Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supplementary Information

(Co)Polymers Containing Boron Difluoride 3-Cyanoformazanate Complexes: Emission Enhancement via Random Copolymerization

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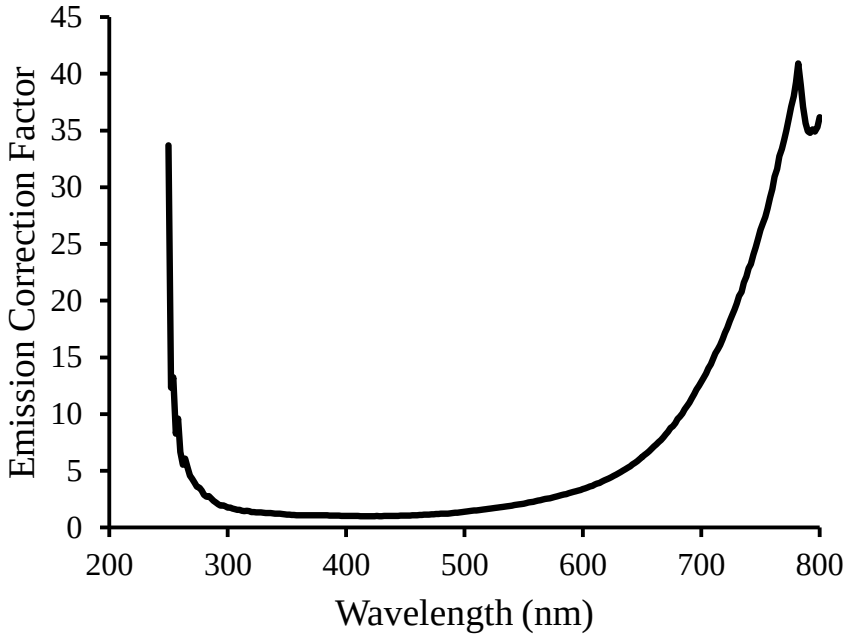

Fig. S1 Wavelength-dependent emission correction provided by Photon Technology International.

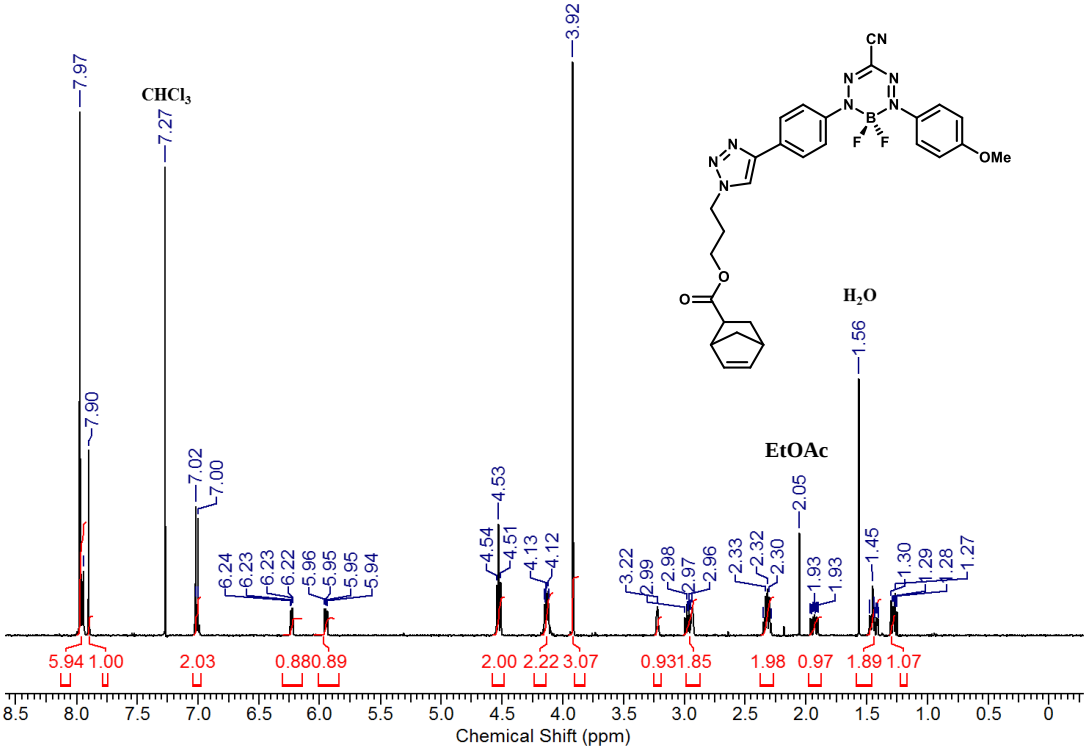

Fig. S2 ^{1}H NMR spectrum of monomer **BF2N** in $CDCl_3$.

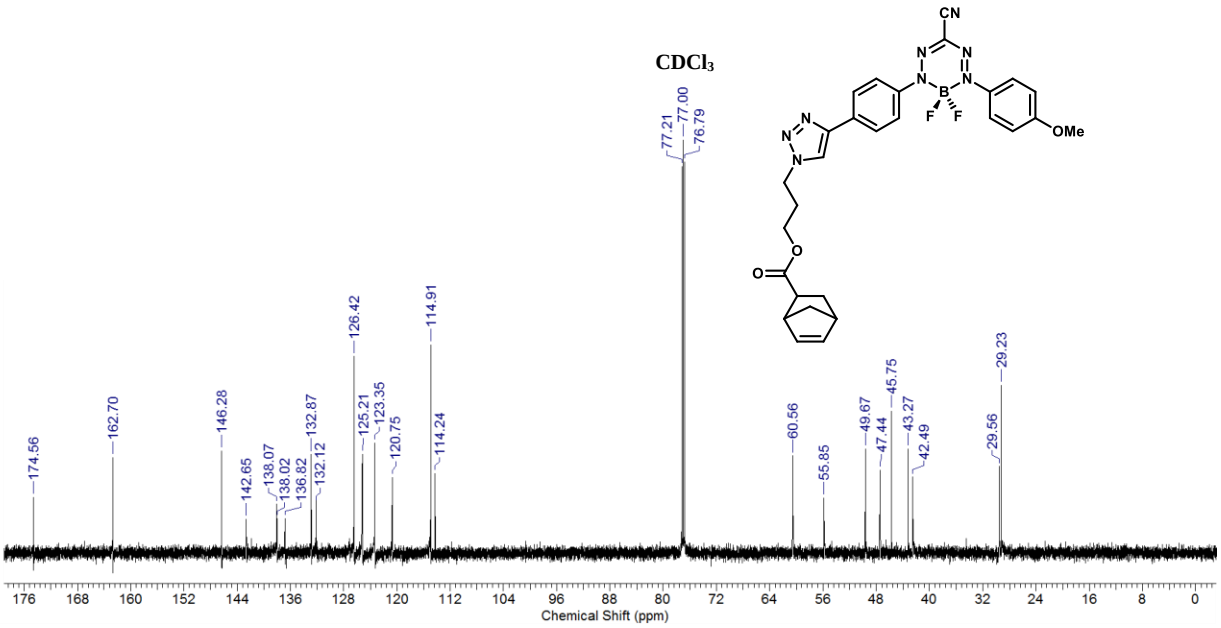

Fig. S3 $^{13}C\{^{1}H\}$ NMR spectrum of monomer **BF2N** in $CDCl_3$.

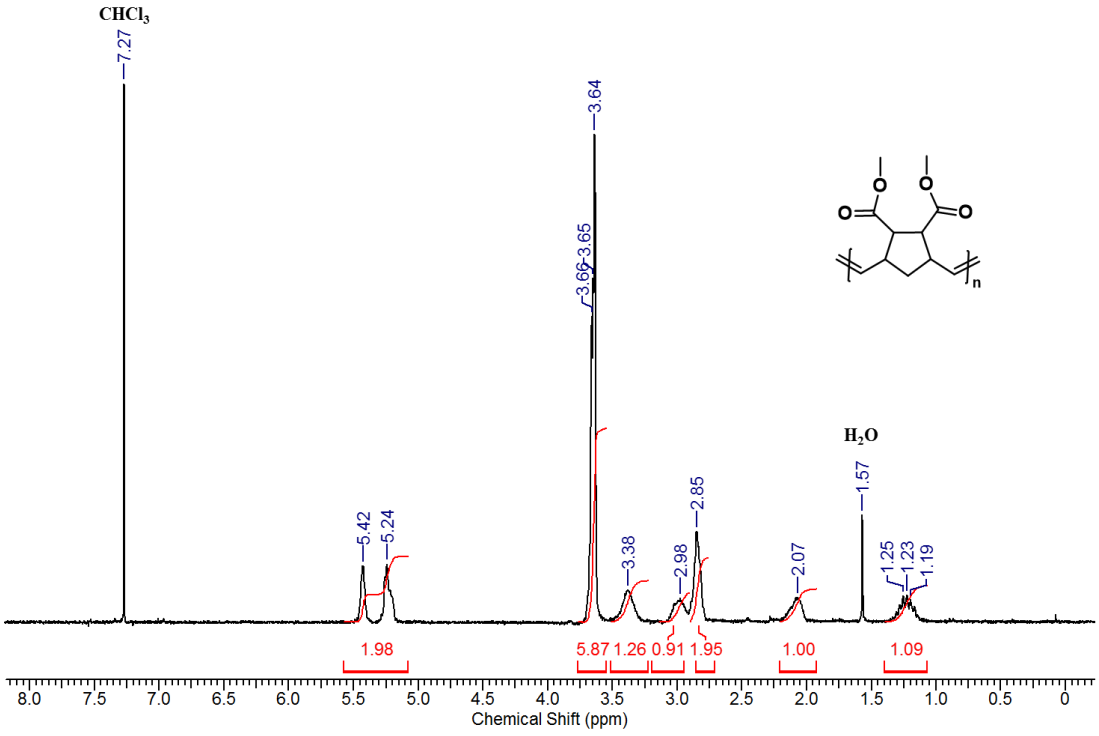

Fig. S4 ^{1}H NMR spectrum of **PDND** in $CDCl_3$.

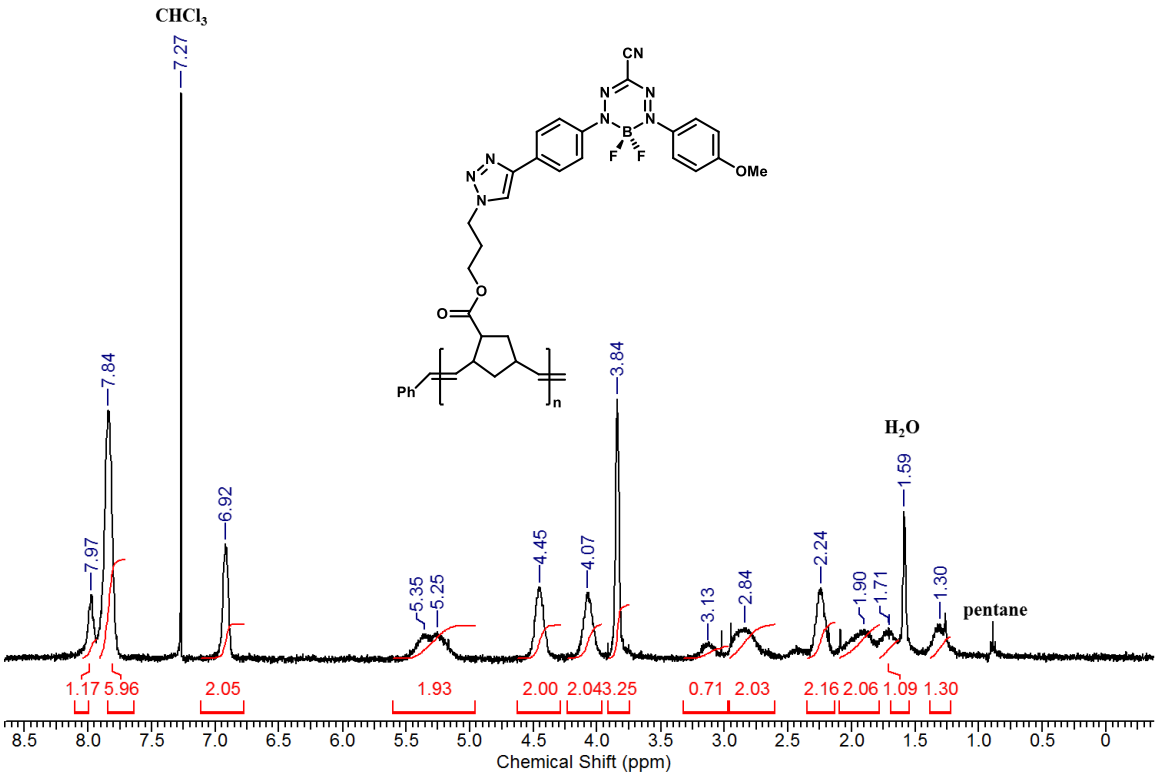

Fig. S5 ^{1}H NMR spectrum of **PBF2N** in $CDCl_3$.

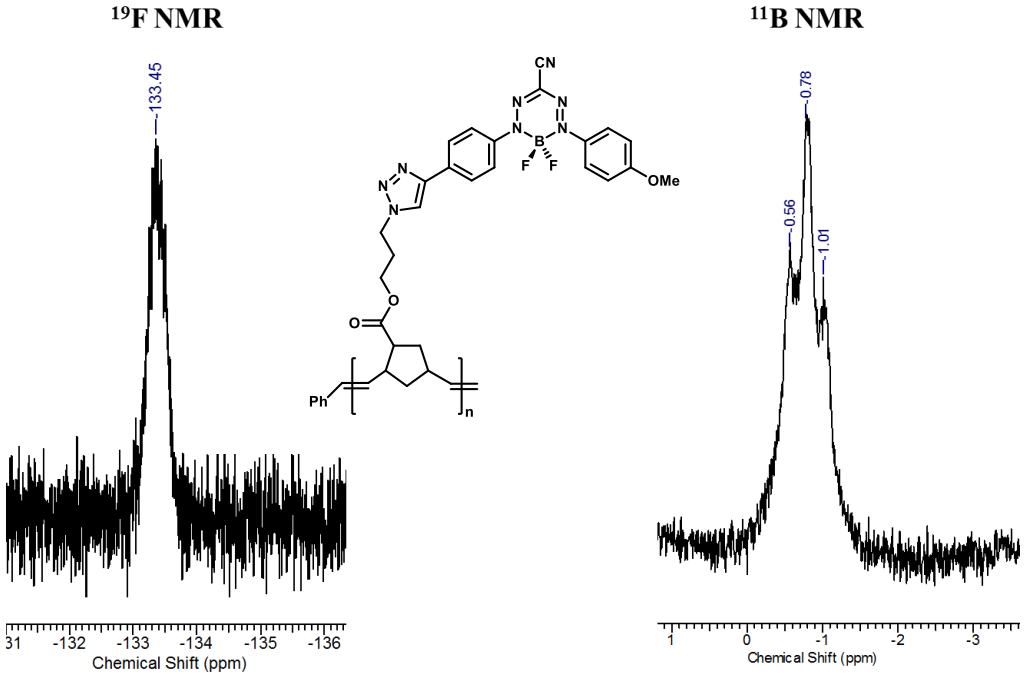

Fig. S6 ^{19}F NMR (left) spectrum and ^{11}B NMR (right) of **PBF2N** in $CDCl_3$.

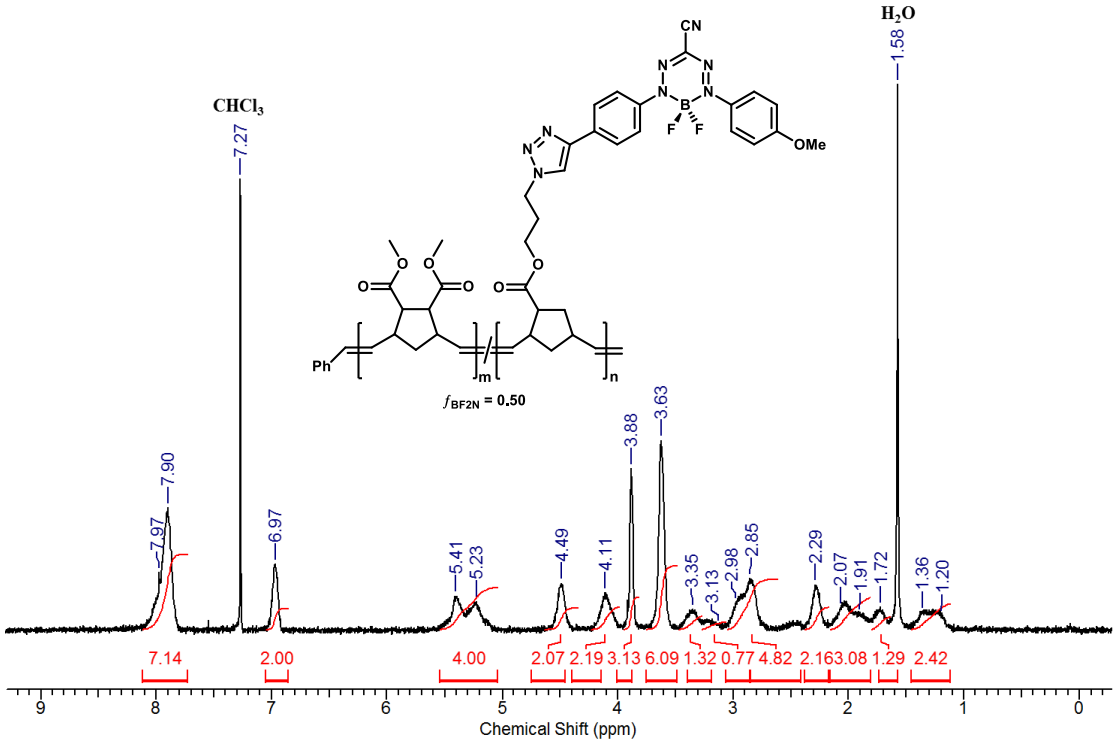

Fig. S7 ^{1}H NMR spectrum of **(PDND)$_{m}$-*r*-(PBF2N)$_{n}$** (f_{BF2N} = 0.50) in $CDCl_3$.

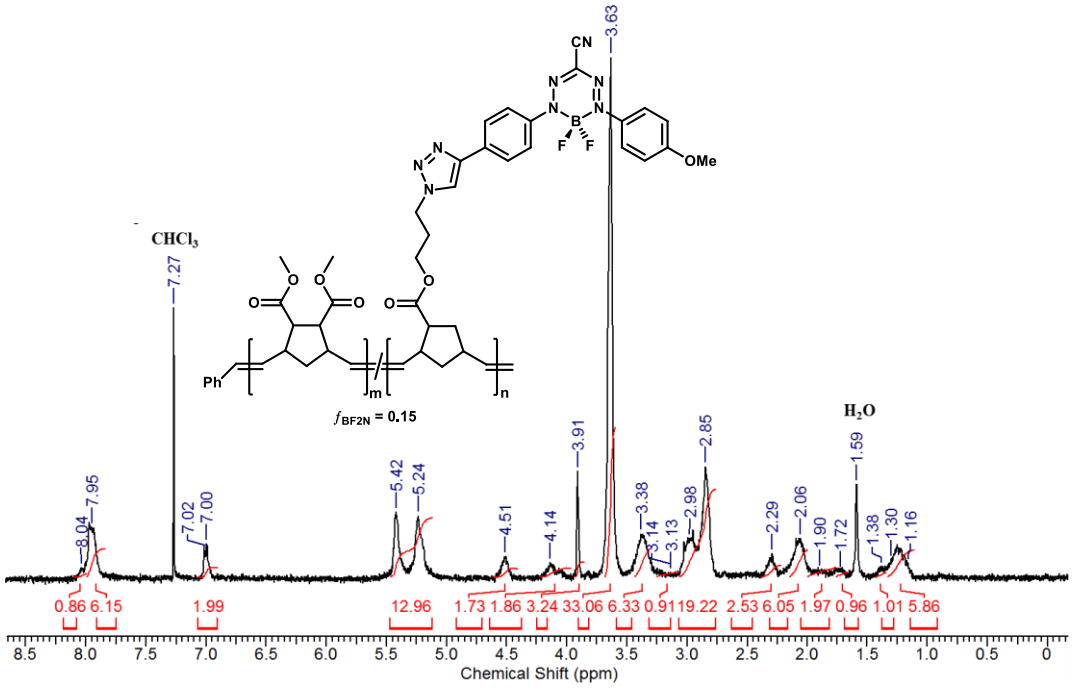

Fig. S8 ^{1}H NMR spectrum of **(PDND)$_{m}$-*r*-(PBF2N)$_{n}$** (f_{BF2N} = 0.15) in $CDCl_3$.

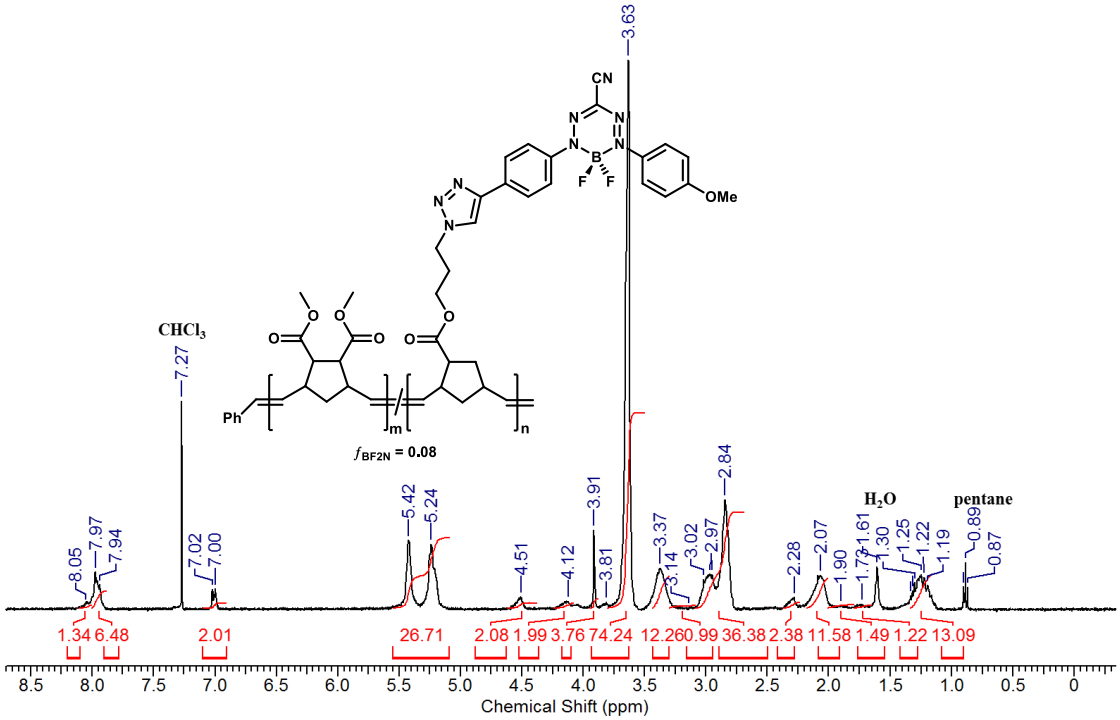

Fig. S9 ^{1}H NMR spectrum of **(PDND)$_{m}$-*r*-(PBF2N)$_{n}$** (f_{BF2N} = 0.08) in $CDCl_3$.

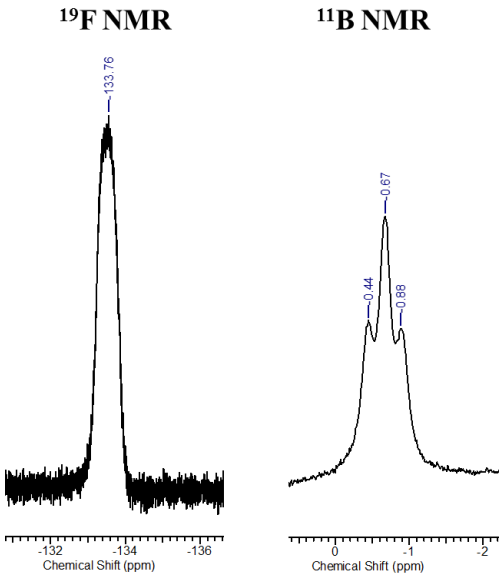

Fig. S10 Representative ^{11}B NMR and ^{19}F NMR for random copolymers **(PDND)$_{m}$-*r*-(PBF2N)$_{n}$** and block copolymers **(PDND)$_{m}$-*b*-(PBF2N)$_{n}$** in $CDCl_3$.

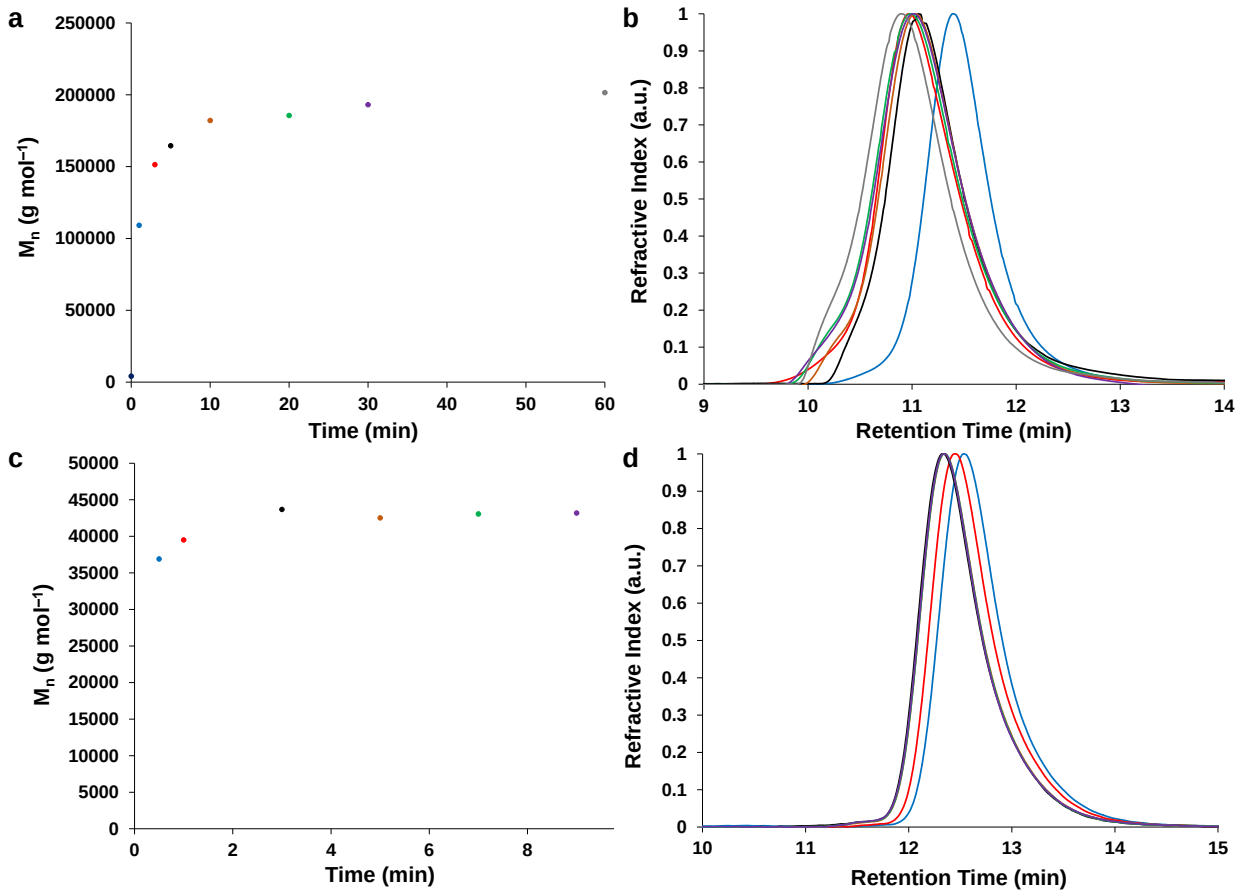

Fig. S11 Relationship between number average molecular weight (M_n) of homopolymers **PBF2N** (a,b) and **PDND** (c,d) and reaction time.

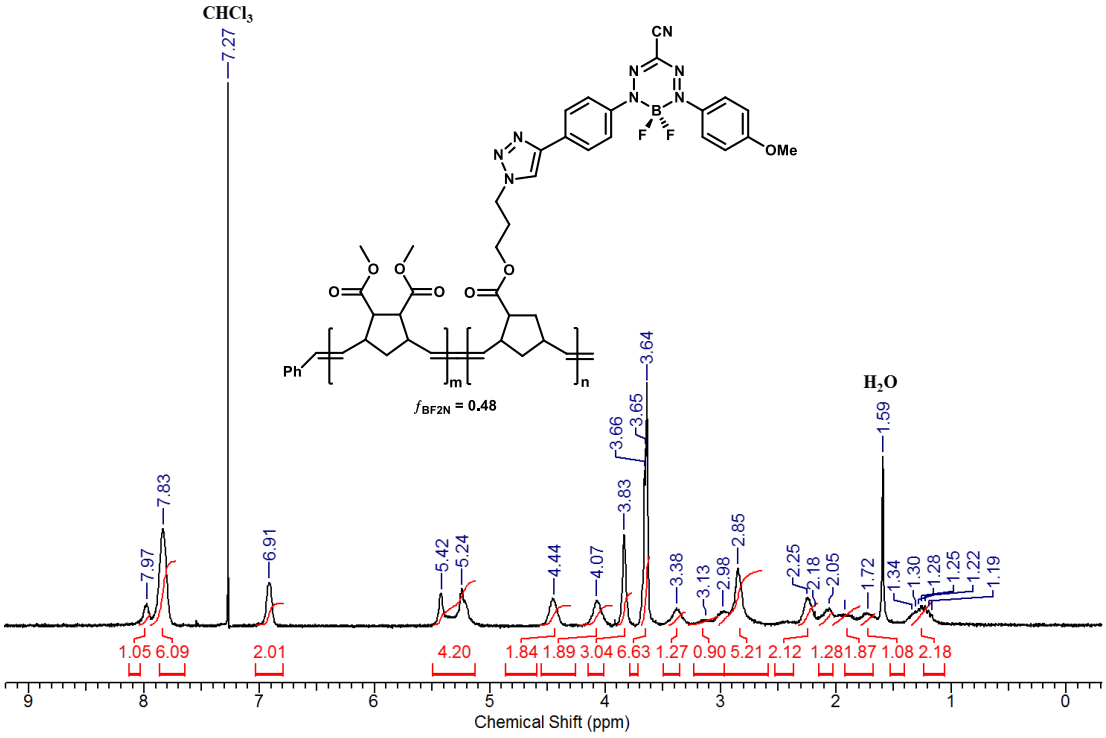

Fig. S12 ^{1}H NMR spectrum of **(PDND)$_{m}$-*b*-(PBF2N)$_{n}$** (f_{BF2N} = 0.48) in $CDCl_3$.

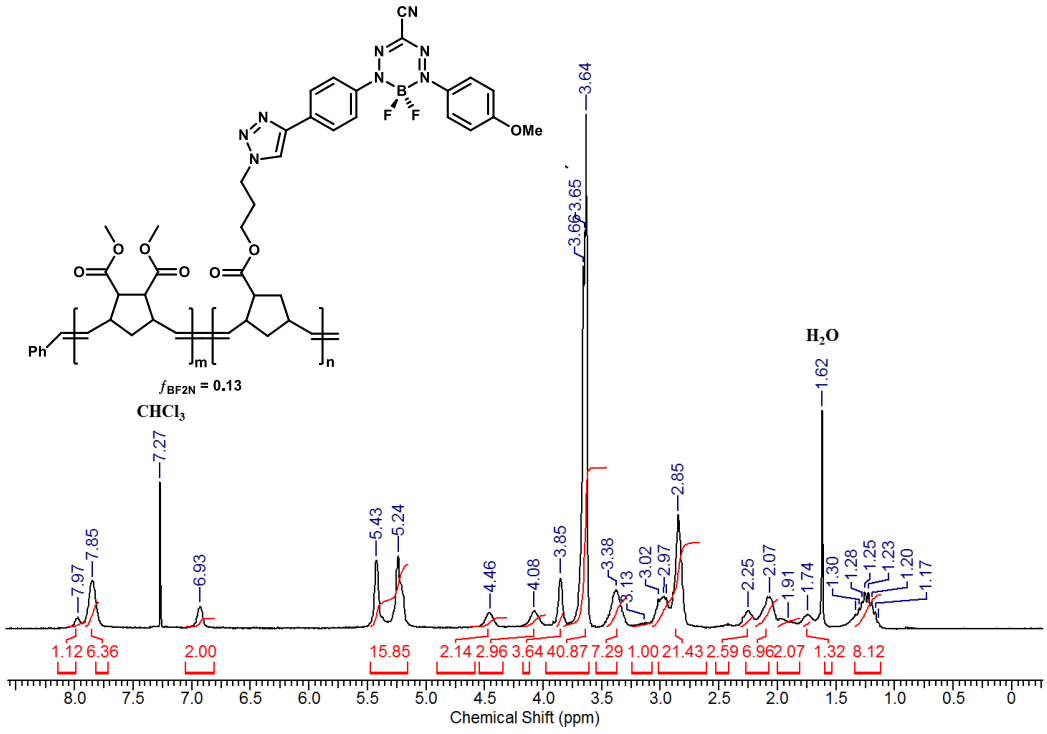

Fig. S13 ^{1}H NMR spectrum of **(PDND)$_{m}$-*b*-(PBF2N)$_{n}$** (f_{BF2N} = 0.13) in $CDCl_3$.

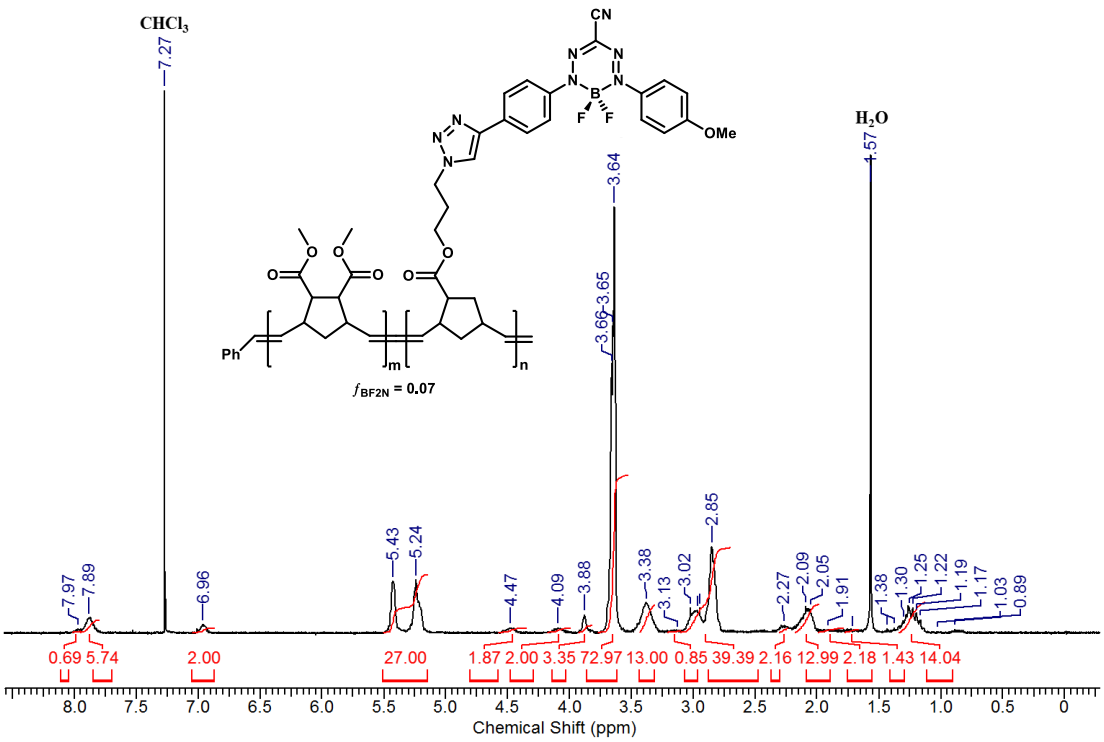

Fig. S14 ^{1}H NMR spectrum of **(PDND)$_m$-*b*-(PBF2N)$_n$** (f_{BF2N} = 0.07) in $CDCl_3$.

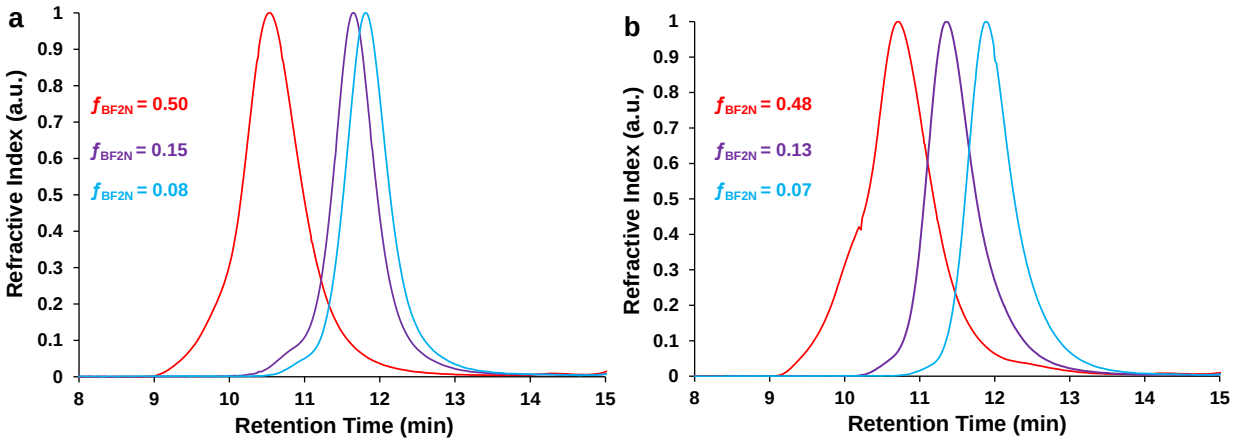

Fig. S15 GPC traces recorded for random copolymers **(PDND)$_m$-*r*-(PBF2N)$_n$** (a), and block copolymers**(PDND)$_m$-*b*-(PBF2N)$_n$** (b) in DMF.

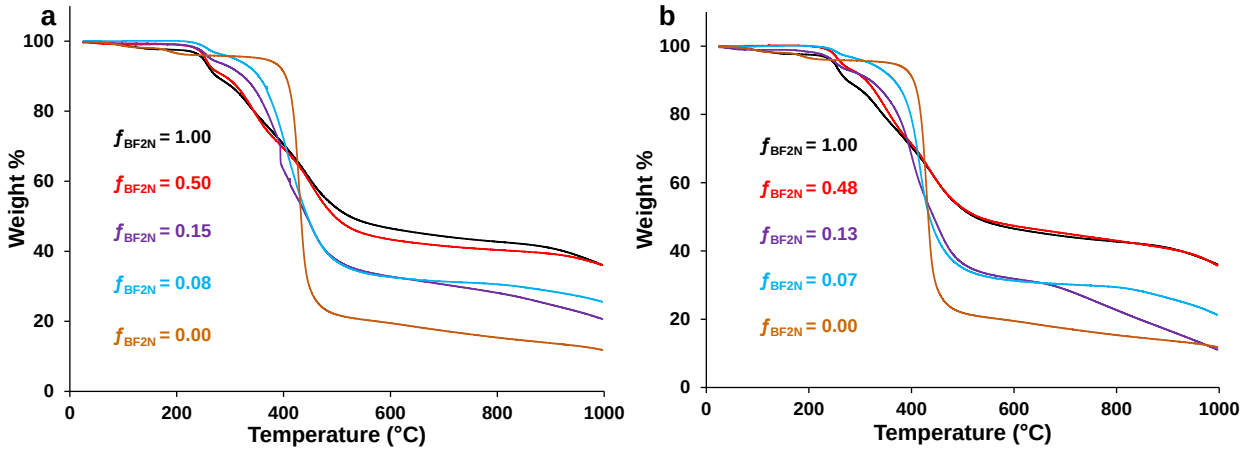

Fig. S16 TGA data recorded for hompolymers **PBF2N** and **PDND**, random copolymers **(PDND)$_m$-*r*-(PBF2N)$_n$** (a), and block copolymers**(PDND)$_m$-*b*-(PBF2N)$_n$** (b) under a N_2 atmosphere.

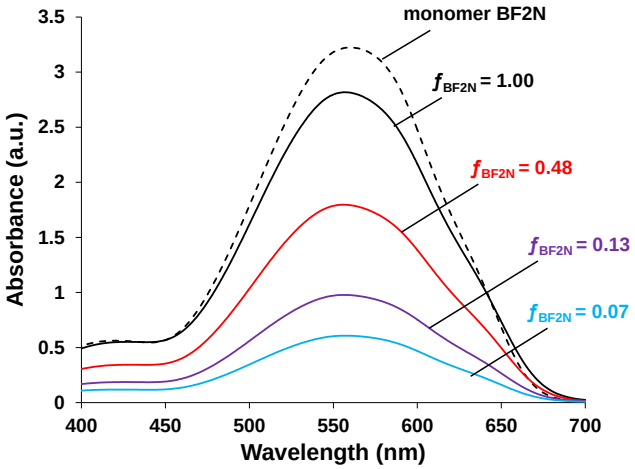

Fig. S17 UV-vis absorption spectra of monomer **BF_2N**, homopolymer **PBF2N**, and block copolymers **(PDND)$_m$-*b*-(PBF2N)$_n$** recorded for 0.05 mg mL^{-1} CH_2Cl_2 solutions.

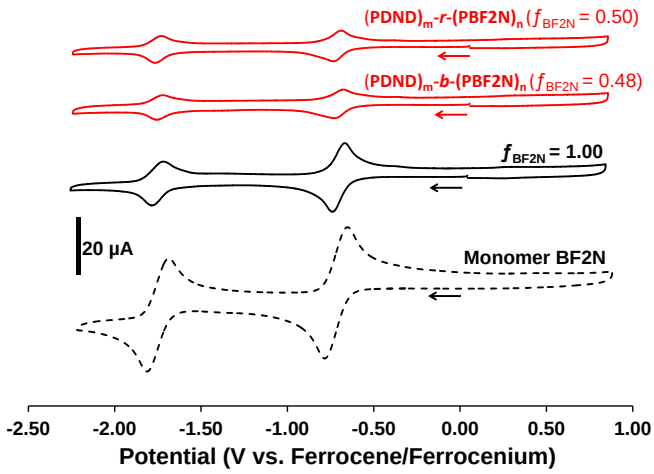

Fig. S18 Cyclic voltammograms of 1 mM (calculated using an average molar mass for blocks and random copolymers) CH_2Cl_2 solutions of monomer **BF_2N**, homopolymer **PBF2N**, random copolymer (**PDND)$_m$-*r*-(PBF2N)$_n$** (f_{BF2N} = 0.50), and block copolymer (**PDND)$_m$-*b*-(PBF2N)$_n$** (f_{BF2N} = 0.48) containing 0.1 M [*n*Bu_4N][PF_6] as supporting electrolyte recorded at a scan rate of 250 mV s^{-1}. Voltammograms were referenced internally against the ferrocence/ferrocenium redox couple.