

Supporting Information for:

**Separation and Quantification of Dead Species in Styrene RAFT
Polymerization by Gradient Polymer Elution Chromatography**

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The experimental and characterization data for BDB-mediated polystyrene in THF at 60 °C were shown in Table S1. In the sample 3, 4, 5, 6 and 7, the PDI values of PSt were rather high. This is due to the fact that the RAFT polymerization was carried out in the presence of excessive AIBN. The ratio of [AIBN] to [RAFT agent] in the specifically designed experiments was over 1.

Table S1. Experimental and characterization data for BDB-mediated polystyrene in THF at 60 °C^a

Sample	[St]:[BDB]:[AIBN]	<i>t</i> (h)	Conv. (%)	<i>M</i> _n ^b × 10 ⁻³	<i>M</i> _w ^b × 10 ⁻³	PDI ^c
1	500:10:2.5	24	70.21	3.80	4.37	1.15
2	500:10:5.0	24	92.74	4.40	5.94	1.35
3	500:10:10	24	85.03	4.31	6.20	1.44
4	500:10:15	24	90.35	4.89	7.83	1.60
5	500:10:20	24	87.68	3.96	6.65	1.68
6	500:2.5:5.0	24	96.80	17.06	29.34	1.72
7	500:5.0:5.0	24	88.37	6.41	10.20	1.59
8	500:20:5.0	24	78.46	2.09	2.57	1.23
9	500:40:5.0	24	75.22	1.18	1.43	1.21
10	500:10:5.0	2	11.02	1.27	1.58	1.24
11	500:10:5.0	4	17.89	1.70	2.16	1.27
12	500:10:5.0	6	34.51	1.92	2.32	1.21
13	500:10:5.0	8	42.57	2.38	2.93	1.23
14	500:10:5.0	12	55.43	2.60	3.41	1.31
15	500:10:5.0	16	75.82	3.27	4.35	1.33
16	500:10:5.0	24	92.74	4.40	5.94	1.35

^a[St]= 5.0 × 10⁻³ mol/mL; ^bDetermined by GPC; ^cPDI=*M*_w/*M*_n