Electronic Supplementary Information

Tunable emission of tetraphenylethylene copolymer via polymer matrix assisted and aggregation-induced emission†

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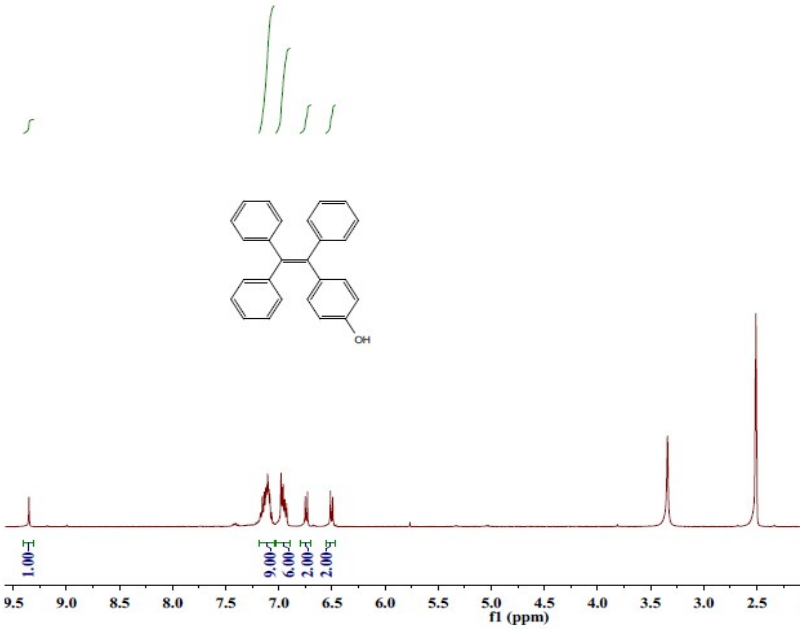


Figure S1. ^{1}H NMR spectra of compound **1** in DMSO-d_6.

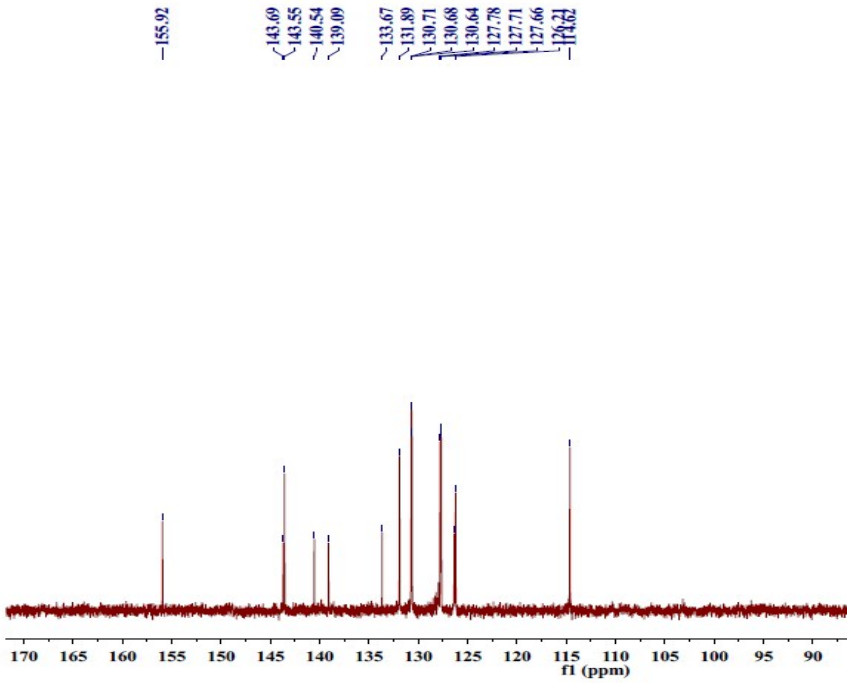


Figure S2. ^{13}CNMR spectra of compound **1** in DMSO-d_6.

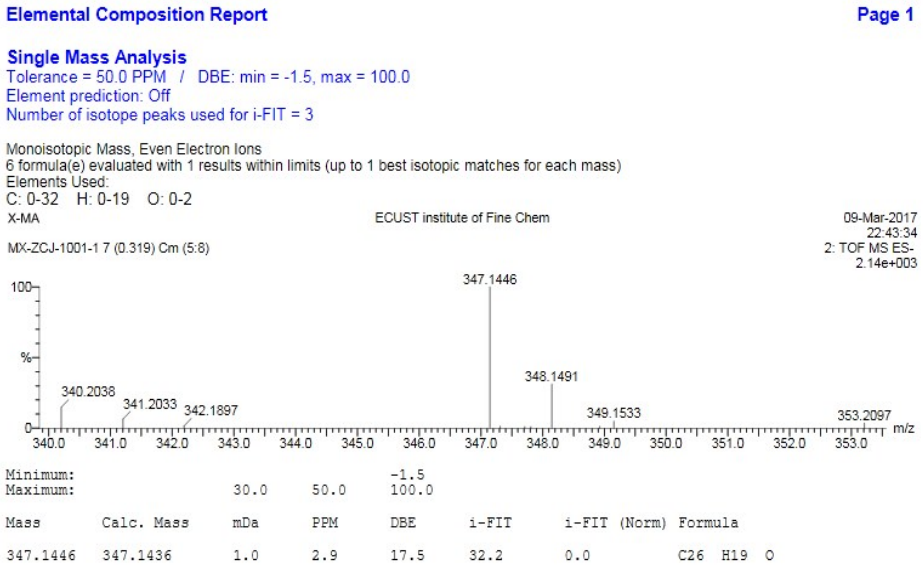


Figure S3. Mass spectra of compound **1**

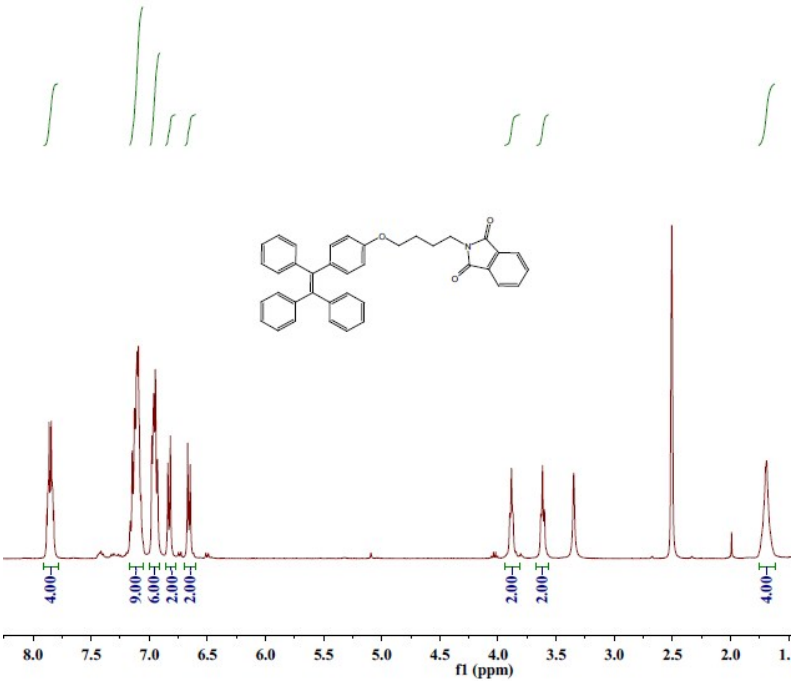


Figure S4. ^{1}H NMR spectra of Compound **2** in DMSO-d_6.

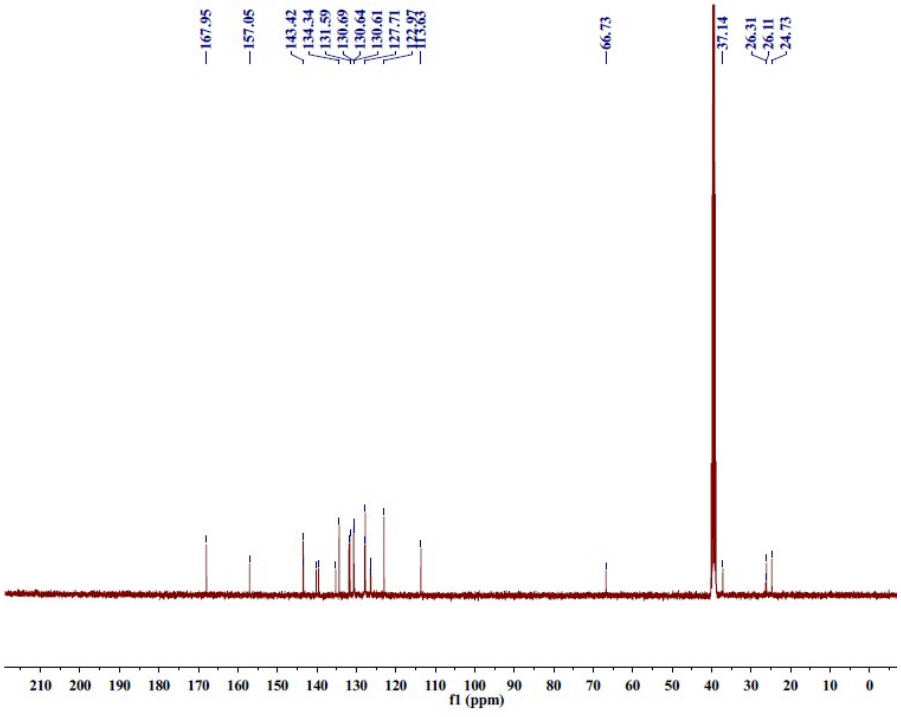


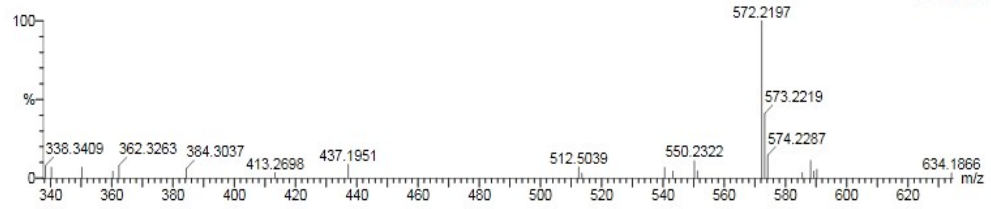
Figure S5. ^{13}C NMR spectra of Compound **2** in DMSO-d_6.

Elemental Composition Report **Page 1**

Single Mass Analysis
Tolerance = 50.0 PPM / DBE: min = -1.5, max = 100.0
Element prediction: Off
Number of isotope peaks used for i-FIT = 3

Monoisotopic Mass, Even Electron Ions
5 formula(e) evaluated with 1 results within limits (up to 1 best isotopic matches for each mass)
Elements Used:
C: 0-38 H: 0-35 N: 0-1 O: 0-3 Na: 0-1

X-MA ECUST institute of Fine Chem 09-Mar-2017 22:30:13
MX-ZCJ-1002 23 (0.791) Cm (22:23) 1: TOF MS ES+ 2.11e+003



Minimum:				-1.5			
Maximum:		30.0	50.0	100.0			
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
572.2197	572.2202	-0.5	-0.9	23.5	12.5	0.0	C38 H31 N O3 Na

Figure S6. Mass spectra of compound **2**

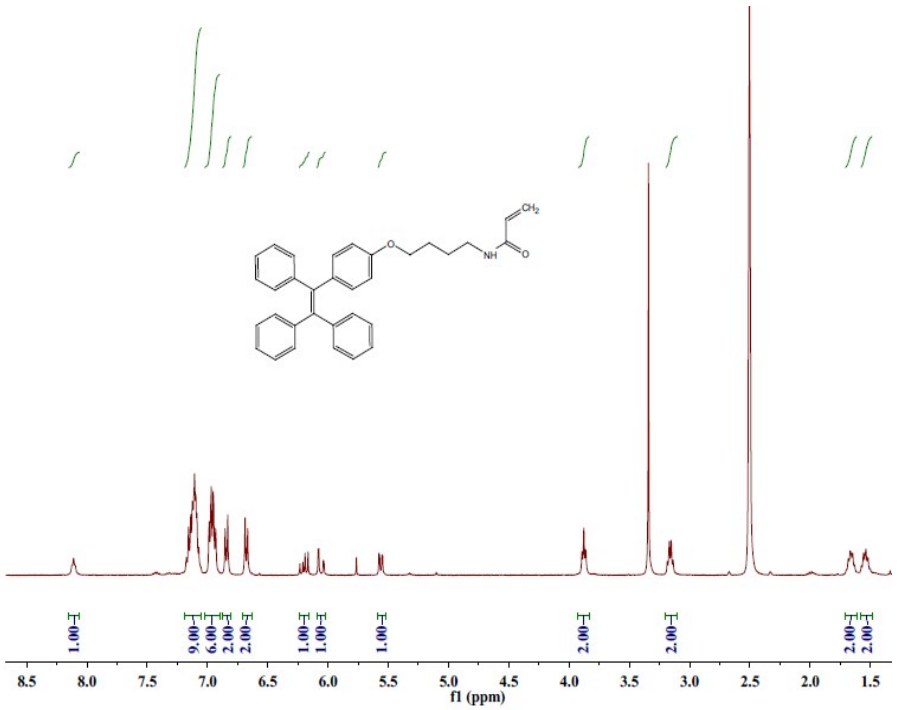


Figure S7. ^{1}H NMR spectra of Compound **4** in DMSO-d_6.

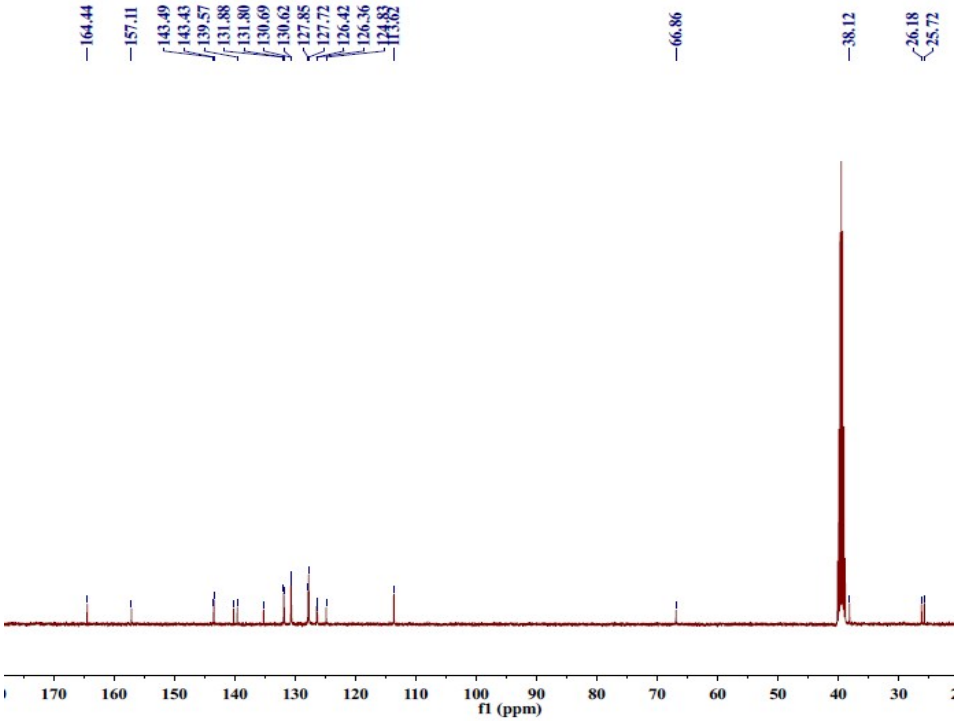


Figure S8. ^{13}C NMR spectra of Compound **4** in DMSO-d_6.

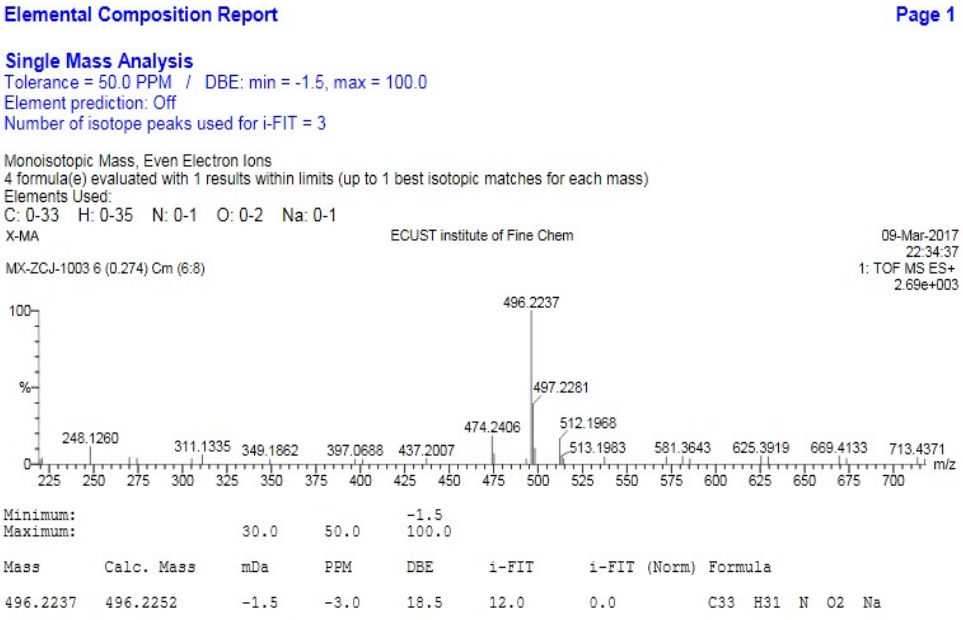


Figure S9. Mass spectra of compound **4**.

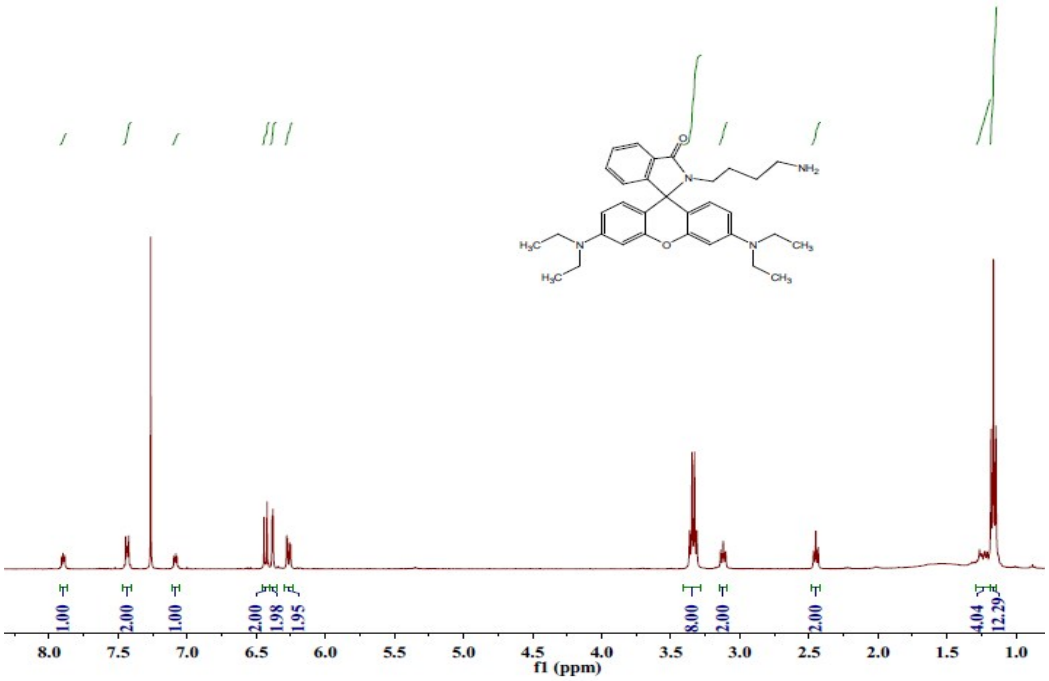


Figure S10. ^{1}H NMR spectra of Compound **5** in $CDCl_3$.

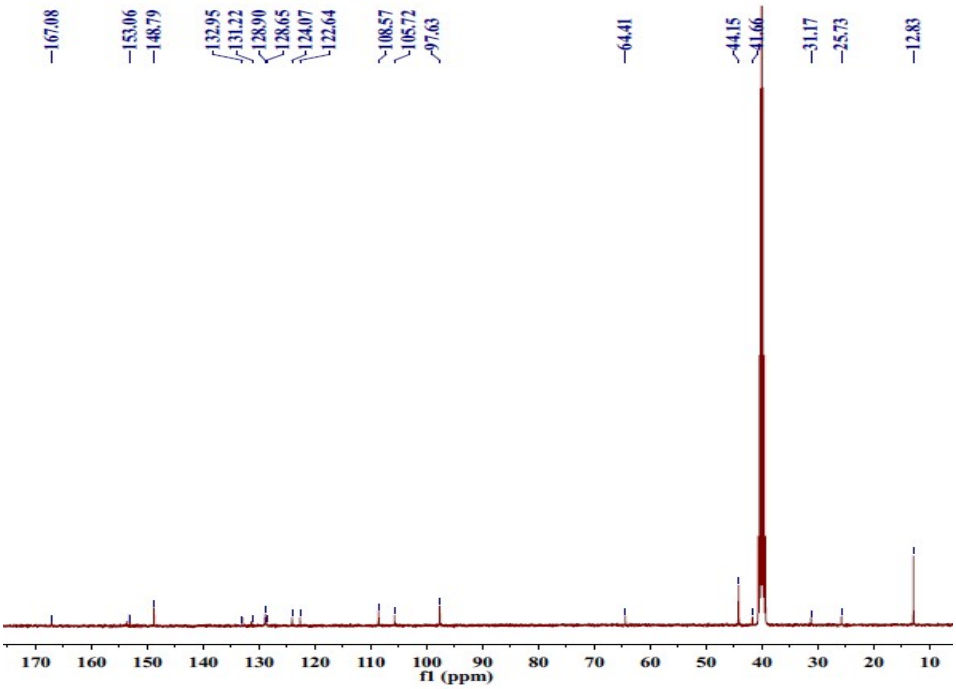


Figure S11. ^{13}C NMR spectra of Compound **5** in DMSO-d_6.

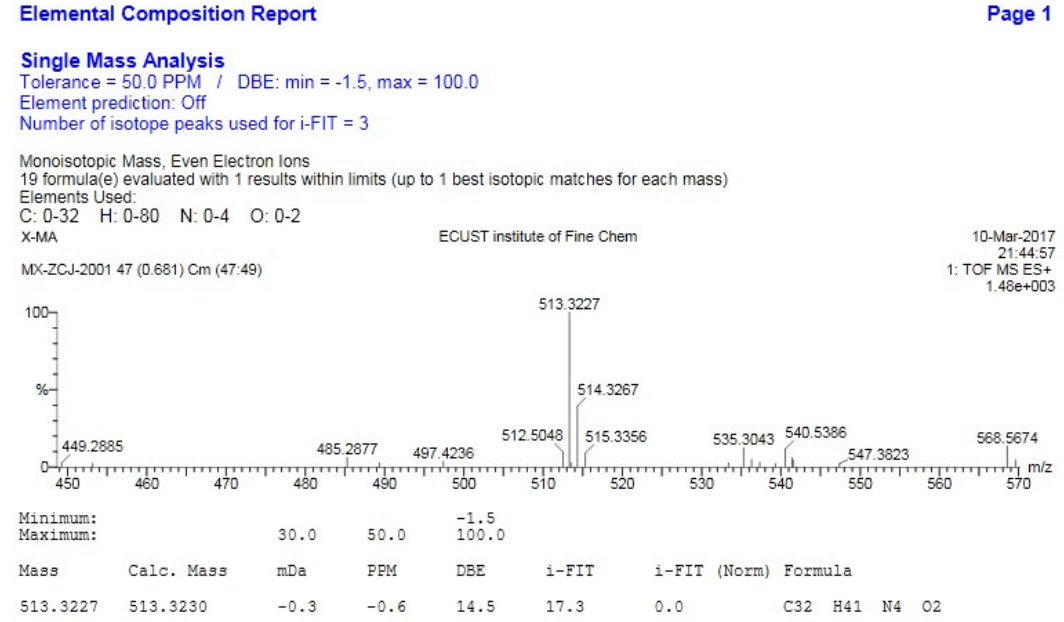


Figure S12. Mass spectra of compound **5**.

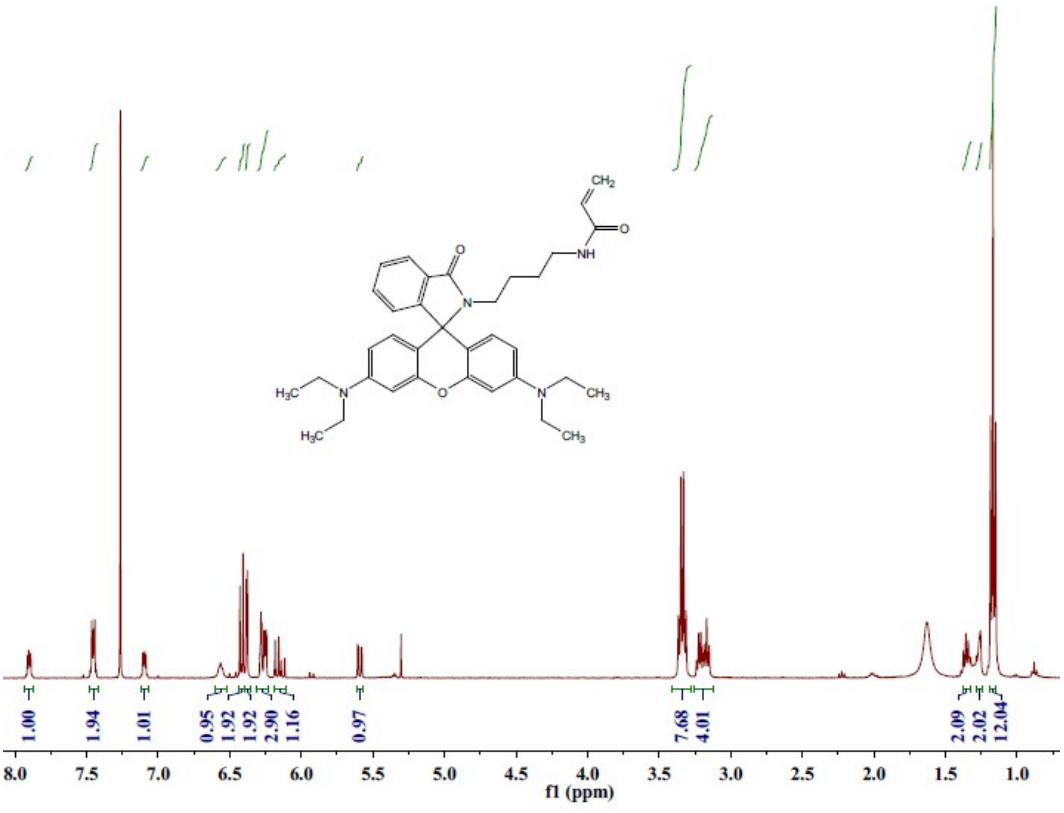


Figure S13. ^{1}H NMR spectra of Compound **6** in $CDCl_3$.

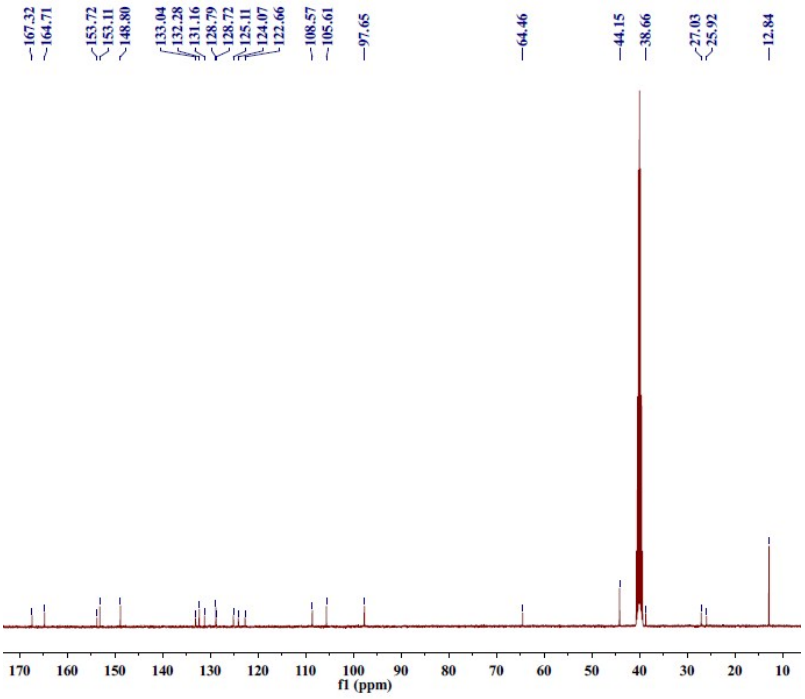


Figure S14. ^{13}C NMR spectra of Compound **6** in DMSO-d_6.

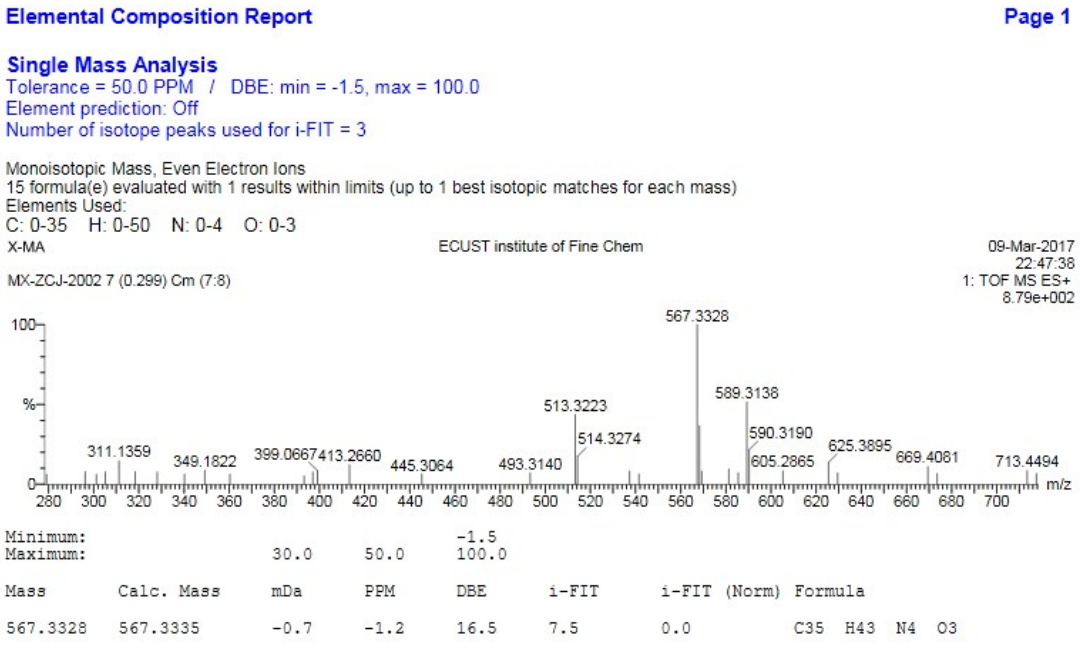


Figure S15. Mass spectra of compound **6**.

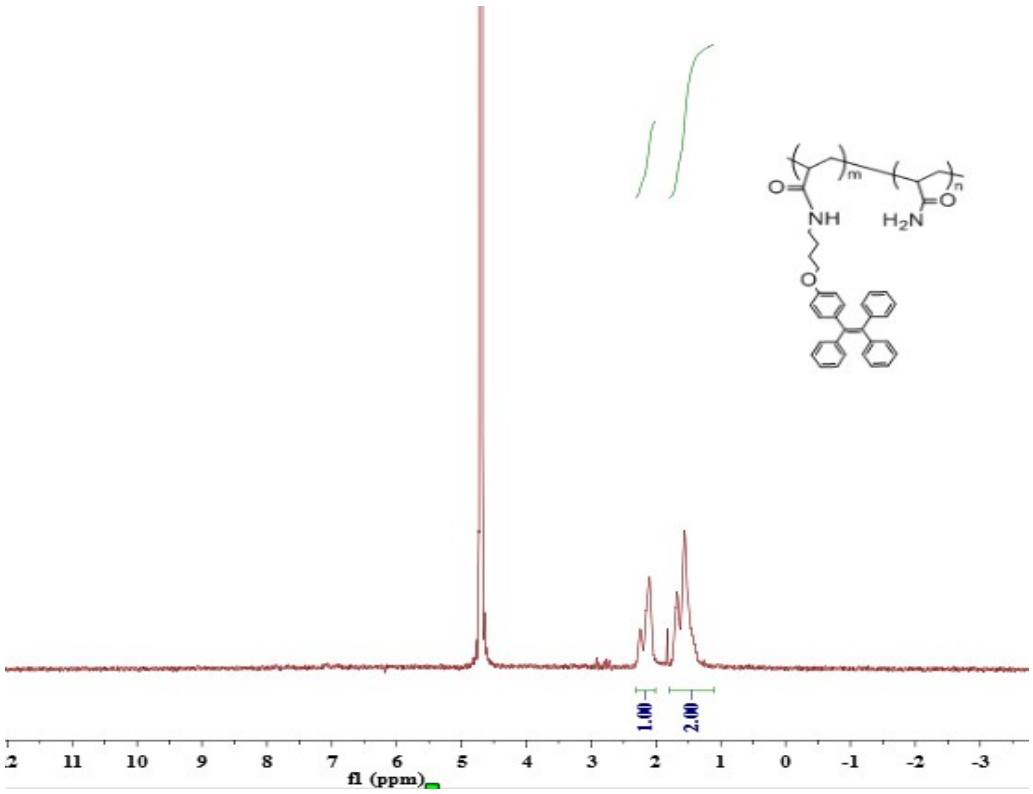


Figure S16. ^{1}H NMR spectra of **TPE-PAM** in D_2O.

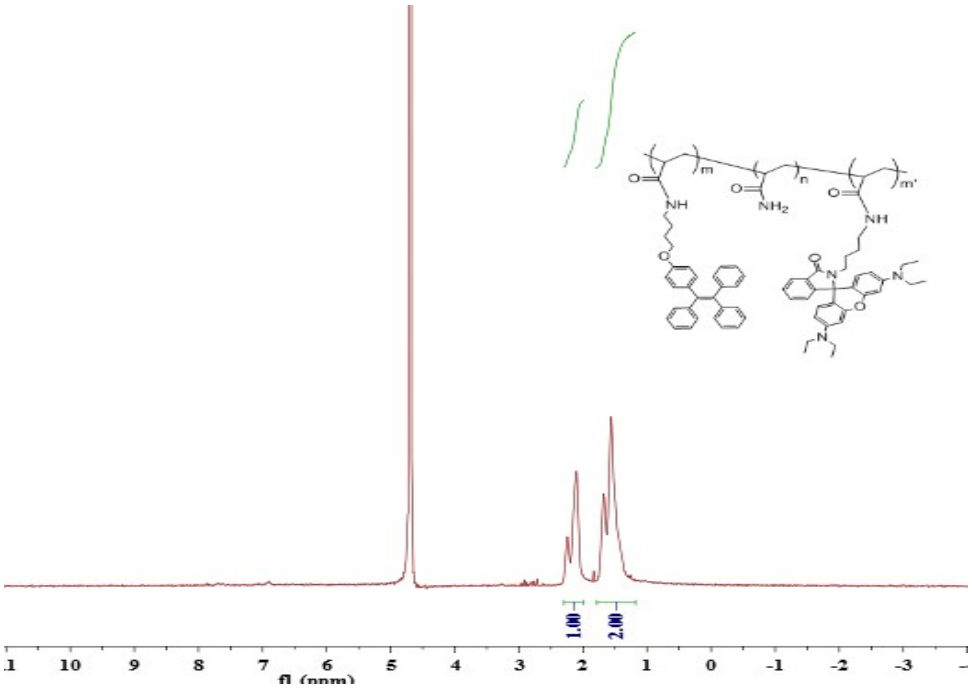


Figure S17. ^{1}H NMR spectra of **TPE-RhB-PAM** in D_2O.

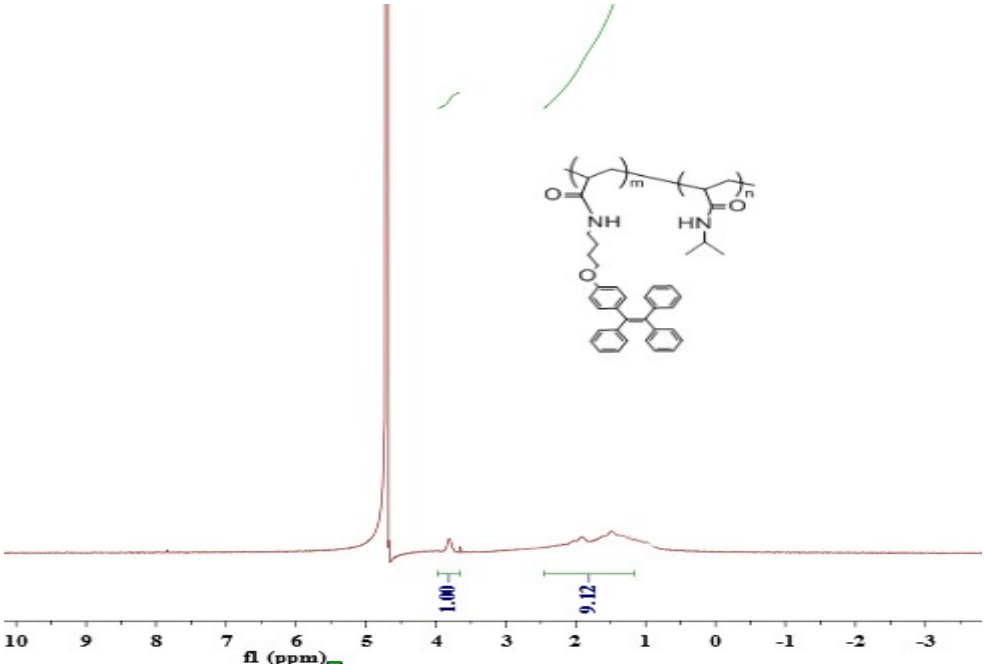


Figure S18. ^{1}H NMR spectra of **TPE-PNIPAM** in D_2O

Table S1. The C, H and N content of **TPE-PAM**, **TPE-PNIPAM** and **TPE-RhB-PAM.**

Sample	N%	C%	H%
TPE-PAM	15.53	41.88	7.26
TPE-PNIPAM	10.21	54.28	9.83
TPE-RhB-PAM	15.12	41.99	7.30

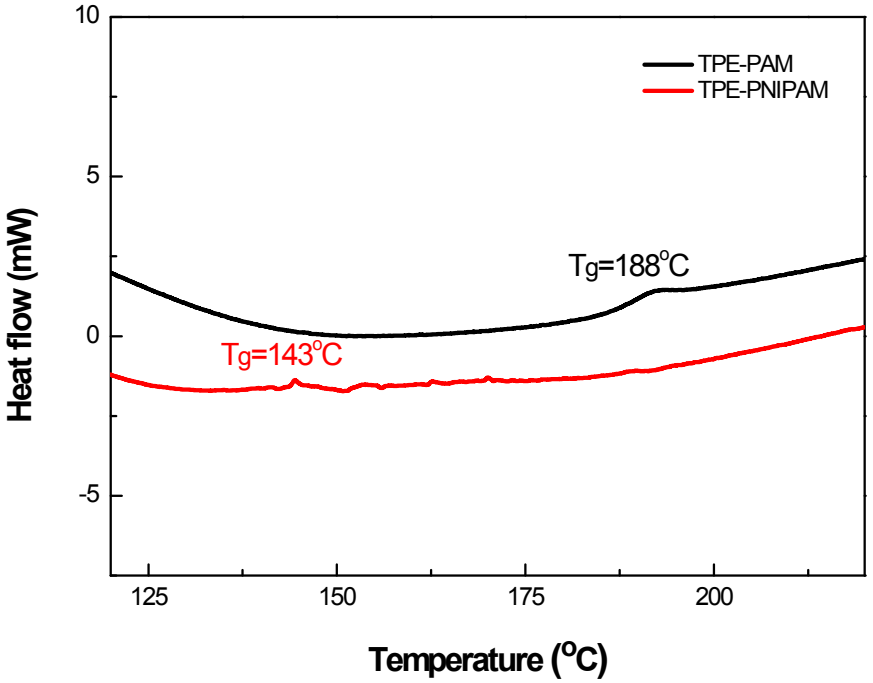


Figure S19. DSC thermogram of the **TPE-PAM** (black) and **TPE-PNIPAM** (red).

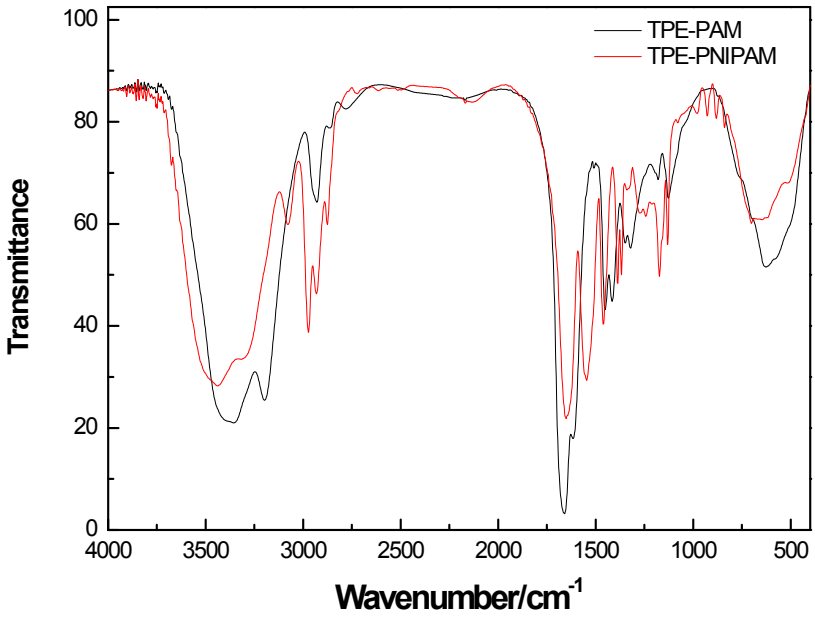


Figure S20. Infrared Spectroscopy of **TPE-PAM** and **TPE-PNIPAM**.

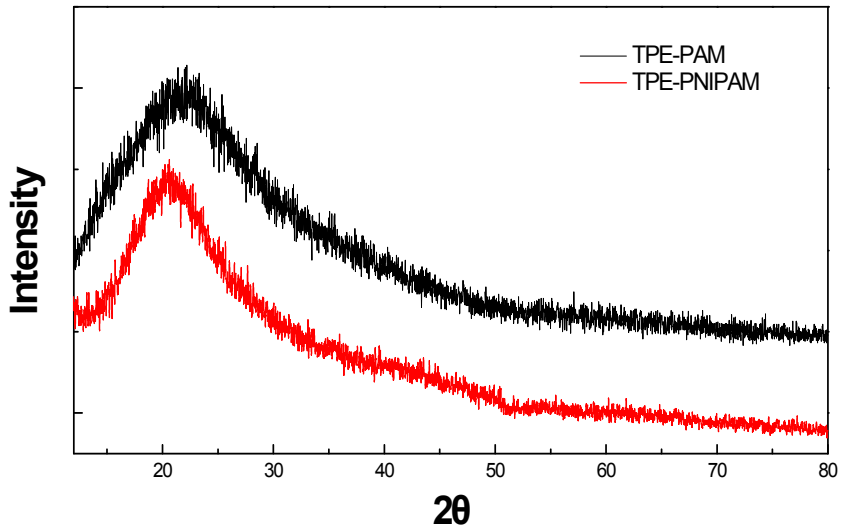


Figure S21. XRD patterns of **TPE-PAM** (black) and **TPE-PNIPAM** (red).

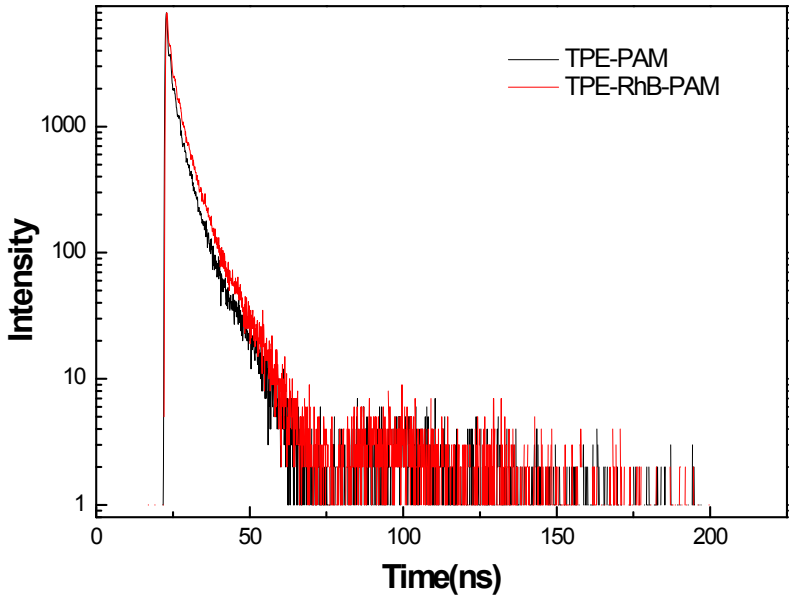


Figure S22. Fluorescence lifetime of **TPE-PAM** and **TPE-RhB-PAM** in 100% water-fraction.

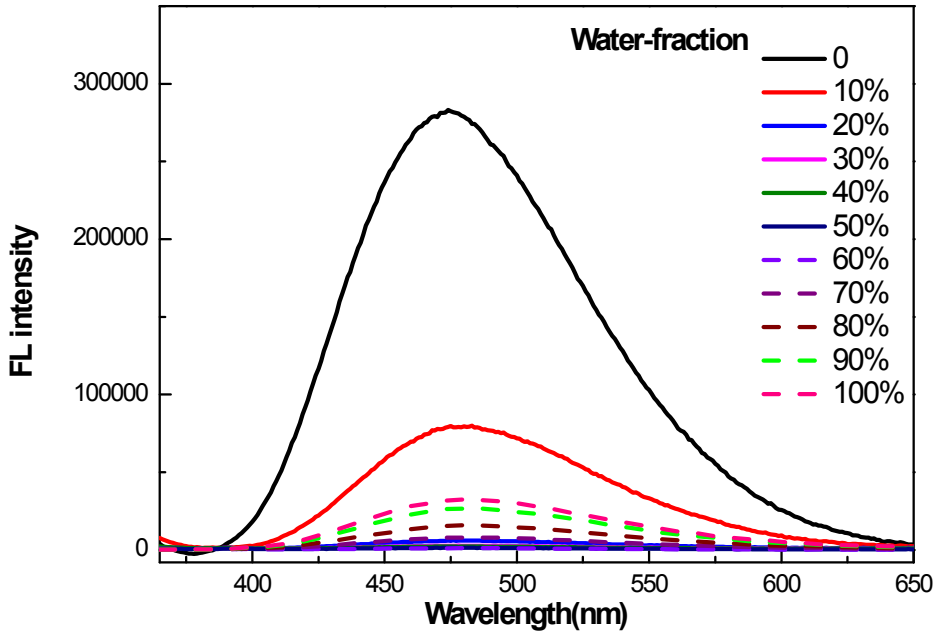


Figure S23. Fluorescence spectra of copolymer **TPE-PAM** in H_2O/Ethanol mixtures with different H_2O contents (λ_{ex}= 350 nm, [**TPE-PAM**] =1 mg mL^{-1}).

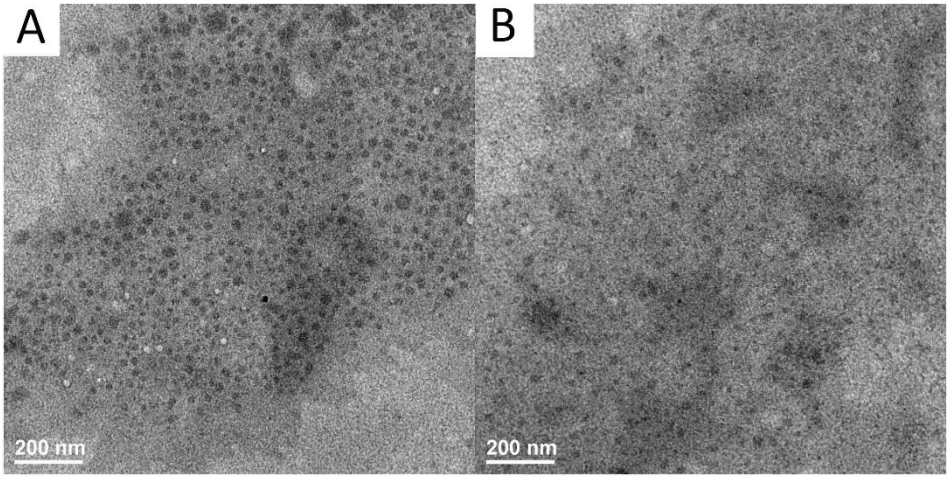


Figure S24. TEM images of **TPE-PAM** sampled with the water-fraction of 40% (A) and 50% (B)