Supplementary Materials

Dithiocarbamates as Effective Reversible Addition–Fragmentation Chain Transfer Agents for Controlled Radical Polymerization of 1-Vinyl-1,2,4-triazole

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Table S1. Characteristics of poly(1-vinyl-1,2,4-triazole) obtained by chain addition to polyCTA at various ratios [M]:[polyCTA] in DMF at 60 °C for 6 h.*

Entry	[M]:[polyCTA]	Conversion, %	$M_{n,\ theory}$, Da	M_n, Da	PDI
1	400	99	38000	42000	1.23
2	600	99	57000	61000	1.27
3	800	98	75000	83000	1.34

* [AIBN]:[CTA] = 1:2.5, [M] = 4.97 mol/L, polyCTA – Table 2, 16. Number-average molecular weight (M_n) and molecular mass distribution (M_w/M_n) were measured by GPC. The theoretical molecular weight ($M_{n,\ theory}$)=(MW of VT)×[M]:[polyCTA]×conv.+(MW of polyCTA). Number-average molecular weight (M_n) and molecular weight distribution (M_w/M_n) were measured by GPC.

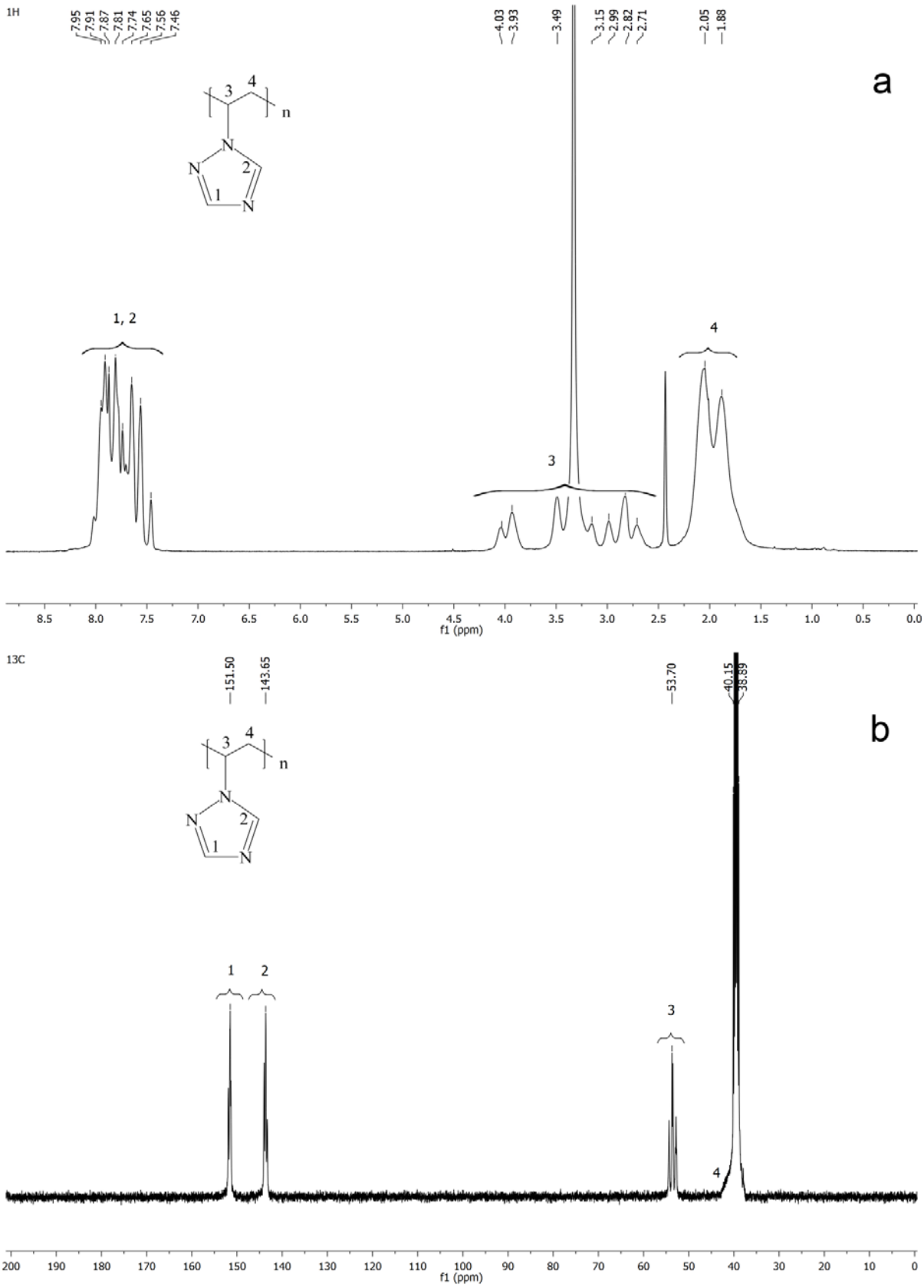


Figure S1. ^{1}H (**a**) and ^{13}C (**b**) NMR spectra of poly(1-vinyl-1,2,4-triazole) synthesized by free radical polymerization.

Table S2. Effect of [M]:[CTA] ratio on RAFT polymerization of VT at constant [CTA]:[AIBN] concentration ratio at 60 °C for 24 h in DMF and methanol.*

Entry	CTA	Solvent	[M]:[CTA]	Conversion, %	$M_{n,\,theory}$, Da	M_n, Da	PDI
1	CTA1	DMF	100	98	9300	21000	1.21
2			200	98	19000	37000	1.25
3			300	98	28000	49000	1.27
4			400	98	37000	51000	1.28
5		MeOH	100	>99	9500	20000	1.19
6			200	99	19000	35000	1.21
7			300	99	28000	42000	1.22
8			400	99	37000	47000	1.24
9	CTA2	DMF	100	>99	9500	20000	1.17
10			200	>99	19000	35000	1.19
11			300	>99	28000	47000	1.21
12			400	98	37000	59000	1.25
13		MeOH	100	98	9400	19000	1.16
14			200	>99	19000	32000	1.18
15			300	>99	28000	44000	1.19
16			400	>99	38000	55000	1.21

* [AIBN]:[CTA] = 1:2.5, [M] = 4.97 mol/L. Number-average molecular weight (M_n) and molecular mass distribution (M_w/M_n) were measured by GPC. The theoretical molecular weight ($M_{n,\,theory}$)=(MW of VT)×[M]:[CTA]×conv.+(MW of CTA). Number-average molecular weight (M_n) and molecular weight distribution (M_w/M_n) were measured by GPC.