Supporting Information

Facile Conversion of RAFT Polymers into Hydroxyl Functional Polymers: A Detailed Investigation of Variable Monomer and RAFT Agent Combinations

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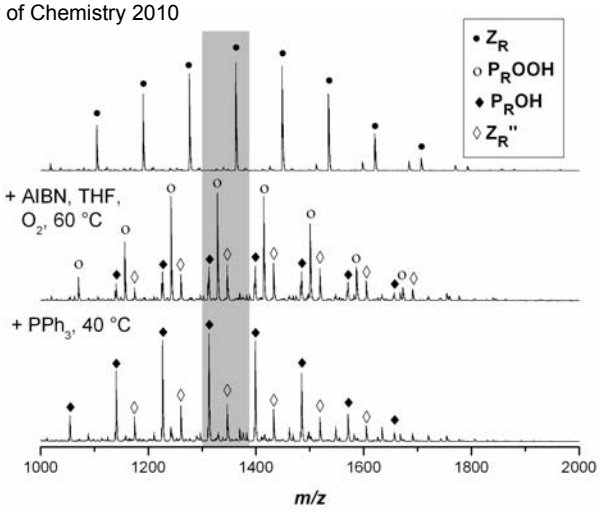

Figure S1 - Electrospray ionization mass spectra of the end-group transformation of poly(methyl acrylate) carrying a dithiobenzoate end-group into hydroxyl functional pMA in the charge state $z = 1$. The range highlighted in grey is shown in Figure 1.

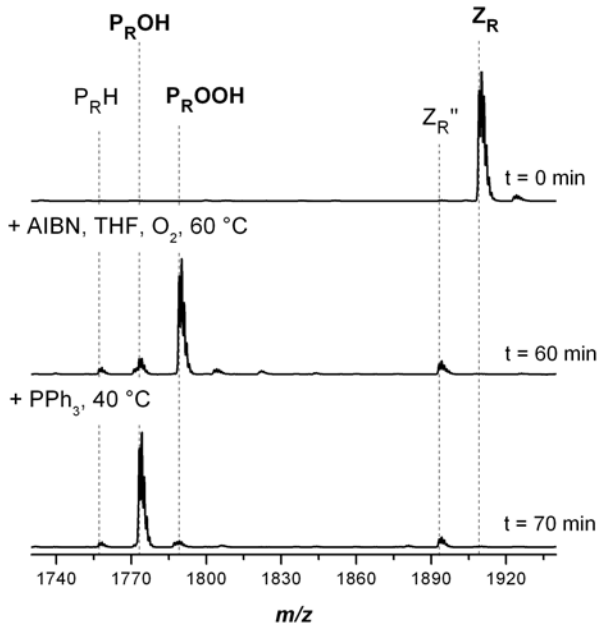

Figure S2 - Electrospray ionization mass spectra of the end-group transformation of poly(*iso*bornyl acrylate) carrying a dithiobenzoate end-group into hydroxyl functional p*i*BoA in the charge state $z = 1$. The reagents AIBN/THF and PPh_3 were added sequentially at $t = 0$ and 60 min. Full conversion was reached after 70 min.

Table T1 - Theoretical and measured *m/z* ratios of the main species involved in the end-group conversion of p*i*BoA carrying a dithiobenzoate end-group into hydroxyl functional p*i*BoA.

	$[M + Na]^+$		
Struktur	**m/z^{theo}**	**m/z^{exp}**	**$\Delta m/z$**
Z_R	1909.19	1909.17	0.02
Z_R''	1893.22	1893.17	0.05
P_ROOH	1789.21	1789.17	0.04
P_ROH	1773.21	1773.25	0.04
P_RH	1757.22	1757.25	0.03

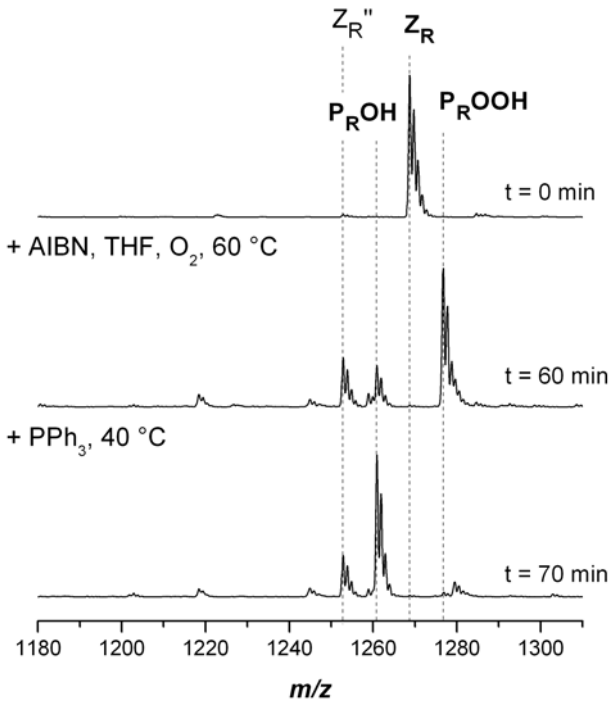

Figure S3- Electrospray ionization mass spectra of the end-group transformation of poly(butyl acrylate) carrying a dithiobenzoate end-group into hydroxyl functional pBA in the charge state $z = 1$. The reagents AIBN/THF and PPh_3 were added sequentially at $t = 0$ and 60 min. Full conversion was reached after 70 min.

Table T2 - Theoretical and measured *m/z* ratios of the main species involved in the end-group conversion of pBA carrying a dithiobenzoate end-group into hydroxyl functional pBA.

	$[M + Na]^+$		
Struktur	m/z^{theo}	m/z^{exp}	$\Delta m/z$
$\mathbf{Z_R}$	1268.69	1268.75	0.06
$\mathbf{Z_R''}$	1252.72	1252.83	0.11
$\mathbf{P_ROOH}$	1276.79	1276.75	0.04
$\mathbf{P_ROH}$	1260.80	1260.92	0.12

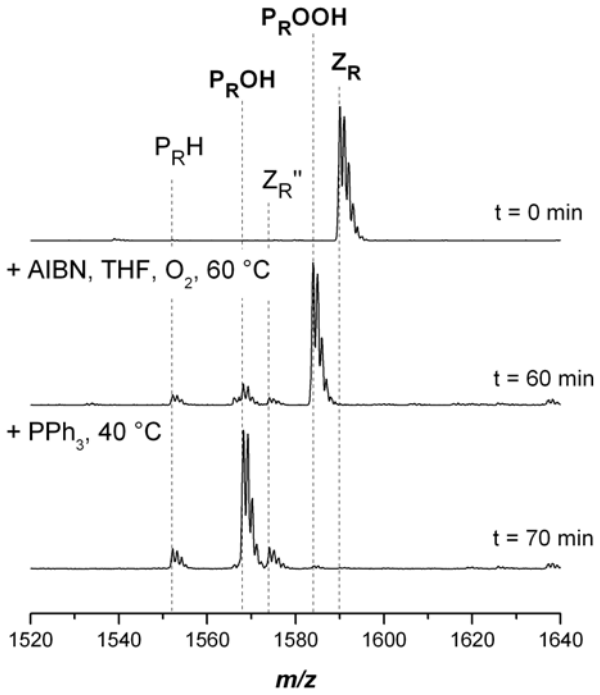

Figure S4 - Electrospray ionization mass spectra of the end-group transformation of poly(butyl acrylate) carrying a phenyldithioacetate end-group into hydroxyl functional pBA in the charge state $z = 1$. The reagents AIBN/THF and PPh_3 were added sequentially at $t = 0$ and 60 min. Full conversion was reached after 70 min.

Table T3 - Theoretical and measured *m/z* ratios of the main species involved in the end-group conversion of pBA carrying a phenyldithioacetate end-group into hydroxyl functional pBA.

	$[M + Na]^+$		
Struktur	m/z^{theo}	m/z^{exp}	$\Delta m/z$
$\mathbf{Z_R}$	1589.91	1590.08	0.17
$\mathbf{P_ROOH}$	1584.00	1584.00	0.00
$\mathbf{Z_R''}$	1573.94	1574.00	0.06
$\mathbf{P_ROH}$	1568.00	1568.17	0.17
$\mathbf{P_RH}$	1552.00	1552.17	0.17