Supporting Information for

Self-assembly of BODIPY based pH-sensitive near-infrared polymeric micelles for drug controlled delivery and fluorescent imaging applications†

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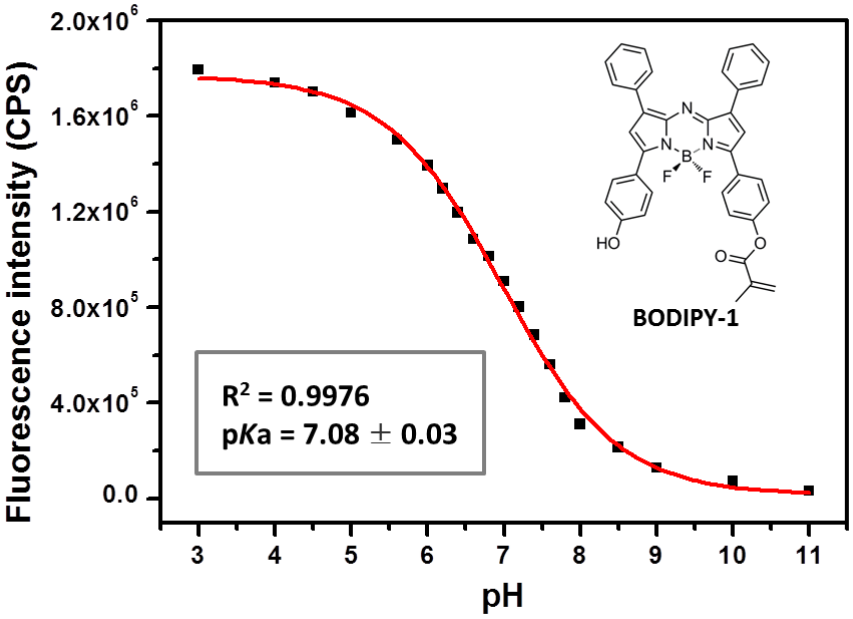

Figure S1. The pH calibration curve of **BODIPY-1** based on fluorescence emission, observed in the emission maximum at λ_{em} = 706 nm.

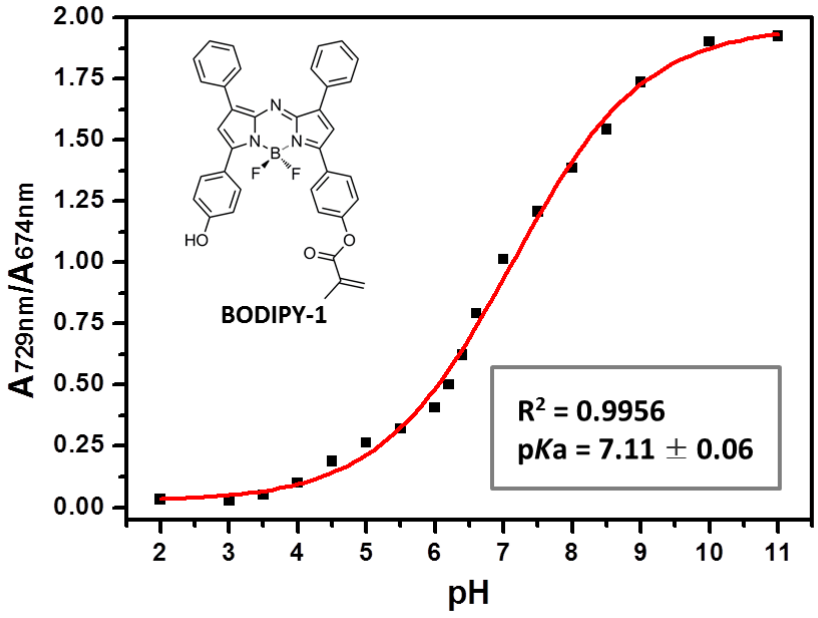

Figure S2. The pH calibration curve of **BODIPY-1** based on absorption, observed in the the absorbance ratios $A_{729\ nm}/A_{674\ nm}$.

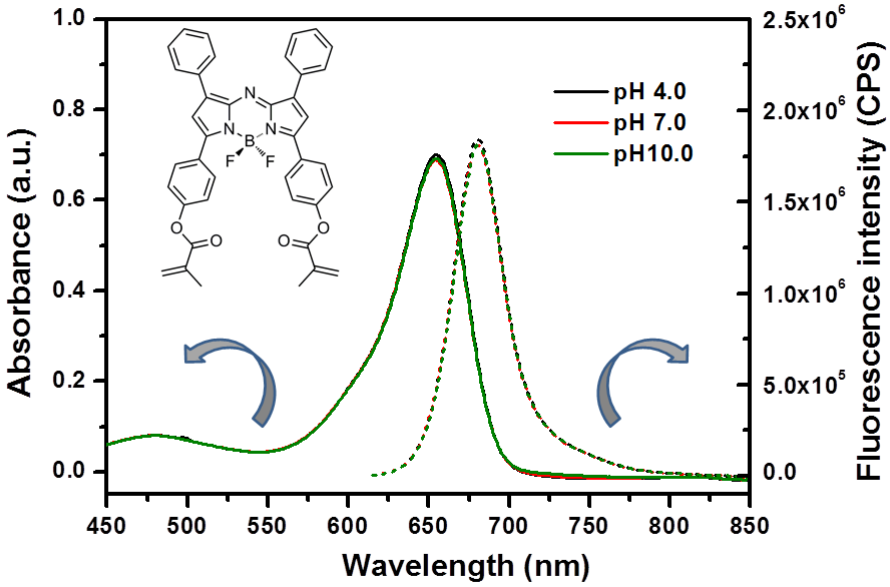

Figure S3. Absorption (solid lines) and emission (dashed lines, λ_{ex} = 600 nm) spectra of **BODIPY-2**.

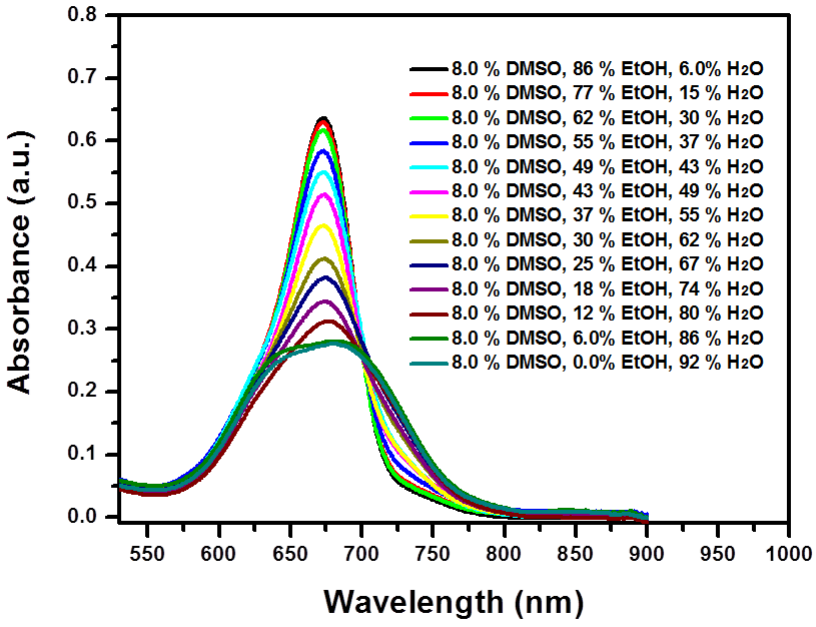

Figure S4. Absorbance spectra of **BODIPY-1** (10 μM) in co-solvent mixtures (mixed with DMSO, EtOH and water in different volume ratios) under acidic condition (pH 4.0).

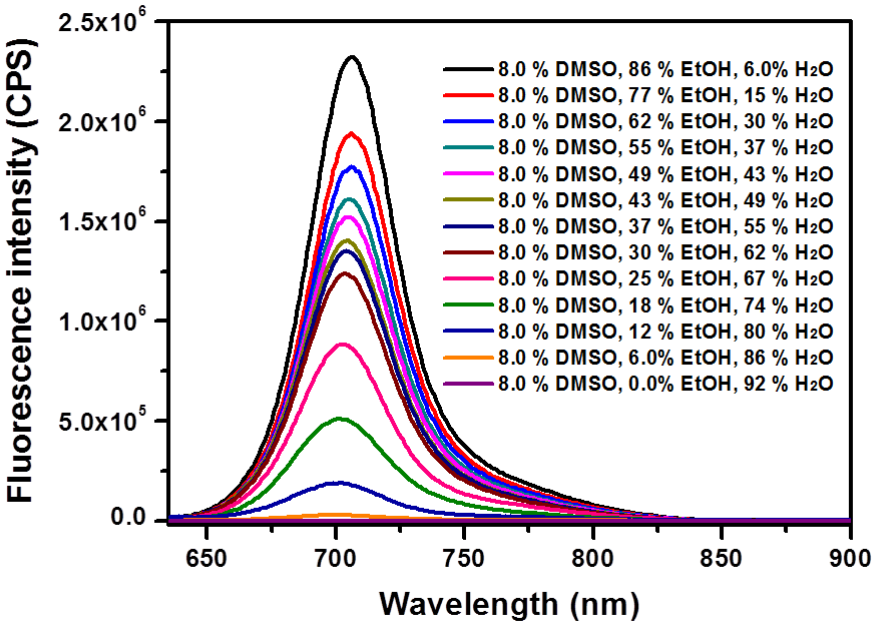

Figure S5. Fluorescence spectra of **BODIPY-1** (10 μM) in co-solvent mixtures (mixed with DMSO, EtOH and water in different volume ratios) under acidic condition (pH 4.0).

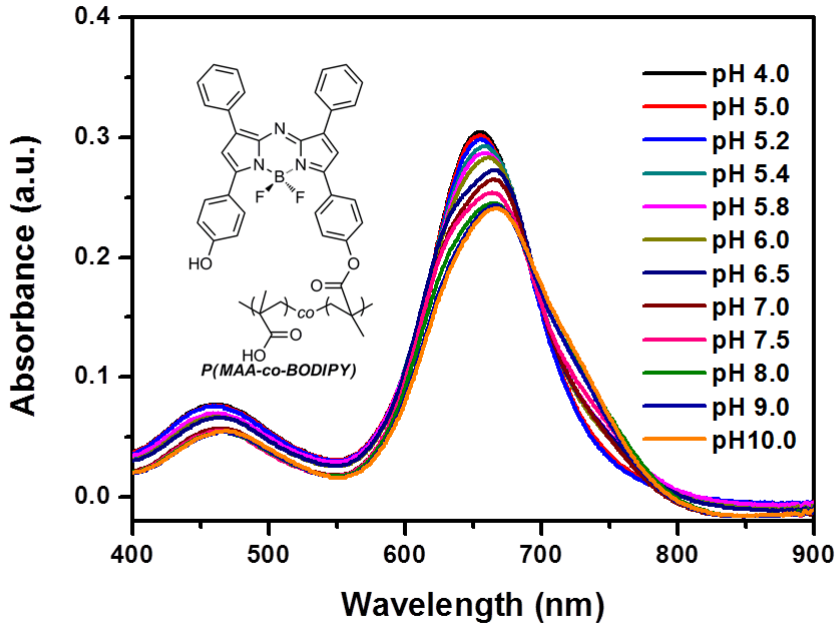

Figure S6. Absorption spectra of P(MAA-*co*-BODIPY) (0.10 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution.

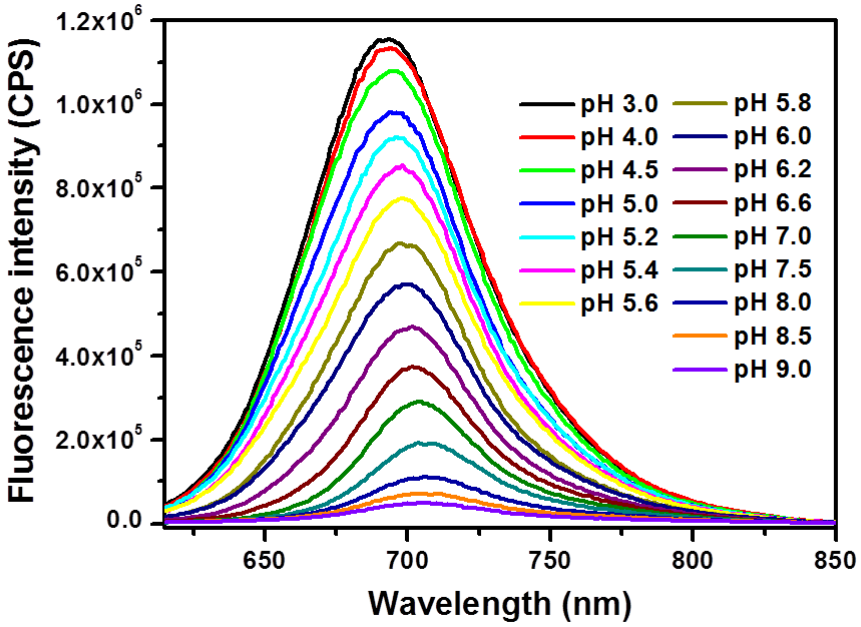

Figure S7. Fluorescence spectra of P(MAA-*co*-BODIPY) (0.10 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution, λ_{ex} = 600 nm.

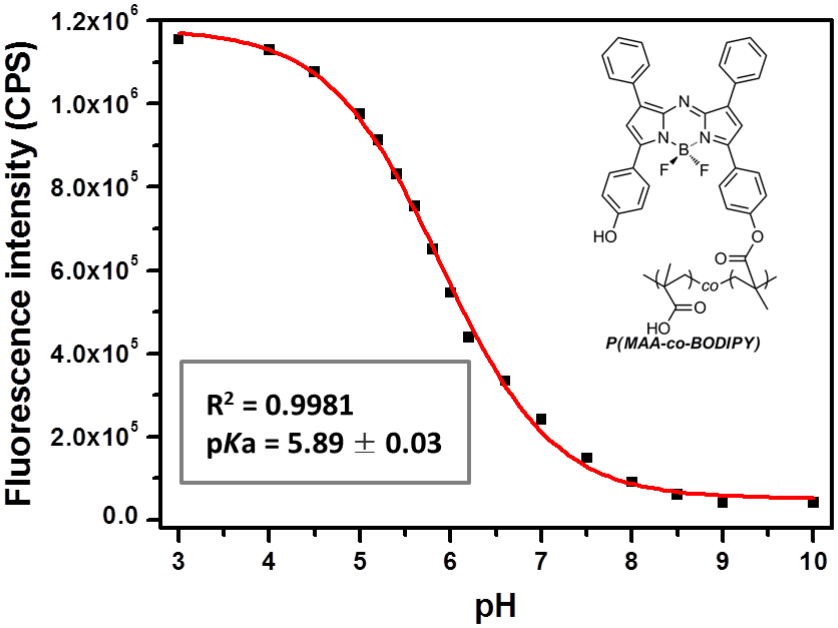

Figure S8. The pH calibration curve of P(MAA-*co*-BODIPY) based on fluorescence emission, observed in the emission maximum at λ_{em} = 694 nm.

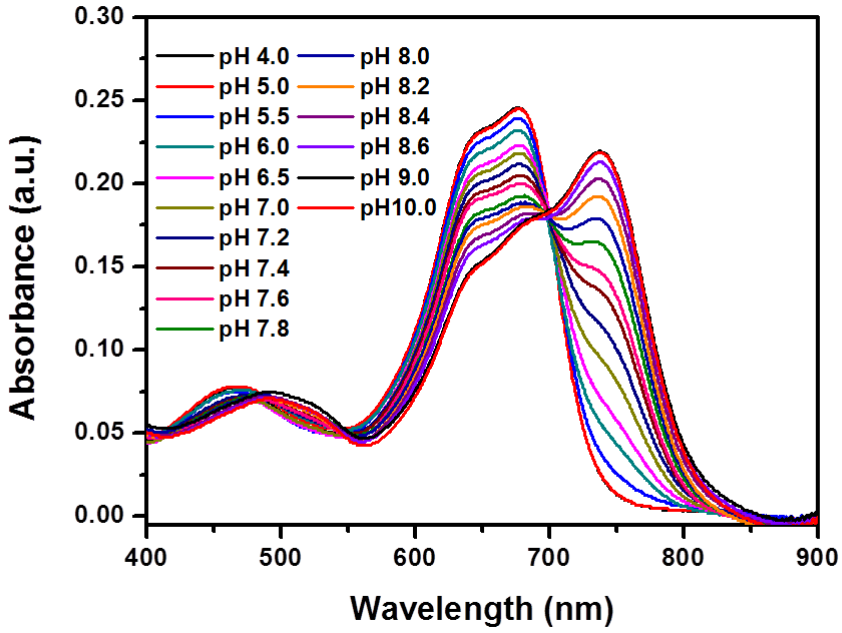

Figure S9. Absorption spectra of P(PEGMA-*co*-BODIPY) (0.10 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution.

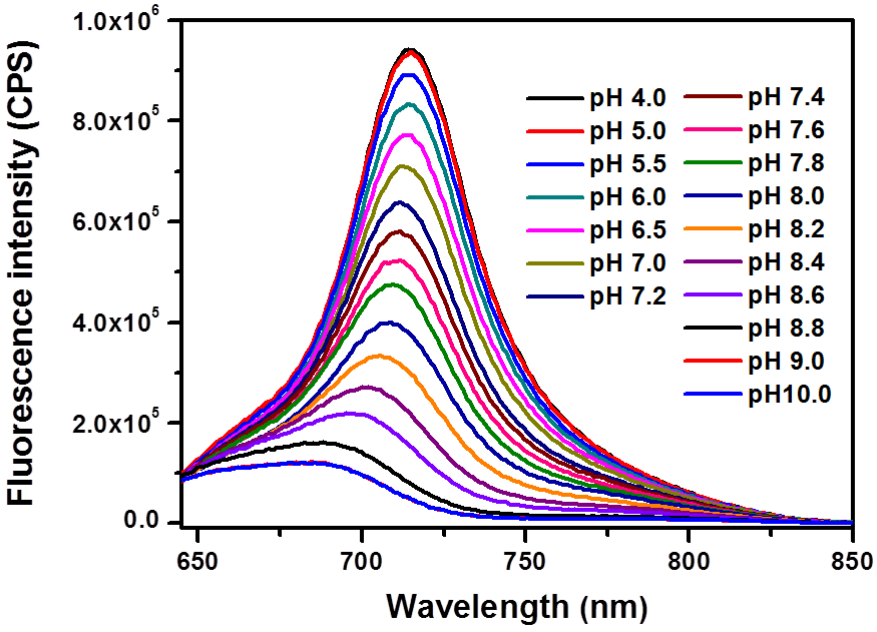

Figure S10. Fluorescence spectra of P(PEGMA-*co*-BODIPY) (0.10 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution, λ_{ex} = 620 nm.

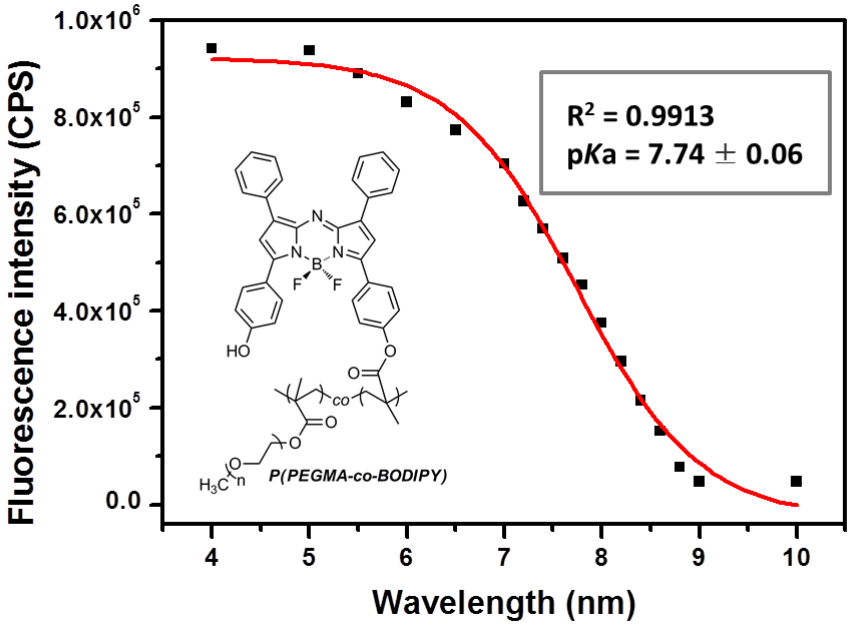

Figure S11. The pH calibration curve of P(PEGMA-*co*-BODIPY) based on fluorescence emission, observed in the emission maximum at λ_{em} = 715 nm.

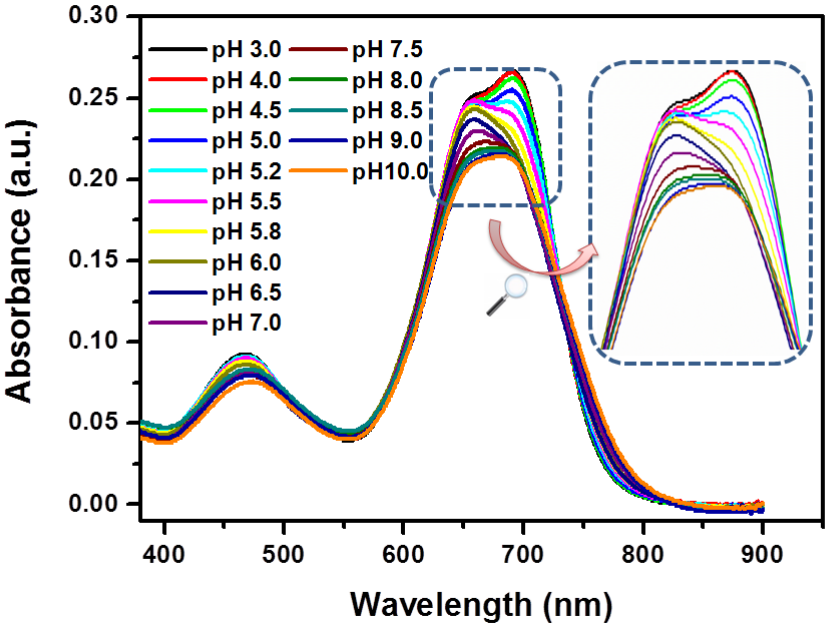

Figure S12. Absorption spectra of P(PEGMA-*co*-MAA-*co*-BODIPY) (0.25 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution.

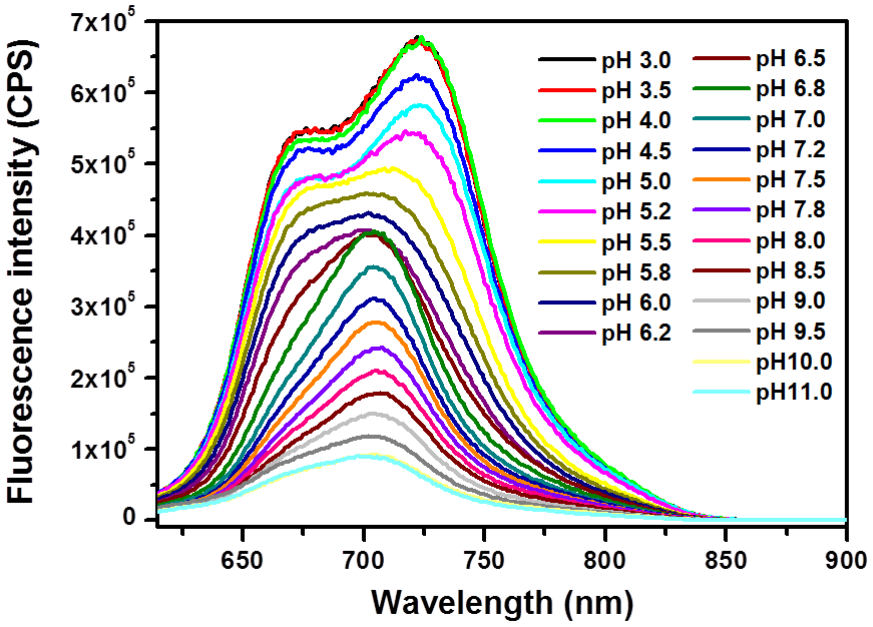

Figure S13. Fluorescence spectra of P(PEGMA-*co*-MAA-*co*-BODIPY) (0.25 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution, λ_{ex} = 600 nm.

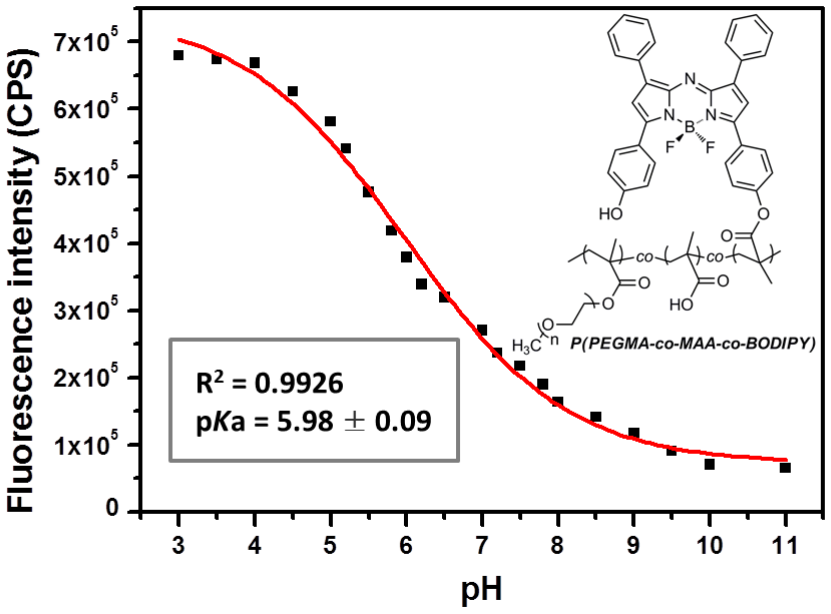

Figure S14. The pH calibration curve of P(PEGMA-*co*-MAA-*co*-BODIPY) based on fluorescence emission, observed in the emission maximum at λ_{em} = 722 nm.

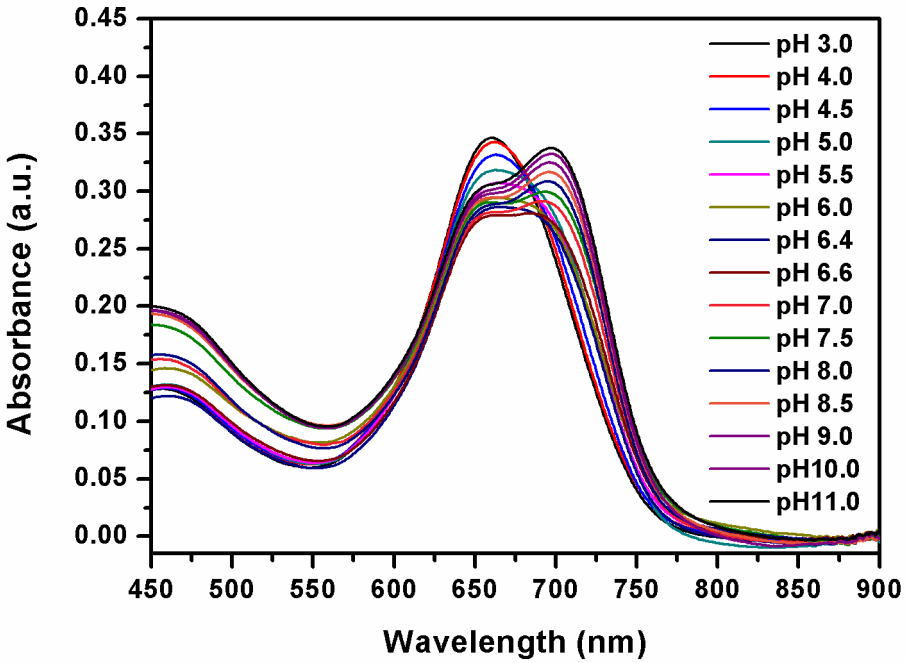

Figure S15. Absorption spectra of PPEGMA-*b*-P(MAA--*co*-BODIPY) (0.25 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution.

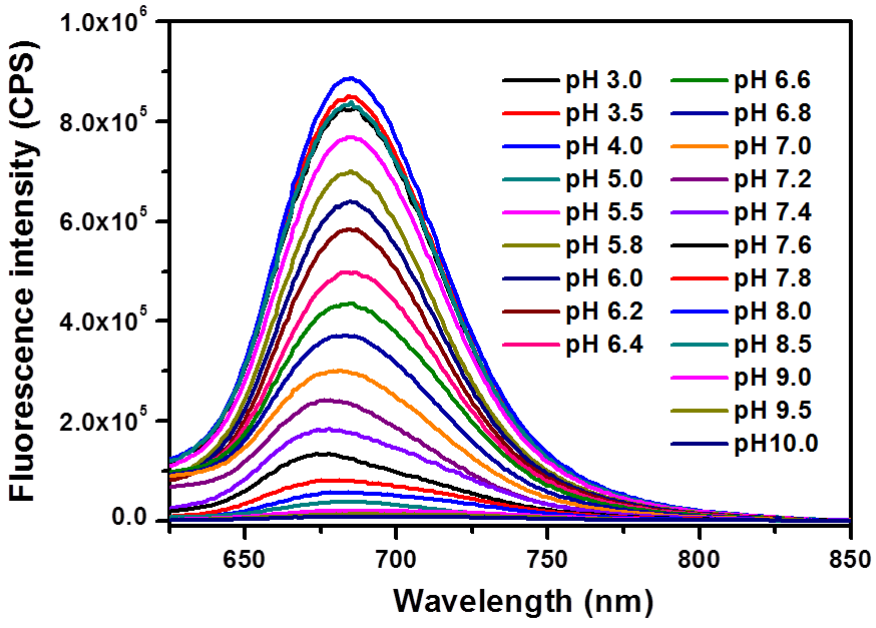

Figure S16. Fluorescence spectra of PPEGMA-*b*-P(MAA--*co*-BODIPY) (0.25 mg/mL) under different pH in Na_2HPO_4-citric acid buffer solution, λ_{ex} = 600 nm.

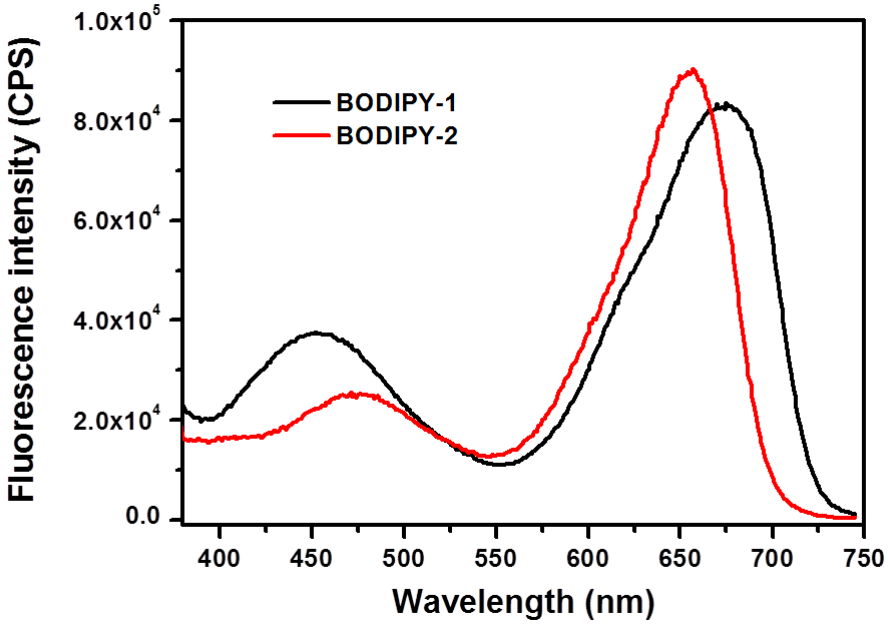

Figure S17. Excitation spectra of **BODIPY-1** (10 μM) and **BODIPY-2** (10 μM). Conditions: DMSO–ethanol–Na_2HPO_4-citric acid buffer solution (50 mM, 8/62/30 %, v/v/v, pH 4.0, rt), λ_{em} = 750 nm.

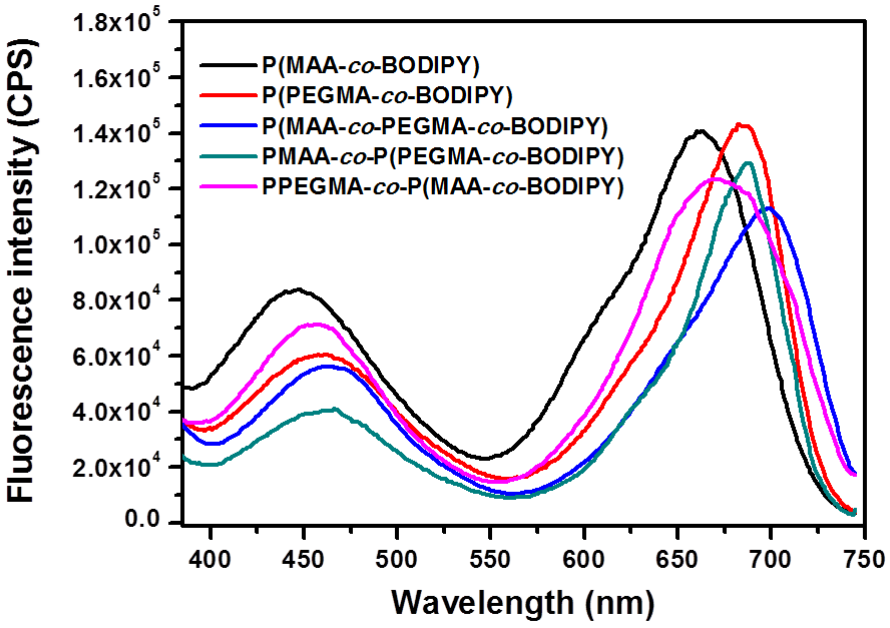

Figure S18. Excitation spectra of polymers in Na_2HPO_4-citric acid buffer solution (50 mM, pH 4.0, rt), λ_{em} = 750 nm.

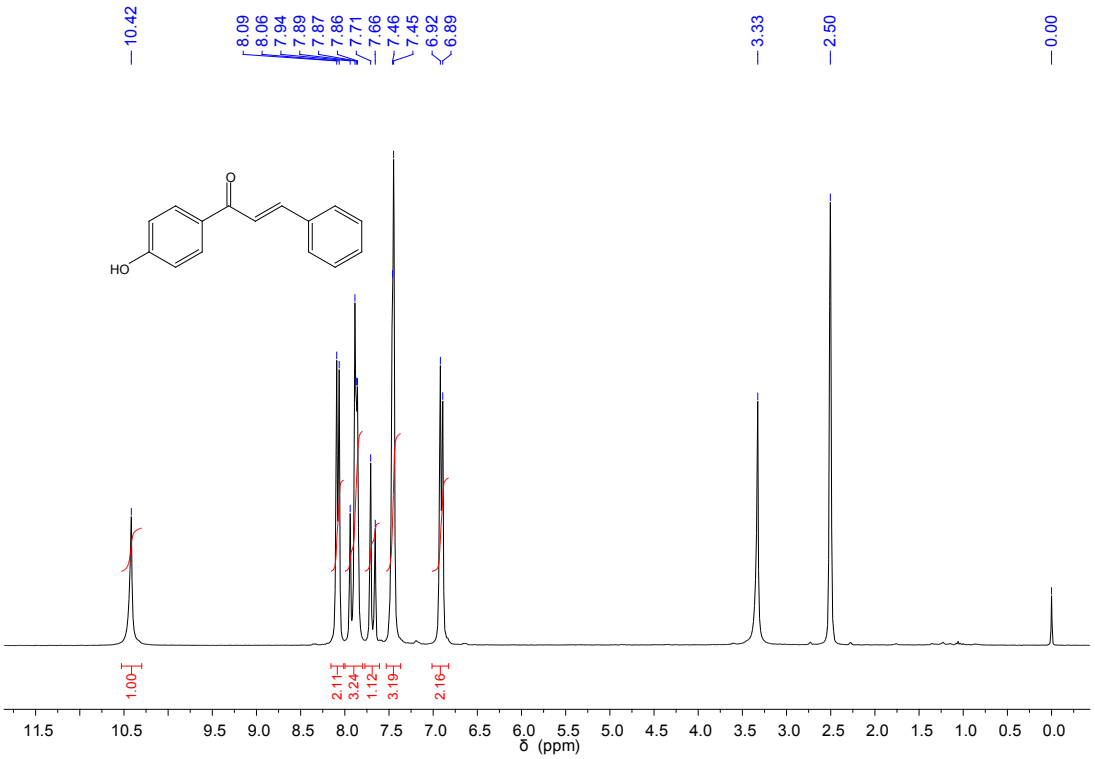

Figure S19. [1]H NMR spectrum of compound **1** in DMSO-d_6.

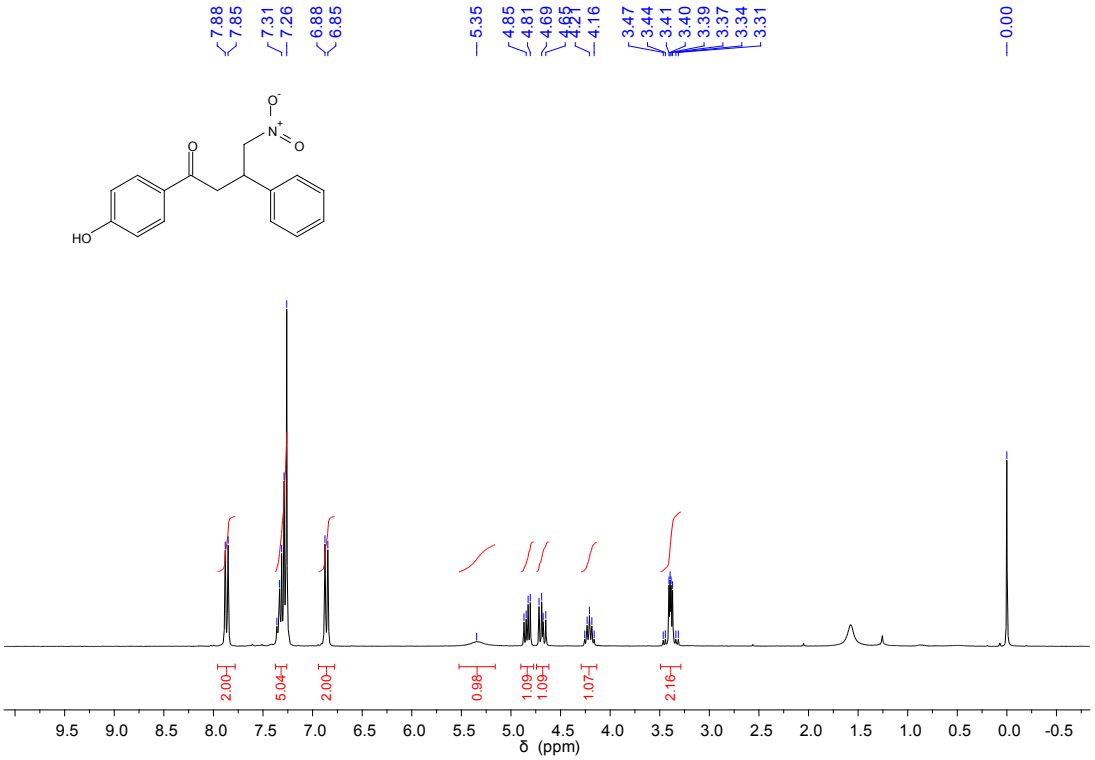

Figure S20. [1]H NMR spectrum of compound **2** in DMSO-d_6.

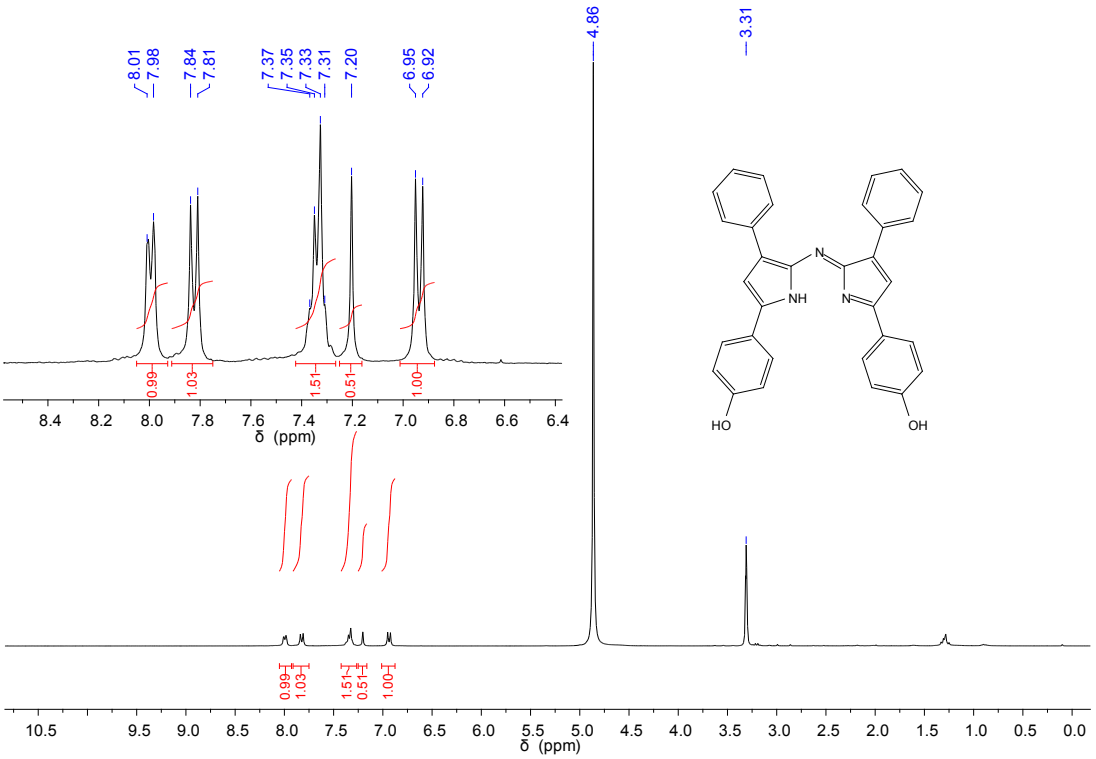

Figure S21. ^{1}H NMR spectrum of compound **3** in CD_3OD.

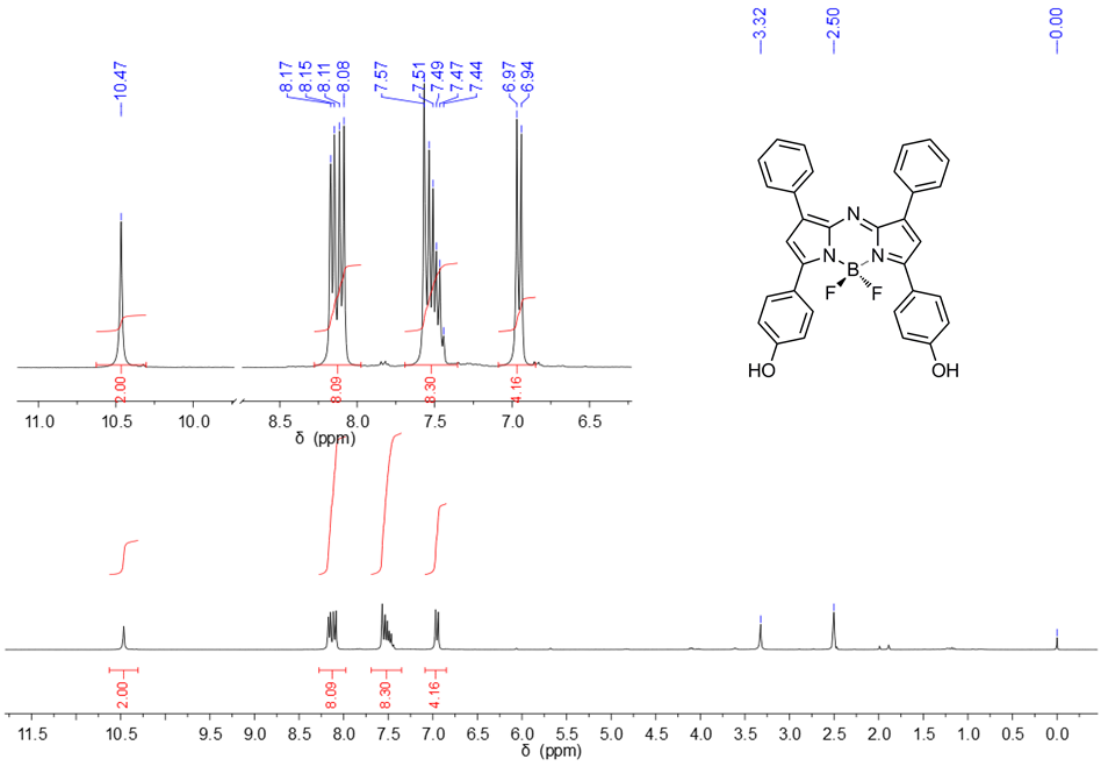

Figure S22. ^{1}H NMR spectra of compound **4** in DMSO-d_6.

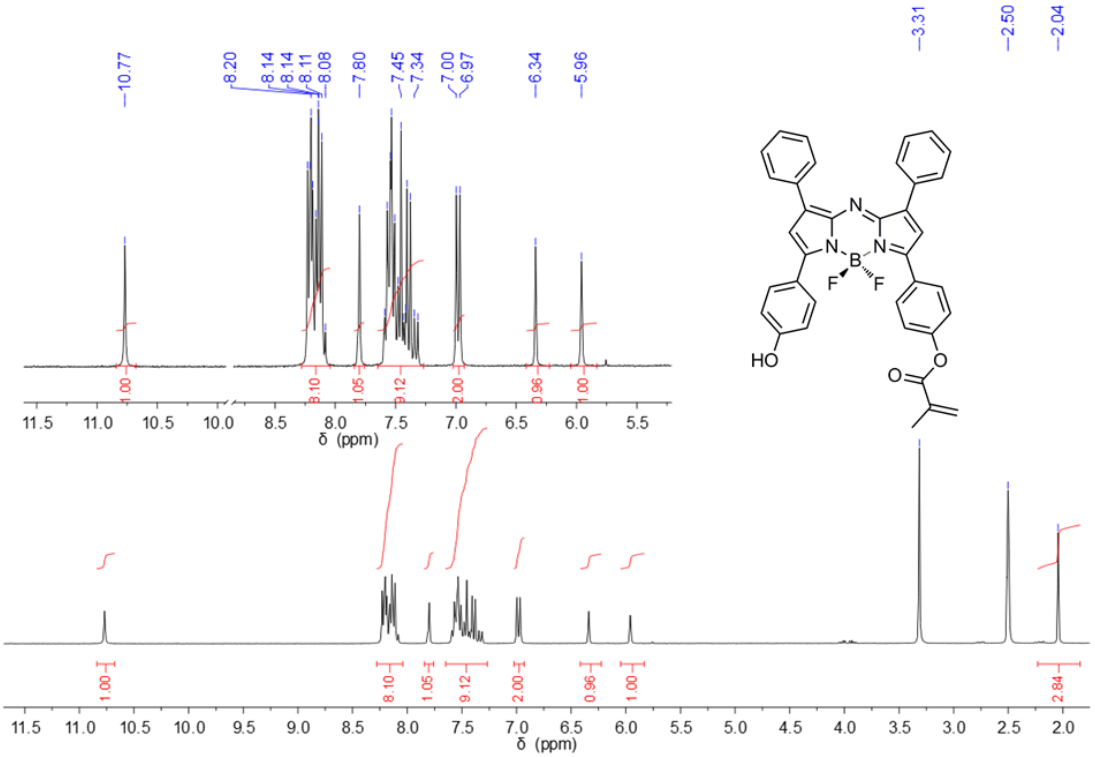

Figure S23. ^{1}H NMR spectrum of **BODIPY-1** in DMSO-d_6.

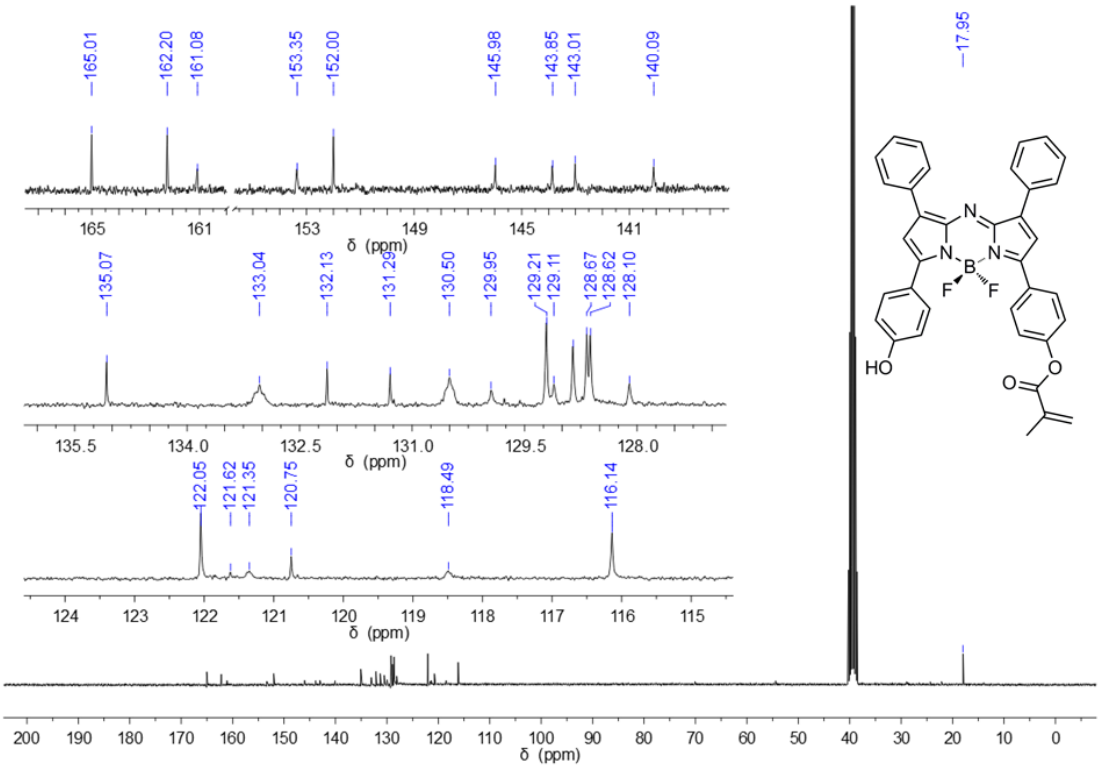

Figure S24. ^{13}C NMR spectrum of **BODIPY-1** in DMSO-d_6.

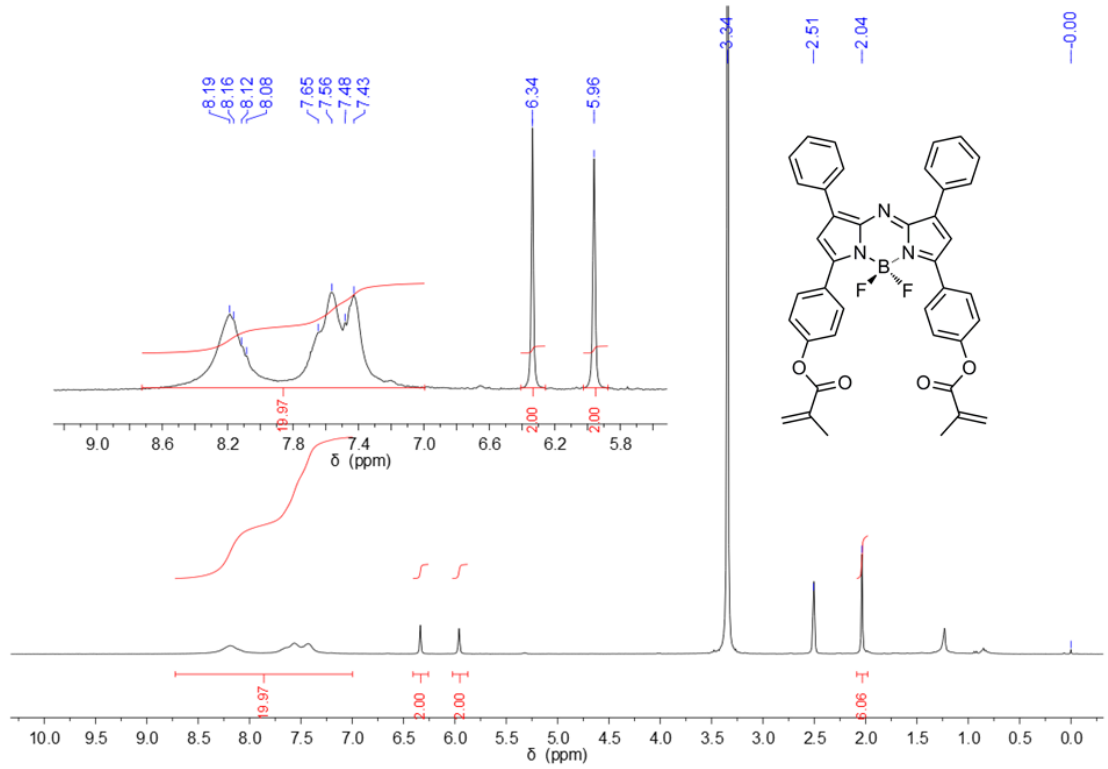

Figure S25. [1]H NMR spectrum of **BODIPY-2** in DMSO-d_6.

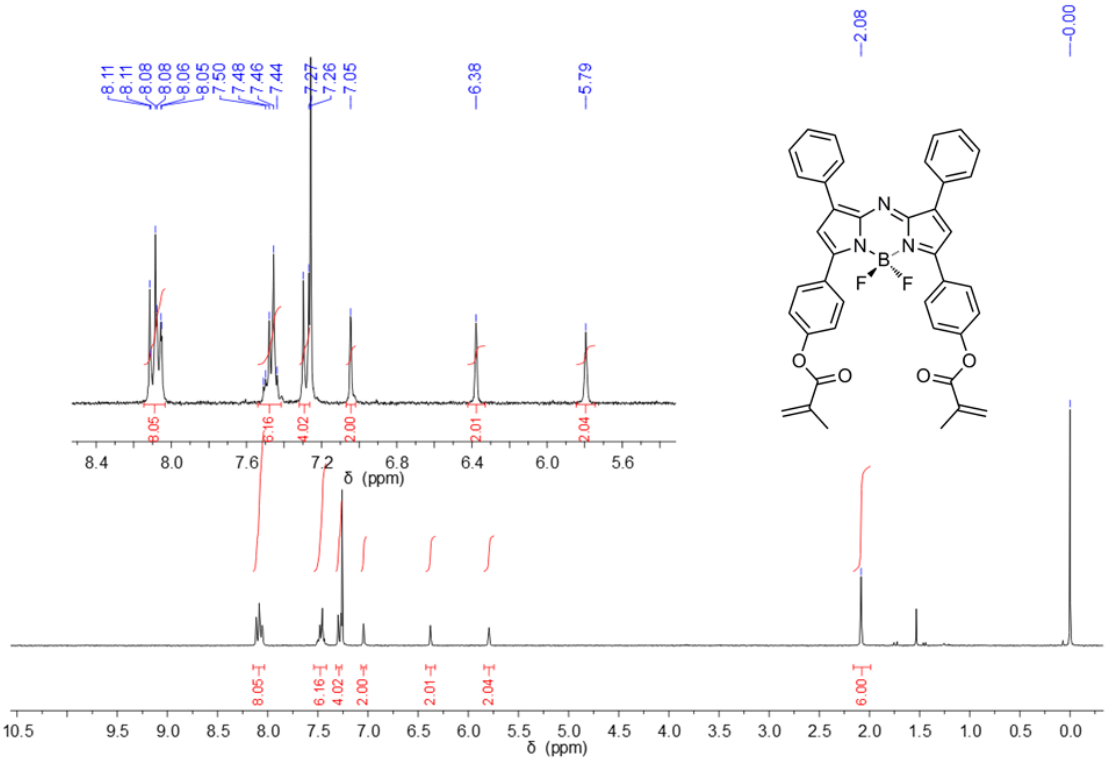

Figure S26. [1]H NMR spectrum of **BODIPY-2** in $CDCl_3$.

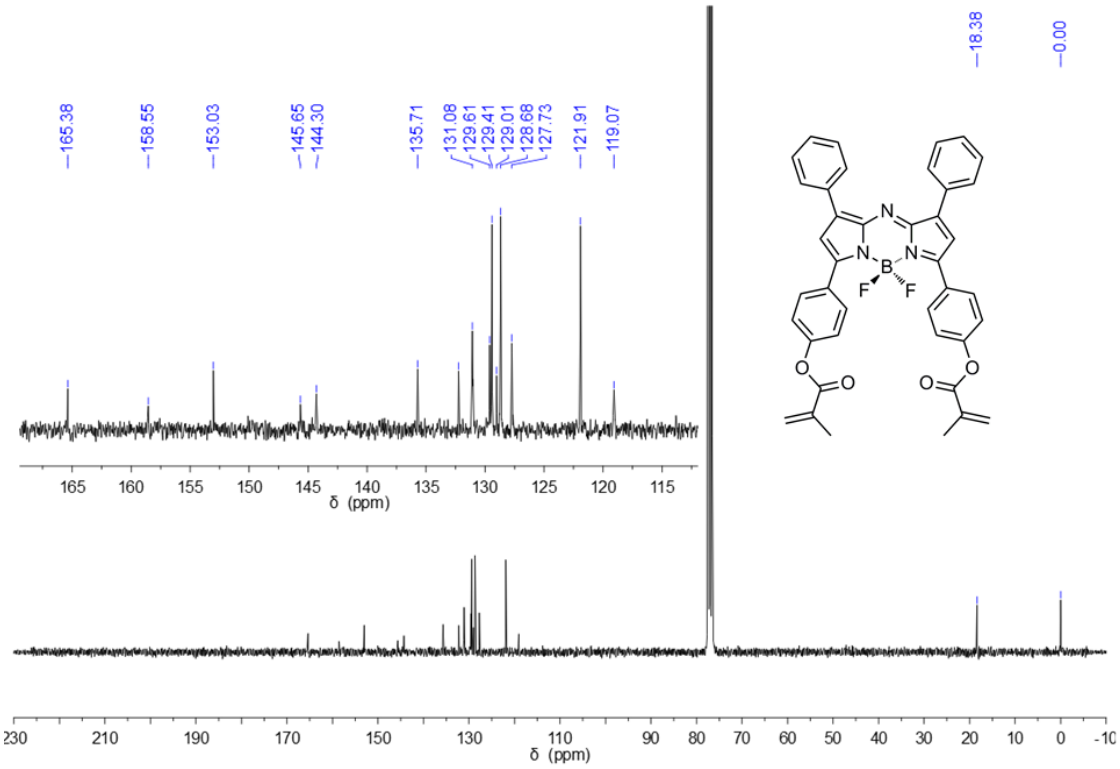

Figure S27. ^{13}C NMR spectrum of **BODIPY-2** in $CDCl_3$.

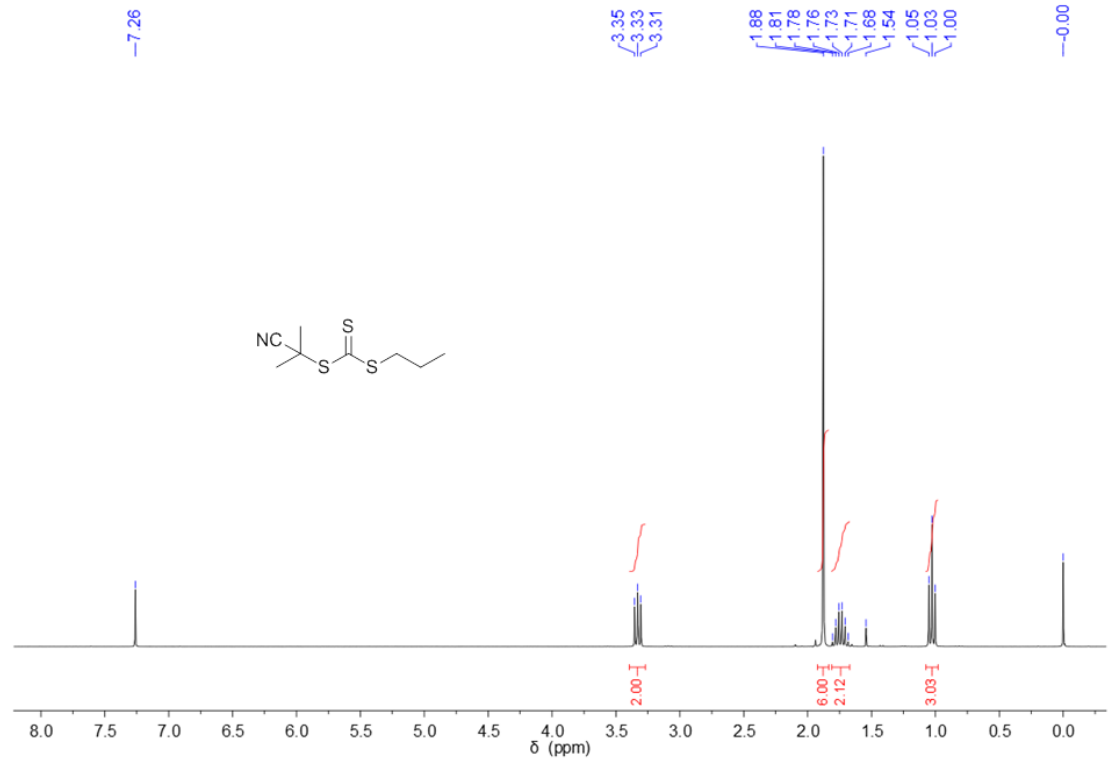

Figure S28. ^{1}H NMR spectrum of **CPPTC** in $CDCl_3$.

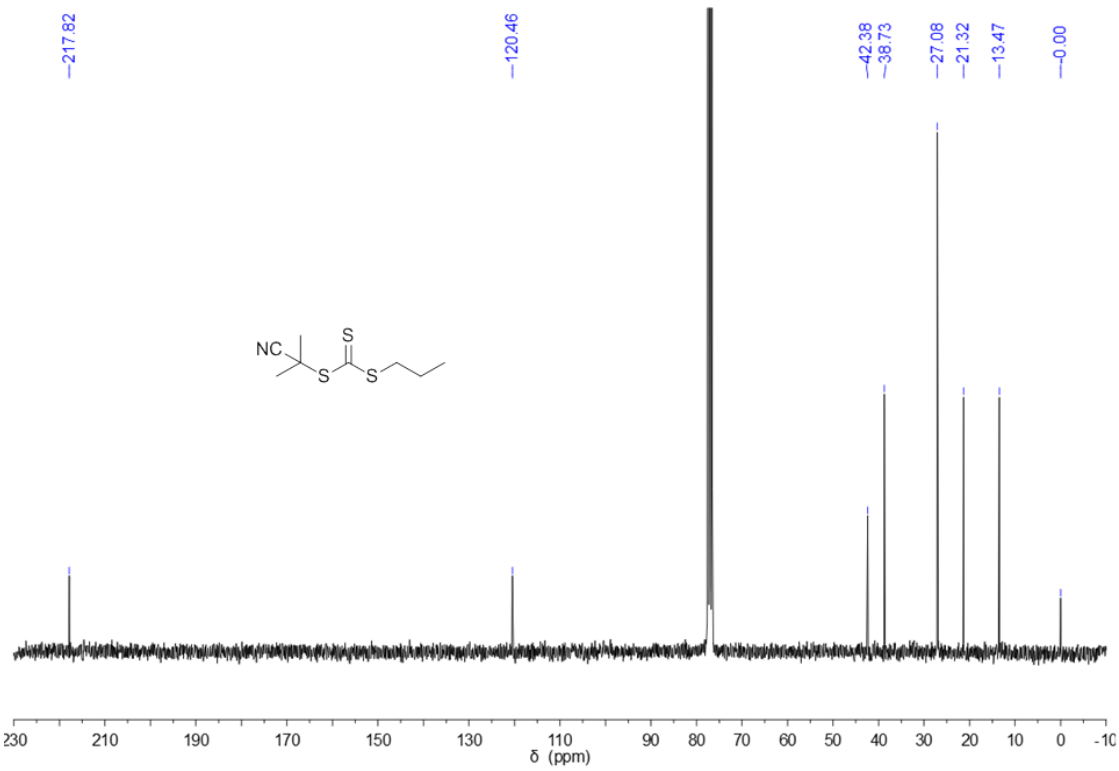

Figure S29. ^{13}C NMR spectrum of **CPPTC** in $CDCl_3$.

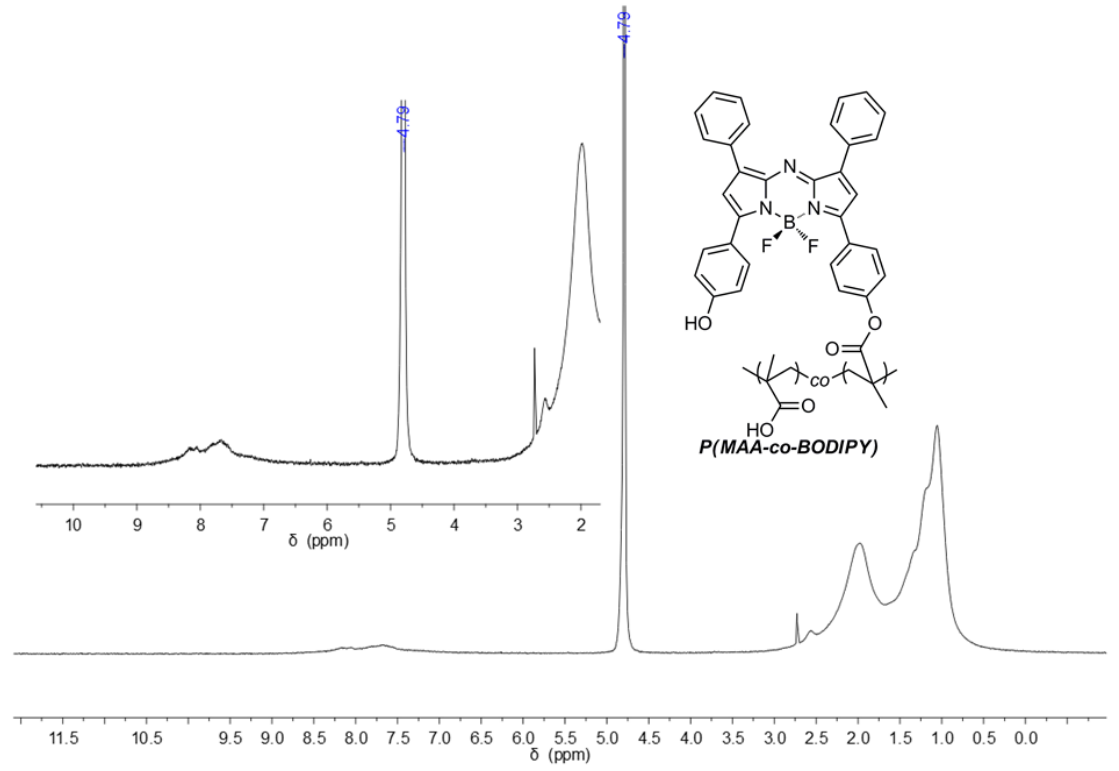

Figure S30. ^{1}H NMR spectrum of polymer P(MAA-*co*-BODIPY) in D_2O.

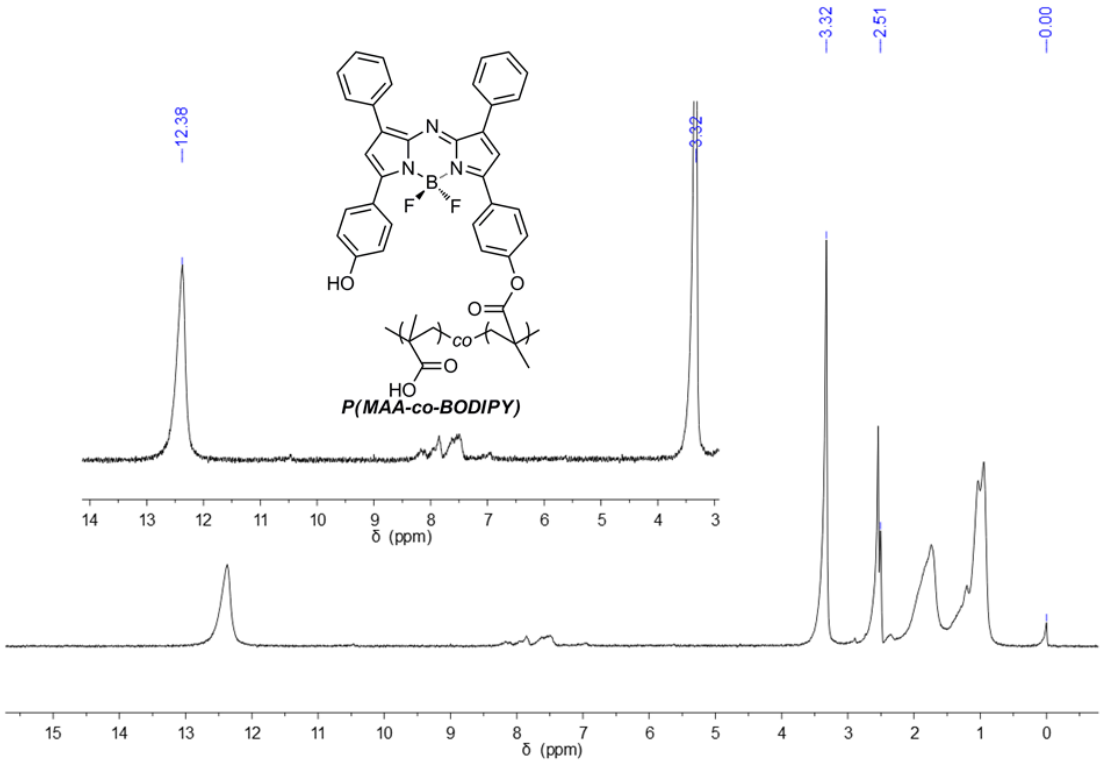

Figure S31. ^{1}H NMR spectrum of polymer P(MAA-*co*-BODIPY) in DMSO-d_6.

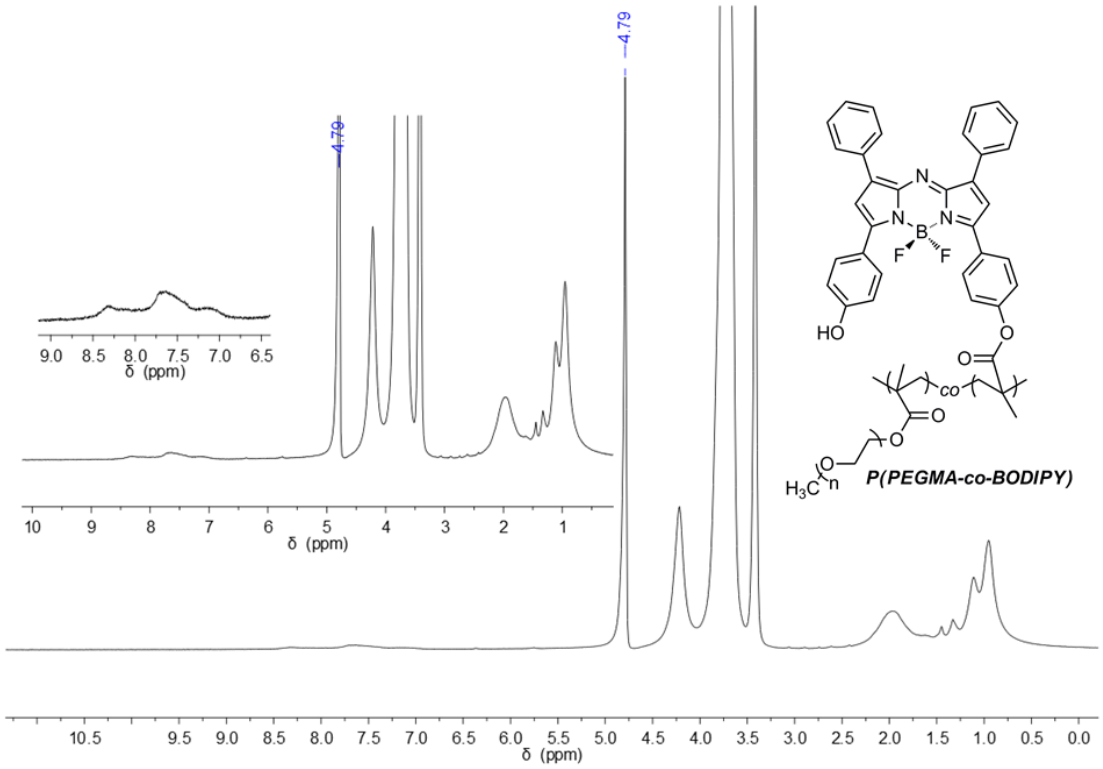

Figure S32. ^{1}H NMR spectrum of polymer P(PEGMA-*co*-BODIPY) in D_2O.

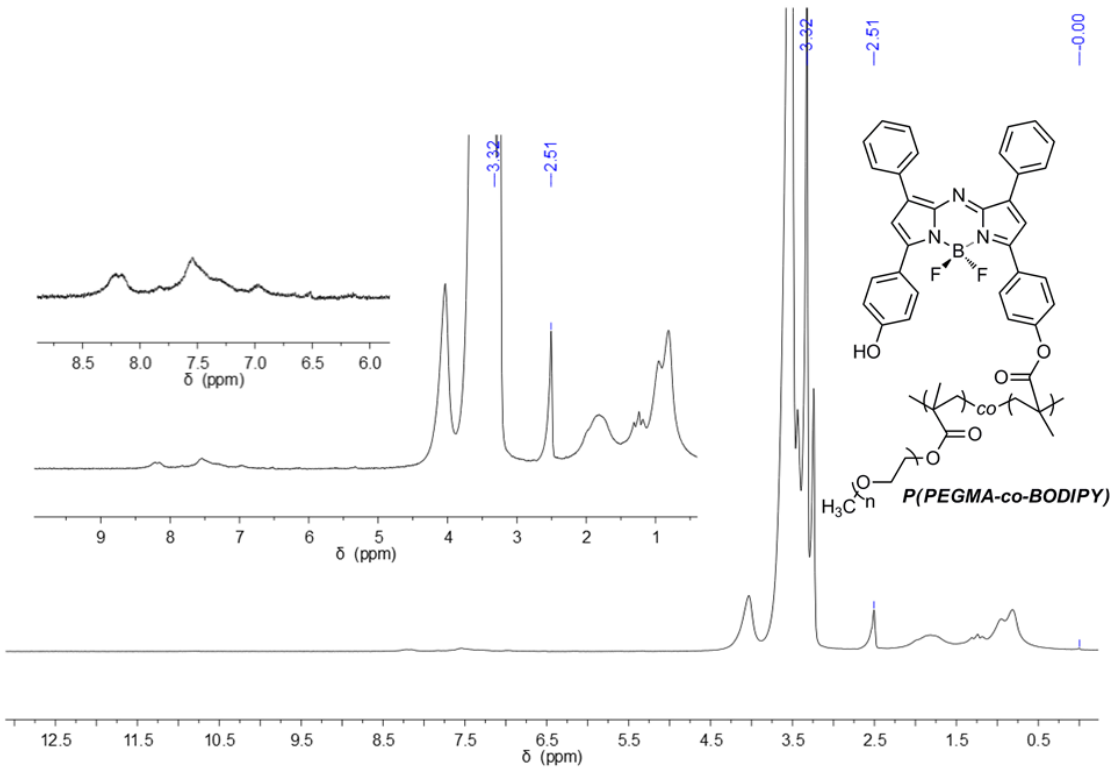

Figure S33. ^{1}H NMR spectrum of polymer P(PEGMA-*co*-BODIPY) in DMSO-d_6.

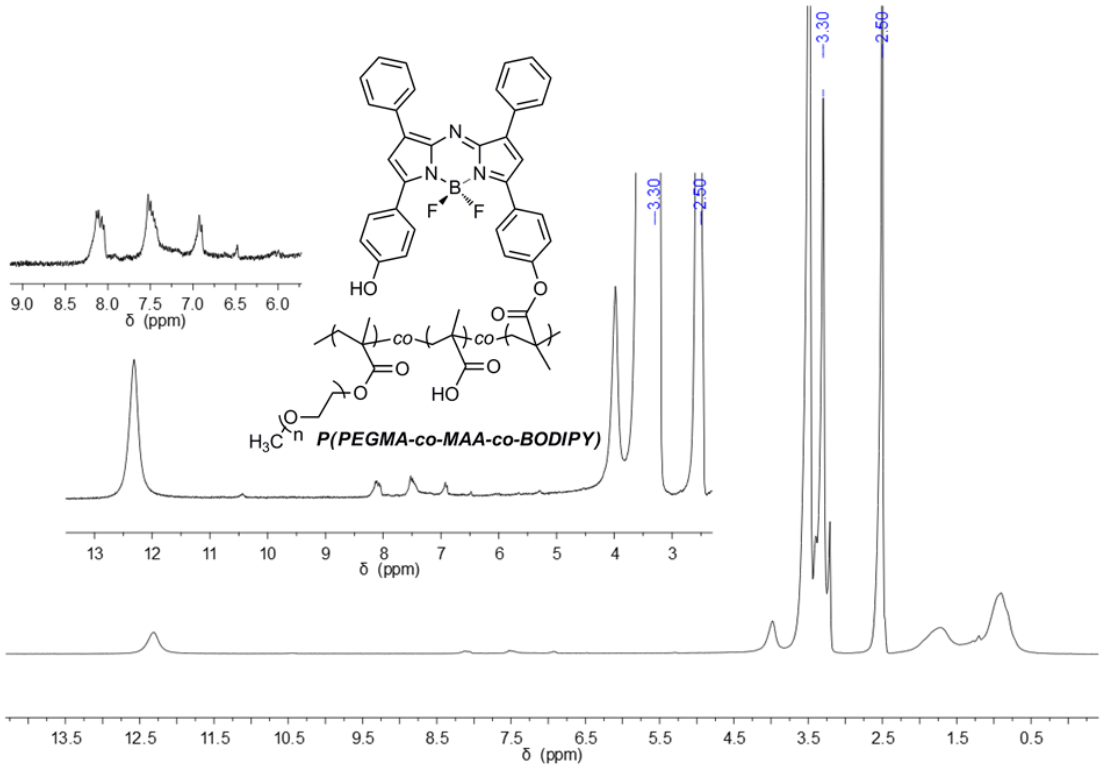

Figure S34. ^{1}H NMR spectrum of P(PEGMA-*co*-MAA-*co*-BODIPY) in DMSO-d_6.

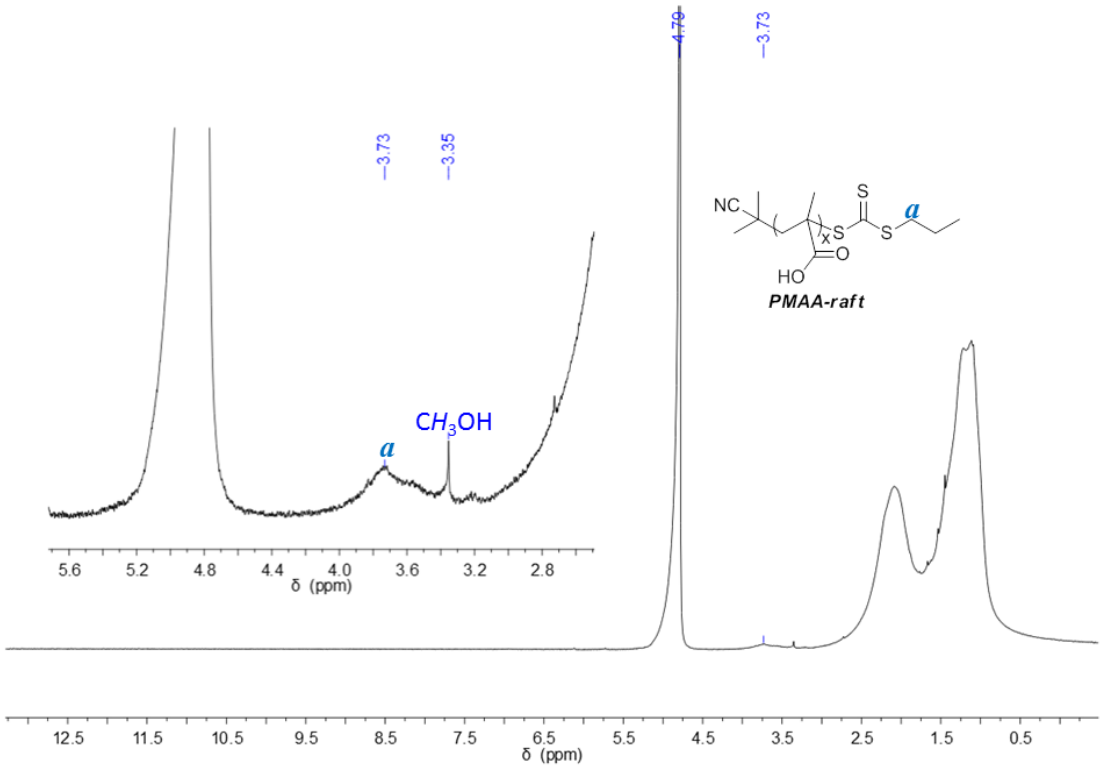

Figure S35. ^{1}H NMR spectrum of polymer **PMAA-raft** in D_2O.

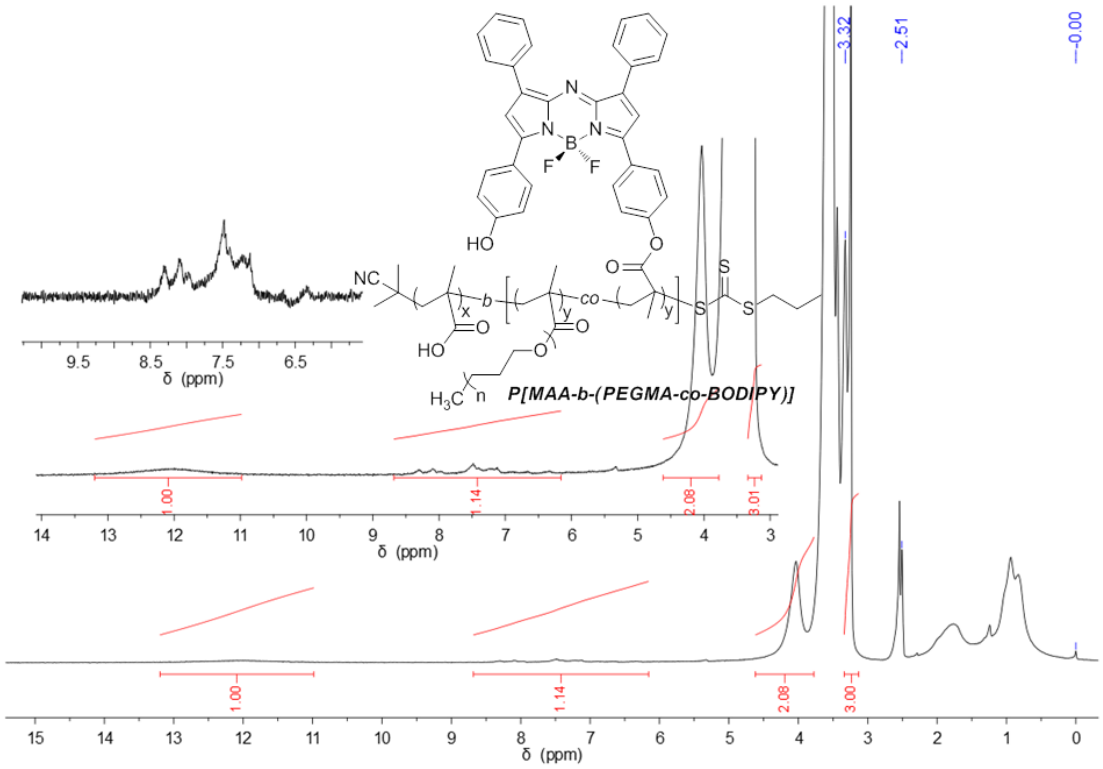

Figure S36. ^{1}H NMR spectrum of PMAA-*b*-P(PEGMA-*co*-BODIPY) in DMSO-d_6.

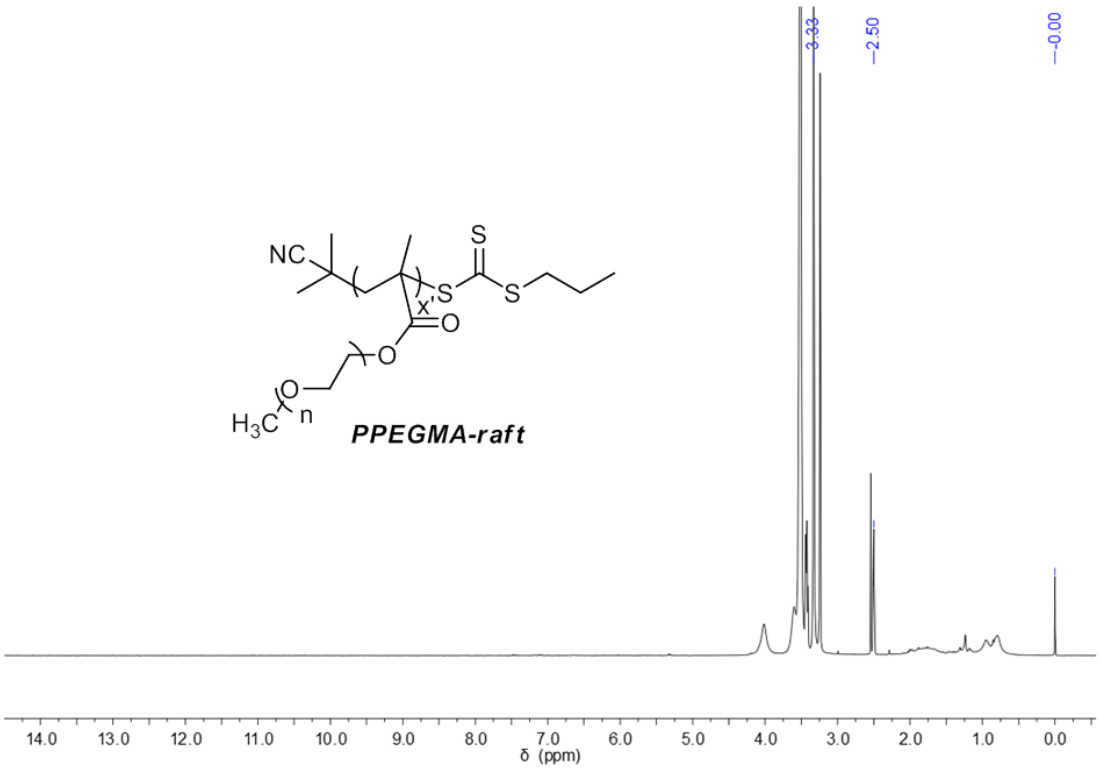

Figure S37. ^{1}H NMR spectrum of polymer **PPEGMA-raft** in DMSO-d_6.

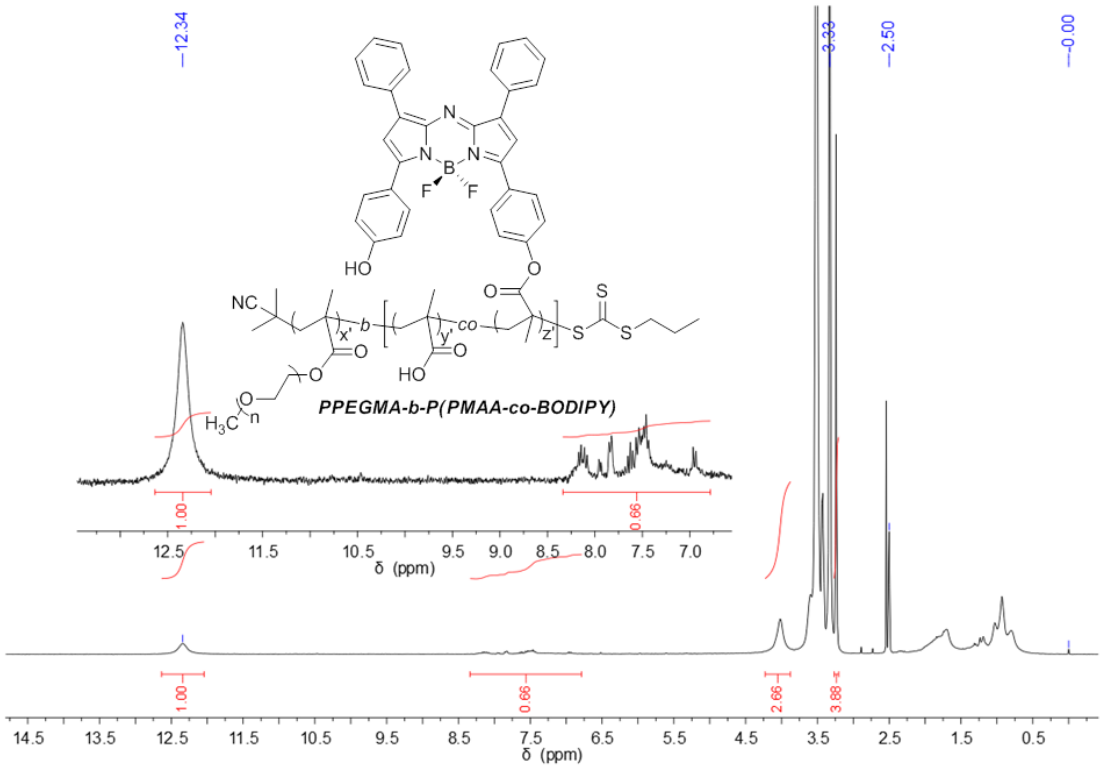

Figure S38. ^{1}H NMR spectrum of PPEGMA-*b*-P(MAA-*co*-BODIPY) in DMSO-d_6.

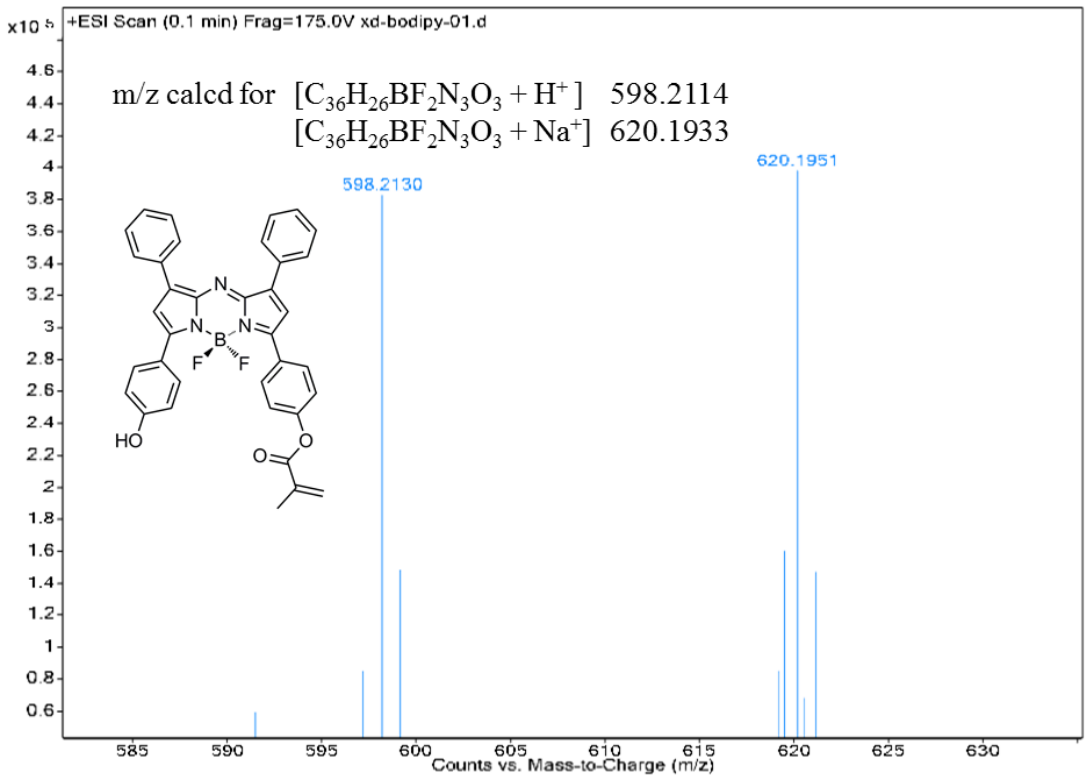

Figure S39. High resolution mass spectrum of **BODIPY-1**.

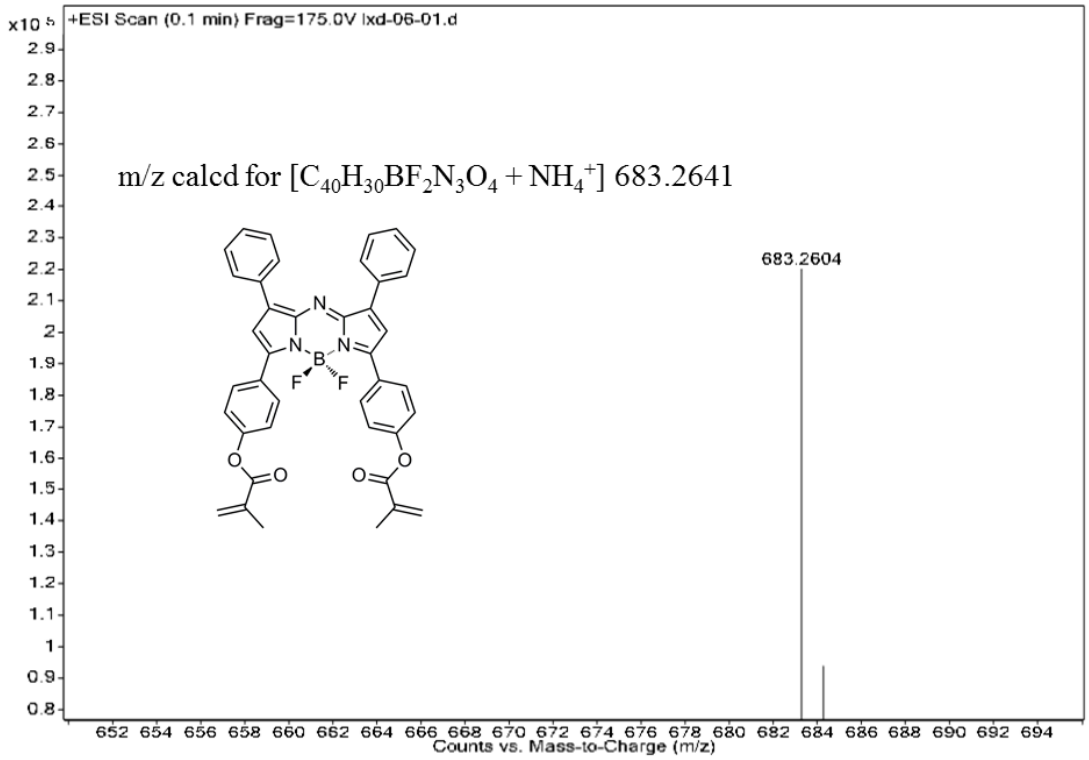

Figure S40. High resolution mass spectrum of **BODIPY-2**.

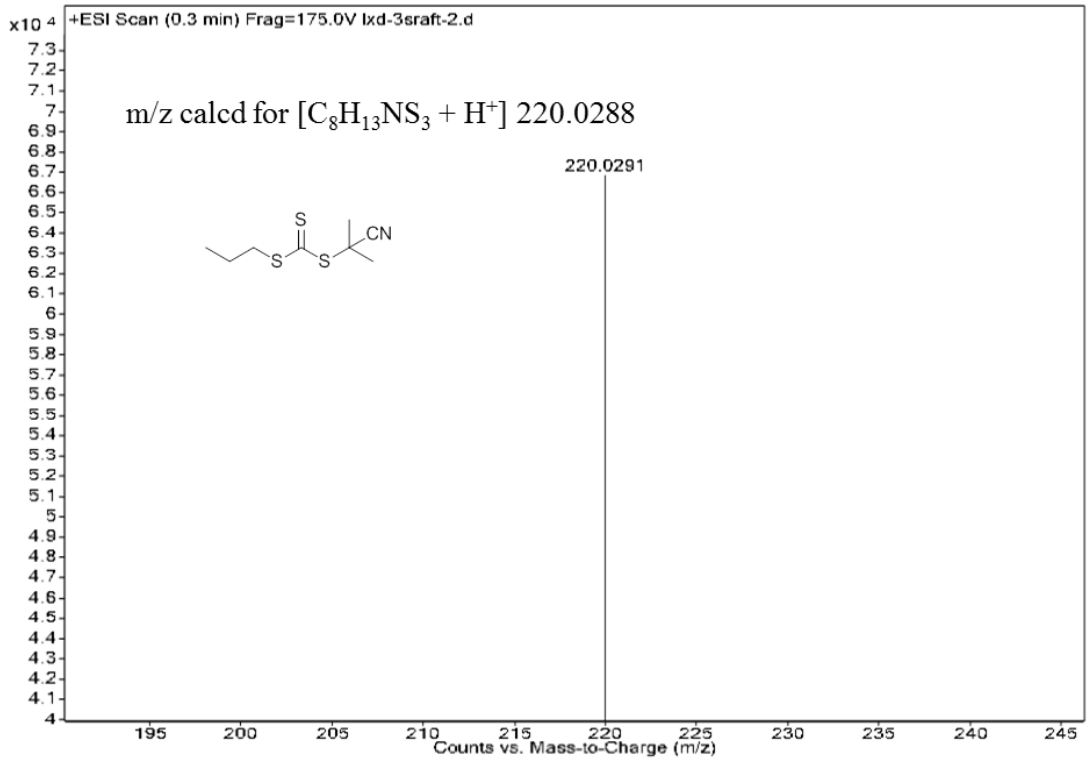

Figure S41. High resolution mass spectrum of **CPPTC**.

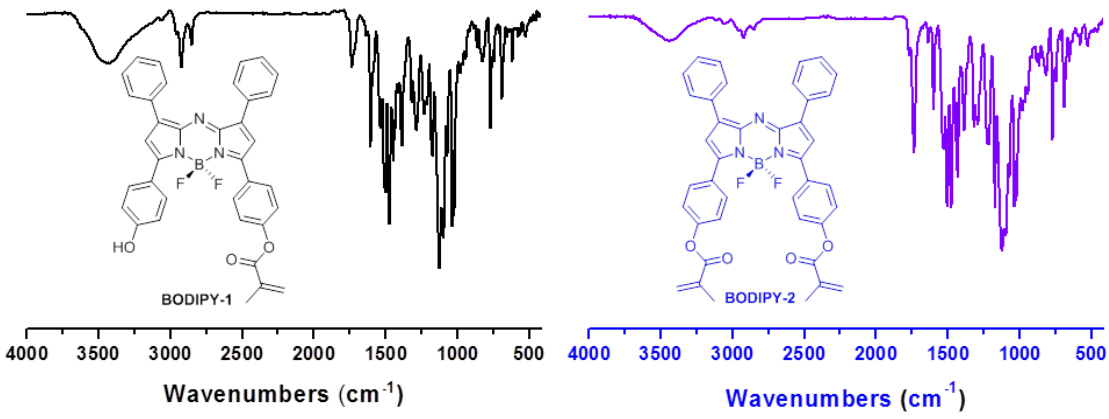

Figure S42. FT-IR spectra of **BODIPY-1** and **BODIPY-2**.

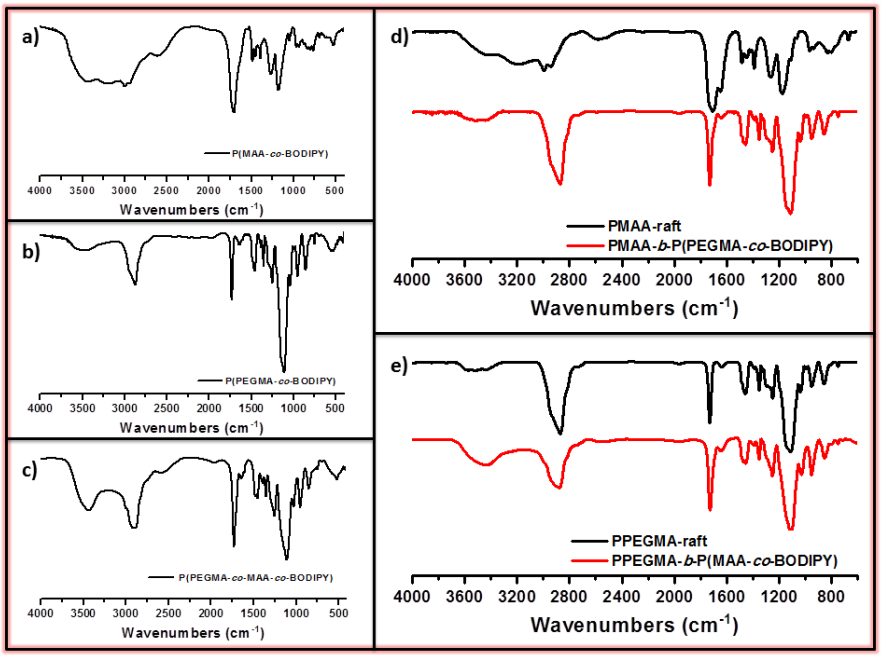

Figure S43. FT-IR spectra of (a) P(MAA-*co*-BODIPY), (b) P(PEGMA-co-BODIPY), (c) P(PEGMA-*co*-MAA-*co*-BODIPY), (d) PMAA-raft and PMAA-*b*-P(PEGMA-*co*-BODIPY), (e) PPEGMA-raft and PPEGMA-*b*-P(MAA--*co*-BODIPY).

Table S1 Concentrations of DOX-coordinated complexes ([DOX]/[COOH] = 0.75) and corresponding DOX concentrations in the medium.

RUN	P(MAA-*co*-PEGMA-*co*-BODIPY)		RUN	PMAA-*b*-P(PEGMA-*co*-BODIPY)	
	Sample polymer Concentration	DOX Concentration		Sample polymer Concentration	DOX Concentration
1	4.949 μg/mL	3 μg/mL	1’	7.770 μg/mL	3 μg/mL
2	9.897 μg/mL	6 μg/mL	2’	15.54 μg/mL	6 μg/mL
3	16.50 μg/mL	10 μg/mL	3’	25.90 μg/mL	10 μg/mL
4	24.74 μg/mL	15 μg/mL	4’	38.85 μg/mL	15 μg/mL
5	32.99 μg/mL	20 μg/mL	5’	51.80 μg/mL	20 μg/mL
6	39.59 μg/mL	24 μg/mL	6’	62.16 μg/mL	24 μg/mL
7	46.19 μg/mL	28 μg/mL	7’	72.52 μg/mL	28 μg/mL
8	52.78 μg/mL	32 μg/mL	8’	82.88 μg/mL	32 μg/mL
9	59.38 μg/mL	36 μg/mL	9’	93.24 μg/mL	36 μg/mL
10	65.98 μg/mL	40 μg/mL	10’	103.6 μg/mL	40 μg/mL