

Supplementary Information

Antimicrobial Cobaltocenium Copolymers: Tuning Amphiphilicity against NDM-1 Bacteria

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Scheme S1. Synthesis of poly(2-aminoethyl methacrylate) (PAEMA) via RAFT polymerization.

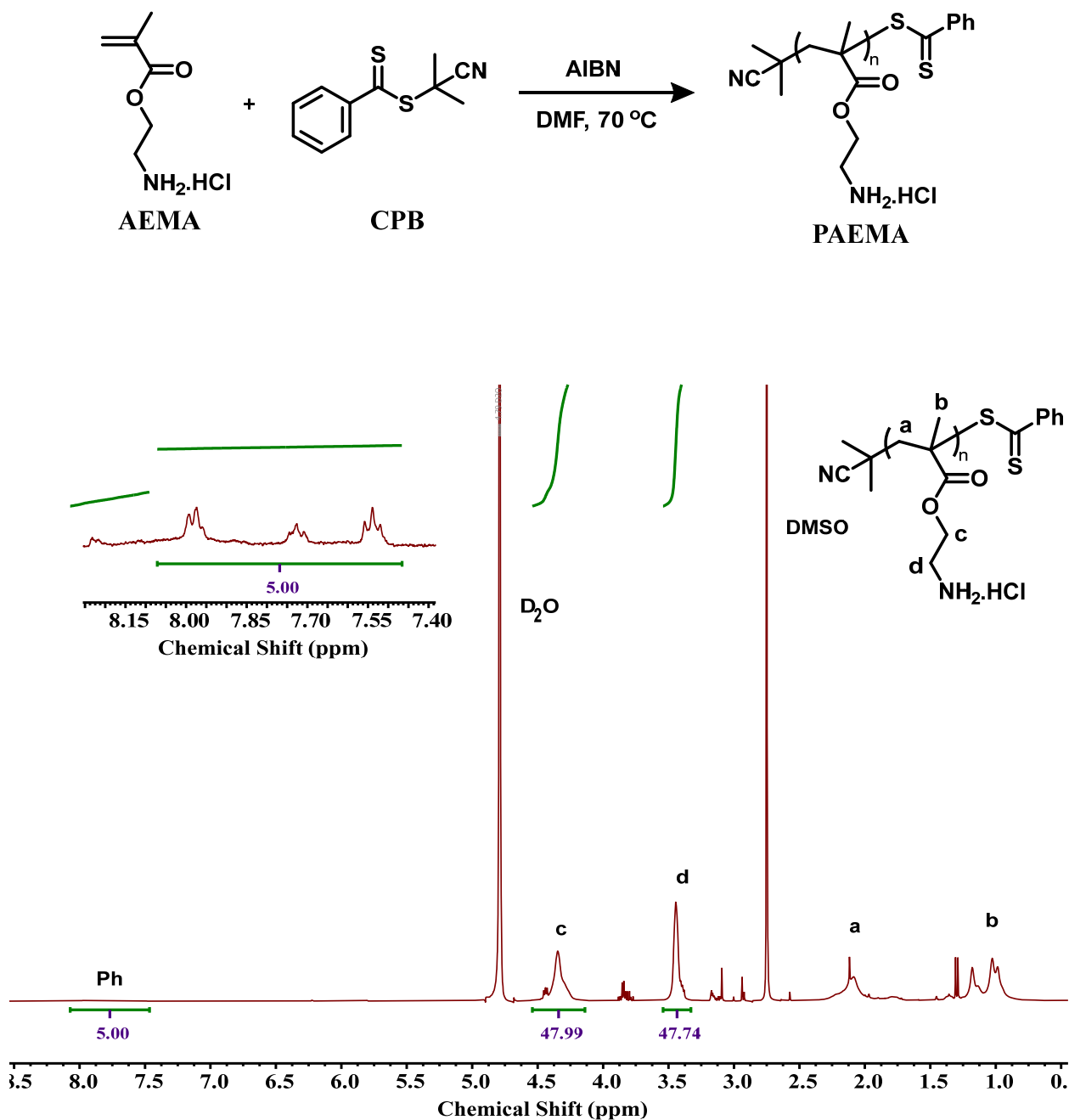


Figure S1: ^1H NMR spectrum of poly(2-aminoethyl methacrylate) P1 (PAEMA).

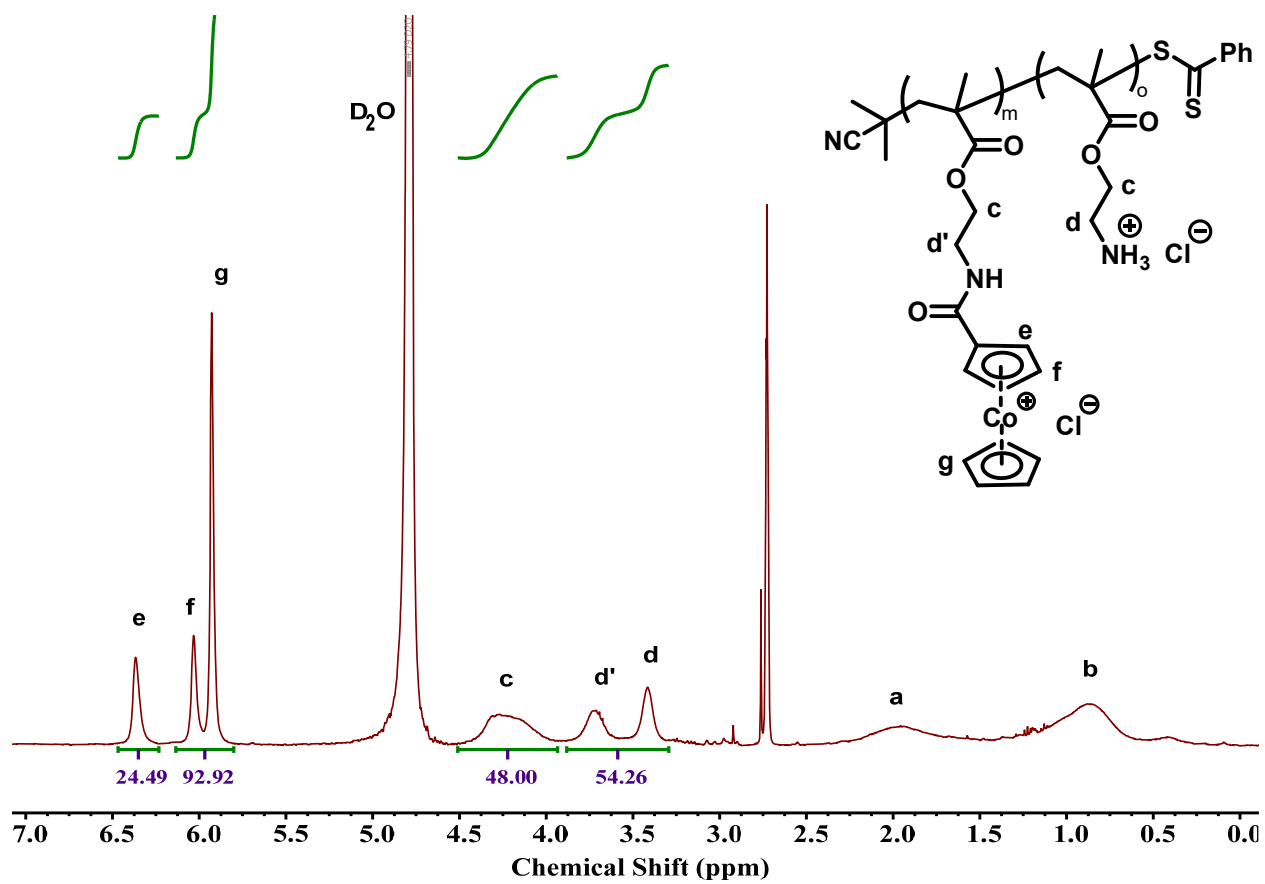


Figure S2: ^1H NMR spectrum of cobaltocenium copolymer **P2** (PAEMA-CC42%).

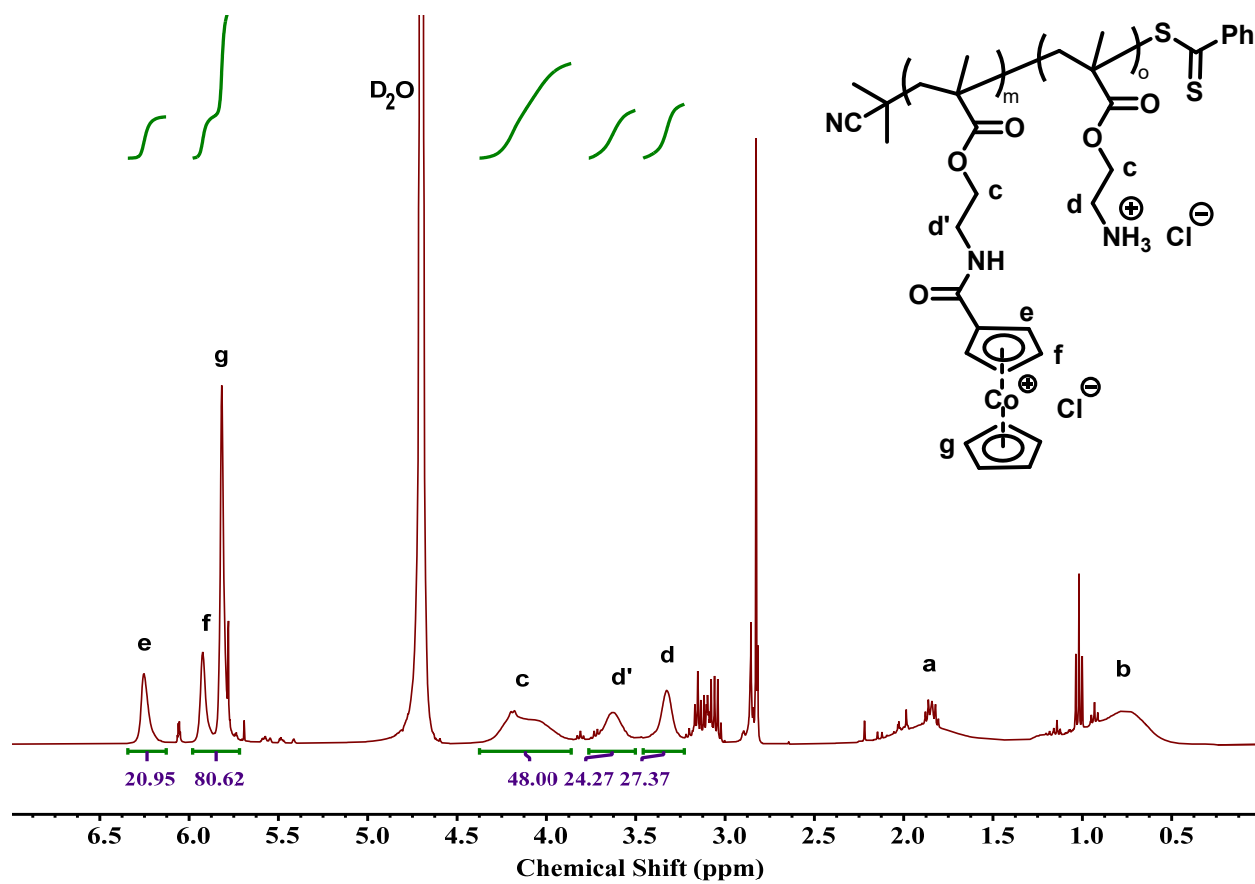


Figure S3: ^1H NMR spectrum of cobaltocenium copolymer **P3** (PAEMA-CC50%).

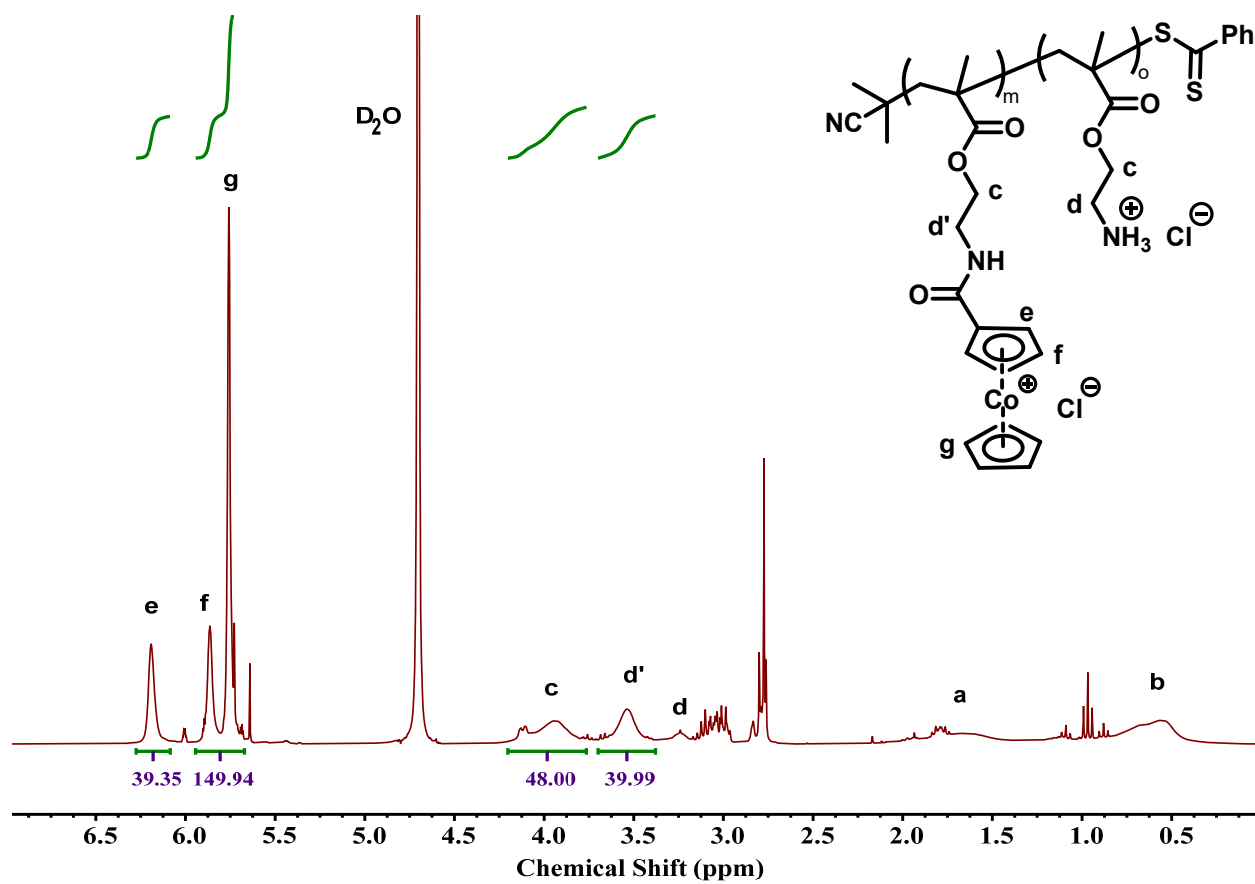


Figure S4: ^1H NMR spectrum of cobaltocenium copolymer **P4** (PAEMA-CC80%).

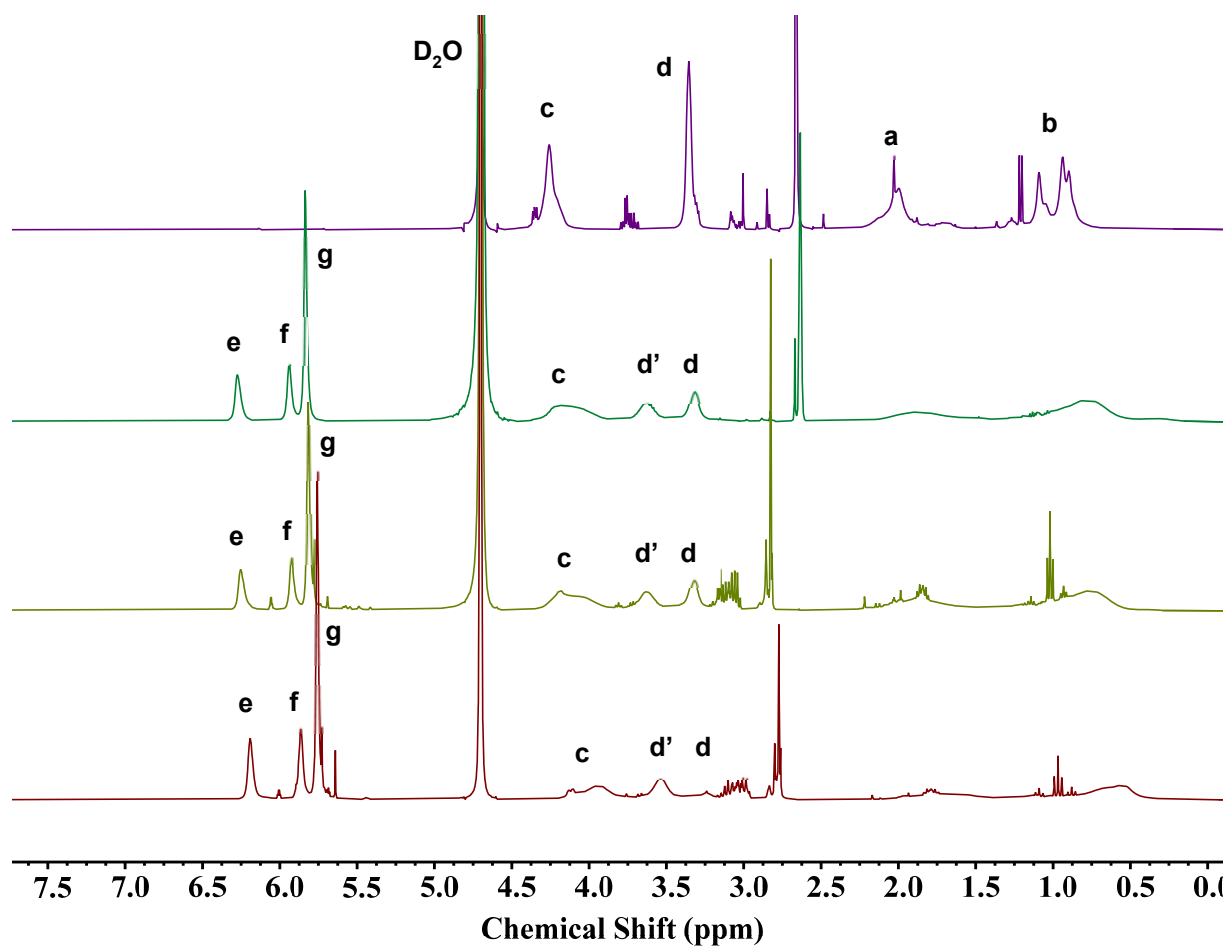


Figure S5: ^1H NMR spectra of PAEMA (P1-top) before and after cobaltocenium incorporation (bottom up: P4, P3, P2).

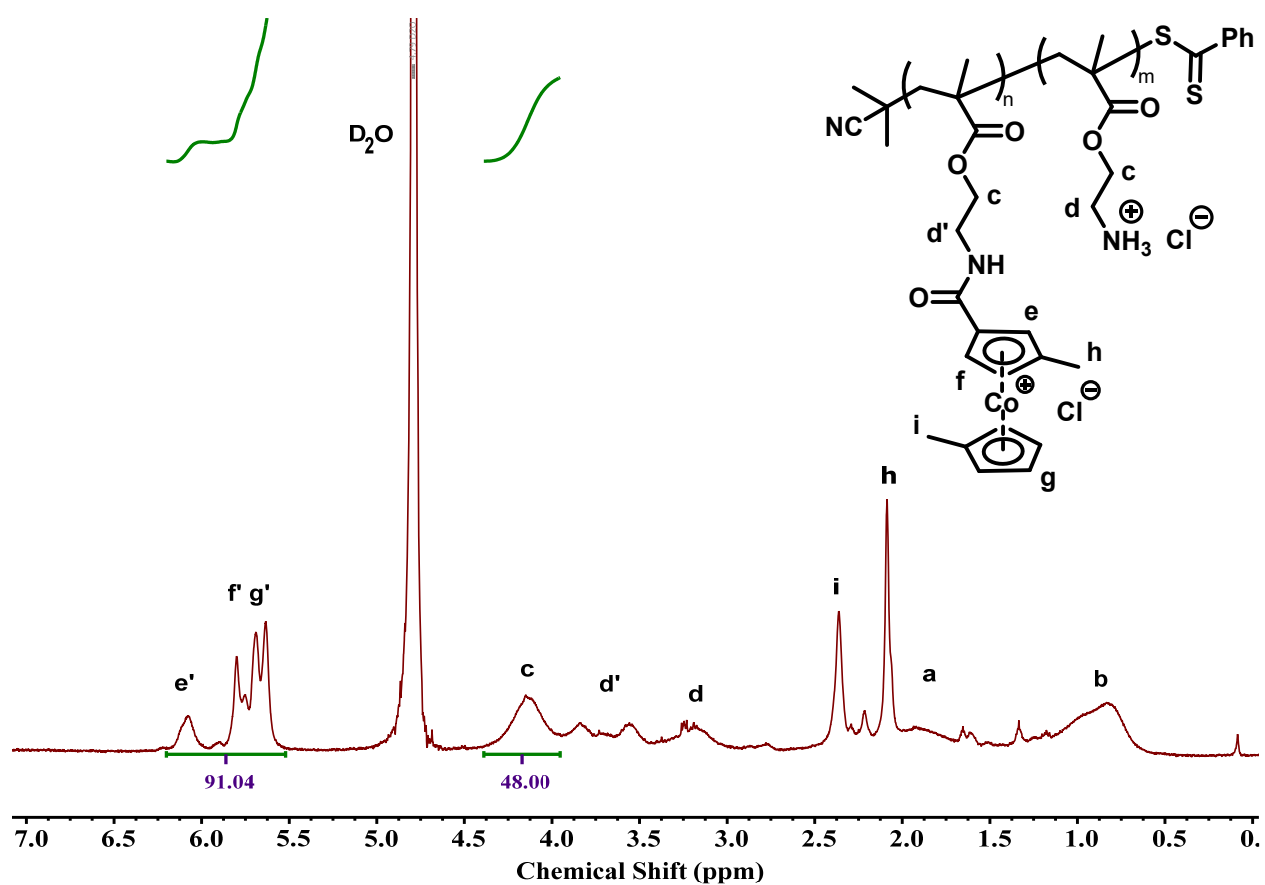


Figure S6: ^1H NMR spectrum of dimethyl substituted cobaltocenium copolymer **P5** (PAEMA-dmCC54%).

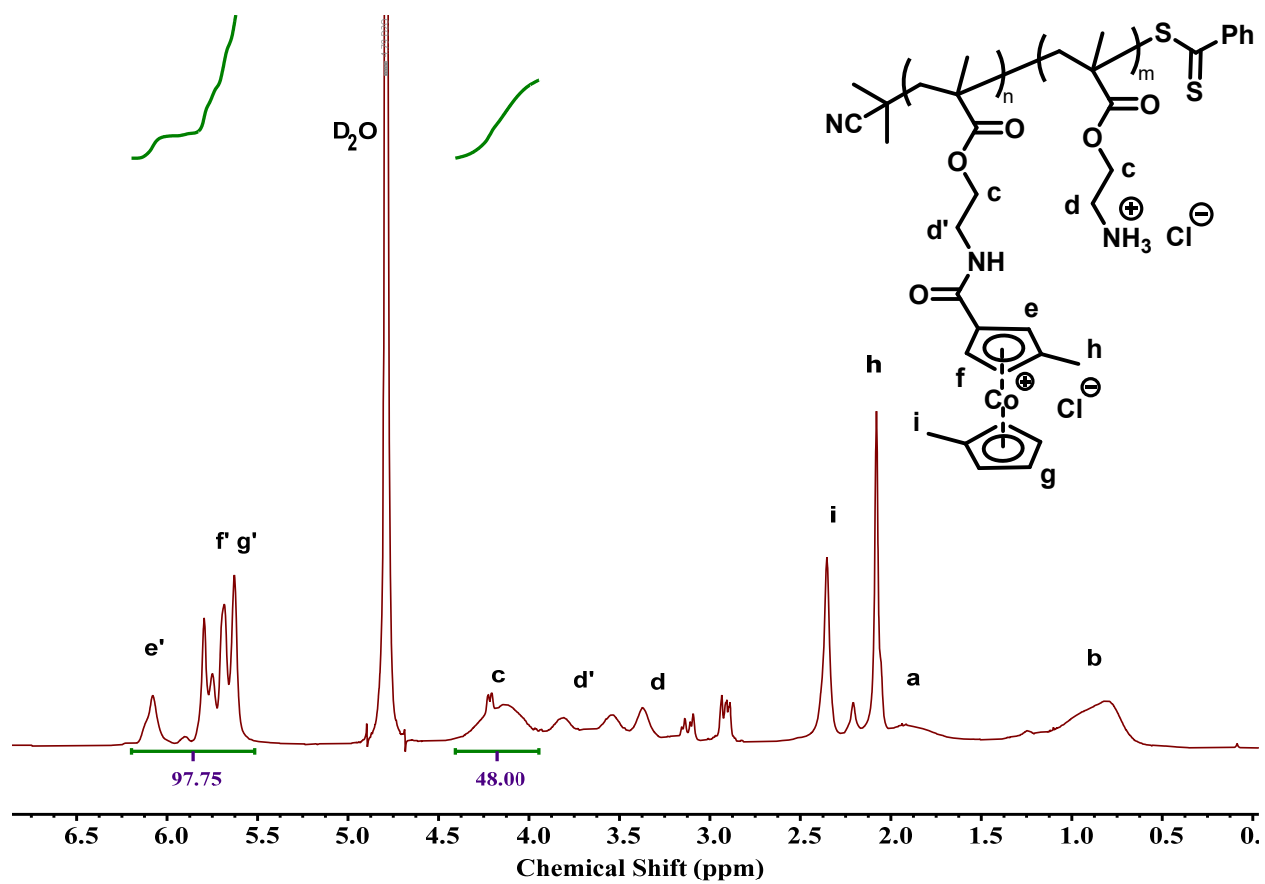


Figure S7: ^1H NMR spectrum of dimethyl substituted cobaltocenium copolymer **P6** (PAEMA-dmCC58%).

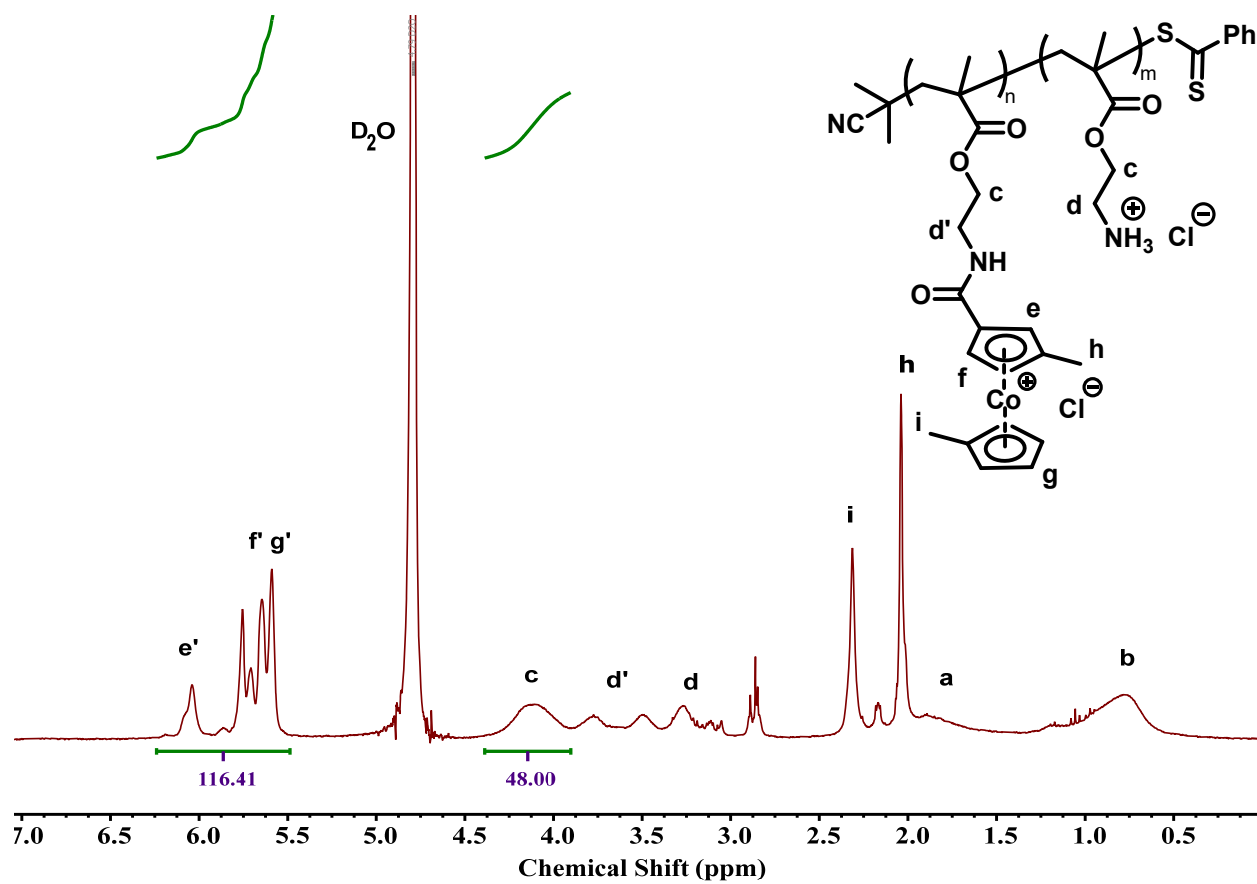


Figure S8: ^1H NMR spectrum of dimethyl substituted cobaltocenium copolymer **P7** (PAEMA-dmCC69%).

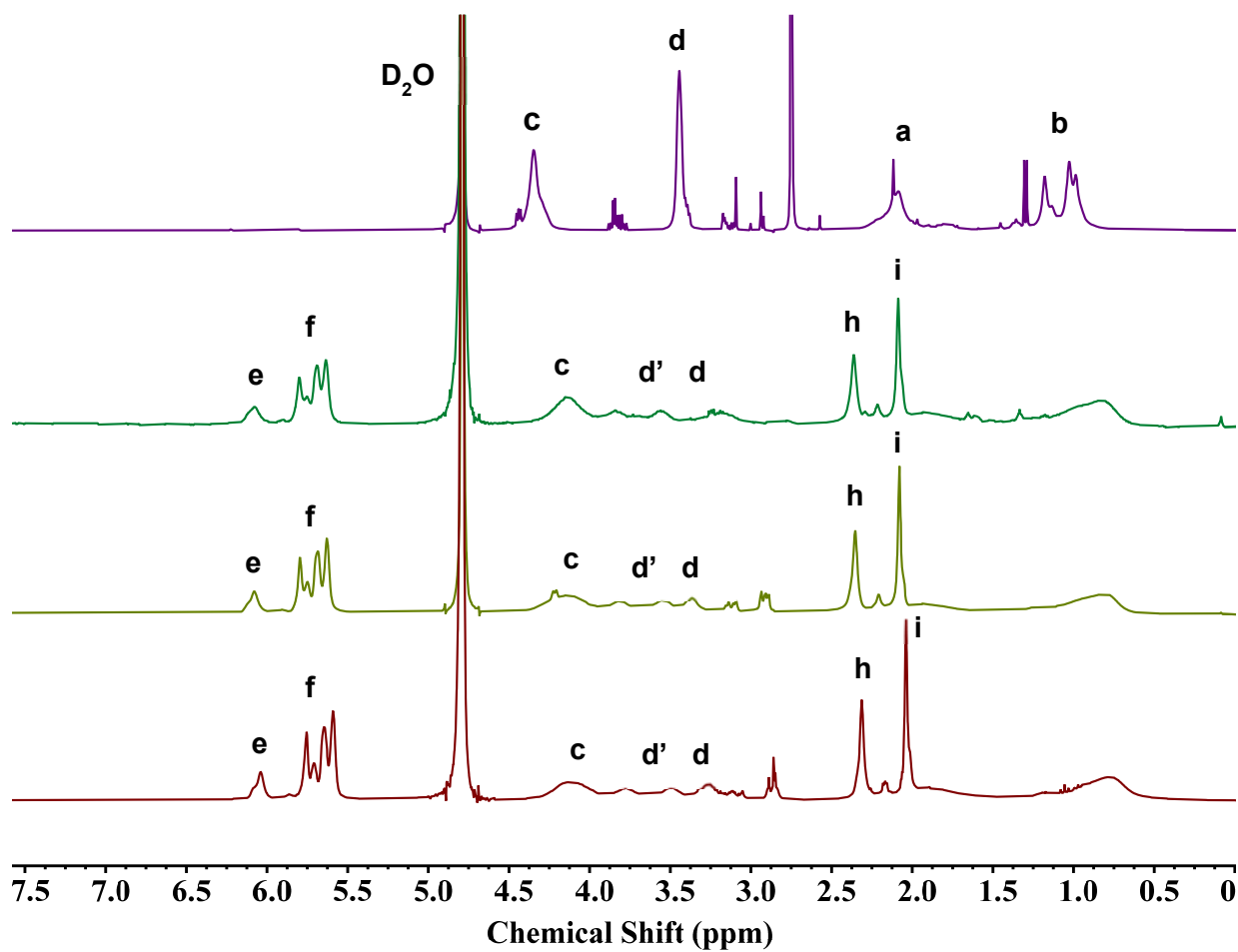


Figure S9: ^1H NMR spectra of PAEMA (P1- top) before and after dimethyl substituted cobaltocenium incorporation (bottom up: P7, P6, and P5).

Table S1. Polymer size and Zeta potential using Dynamic Light Scattering.

Polymer	Concentration (mg/mL)	Hydrodynamic diameter, D _H (nm)	Average D _H (nm)	Zeta potential (mV)	Average Zeta potential (mV)
P1	0.5	ND	ND	14.4	9.67
	1	ND		7.73	
	2	ND		6.87	
P2	0.5	20.54	19.92	25.8	24.7
	1	18.83		20.2	
	2	20.39		28.1	
P3	0.5	33.09	22.35	13.4	14
	1	14.37		10.6	
	2	19.60		18	
P4	0.5	8.508	6.90	14.6	18.9
	1	5.934		13.7	
	2	6.247		28.5	
P5	0.5	40.99	44.34	34.0	29.33
	1	35.18		28.3	
	2	56.85		25.7	
P6	0.5	26.97	40.88	49.6	46.73
	1	42.52		46.3	
	2	53.15		44.3	
P7	0.5	31.96	71.92	45.9	43.83
	1	83.7		41.8	
	2	100.1		43.8	