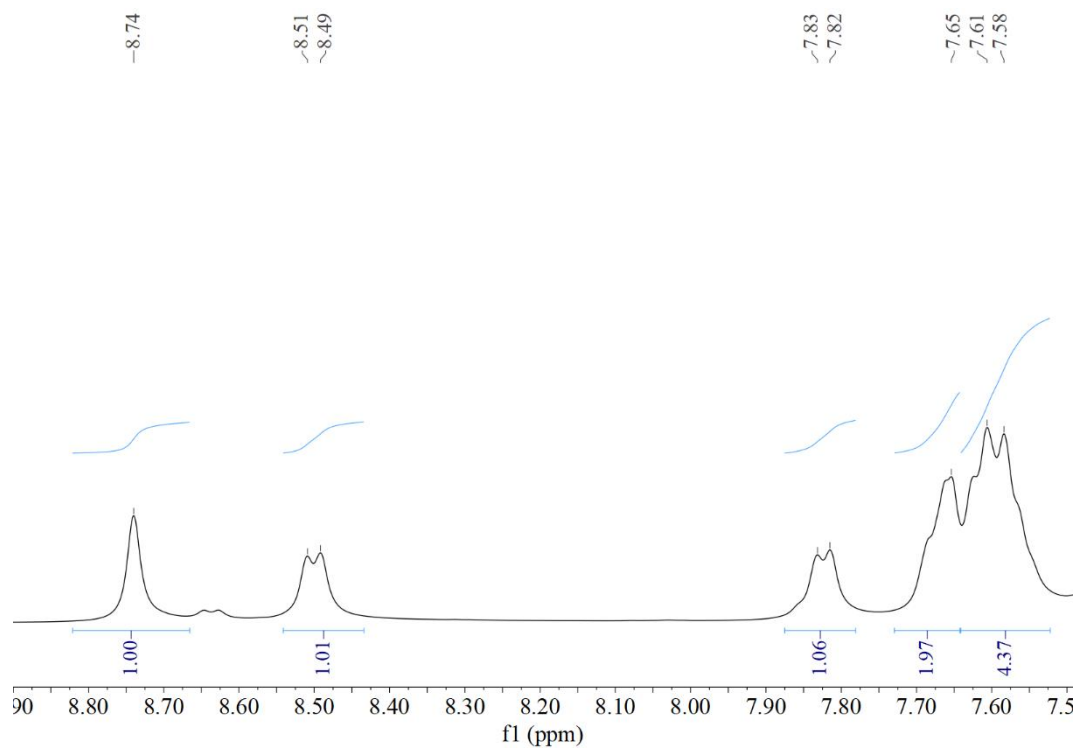


Fig. S1 ^1H NMR spectrum of L1.

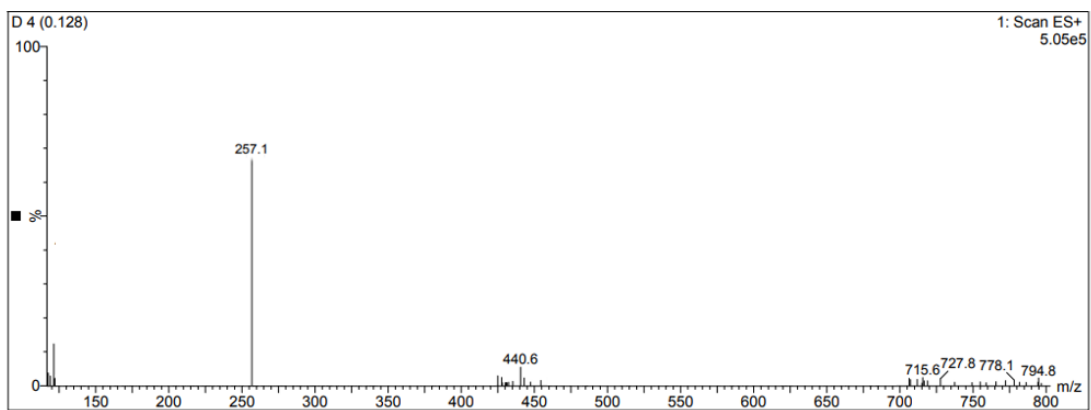


Fig. S2 Mass spectrum of L1.

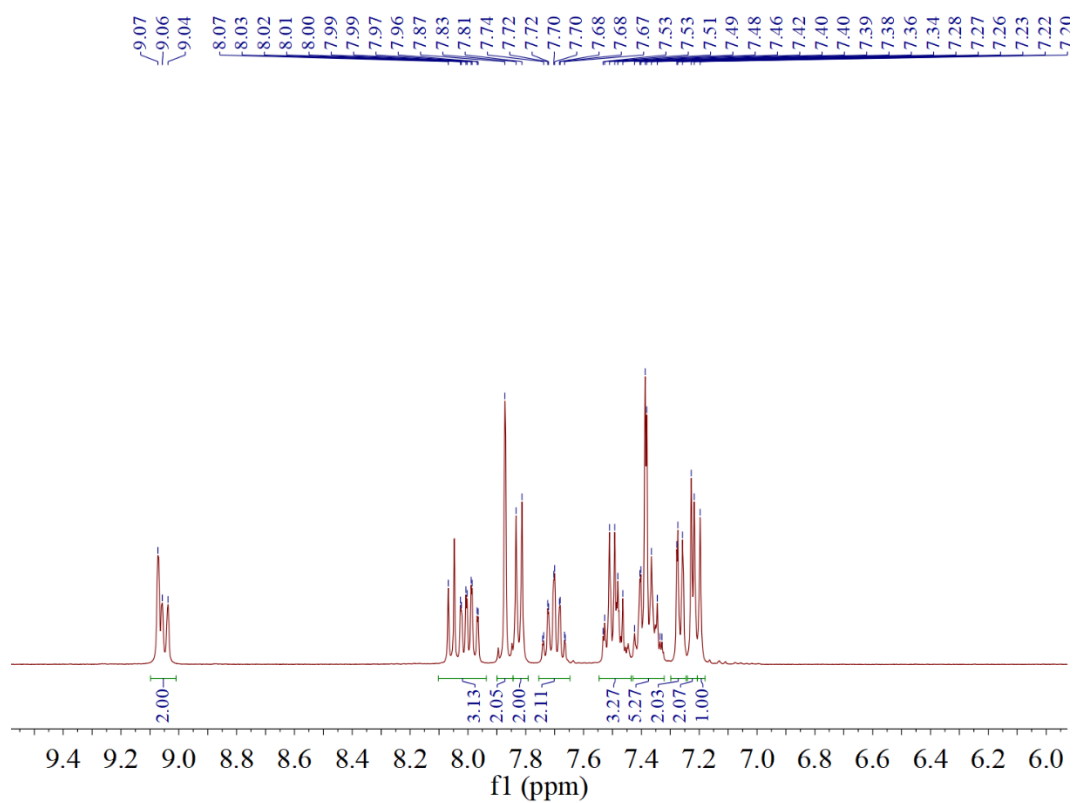


Fig. S3 ¹H NMR spectrum of TP-PH.

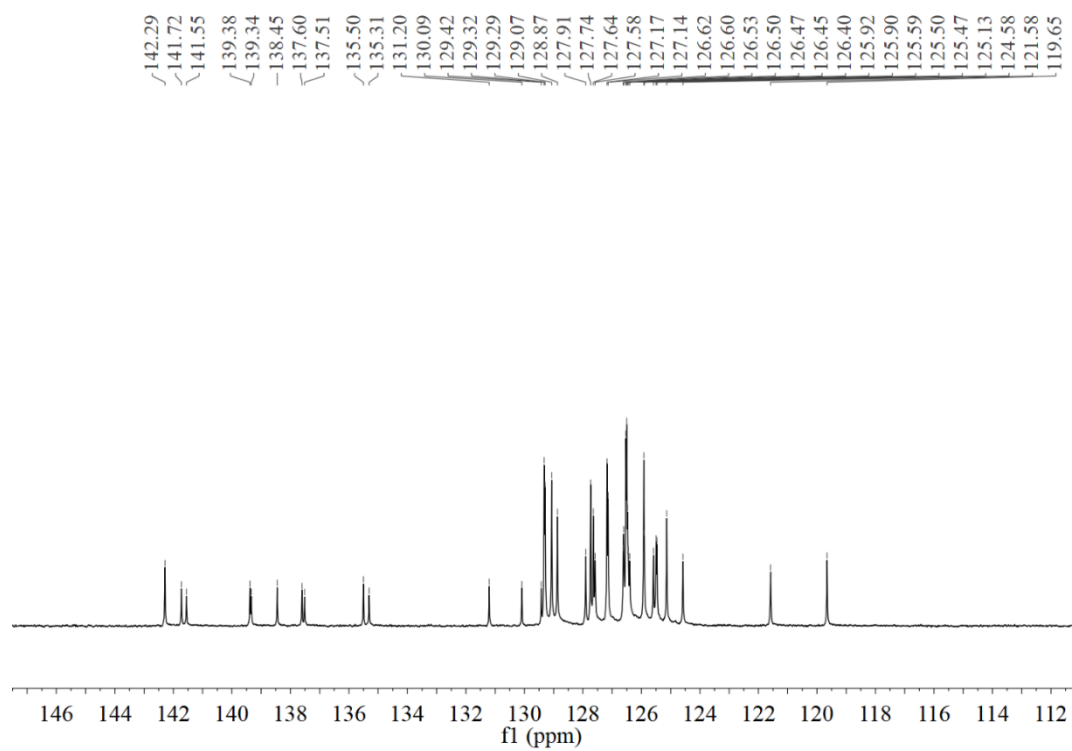


Fig. S4 ¹³C NMR spectrum of TP-PH.

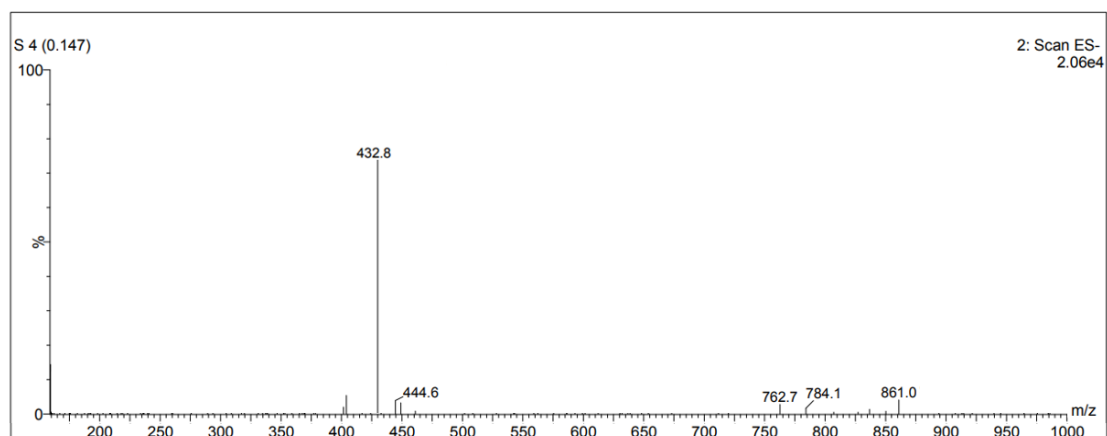


Fig. S5 Mass spectrum of TP-PH.

Table S1 Crystal data and structure refinement of TP-PH

Compound	TP-PH
Empirical formula	C ₃₄ H ₂₄
Formula weight	432.53
Temperature/K	296(2)
Crystal system	monoclinic
Space group	P2 ₁ /c
a/Å	11.757(2)
b/Å	16.721(3)
c/Å	12.271(2)
α /°	90
β /°	102.776(3)
γ /°	90
Volume/Å ³	2352.6(7)
Z	4
Calculated density (Mgm ⁻³)	1.221
μ /mm ⁻¹	0.069
F(000)	912.0
2 θ range for data collection (°)	3.552 to 54.882
Index ranges	-15 ≤ h ≤ 9, -21 ≤ k ≤ 19, -15 ≤ l ≤ 15
Reflections collected / unique	14403
Absorption correction	Multi-scan
Data/restraints/parameters	5339/0/307
Goodness-of-fit on F ²	1.051
Final R indexes [I ≥ 2 σ (I)]	R ₁ = 0.0566, wR ₂ = 0.1642
Final R indexes [all data]	R ₁ = 0.1074, wR ₂ = 0.1947
Largest diff. peak/hole / e Å ⁻³	0.16/-0.17

Table S2 Partial bond length and bond Angle of TP-PH

Bond length(Å)			Bond angles (°)			
C1	C2	1.377(4)	C2	C1	C6	119.7(2)
C1	C6	1.383(5)	C2	C3	C4	121.5(2)
C2	C3	1.379(3)	C5	C4	C3	117.65(19)
C3	C4	1.389(3)	C3	C4	C7	121.30(19)
C4	C7	1.489(3)	C1	C6	C5	119.6(2)
C5	C6	1.387(3)	C14	C7	C8	124.41(17)
C7	C14	1.351(2)	C8	C7	C4	116.03(15)
C8	C9	1.378(3)	C9	C8	C13	116.7(2)
C9	C10	1.381(3)	C13	C8	C7	121.88(18)
C11	C12	1.347(3)	C11	C10	C9	120.8(2)
C12	C13	1.394(3)	C11	C12	C13	120.3(2)
C15	C20	1.390(3)	C20	C15	C16	116.16(17)
C16	C17	1.372(3)	C20	C15	C14	118.14(16)
C17	C18	1.397(3)	C16	C15	C14	125.61(16)
C18	C19	1.388(3)	C16	C17	C18	121.94(17)
C18	C21	1.480(3)	C19	C18	C17	116.76(17)
C19	C20	1.373(3)	C17	C18	C21	120.60(16)
C21	C26	1.384(3)	C19	C20	C15	122.70(18)
C21	C22	1.410(3)	C26	C21	C22	117.65(18)
C22	C23	1.360(3)	C22	C21	C18	121.73(16)
C23	C24	1.400(3)	C23	C24	C25	118.57(18)
C24	C25	1.408(3)	C23	C24	C30	121.73(18)
C24	C30	1.424(3)	C26	C25	C27	122.99(17)
C25	C26	1.403(2)	C21	C26	C25	122.65(17)
C27	C31	1.386(3)	C31	C27	C28	117.70(19)
C28	C34	1.403(3)	C31	C27	C25	123.26(18)
C28	C29	1.415(3)	C34	C28	C29	121.6(2)
C29	C30	1.340(3)	C30	C29	C28	121.61(19)
C31	C32	1.374(3)	C29	C30	C24	121.6(2)
C32	C33	1.379(3)	C31	C32	C33	120.4(2)
C33	C34	1.355(3)	C33	C34	C28	121.0(2)