

Supporting Information

Synthesis of poly(sulfonate ester)s by ADMET polymerization

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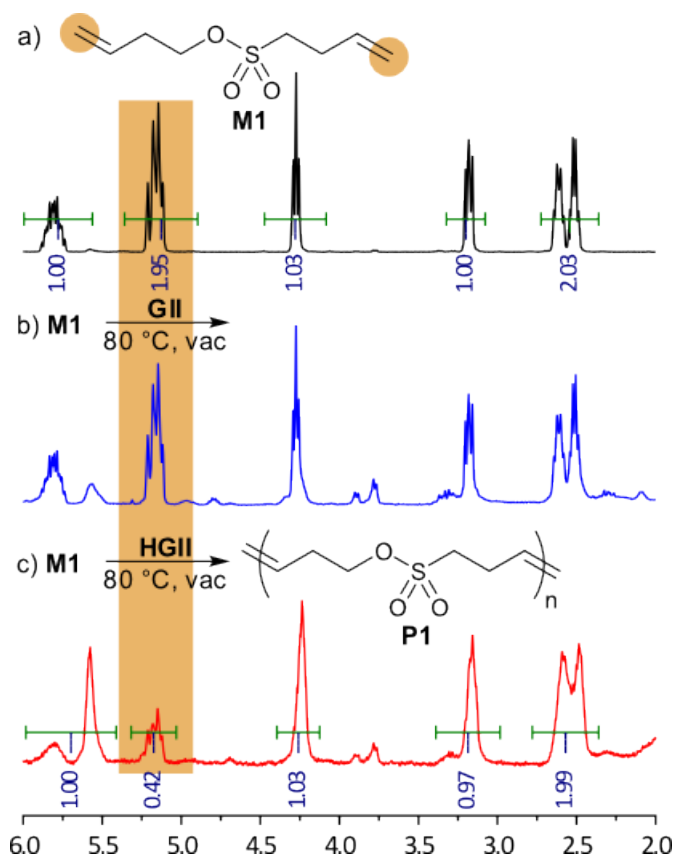
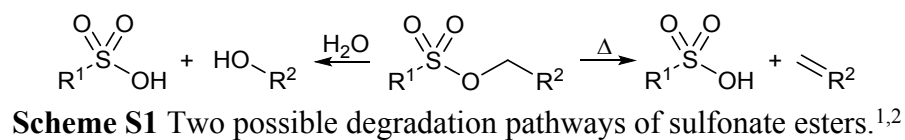


Figure S1 ^1H -NMR spectra in CDCl_3 of a) monomer **M1**; b) bulk ADMET polymerization attempt of **M1** with catalyst **GII** (1 mol %); c) ADMET polymerization attempt of **M1** with catalyst **HGII** (1 mol %), for which end-group analysis resulted in $n = 5$ or $M_n = 800$ g/mol.

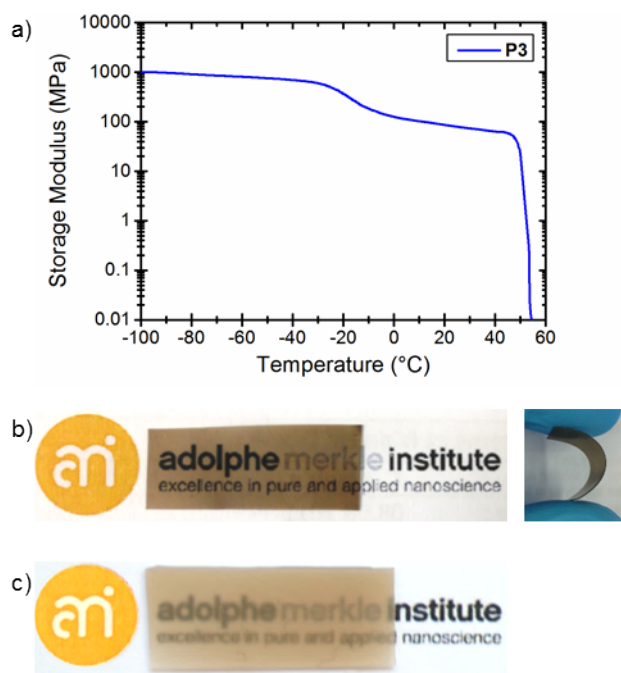


Figure S2 a) Representative DMTA trace of films of **P3** cast from PhCH₃ solution. Experiments were performed at a heating rate of 3 °C/min under N₂. b) Pictures of a solution cast film of **P3** (PhCH₃, 30 °C), and c) a melt-processed film of **HP3**. Films of **HP3** are visibly more opaque.

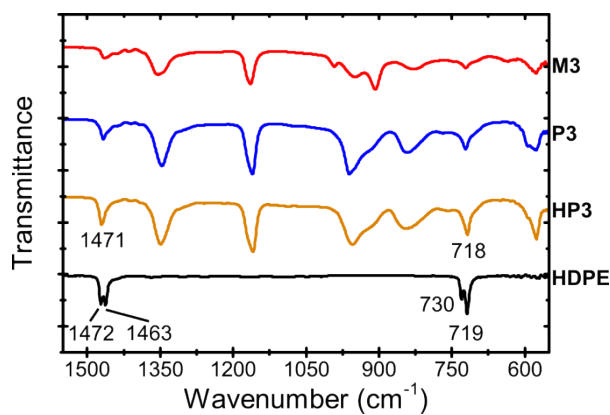
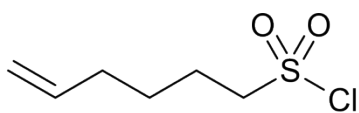
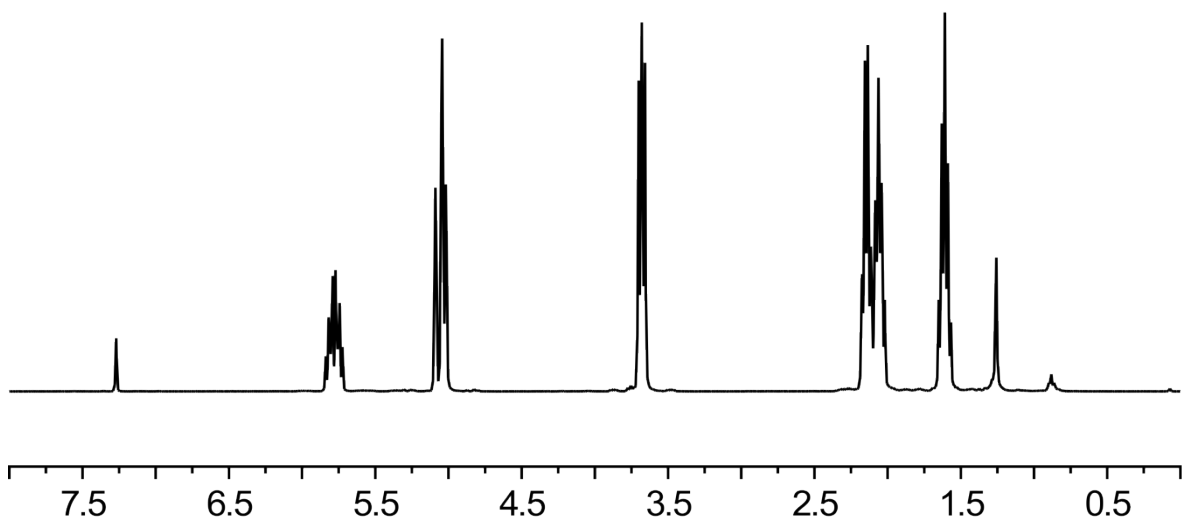


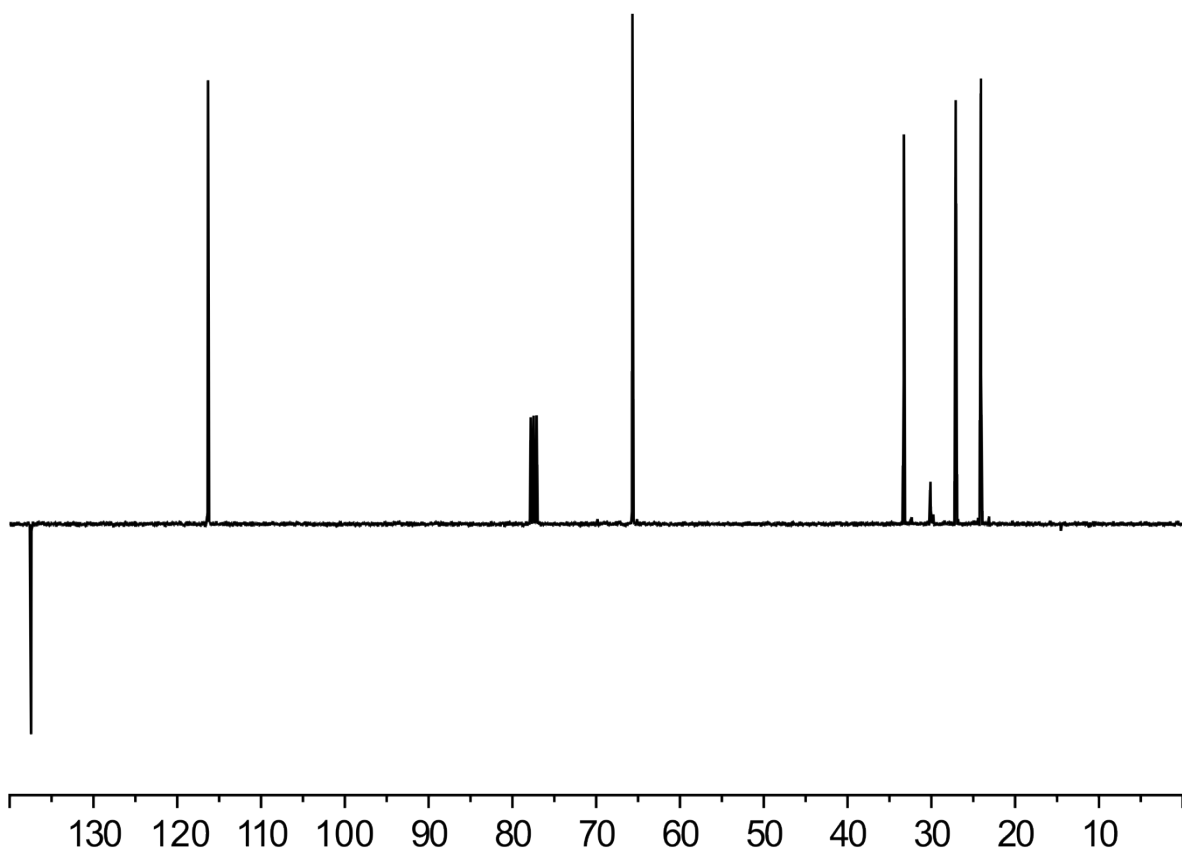
Figure S3 FT-IR spectra of **M3**, **P3**, **HP3**, and **HDPE**.



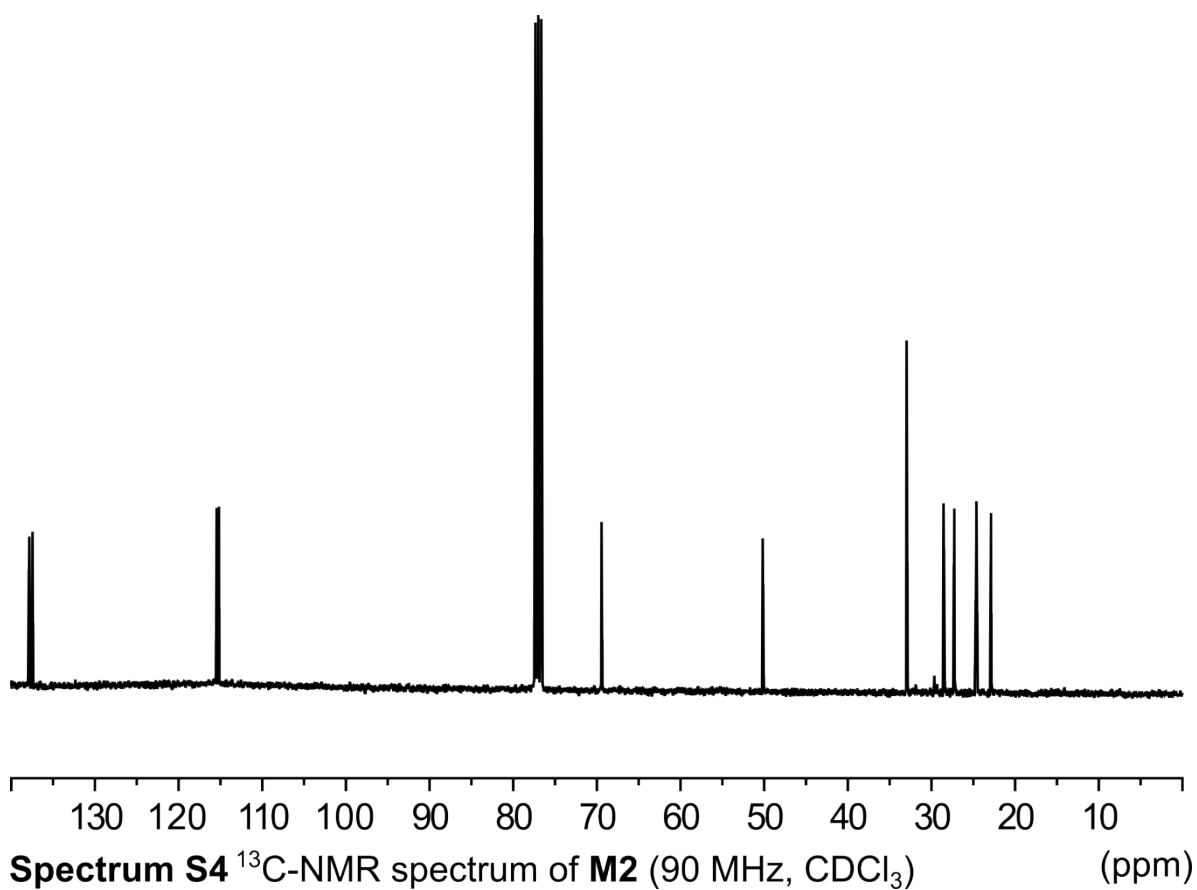
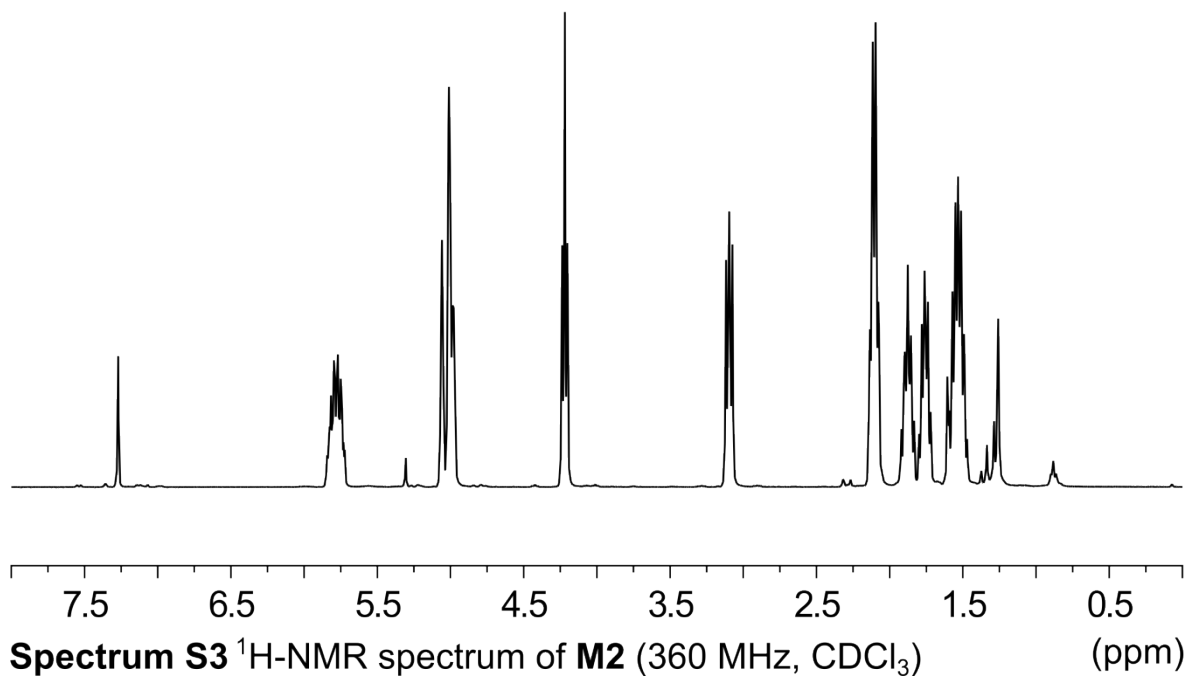
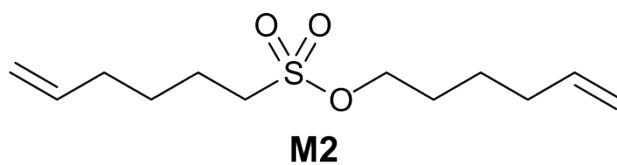
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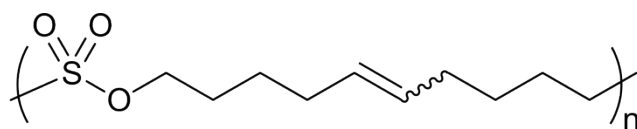


Spectrum S1 ^1H -NMR spectrum of **2** (360 MHz, CDCl_3) (ppm)

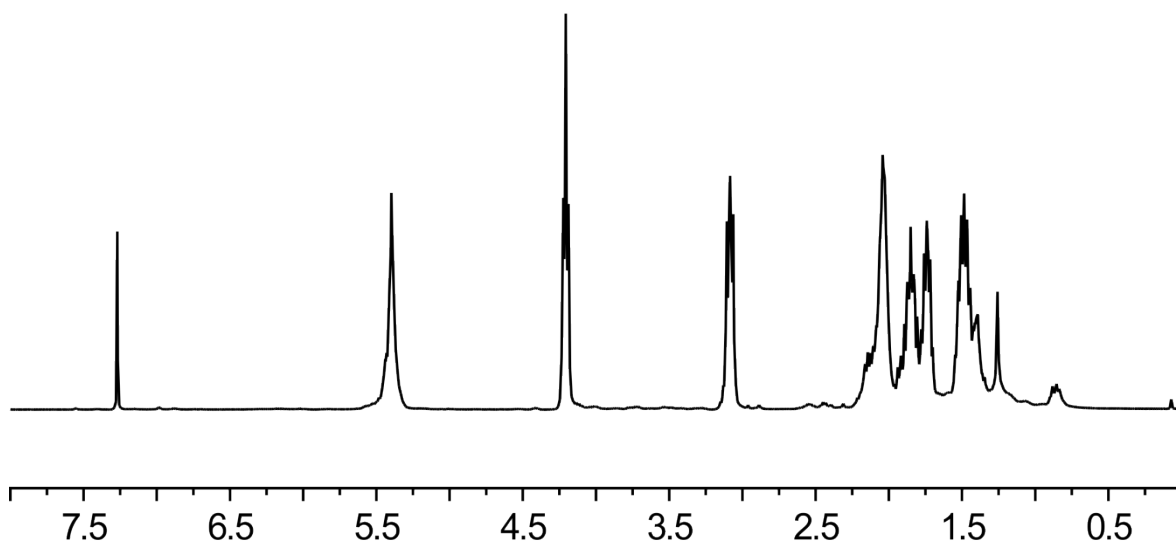


Spectrum S2 ^{13}C -NMR spectrum of **2** (90 MHz, CDCl_3) (ppm)

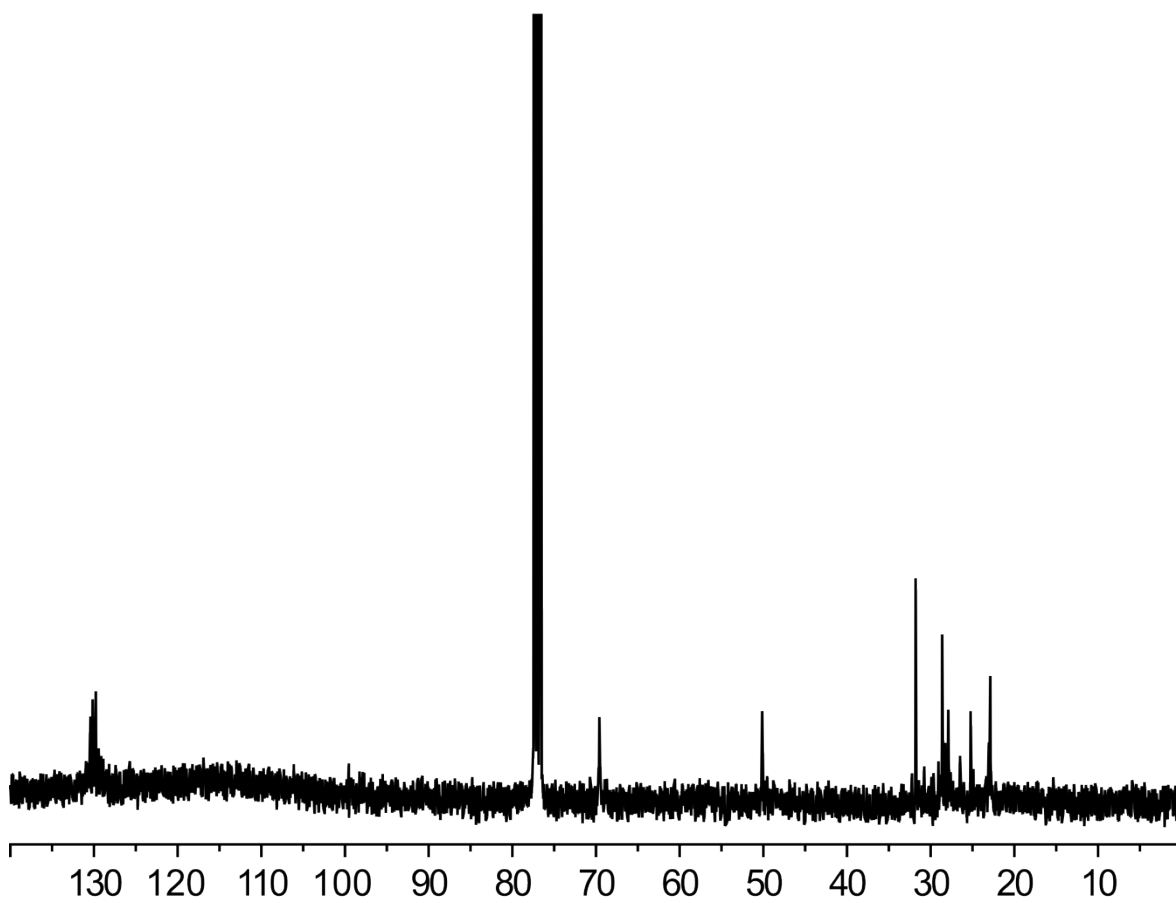




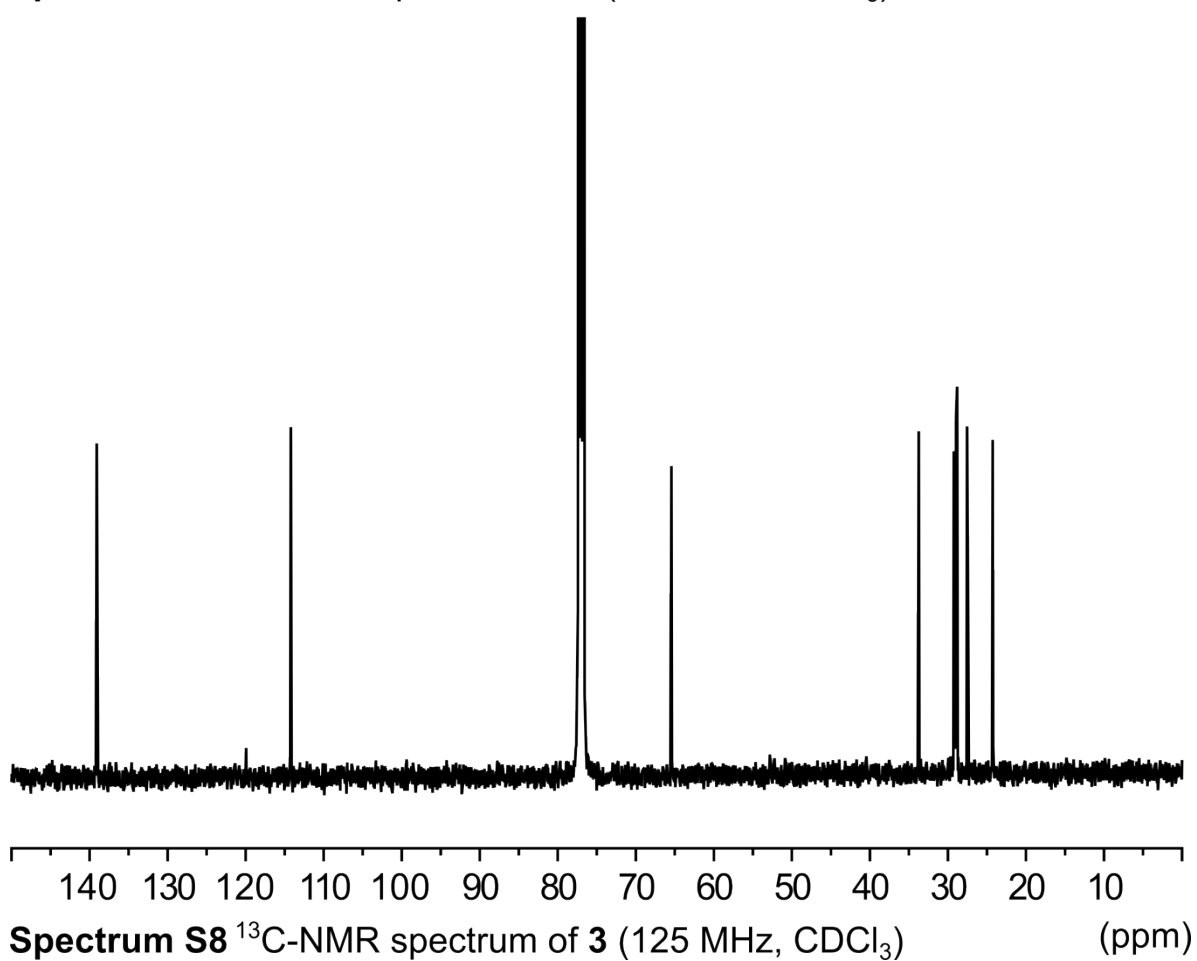
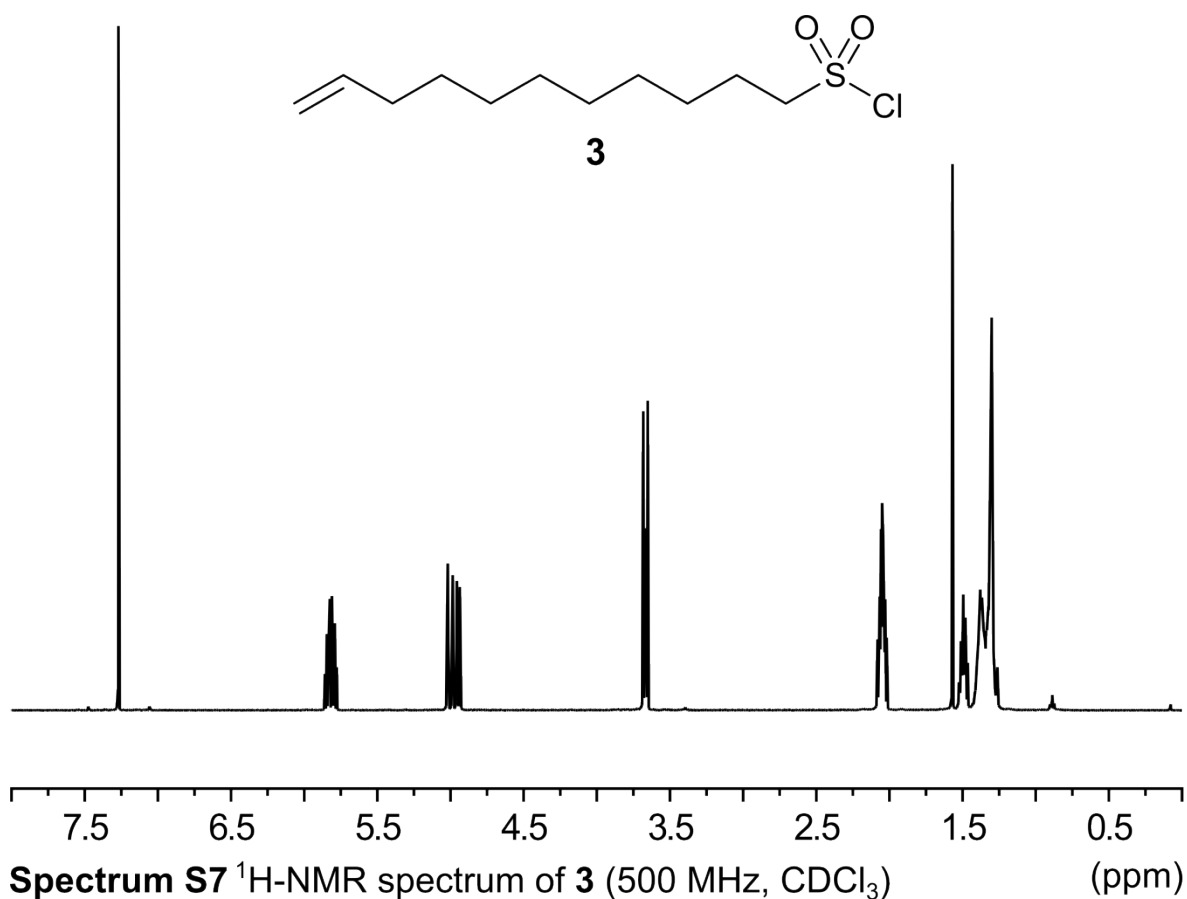
P2

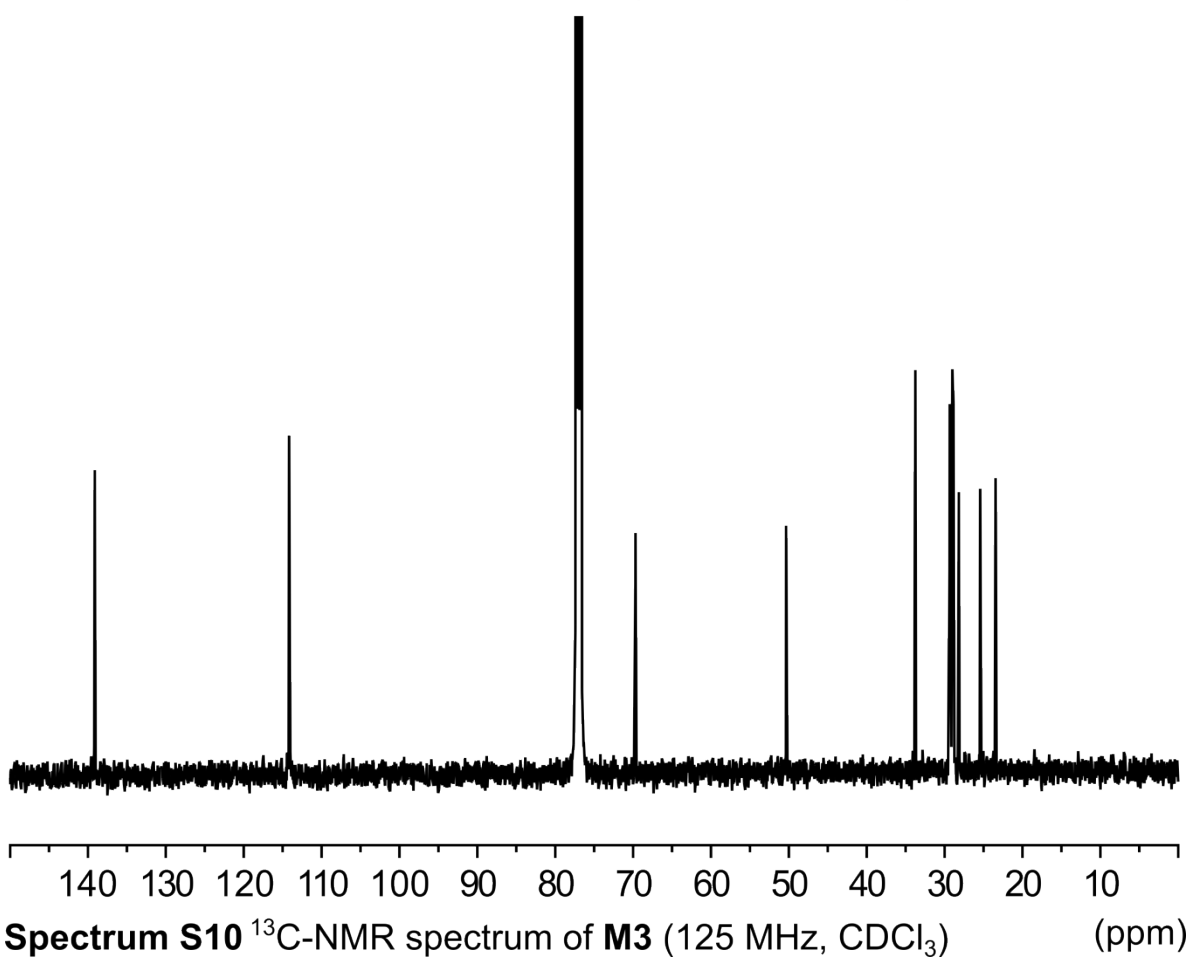
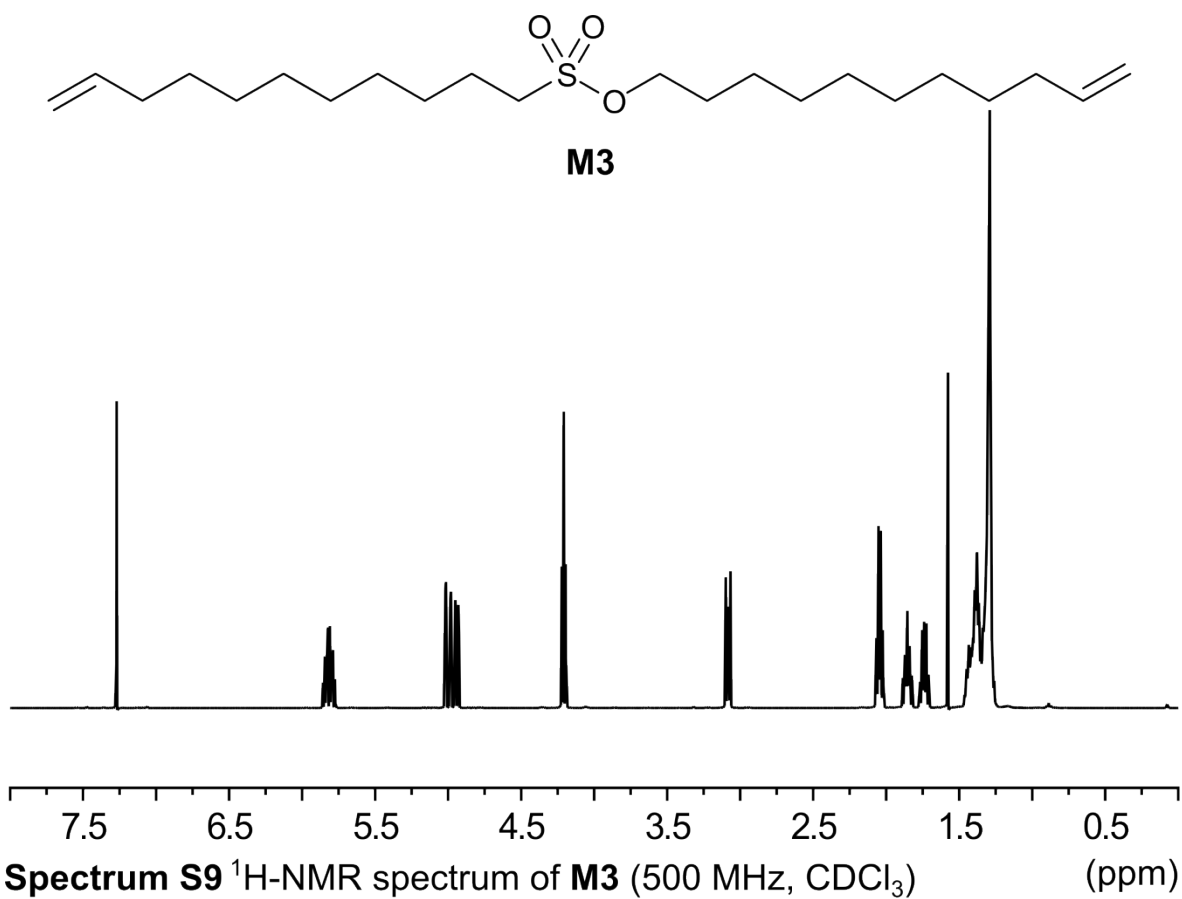


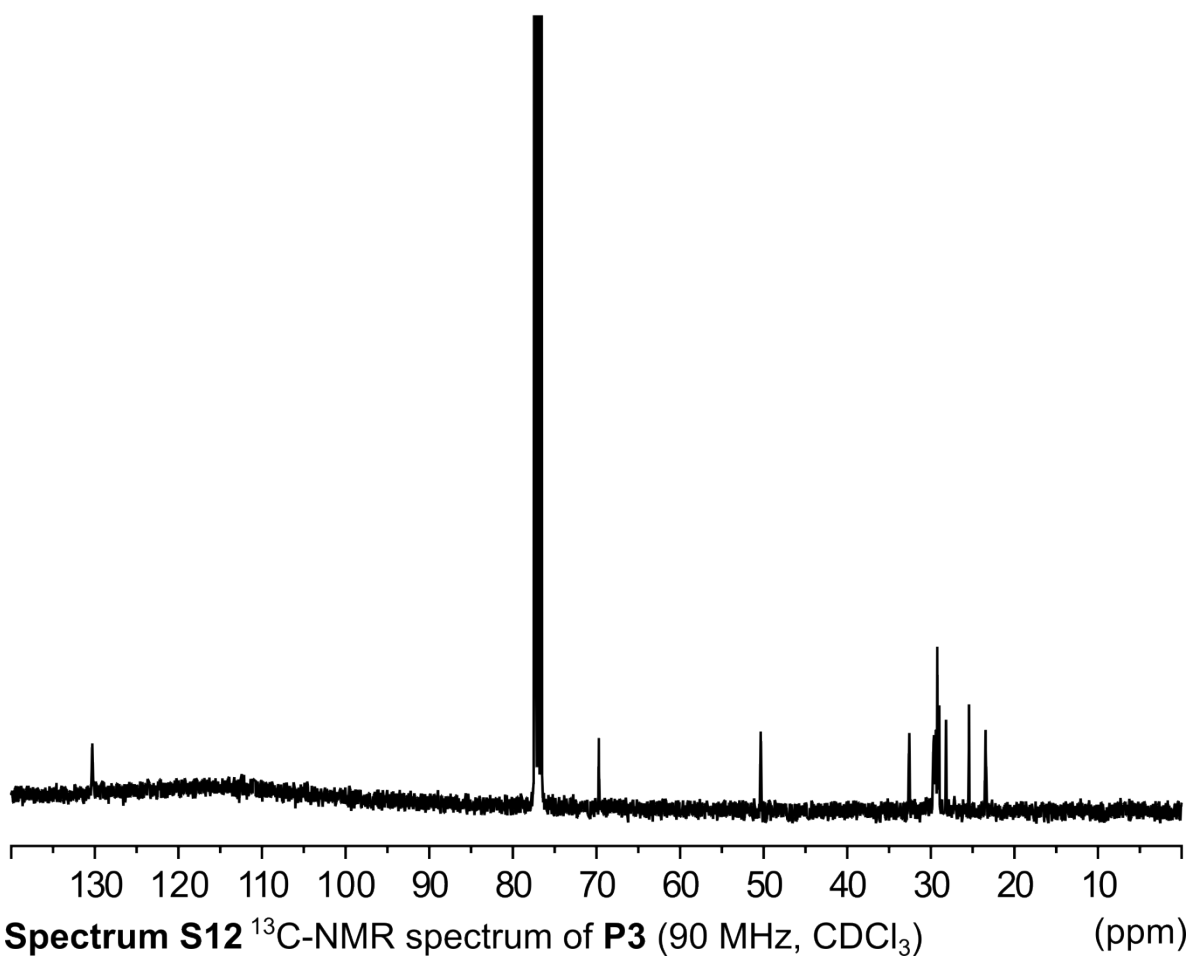
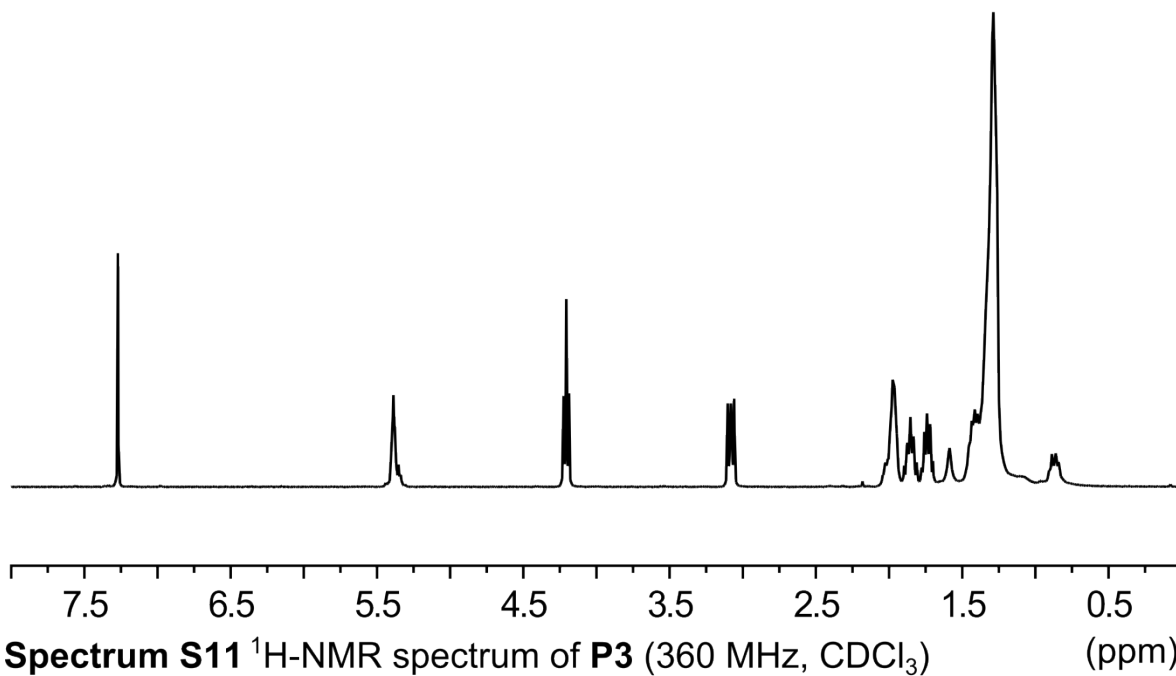
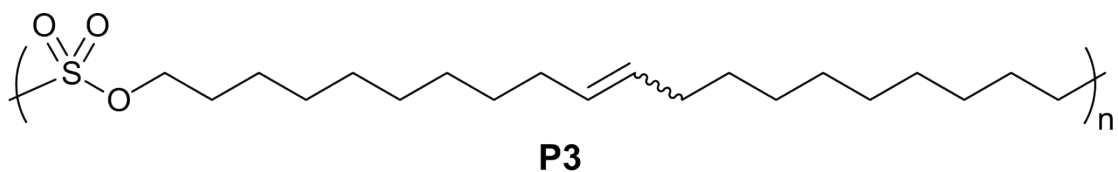
Spectrum **S5** ¹H-NMR spectrum of **P2** (360 MHz, CDCl₃) (ppm)

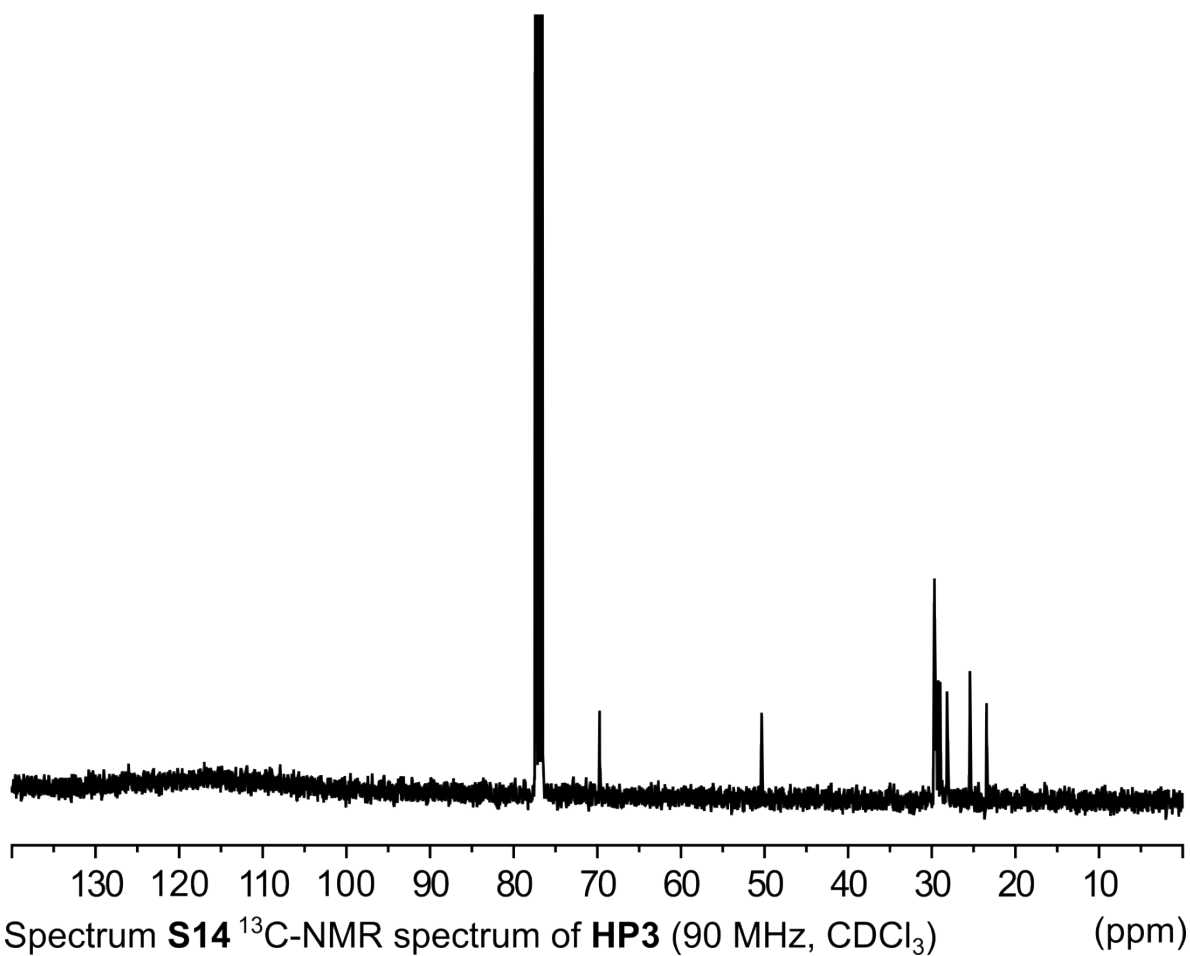
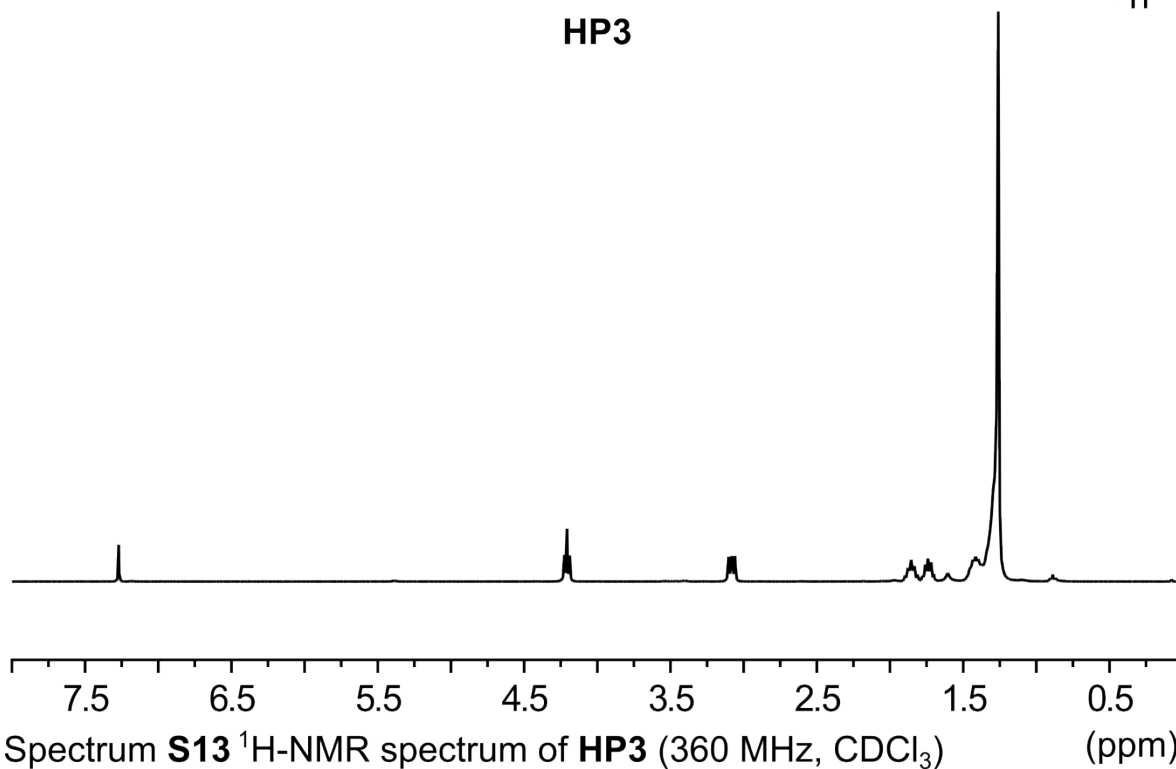
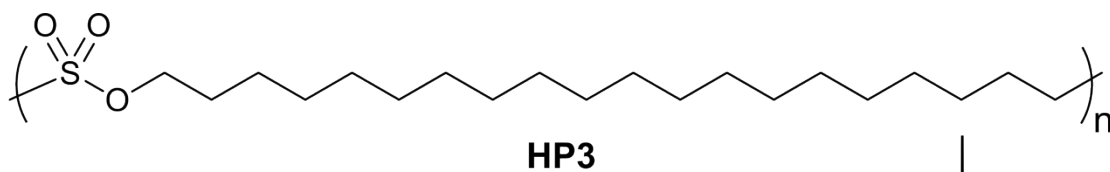


Spectrum **S6** ¹³C-NMR spectrum of **P2** (90 MHz, CDCl₃) (ppm)









References

1. E. J. Corey, G. H. Posner, R. F. Atkinson, A. K. Wingard, D. J. Halloran, D. M. Radzik and J. J. Nash, *J. Org. Chem.*, 1989, 54, 389-393.
2. P. W. C. Barnard and R. E. Robertson, *Can. J. Chem.*, 1961, 39, 881-888.