

Supporting Information for
Synthesis and Properties of a Series of Mesogen-Jacketed
Liquid Crystalline Polymers with Polysiloxane Backbones

Lanying Zhang, Si Chen, Han Zhao, Zhihao Shen,* Xiaofang Chen, Xinghe Fan,*and
Qifeng Zhou*

*Beijing National Laboratory for Molecular Sciences, Key Laboratory of Polymer
Chemistry and Physics of Ministry of Education, College of Chemistry and Molecular
Engineering, Peking University, Beijing 100871, China.*

* To whom the correspondence should be addressed. E-mail: fanxh@pku.edu.cn;
zshen@pku.edu.cn; qfzhou@pku.edu.cn.

This PDF file includes:

Figure S1: IR spectra of Si-MPCS and PHMS;

Figure S2: ^1H NMR spectra of MPCS and Si-MPCS;

Table S1: IR and ^1H NMR data of the polymers;

Figure S3: SEM images of the surfaces cast from 10 mg/mL solutions of four
polymers in THF (Inset in each figure is water CA of each surface).

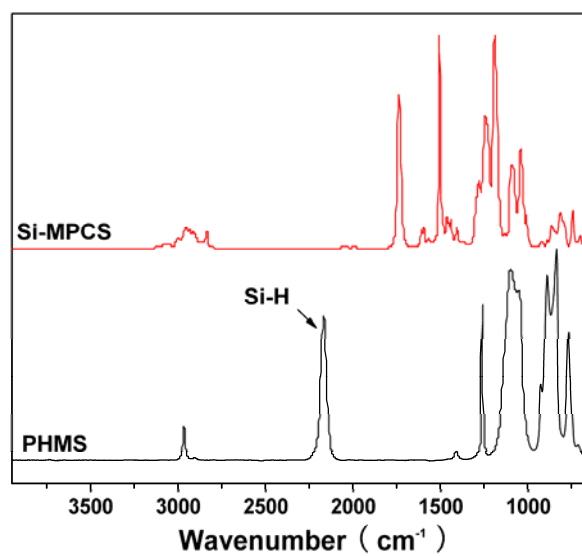


Figure S1. FT-IR spectra of Si-MPCS and PHMS.

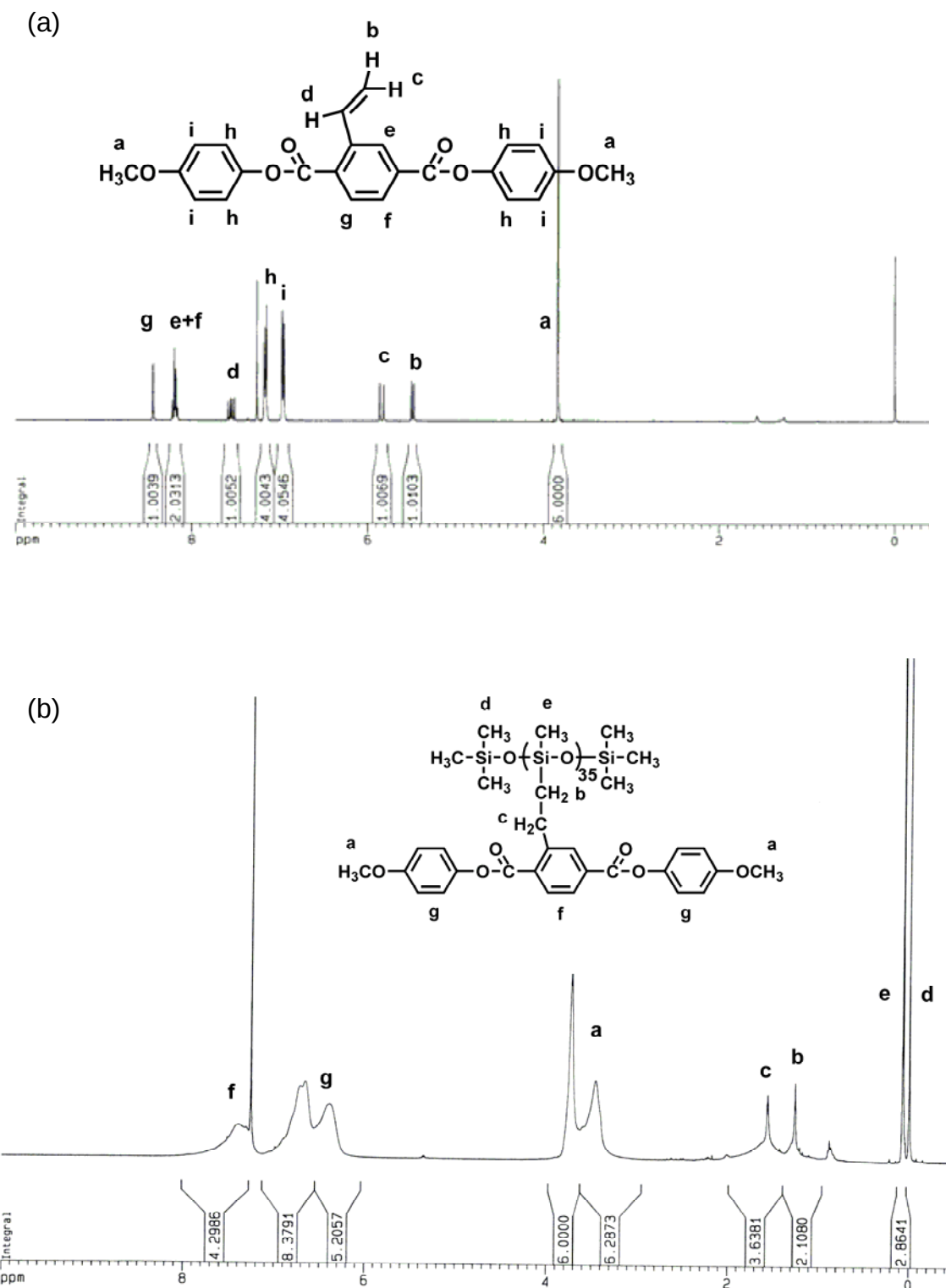


Figure S2. ^1H NMR spectra of MPCS (a) and Si-MPCS (b) (in CDCl_3 with TMS).

Table S1. IR and ¹H NMR Data of the Polymers

Sample	δ ¹ H (ppm)	IR ν_{max} (cm ⁻¹)
Si-MPCS	0 ~ 0.070(Si(CH ₃)), 1.256(Si-CH ₂), 1.562(SiCH ₂ -CH ₂), 3.461 ~ 3.729 (OCH ₃), 6.391 ~ 6.659(Ar-H), 7.260 ~ 7.518(Ar-H)	2836, 2912, 2935(C-H aliphatic); 1739(C=O); 1609, 1508(Ar); 1136, 1089, 1043, 1010(Si-O)
Si-BPCS	0 ~ 0.072(Si(CH ₃)), 0.8829 ~ 0.9828 (CH ₃), 1.257 ~ 1.740(Si-CH ₂ , SiCH ₂ -CH), 3.546 ~ 3.852 (Ar-OCH ₂ -), 6.325 ~ 6.668 (Ar-H), 7.261 ~ 7.520 (Ar-H)	2860, 2975(C-H aliphatic); 1742 (C=O); 1608, 1505(Ar); 1187, 1070, 1023(Si-O)
Si-OXD-C12p	0 ~ 0.054(Si(CH ₃)), 0.932 ~ 0.947 (CH ₃), 1.160 ~ 2.226(Si-CH ₂ , SiCH ₂ -CH), 3.780 ~ 4.097(OCH ₂), 6.874 ~ 8.140(Ar-H)	2852, 2930(C-H aliphatic); 1496, 1609(Ar); 1261, 1305, 1418(C=N); 1174, 1088, 1017 (Si-O)
Si-4C2Vp	0 ~ 0.070(Si(CH ₃)), 0.982(CH ₃), 1.256 ~ 1.762(Si-CH ₂ , SiCH ₂ -CH), 3.528 ~ 3.942(-OCH ₂ -), 6.869 ~ 7.054, 7.519 ~ 7.903 (Ar-H)	2949, 2860 (C-H aliphatic); 1732 (C=O); 1600, 1503 (Ar); 1115, 1071, 1010 (Si-O)
Si-12C2Vp	0 ~ 0.070(Si(CH ₃)), 0.0858(CH ₃), 1.108 ~ 1.778(Si-CH ₂ , SiCH ₂ -CH), 3.919 ~ 3.944(-OCH ₂ -), 6.934 ~ 7.249, 7.529 ~ 8.064(Ar-H)	2851, 2939(C-H aliphatic); 1739(C=O); 1600, 1505(Ar); 1079, 1192, 1251 (Si-O)

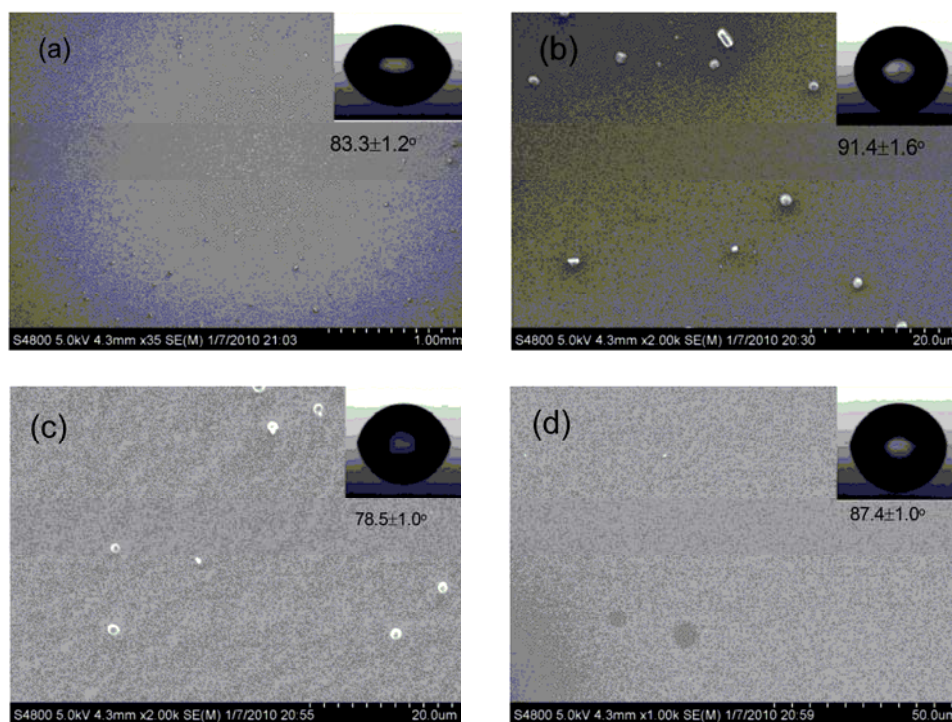


Figure S3. SEM images of the surfaces cast from 10 mg/mL solutions of the polymers in THF (Inset in each figure is water CA of each surface): (a) Si-MPCS; (b) Si-BPCS ; (c) PMPCS; (d) PBPCS.