Supporting Information for:

Chemical modification of polysiloxanes with polar pendant groups by co-hydrosilylation

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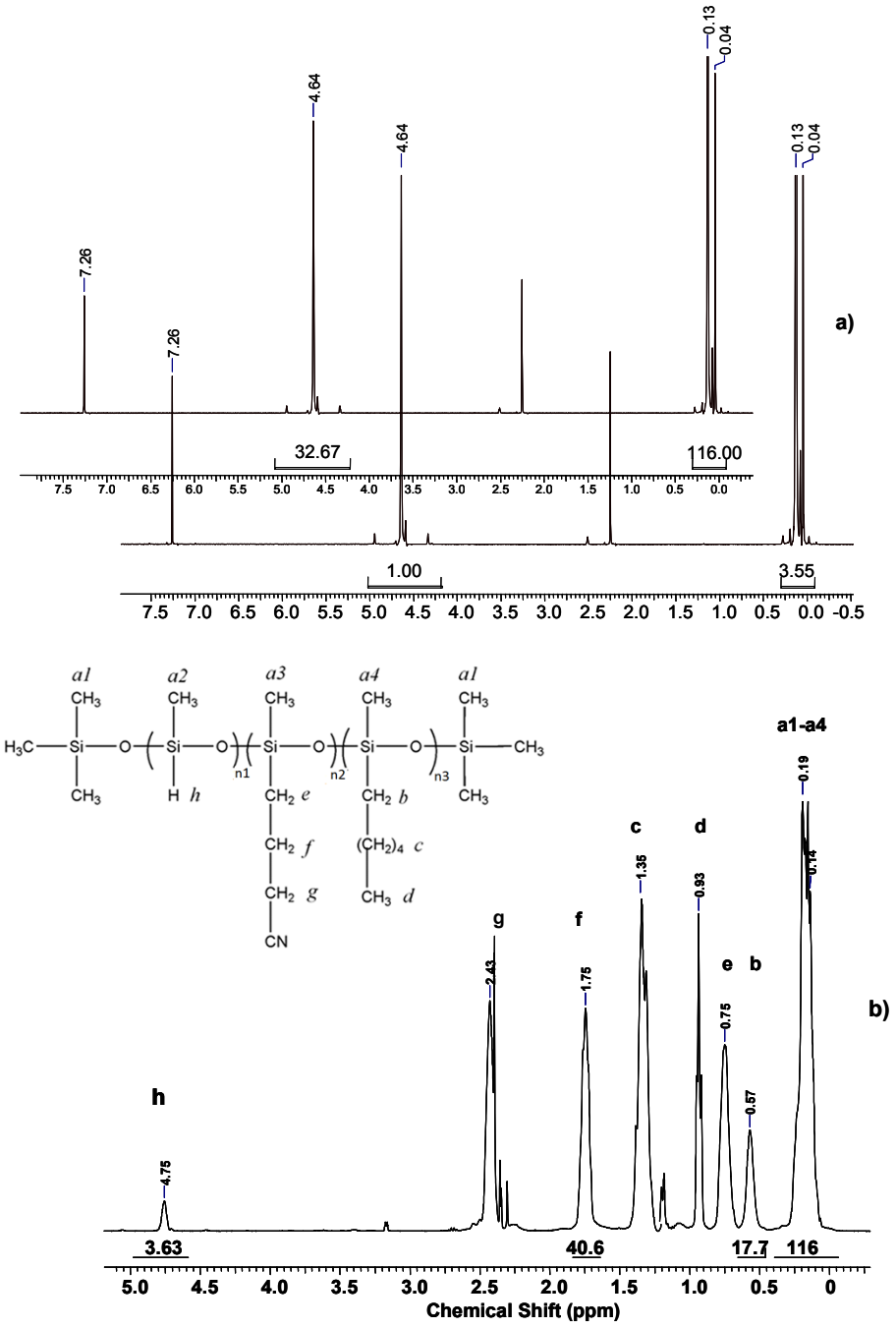


Fig. 1S. Calculation of the copolymer composition in series B. a) ^{1}H NMR spectrum of the starting homopolymer: the total number of $SiCH_3$ protons was assigned in two steps: first the Si-H proton was taken as reference, which indicated 0.55 protons in the chain ends; second, by taking 18 H in the chain ends as a reference, a total of 116 protons in Si-CH_3 groups and 32.7 Si-H groups in average were calculated. b) ^{1}H NMR spectrum of copolymer B3: the total number of Si-CH_3 protons in the initial homopolymer was taken as reference. The following composition can be deducted: from a total of 32.7 siloxane groups, 3.6 are Si-H groups (n1), 40.6:2 = 20.3 are cyano propyl groups (n2), and 17.7:2= 8.8 hexyl groups (n3). Thus the composition is: 11% Si-H, 62.1% CN and 26.9% hexyl groups.

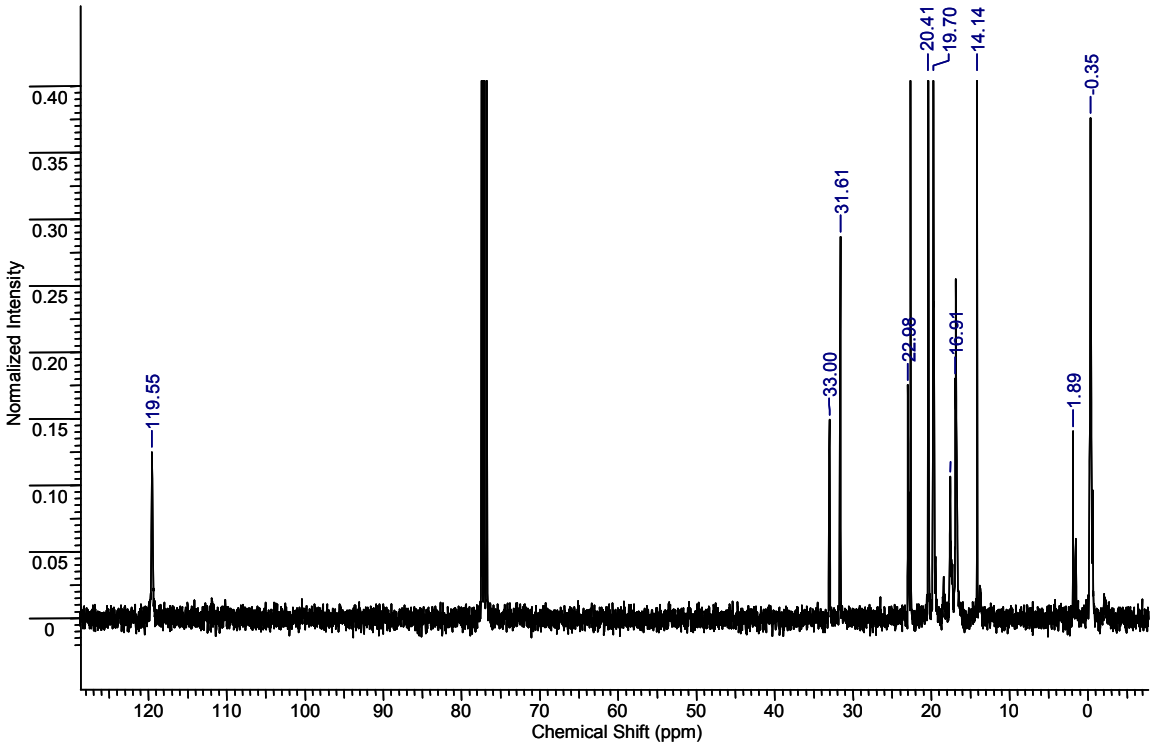


Fig. 2S. ^{13}C NMR spectrum of copolymer B3

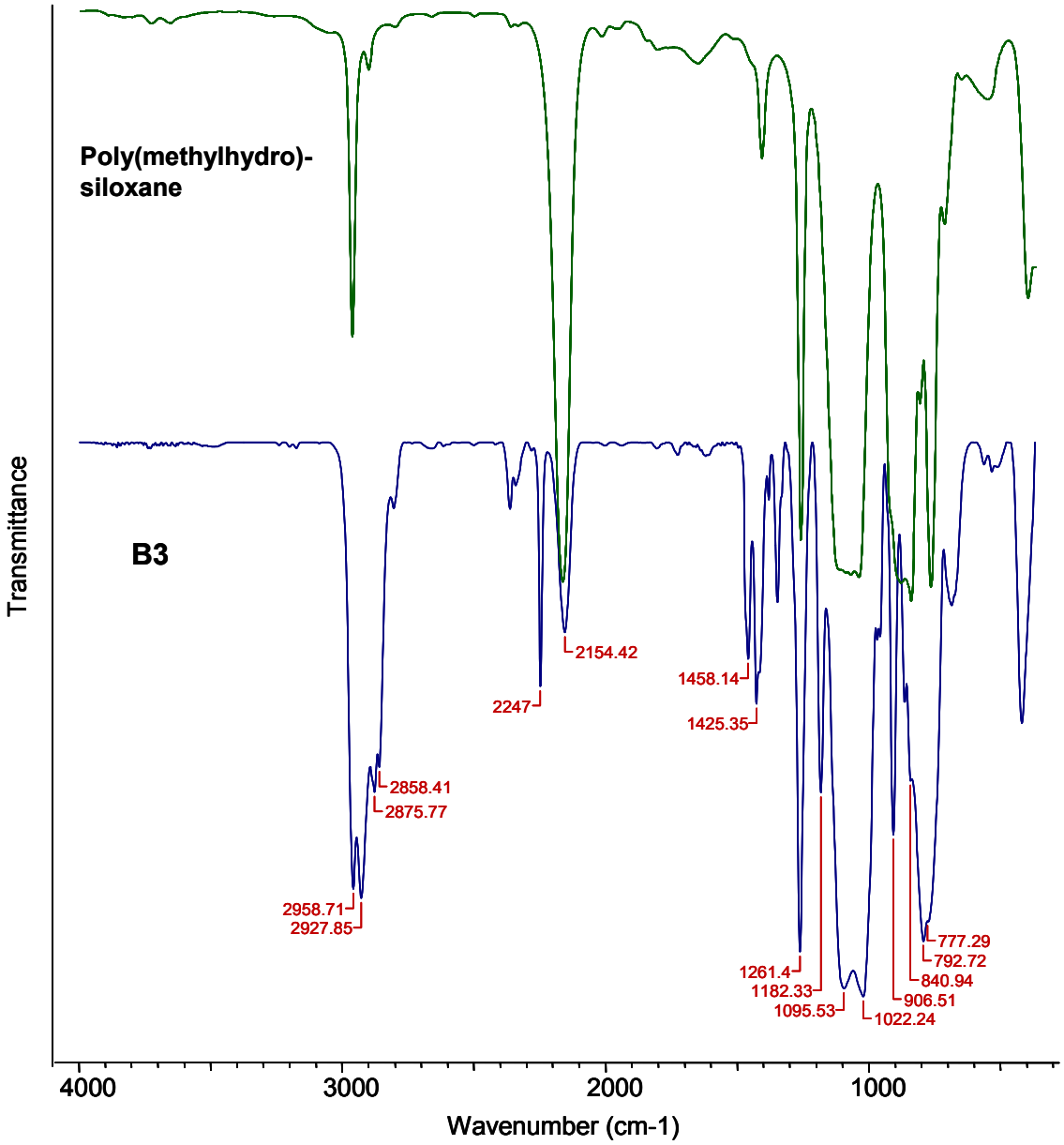


Fig. 3S. FTIR spectrum of copolymer B3 compared to the starting poly(methylhydro)siloxane

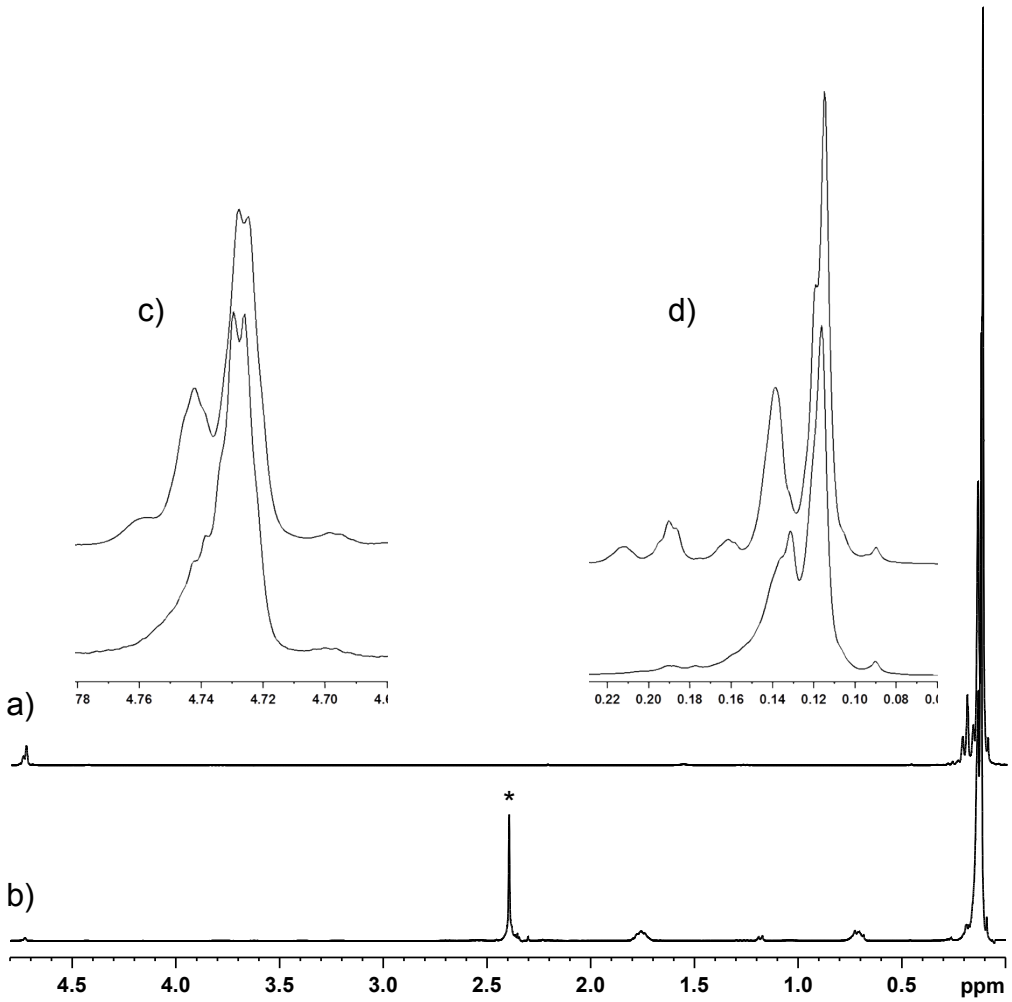


Fig. 4S. ^{1}H NMR spectra of: starting poly(dimethyl-*co*-methylhydro)siloxane (a), corresponding functionalized copolymer (b), enlargement of the Si-H region (c), and enlargement of the Si-CH_3 region (d). Toluene signal is marked (*).

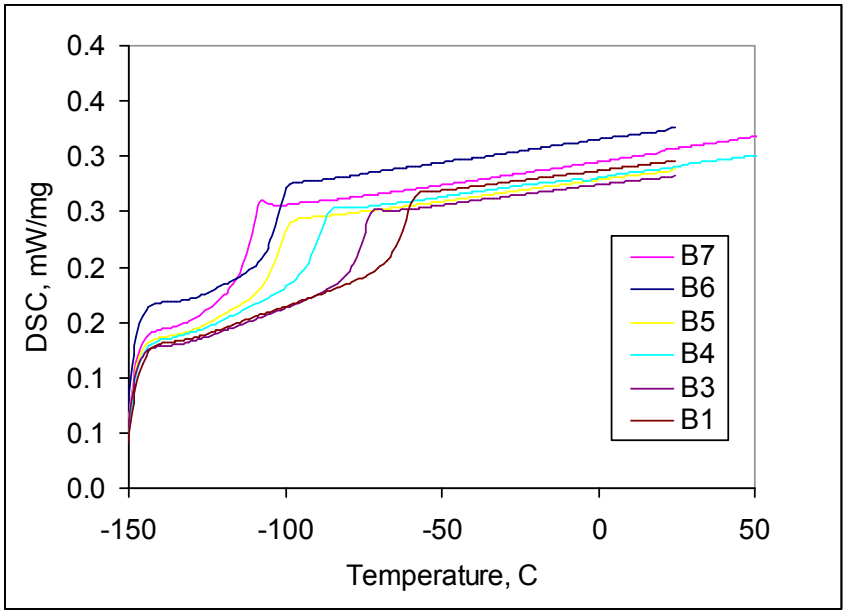
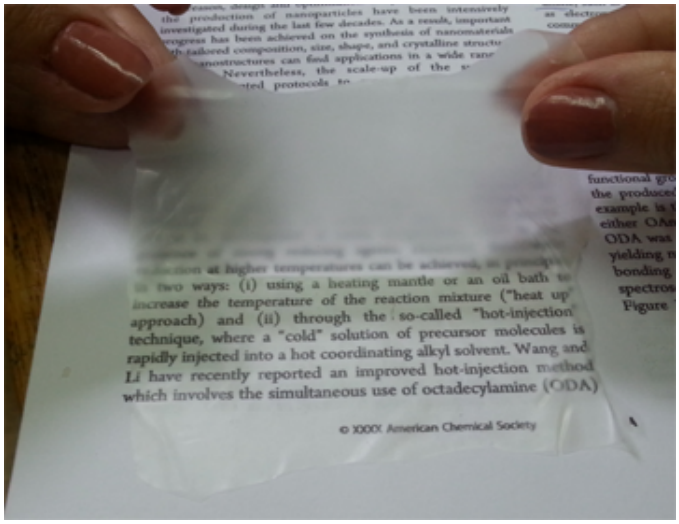


Fig. 5S. DSC curves (second heating) of series B with cyanopropyl and hexyl groups



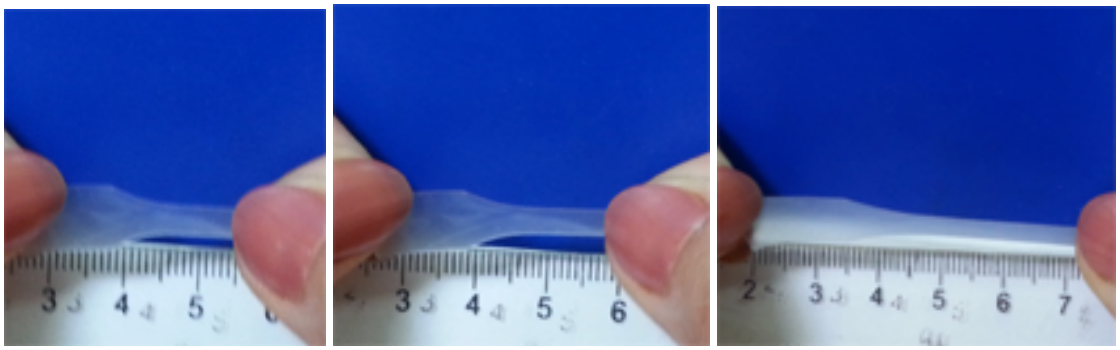


Fig. 6S. Photos of a PDMS film prepared by using copolymer B5 as cross-linker