

Supporting Information to

Synthesis of Star and H-Shape Polymers via a Combination of Cobalt-Mediated Radical Polymerization and Nitron-Mediated Radical Coupling Reactions

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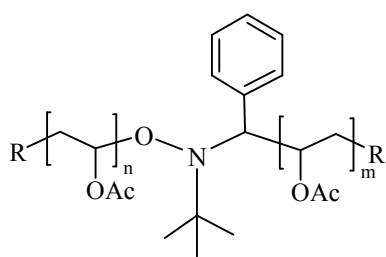
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Table S1. Theoretical and Measured Mass-to-Charge Ratios of the PVAc coupling product.

X	[M + Na] ⁺		
	<i>m/z</i> _{theo}	<i>m/z</i> _{meas}	$\Delta m/z$
2	652.39	652.28	0.11
3	738.43	738.28	0.15
4	824.47	824.28	0.19
5	910.50	910.32	0.18
6	996.54	996.32	0.22
7	1082.58	1082.32	0.26
8	1168.61	1168.32	0.29
9	1254.65	1254.36	0.29



R = -C(CH₃)(CN)-CH₂-C(OCH₃)(CH₃)₂

X = n + m

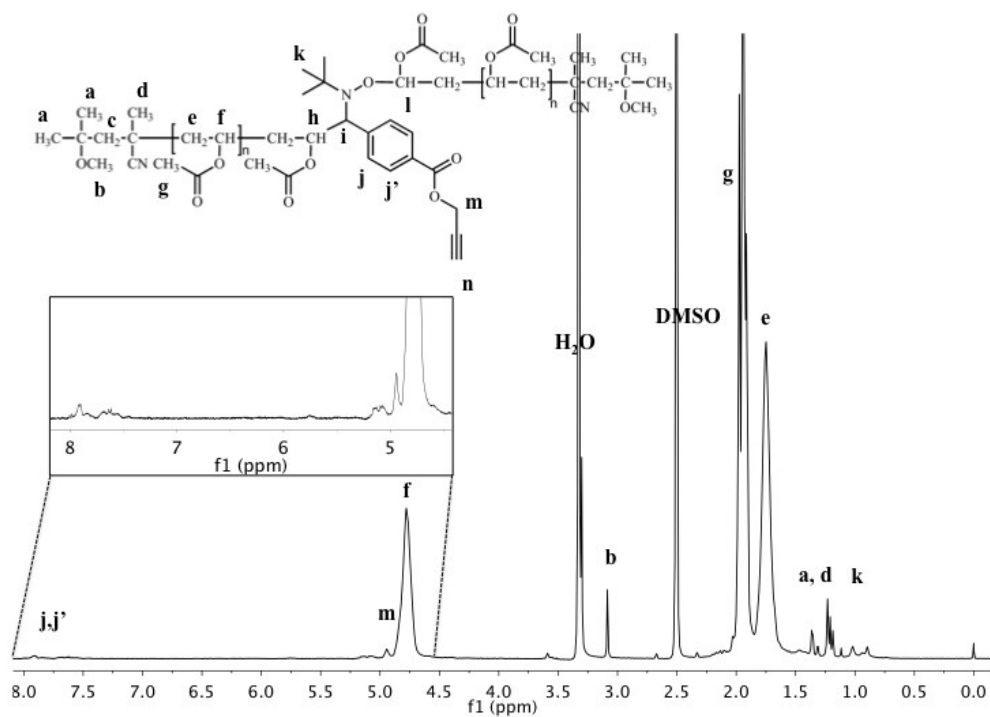


Figure S1 400 MHz ¹H-NMR spectrum of PVAc-Co(acac)₂ coupled by nitrone **3** (Table 1, entry 5).

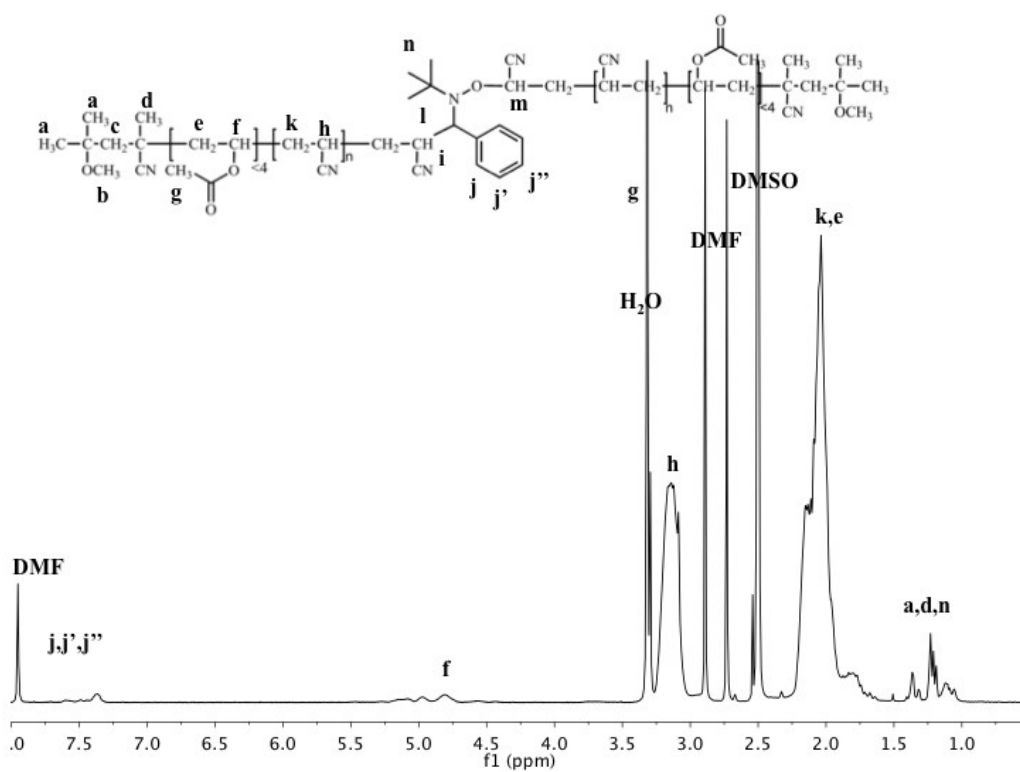


Figure S2 400 MHz ¹H-NMR spectrum of PAN-Co(acac)₂ coupled by nitrone **1** (Table 1 entry 1)

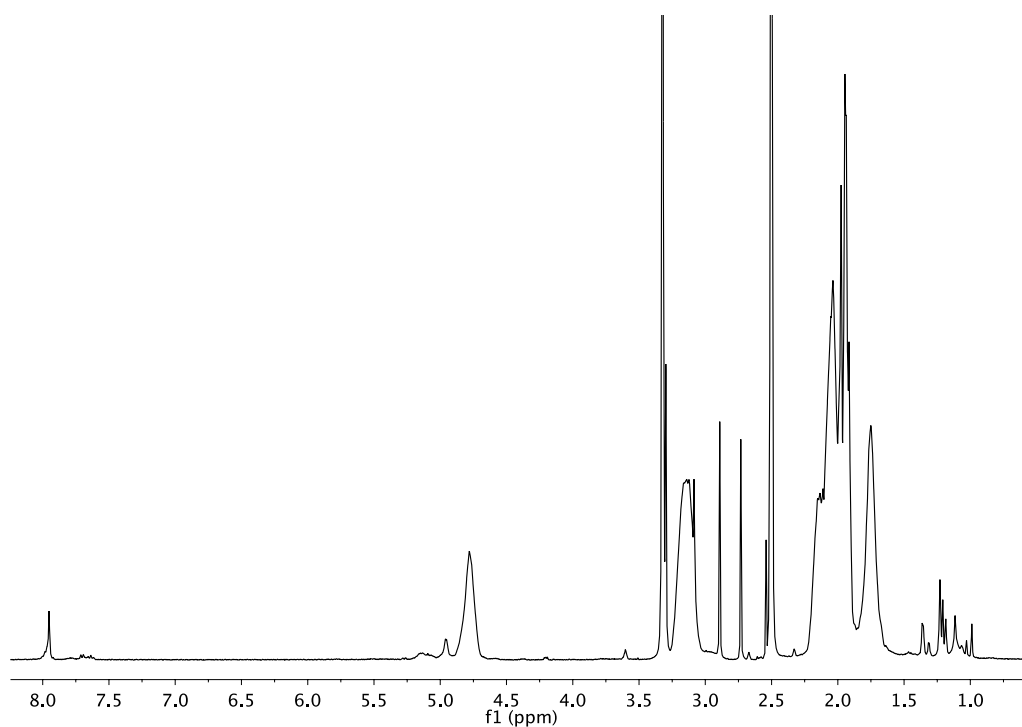


Figure S3 400 MHz ^1H -NMR spectrum of PVAc-b-PAN-b-PVAc formed by coupling PVAc-b-PAN-Co(acac) $_2$ by nitrene **3**

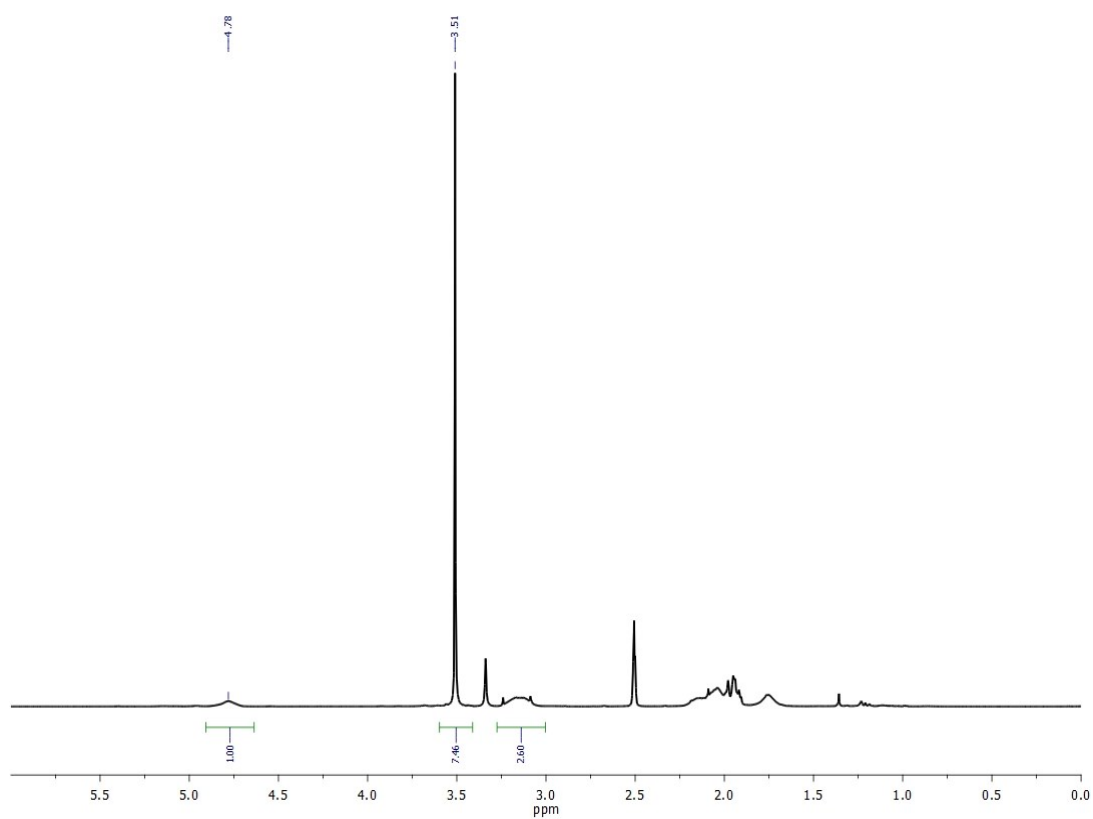


Figure S4 400 MHz ^1H -NMR spectrum of (PVAc-PAN) $_2$ -PEG miktoarm star polymer

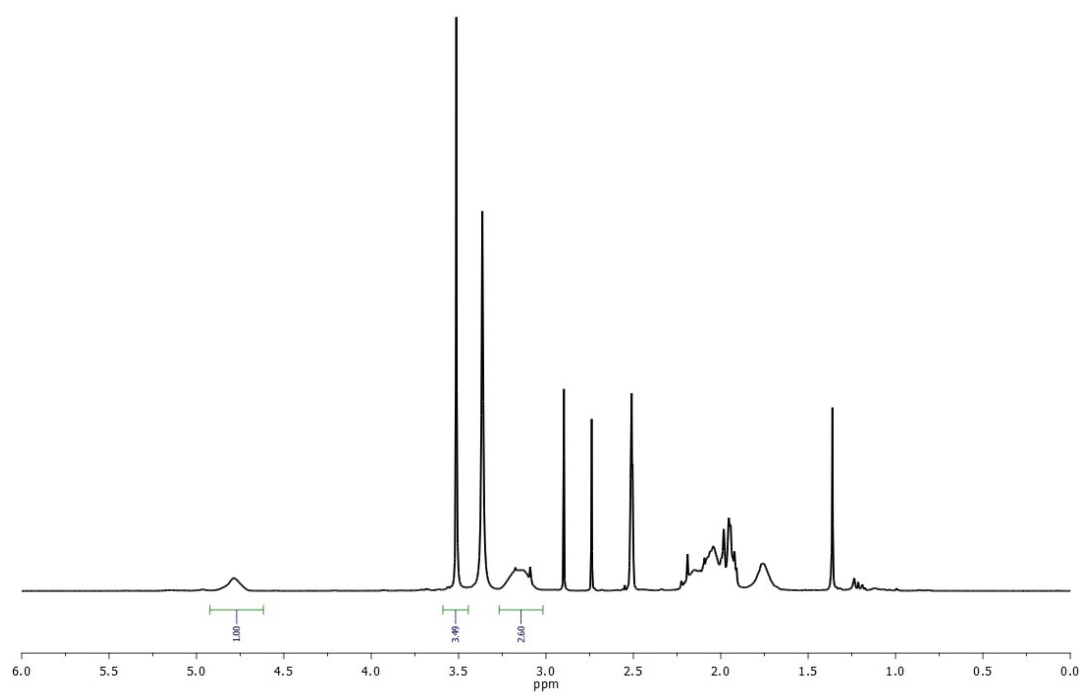


Figure S5 400 MHz ¹H-NMR spectrum of (PVAc-PAN)₂-PEG-(PVAc-PAN)₂ H-shaped polymer