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Supporting information

Synthesis and characterization of poly(phenylene thioether)s containing pyrimidine units exhibiting high transparency, high refractive indices, and low birefringence

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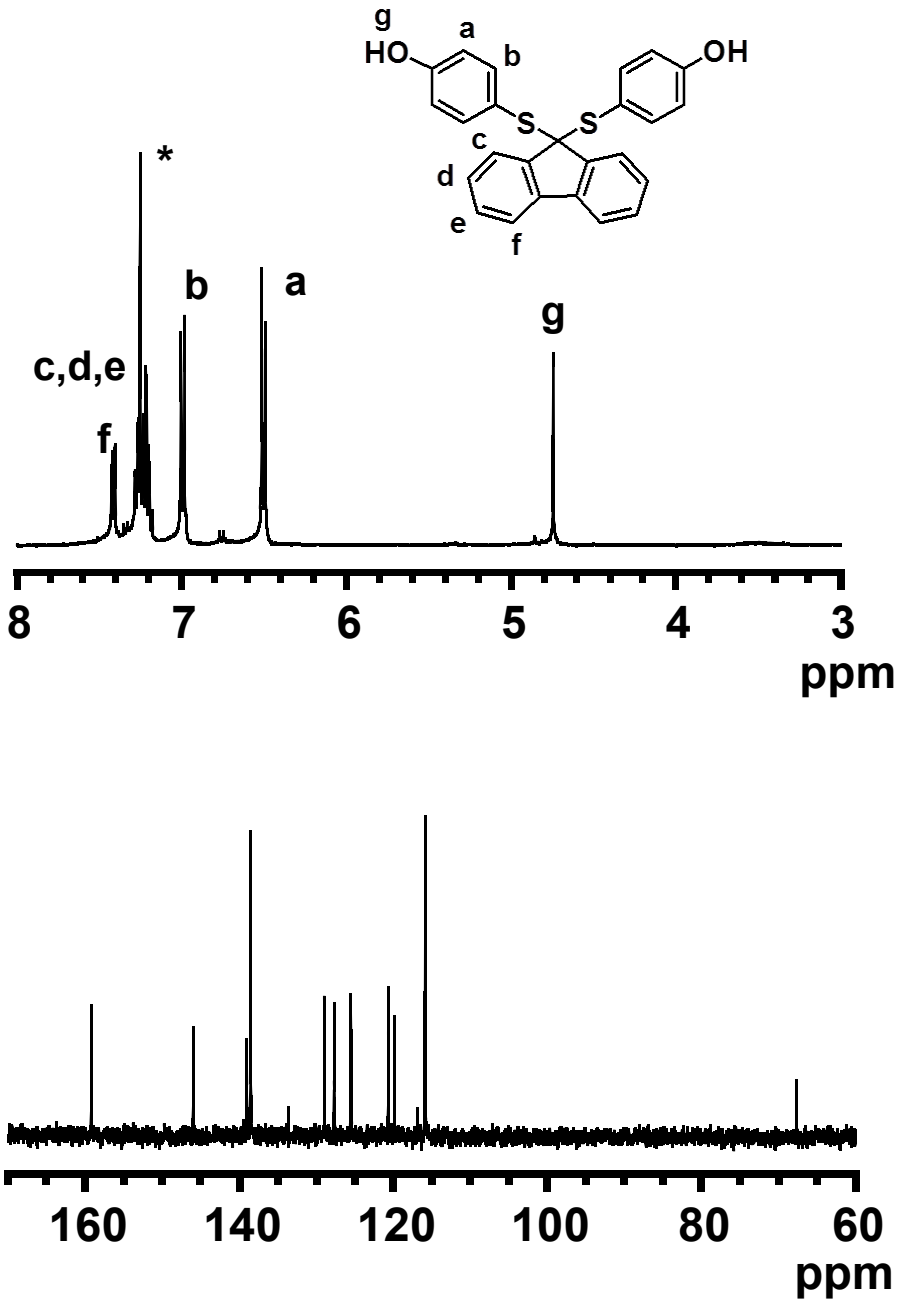

Fig. S1 ^{1}H ($CDCl_3$) and ^{13}C NMR (DMSO-d_6) spectra of **M1**. The residual $CHCl_3$ peak is marked.

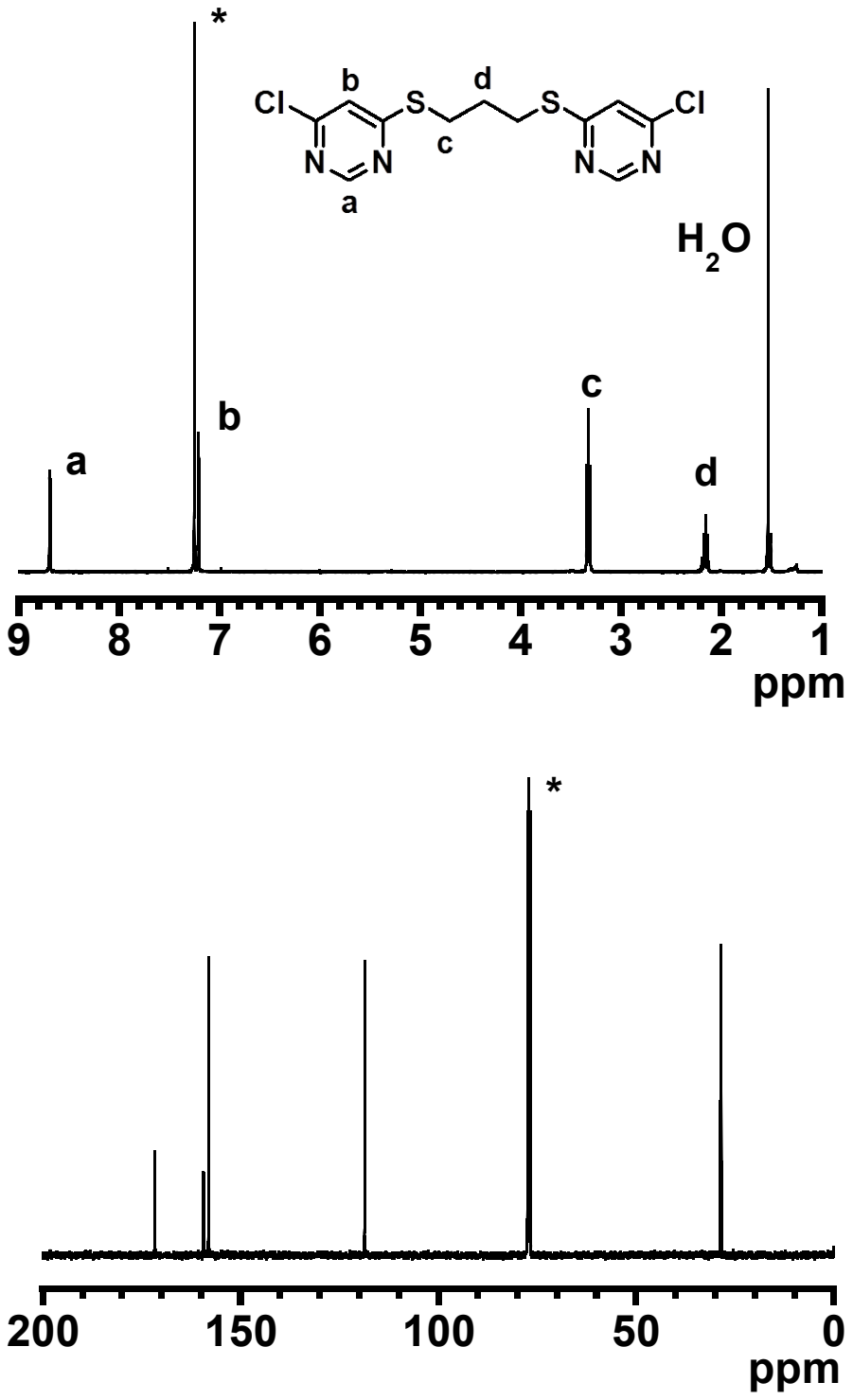

Fig. S2 ^{1}H and ^{13}C NMR spectra of **M2** in $CDCl_3$. The residual $CHCl_3$ peak is marked.

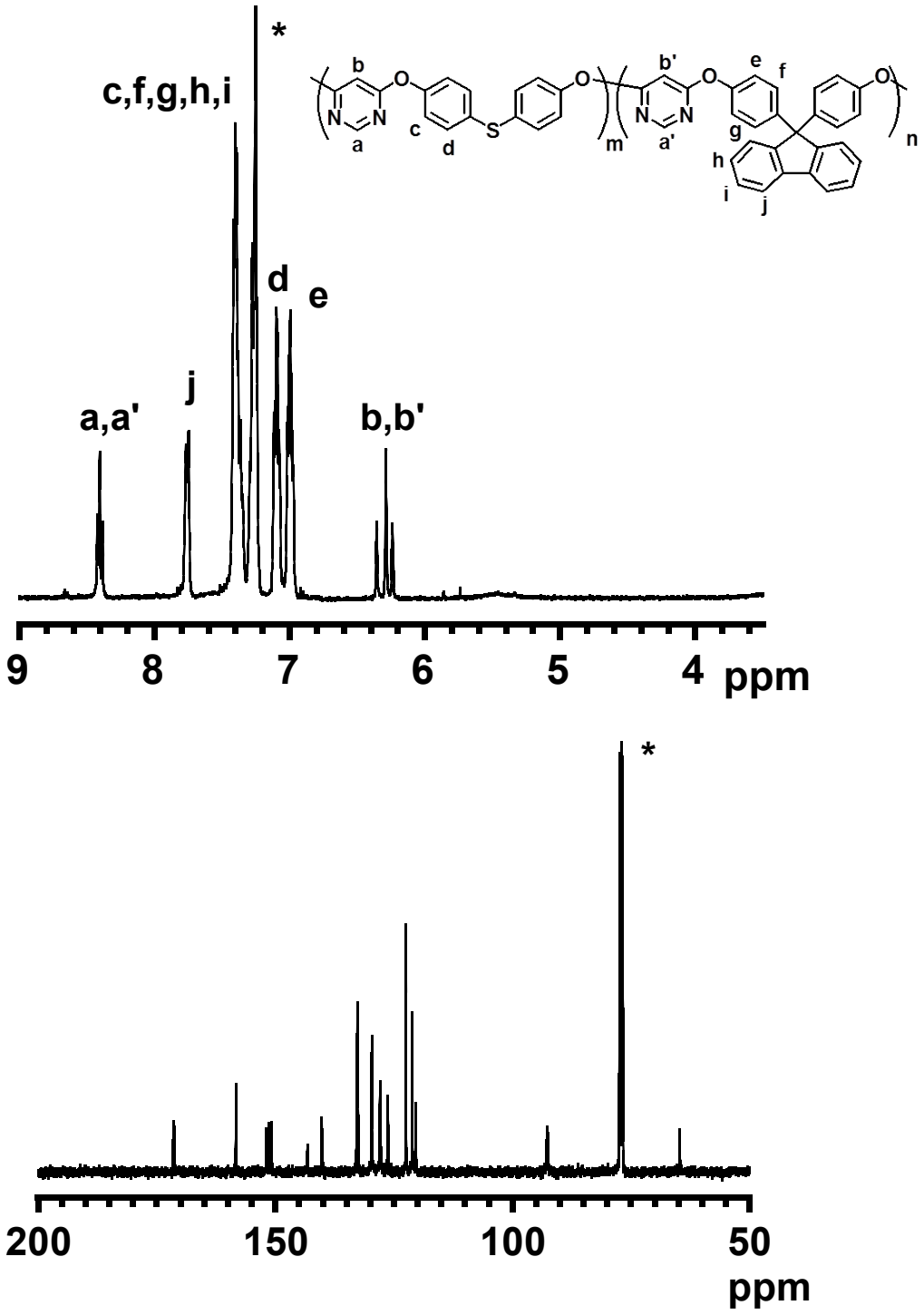

Fig. S3 ^{1}H and ^{13}C NMR spectrum of **P2** in $CDCl_3$. The residual $CHCl_3$ peak is marked.

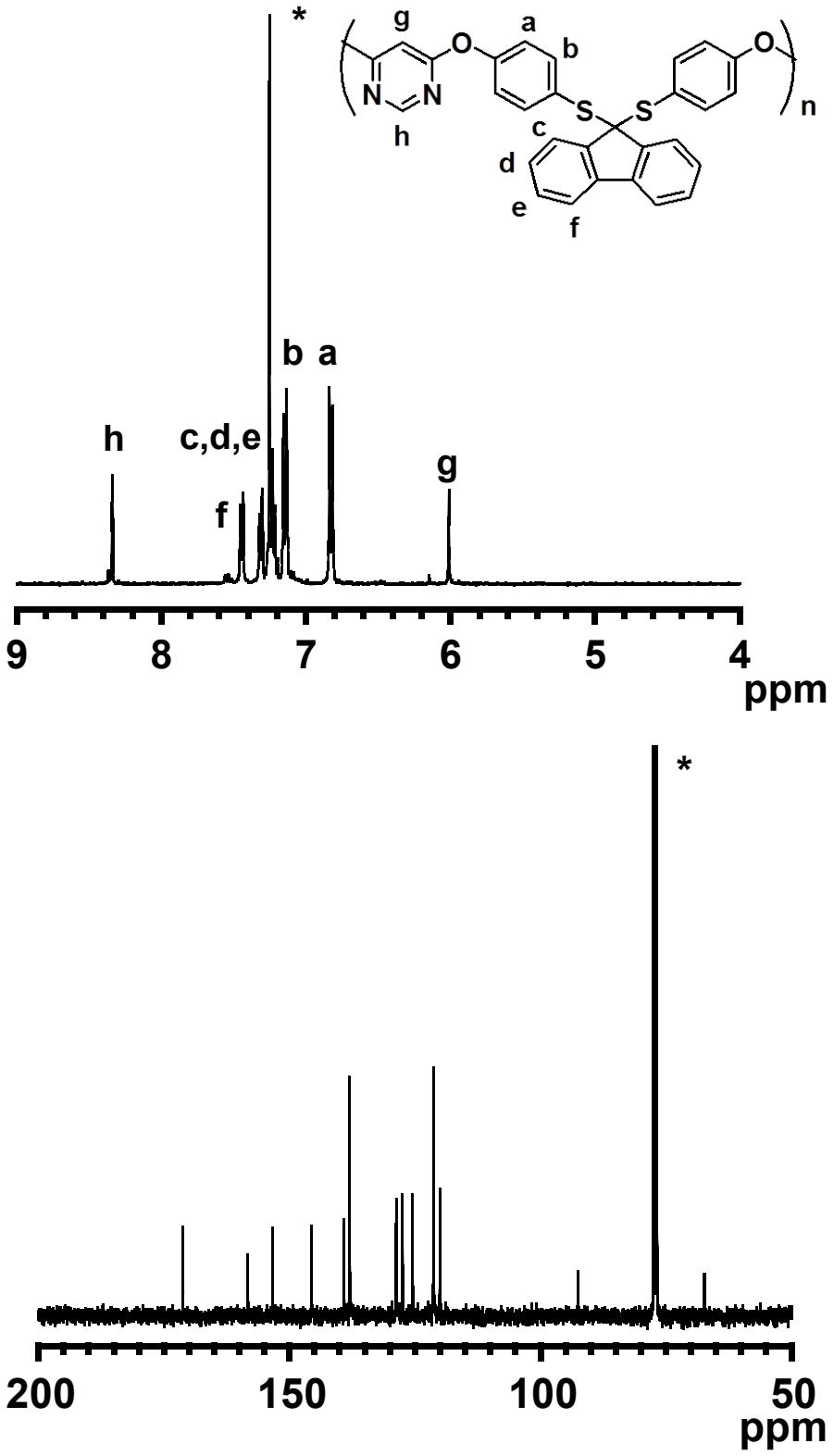

Fig. S4 ^{1}H and ^{13}C NMR spectrum of **P3** in $CDCl_3$. The residual $CHCl_3$ peak is marked.

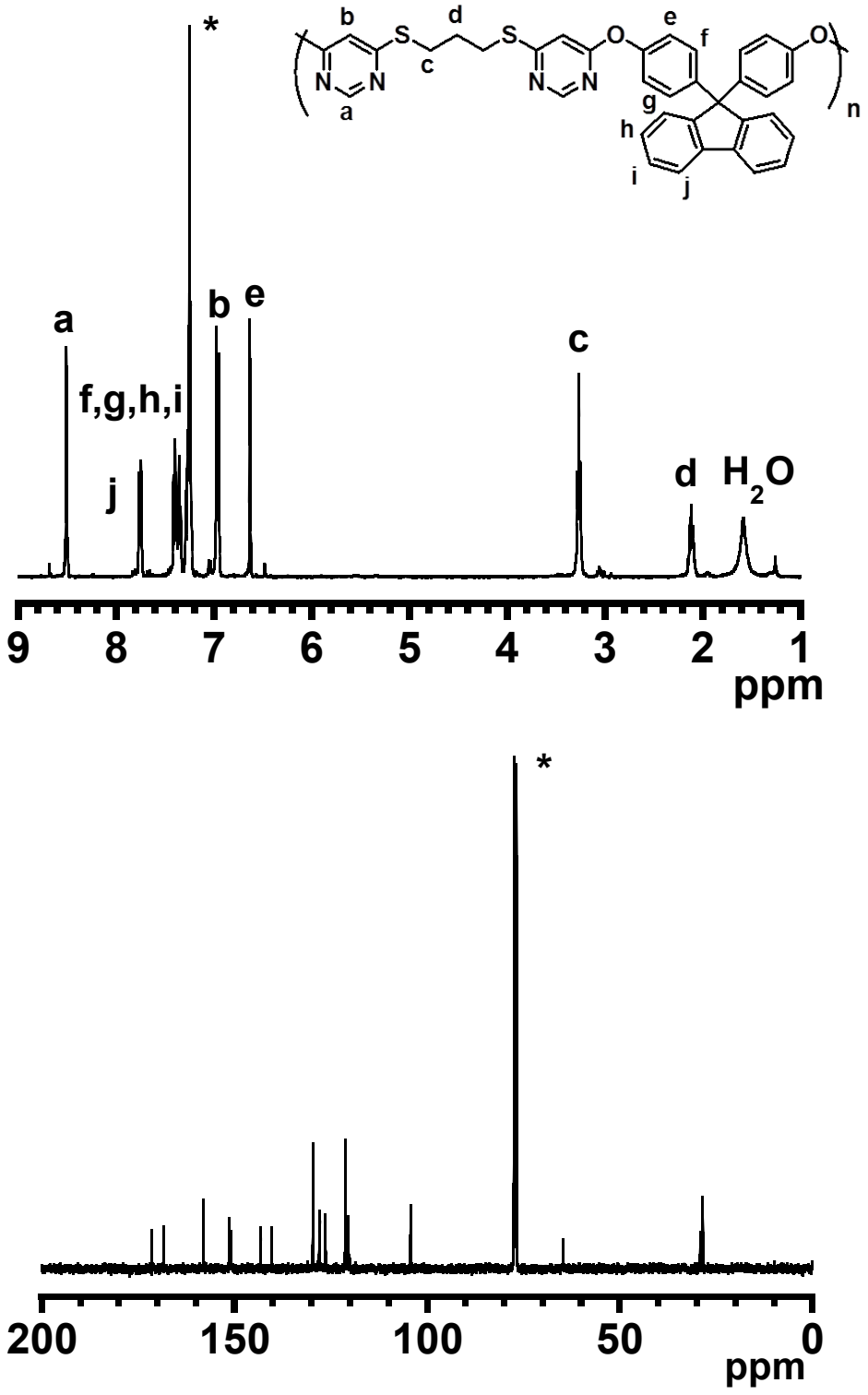

Fig. S5 ^{1}H and ^{13}C NMR spectrum of **P4** in $CDCl_3$. The residual $CHCl_3$ peak is marked.

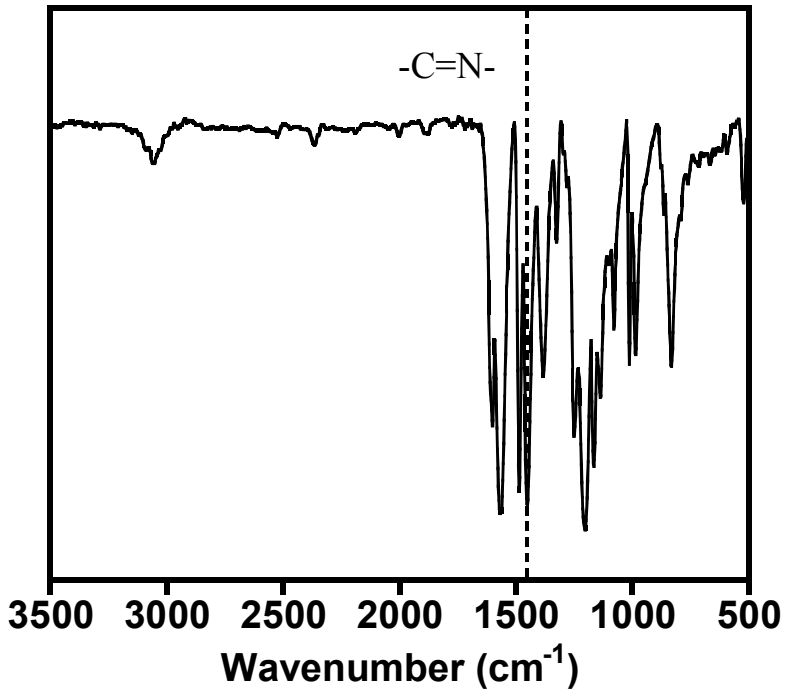

Figure S6. FT-IR spectrum of **P1**.

Figure S7. Images of as-cast and annealed **P1** films.

Table S1. Polymerization results of **P2**.[a]

Run	Temp (°C)	Yield (%)	M_n (M_w/M_n)[b]	Color of products
1	100	93	104,000 (2.11)	white
2	80	92	92,000 (2.07)	white
3	60	97	56,000 (1.60)	white

[a]Polymerization was carried out using 3.0 equivalent of K_2CO_3. [b]Measured by SEC using polystyrene standards in chloroform.

Table S2. Polymerization results of **P3**.[a]

Run	Temp. (°C)	Yield (%)	M_n (M_w/M_n)[b]	Color of products
1	100	68	4,000 (1.57)	red
2	80	94	7,200 (2.32)	yellow
3	60	84	31,000 (1.90)	yellow
4[c]	60	97	38,000 (2.04)	white

[a]Polymerization was carried out using 3.0 equivalent of K_2CO_3. [b]Measured by SEC using polystyrene standards in chloroform. [c]Using 2.2 equivalent of K_2CO_3.

Table S3. Polymerization results of **P4**.[a]

Run	Temp (°C)	Yield (%)	M_n (M_w/M_n)[b]	Color of products
1	120	98	55,000 (1.89)	white
2	100	88	58,000 (2.04)	white
3	80	87	11,000 (1.75)	white

[a]Polymerization was carried out using 3.0 equivalent of K_2CO_3. [b]Measured by SEC using polystyrene standards in chloroform.