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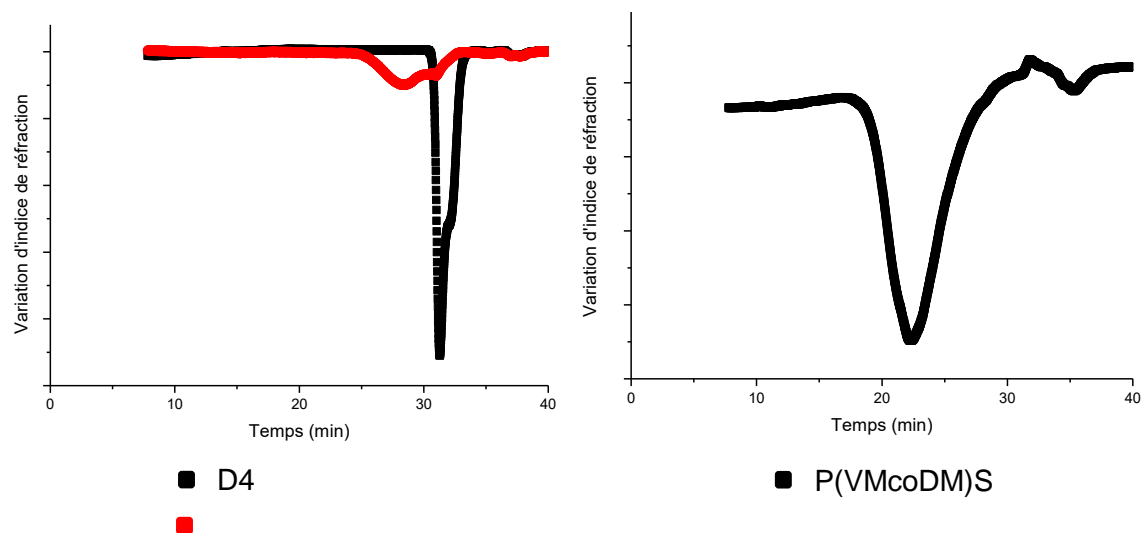
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Supporting Information

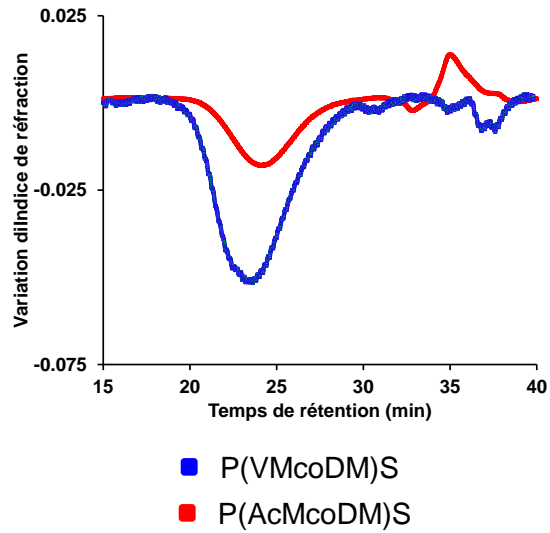
SI-1- Size Exclusion Chromatography – Refractive index detector

1.1- P(VM-co-DM)S 3

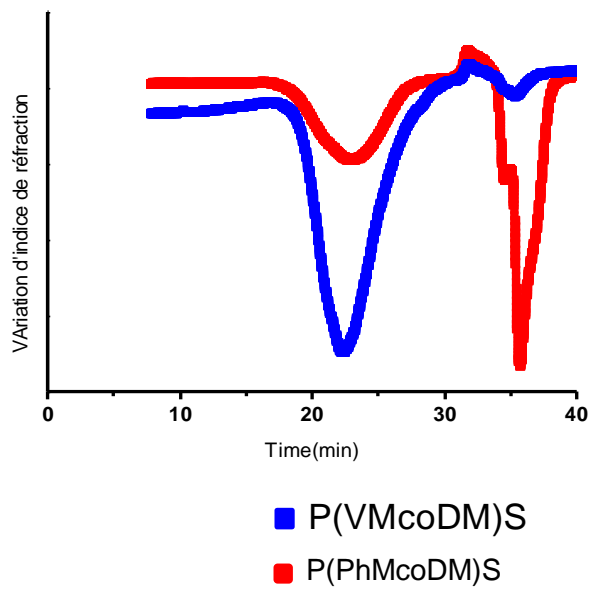


PVMS

1.2- P(AcM-co-DM)S A



1.3- P(PhM-co-DM)S B



1.4- P(FM-co-DM)S C

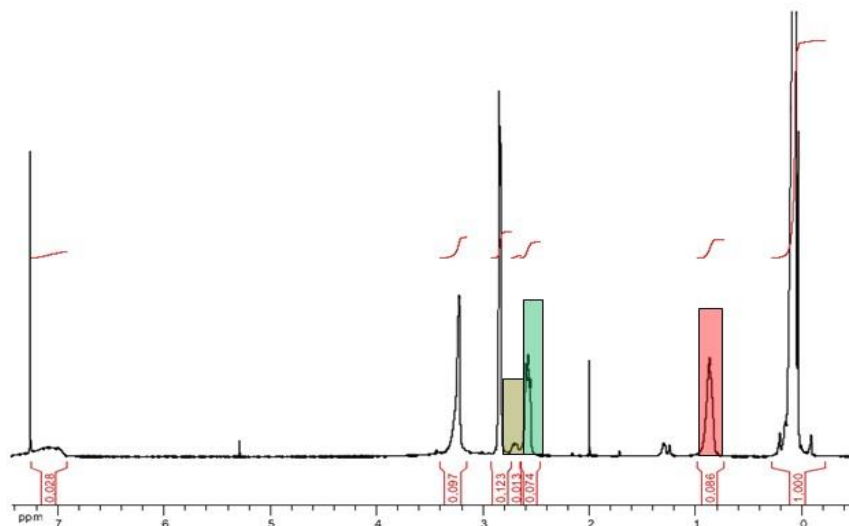


SI-2- ^1H NMR

2.1- P(AcM-co-DM)S A

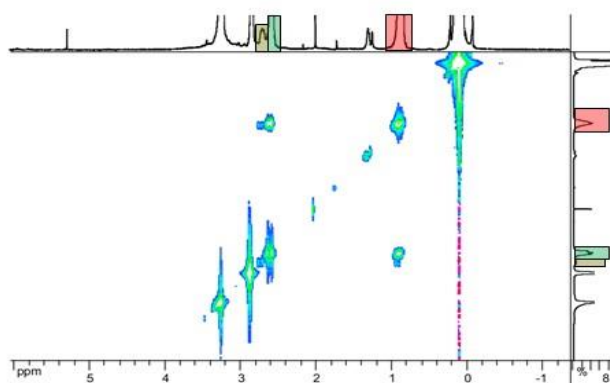
- a): ^1H NMR
- b): ^1H - ^1H correlation NMR
- c): structure of the polymer

a)

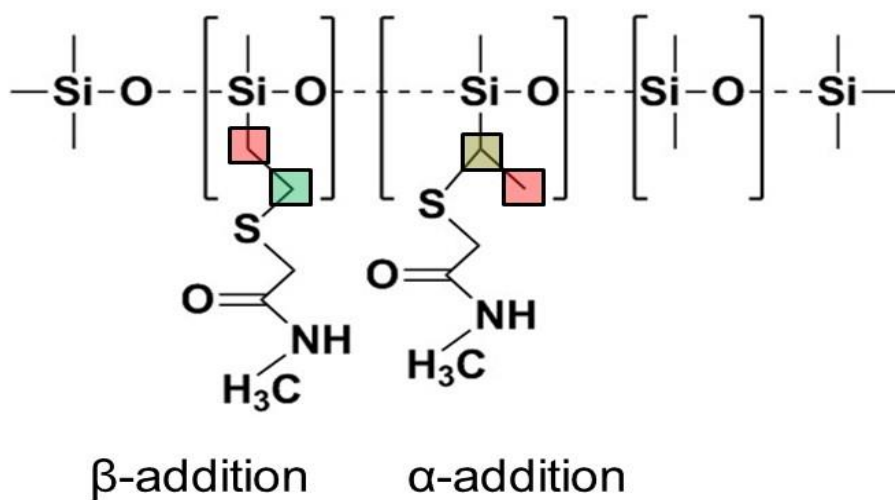


Residual solvents
 2.03 ppm: acetonitrile
 5.32 ppm: dichloromethane
 1.28 ppm: water
 7.24: chloroform

b)



c)

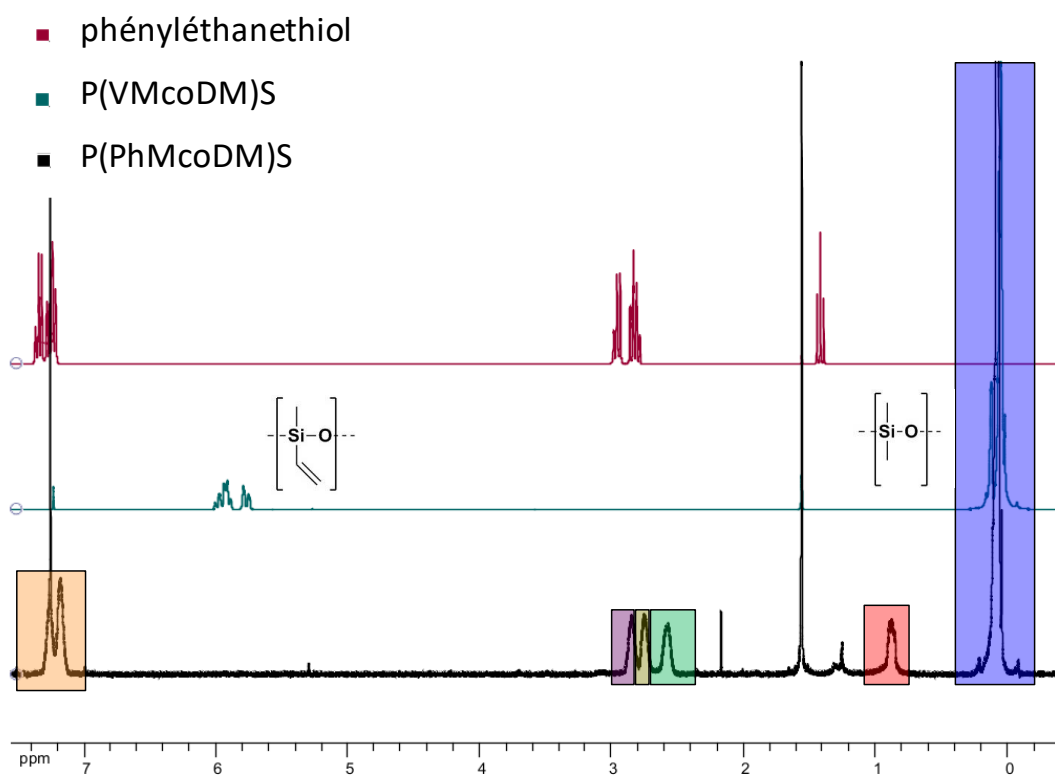


2.2- P(PhM-co-DM)S B

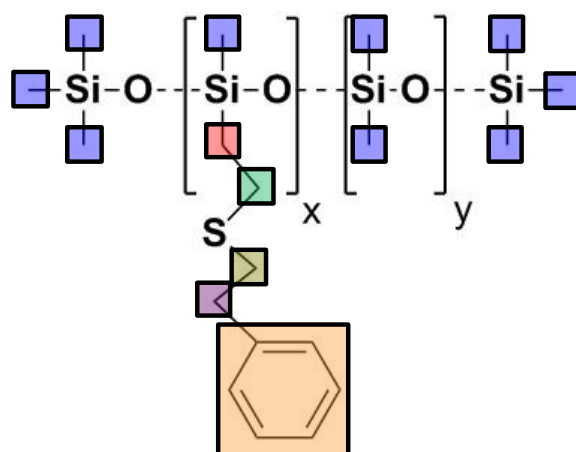
a): ^1H NMR for phenylethanethiol, P(VM-co-DM)S **3** and P(PhMcoDM)S **B**

b): structure of the polymer

a)



b)

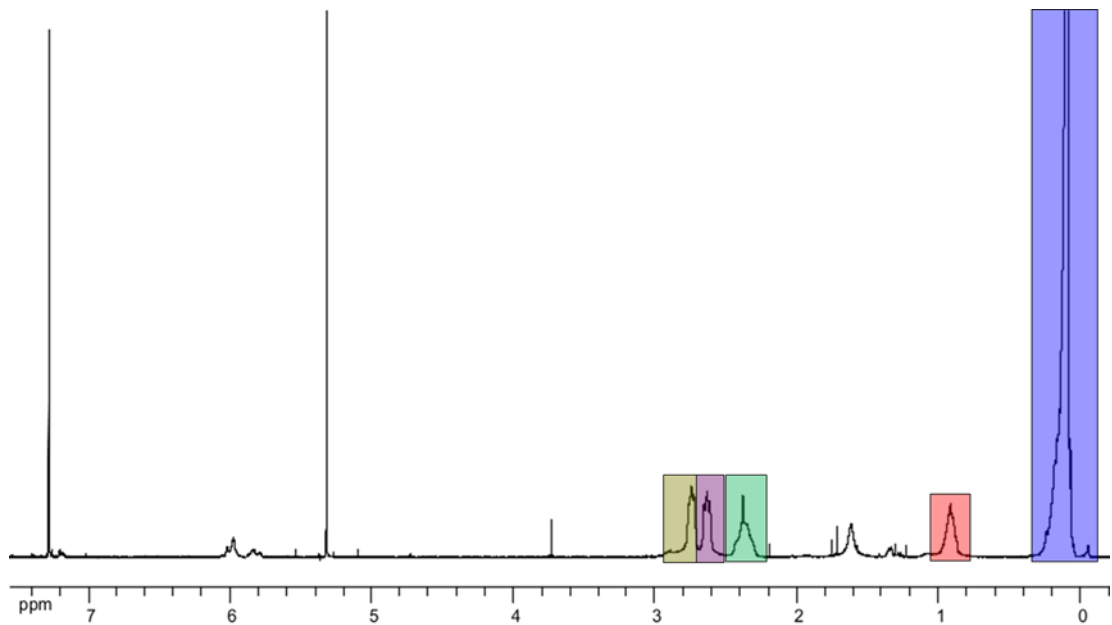


2.3- P(FMcoDM)S C

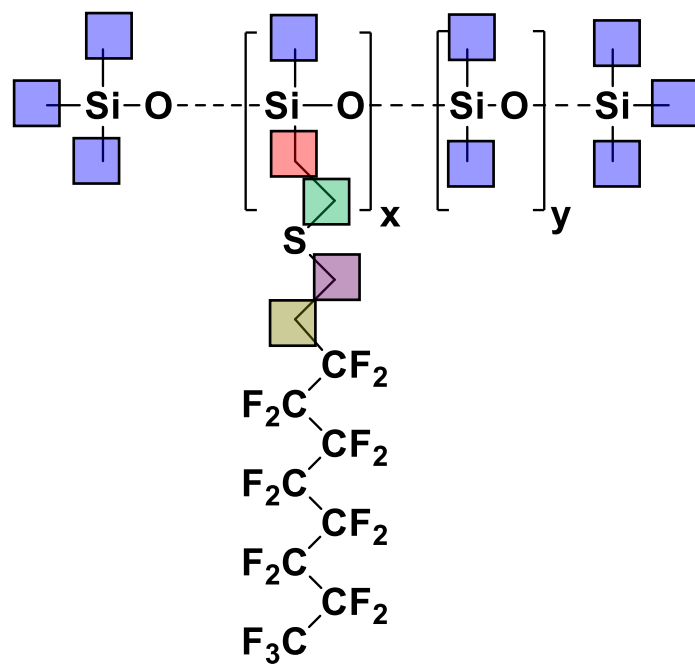
a): ^1H NMR

b): structure of the polymer

a)



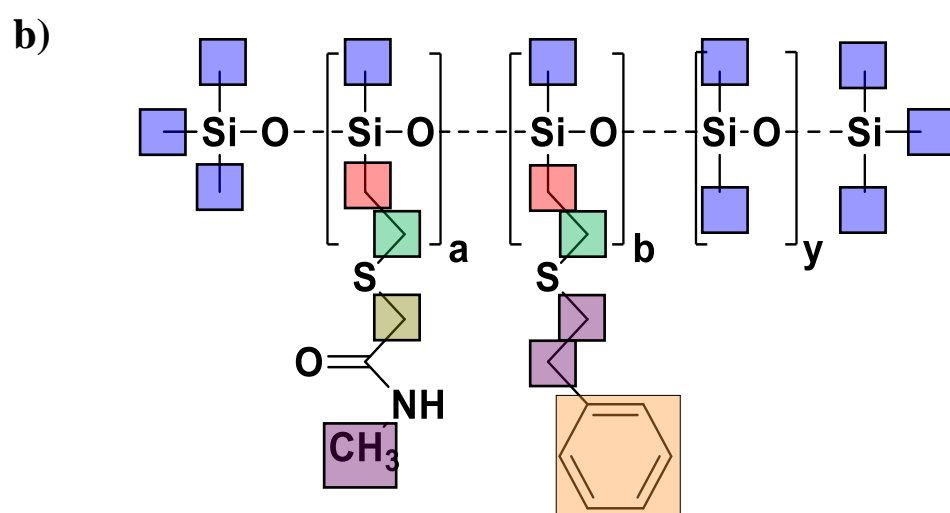
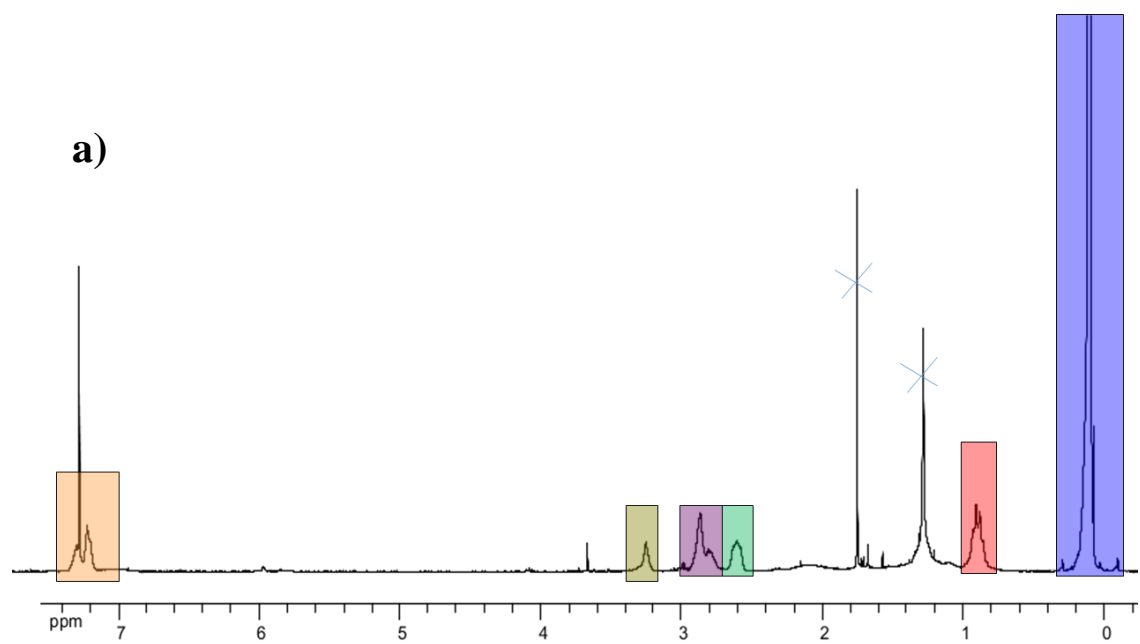
b)



2.4- P(AcMcoPhMcoDM)S D

a): ¹H NMR

b): structure of the polymer

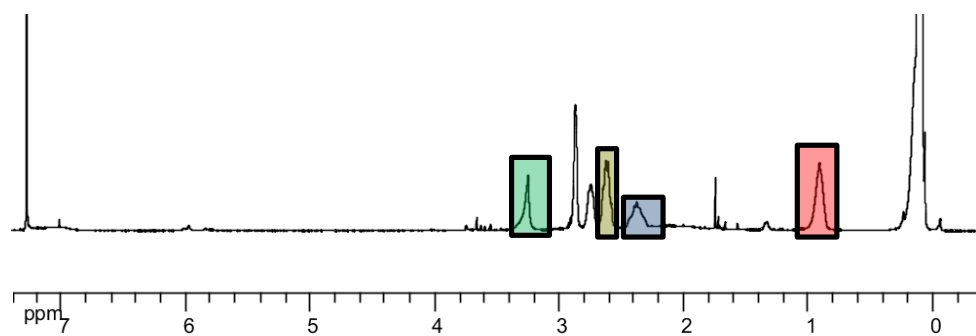


2.5- P(AcMcoFMcoDM)S E

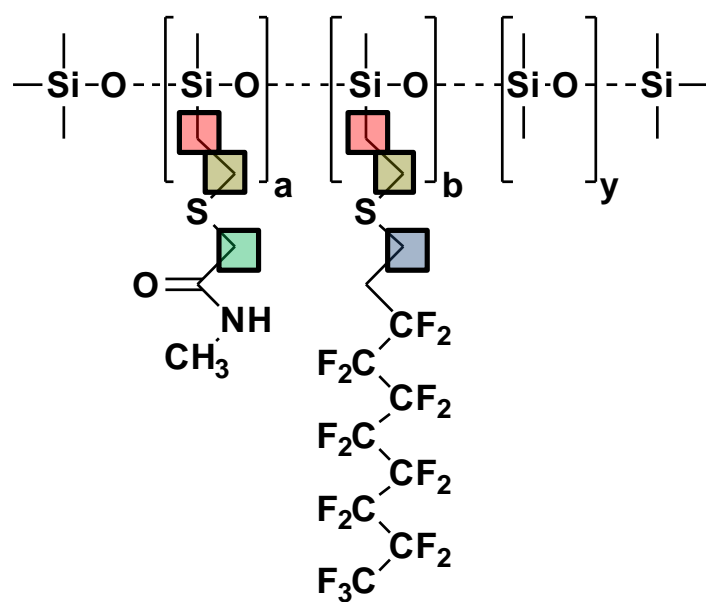
a): ^1H NMR

b): structure of the polymer

a)



b)



SI-3 – UV-visible spectra of polysiloxanes

UV-visible spectra of functionalized polysiloxanes A: P(AcM-co-DM)S; B: P(PhM-co-DM)S; C: P(FM-co-DM)S at 10^{-3} mol/L in CDCl_3

