Erasable Photo-patterning Material Based on a Specially Designed 4-(1,2,2-triphenylvinyl)aniline Salicylaldehyde Hydrazone Aggregation-Induced Emission (AIE) Molecule

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Contents

1. Selected spectra and data referred in the paper

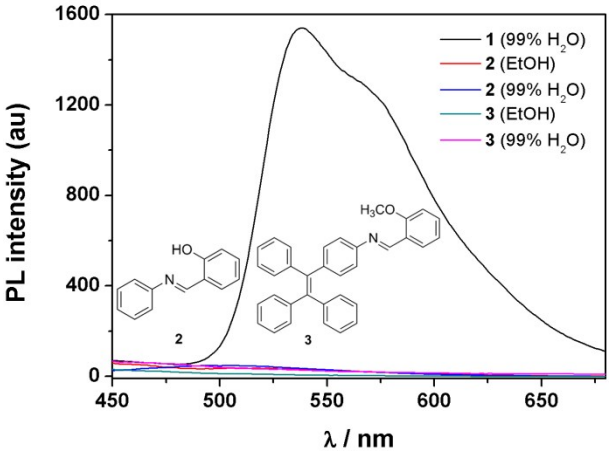

Figure S1. Fluorescence spectra of **2** and **3** in poor solvent of 99% H_2O/EtOH (*v*/*v*) and in good solvent of EtOH, respectively. Black line is the fluorescence spectrum of **1** in 99% H_2O/EtOH (*v*/*v*). Conditions: The concentrations of **1**, **2** and **3** are 50 μmol/L and the excitation wavelength is 370nm.

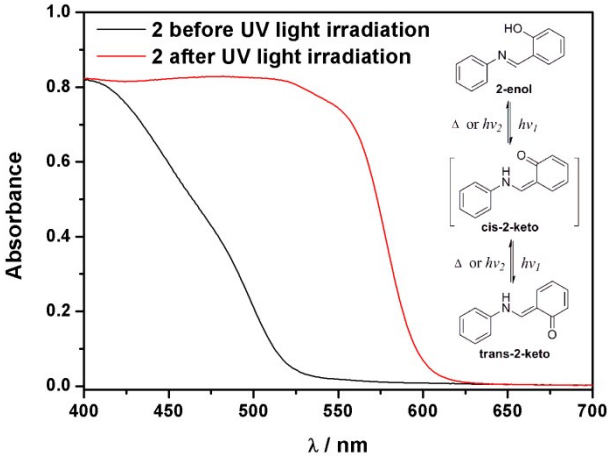

Figure S2. UV-DRS of **2** before and after UV light irradiation.

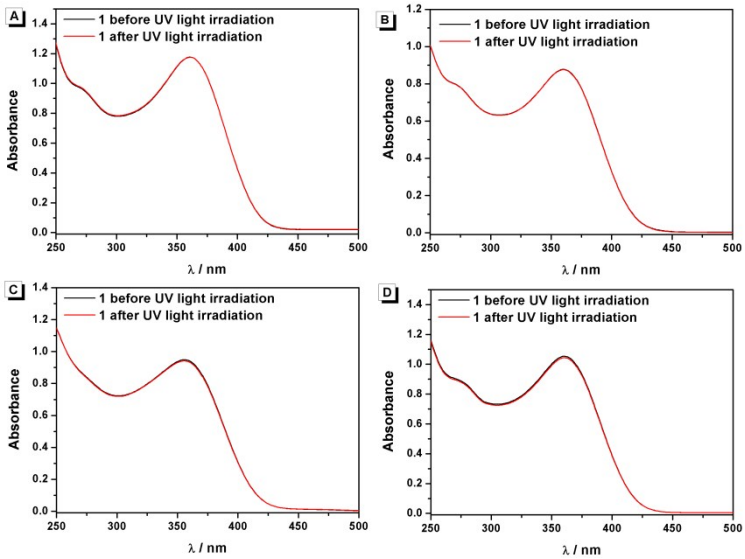

Figure S3. Absorption spectra of **1** before and after UV light irradiation in A) n-hexane, B) DMC,

C) EtOH, D) THF.

Table S1. The influence of different wavelength light to the color change of **1**.

Wavelength/nm	365	405	450	475	500	550	600	650
Color change	yes	yes	yes	yes	no	no	no	no
Color recovery	-	-	-	-	yes	yes	no	no

2. NMR spectra and ESI-MSspectra

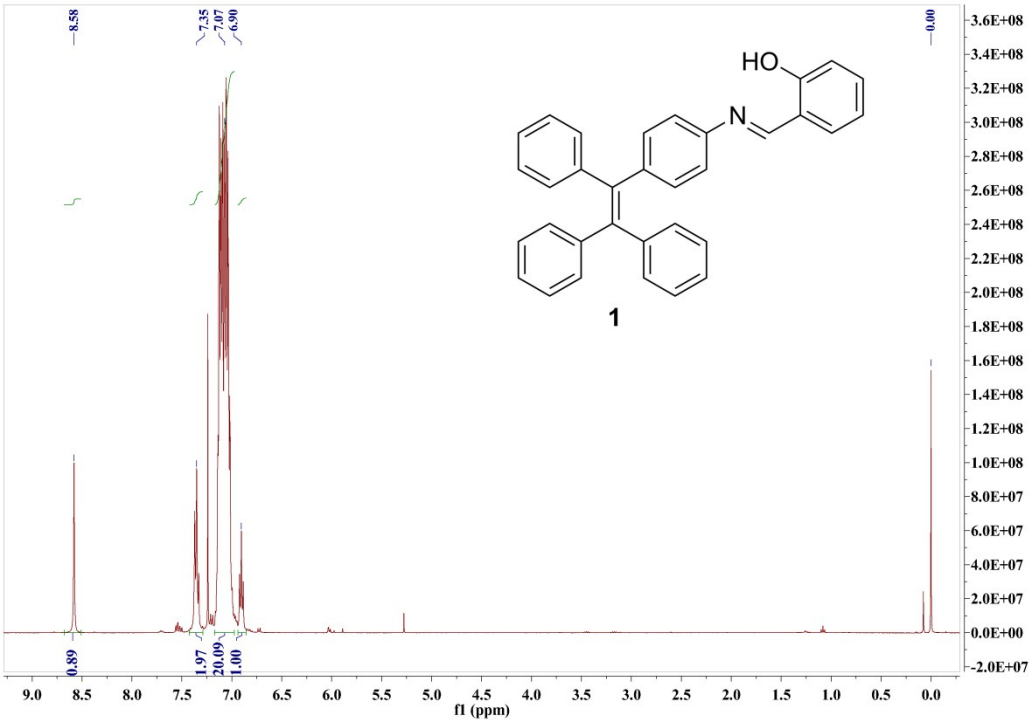

Figure S16. ^{1}H-NMR spectrum of **1** in $DCCl_3$.

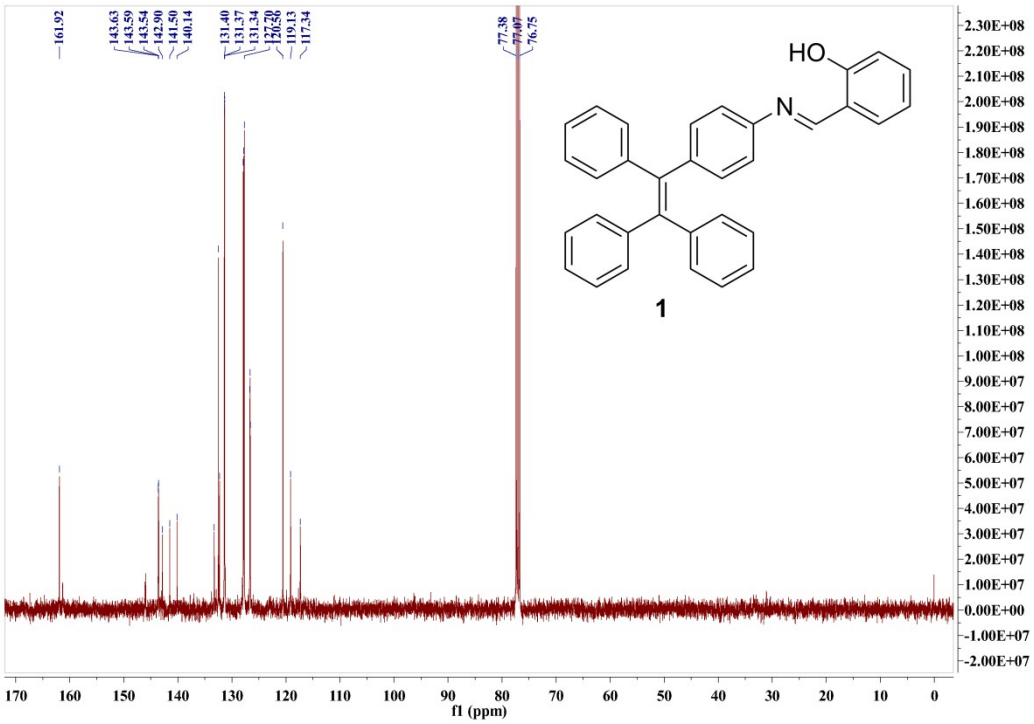

Figure S17. ^{13}C-NMRspectrum of **1** in $DCCl_3$.

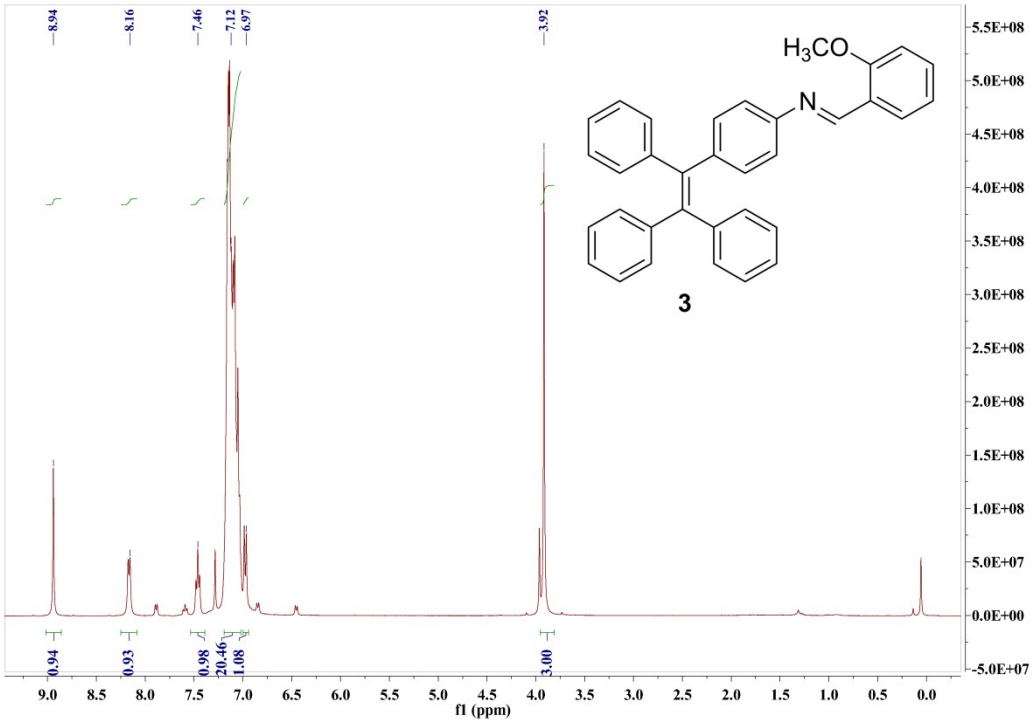

Figure S18. ^{1}H-NMR spectrum of **3** in $DCCl_3$.

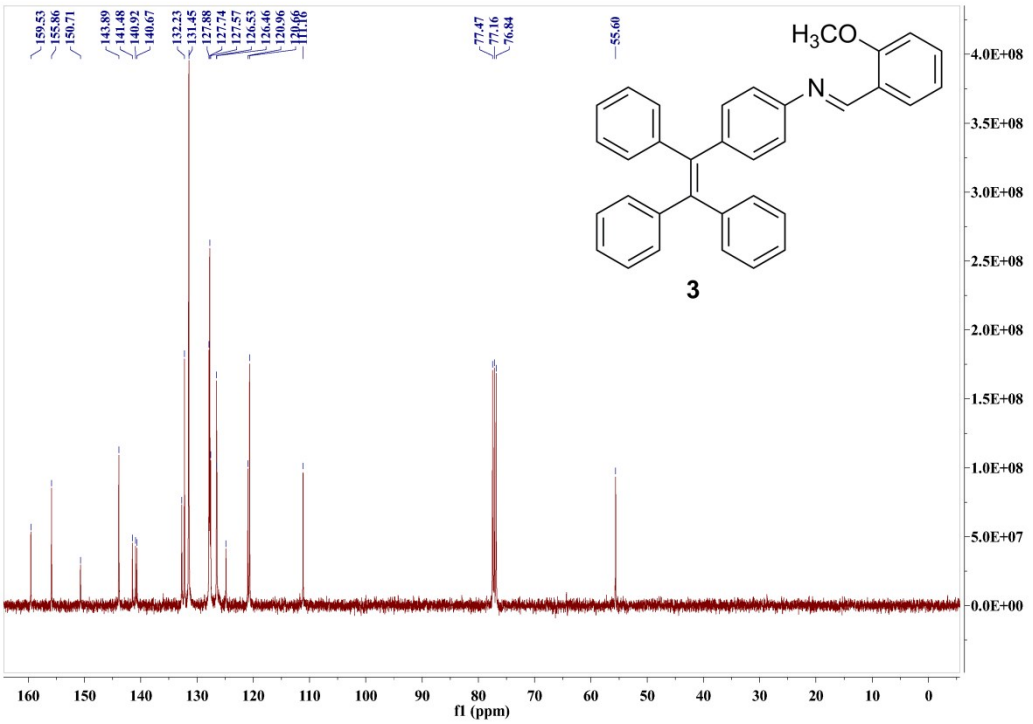

Figure S19. ^{13}C-NMR spectrum of **3** in $DCCl_3$.

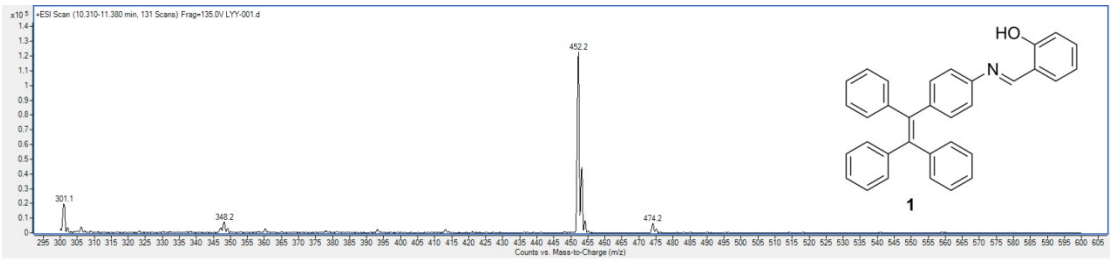

Figure S20. ESI-MS spectrum of **1**.

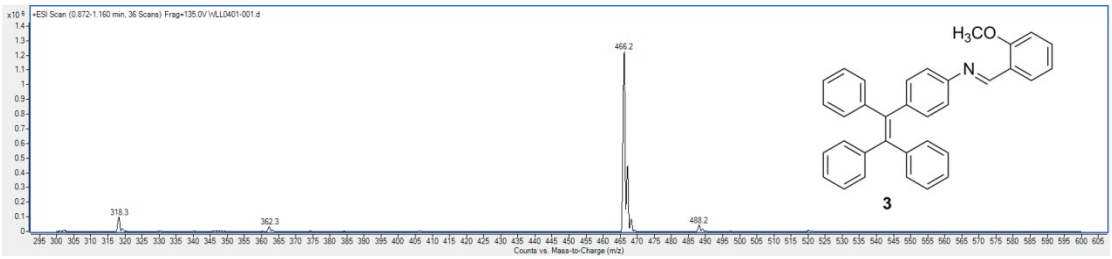

Figure S21. ESI-MS spectrum of **3**.

3. Crystallographic data and structure refinement

Compound	**1**
Empirical formula	$C_{33}H_{25}NO$
Formula weight	451.54
Temperature	293(2) K
Wavelength	0.71073 Å
Crystal system	monoclinic
Space group	C2/c
a	56.337(8) Å
b	5.7057(9) Å
c	36.189(5) Å
α	90°
β	121.942(5)°
γ	90°
Volume	9871(2)$Å^3$
Z	16

Density (calculated)	1.21525 $g \cdot cm^{-3}$
F(000)	3808
Reflections collected	34177
Independent reflections	8190 [R(int) = 0.0538]
Data / restraints / parameters	8190 / 0 / 631
Goodness-of-fit	1.078
Final R indices [I>2sigma(I)]	R1 = 0.1002, wR2 = 0.2446
R indices (all data)	R1 = 0.1181, wR2 = 0.2539

[a] $R_1 = \sum||F_o|-|F_c||\sum/|F_o|$. [b] $wR_2 = [\sum w(F_o^2 - F_c^2)^2/\sum w(F_o^2)^2]^{1/2}$