Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting information

Alcohol mediated degenerate chain transfer controlled cationic polymerisation of *para*-alkoxystyrene

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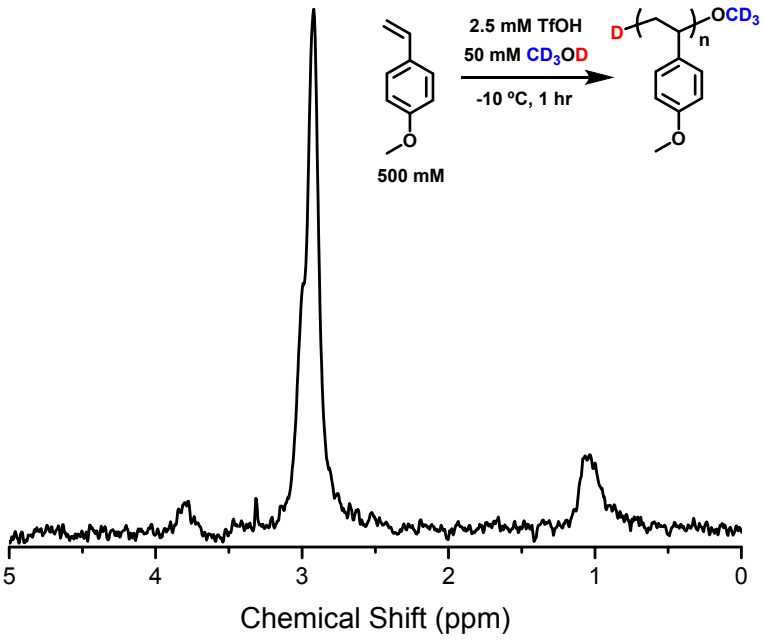


Figure S1: D-NMR spectrum in Dichloromethane

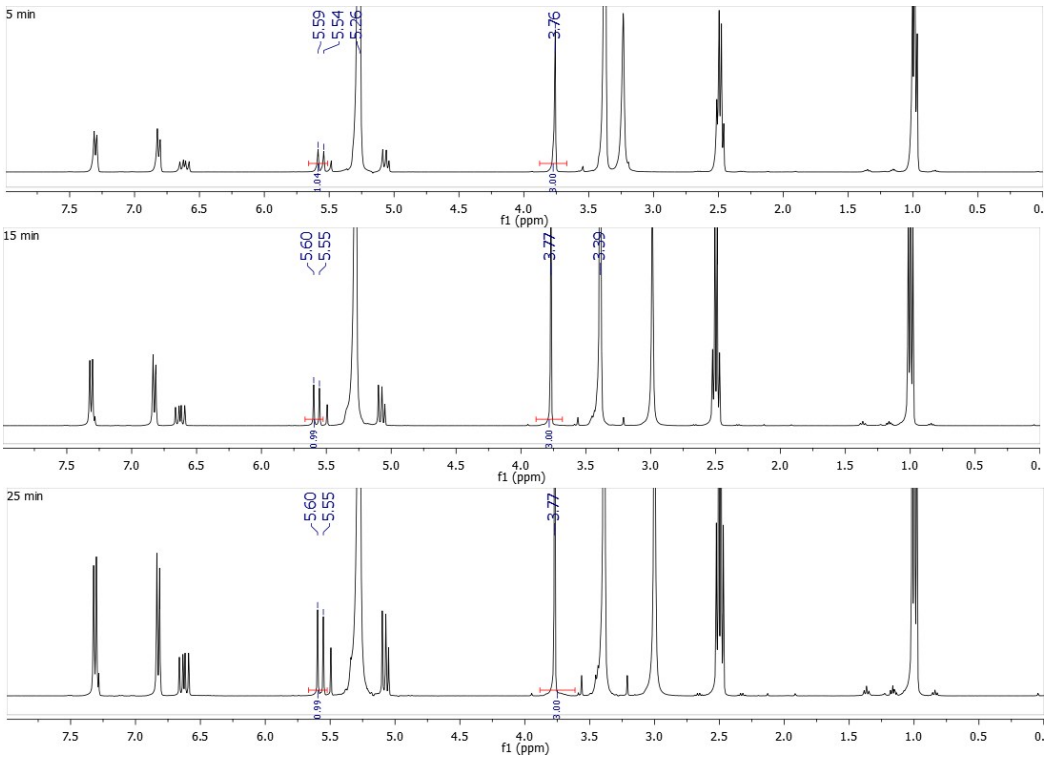


Figure S2: ^{1}H-NMR of pMOS polymerisation (5-25 mins), conversion was obtained by integrating the -C***H***- vinylic proton at 5.57 ppm and using the phenyl-meoxy -OC***H***$_3$ at 3.77 as internal reference.

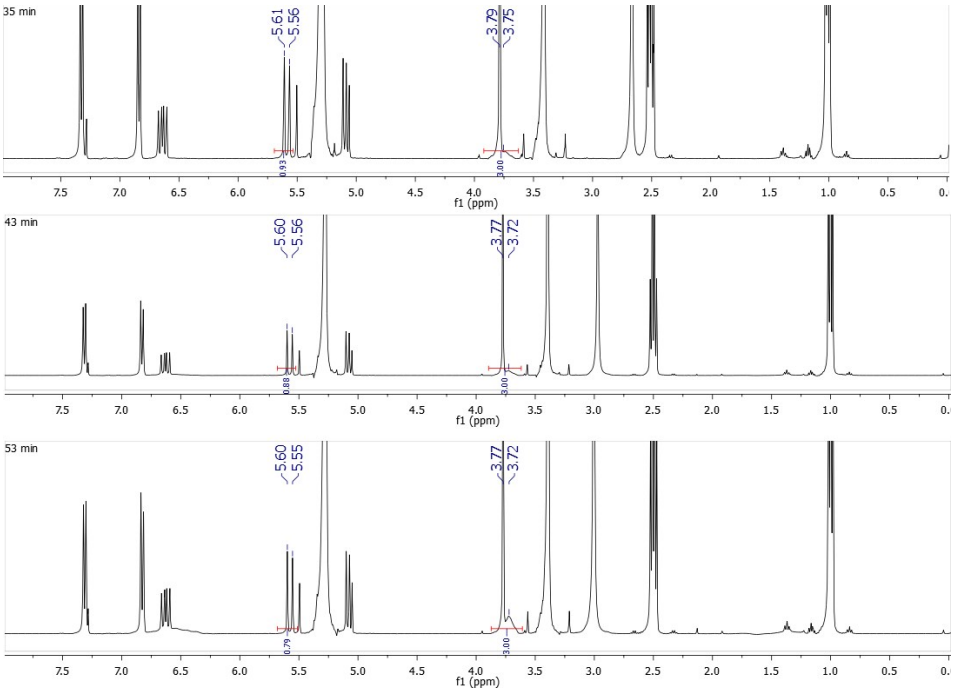


Figure S3: ^{1}H-NMR of pMOS polymerisation (35-53 mins), conversion was obtained by integrating the -C***H***- vinylic proton at 5.57 ppm and using the phenyl-meoxy -OC***H***$_3$ at 3.77 as internal reference.

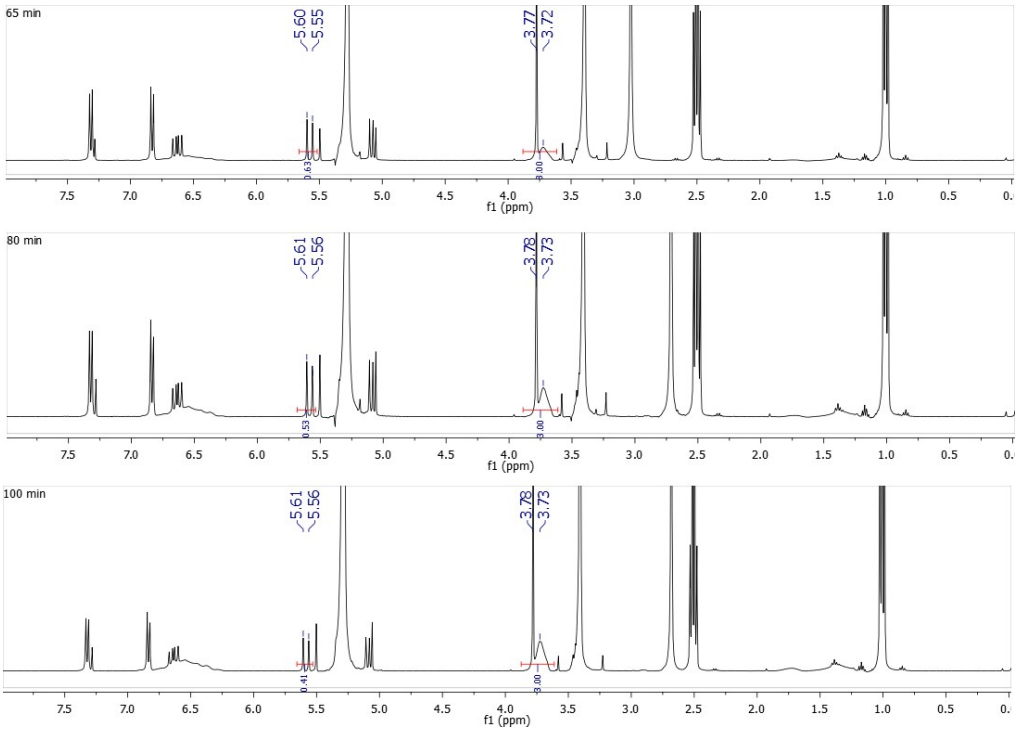


Figure S4: ^{1}H-NMR of pMOS polymerisation (65-100 mins), conversion was obtained by integrating the -C***H***- vinylic proton at 5.57 ppm and using the phenyl-meoxy -OC***H***$_3$ at 3.77 as internal reference.

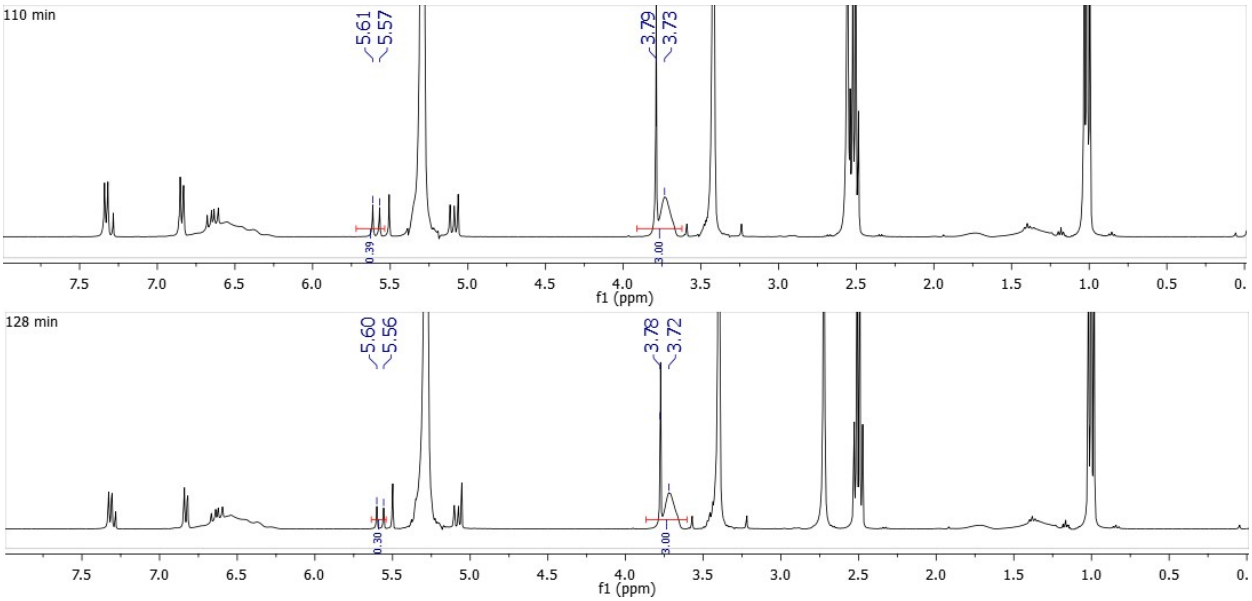


Figure S5: ^{1}H-NMR of pMOS polymerisation (110-128 mins), conversion was obtained by integrating the -C***H***- vinylic proton at 5.57 ppm and using the phenyl-meoxy -OC***H***$_3$ at 3.77 as internal reference.

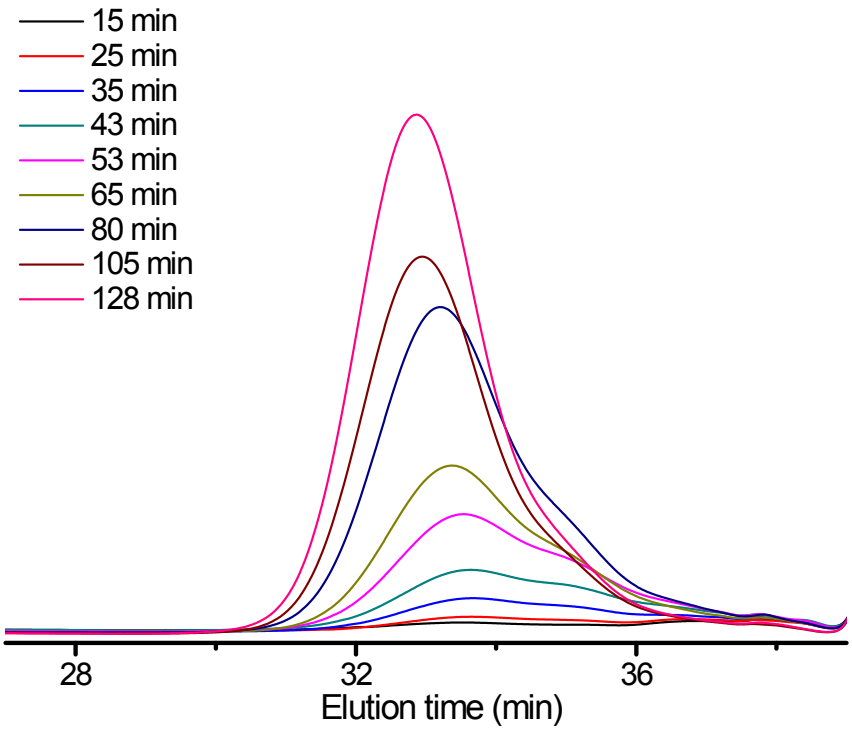


Figure S6: SEC (dRI, THF) graph of pMOS polymerisation (5-128 mins).

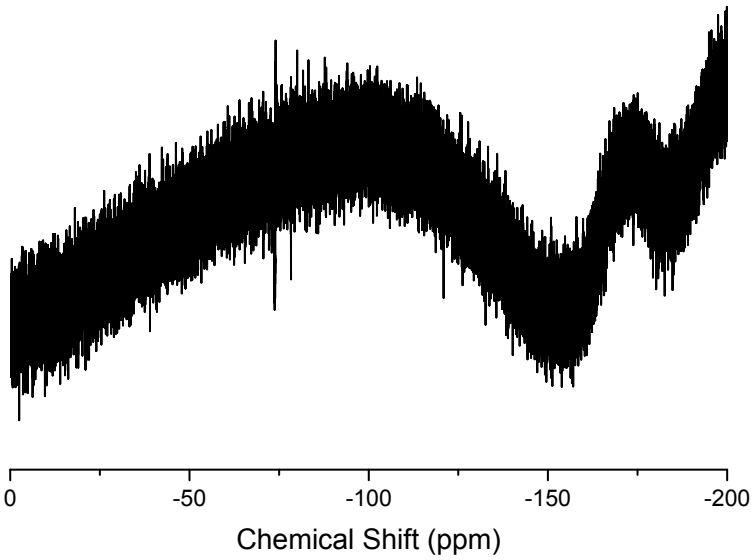


Figure S7: ^{19}F-NMR of cationic polymerisation in presence of trifluoroethanol (entry 5, table 2).

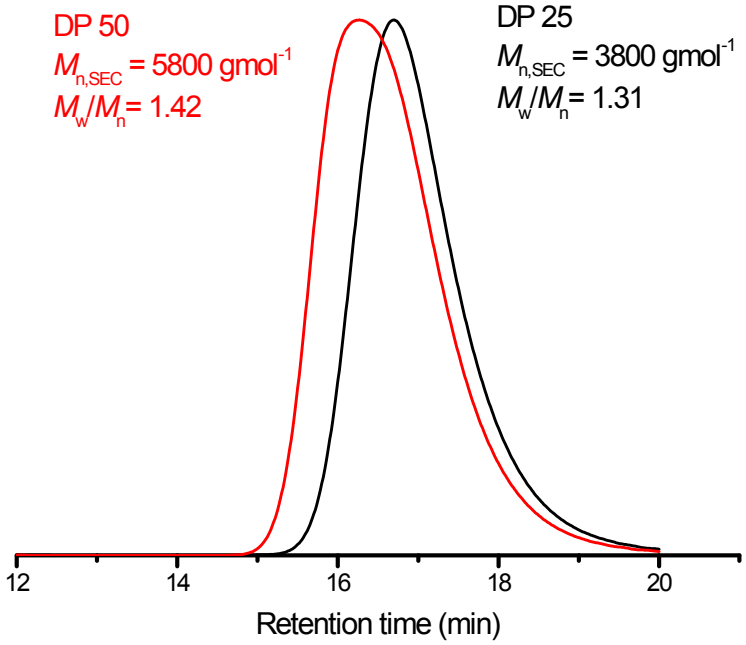
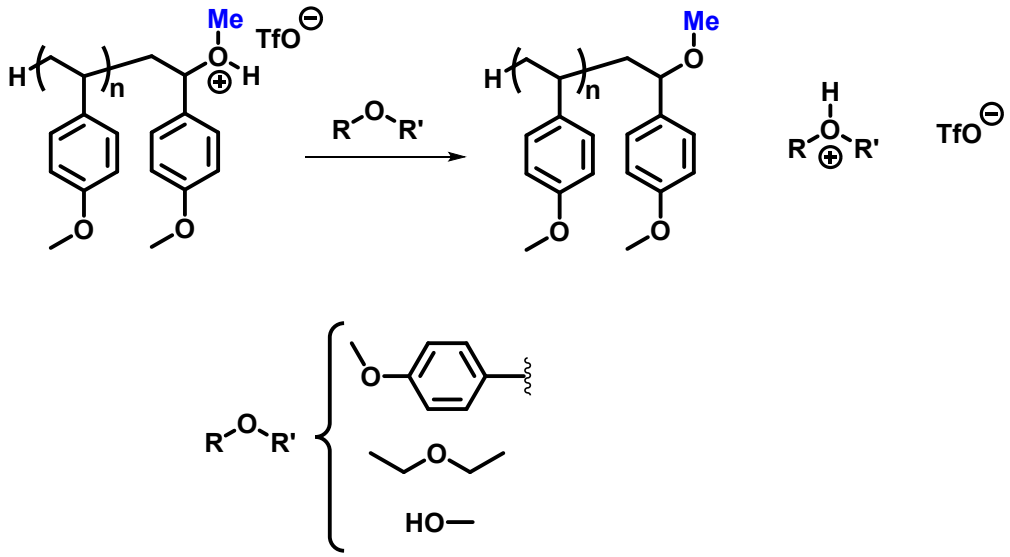


Figure S8: SEC (dRI, THF) chromatogram of chain extension of Poly(pMOS) with pMOS.



Scheme S1: Proton exchange of methanol derived proton on ω-end methoxy group with free divalent oxygen on monomer/polymeric *p*-MOS side chains, diethyl ether or free alcohol.