

## Electronic Supplementary information

### Reversibly meltable layered alkylsiloxanes with melting points controllable by alkyl chain lengths

Kazuko Fujii\*<sup>a</sup>, Hiroshi Kodama<sup>a,‡</sup>, Nobuo Iyi<sup>a</sup>, Taketoshi Fujita<sup>a</sup>, Kenji Kitamura<sup>a</sup>,  
Hisako Sato<sup>b</sup>, Akihiko Yamagishi<sup>c</sup>, Shigenobu Hayashi<sup>d</sup>

<sup>a</sup> National Institute for Materials Science (NIMS), Namiki 1-1, Tsukuba, Ibaraki  
305-0044, Japan.

<sup>b</sup> Graduate School of Science and Engineering, Ehime University, Matsuyama, Ehime  
790-8577, Japan

<sup>c</sup> Faculty of Science, Toho University, Funabashi, Chiba 274-8510, Japan

<sup>d</sup> National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1  
Higashi, Tsukuba, Ibaraki 305-8565, Japan

#### Additional description for the structure model of the siloxane sheet

Scheme S1 presents schematically one example of structure models of the siloxane sheet. All Si atoms bond to the long alkyl chains and the nearest long alkyl chains extend to the opposite side from the siloxane sheet. Indeed, the lateral interchain space ( $d_l$ ) between the long alkyl chains is enough for the bilayer arrangement of the long alkyl chains. However,  $d_l$  does not allow the interdigitation with another long alkyl chain extending from the next siloxane sheet.

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<sup>‡</sup> Deceased

**Scheme S1. Schematic representation of one example of structure models for a part of the siloxane sheet in which all Si atoms bond to the long alkyl chains and the nearest long alkyl chains extend to the opposite side from the siloxane sheet.**

