## <Supporting Information>

## Polymer Alloying of Helical Syndiotactic PMMA with [60]Fullerene-End-Capped Polymers through Inclusion Complex Formation of the Helical Cavity with Fullerene Units

Takehiro Kawauchi,<sup>1,\*</sup> Keita Ohnishi,<sup>2</sup> Kouta Kajihara,<sup>1</sup> Mariko Kawauchi,<sup>2</sup> Tsutomu Takeichi<sup>2</sup>

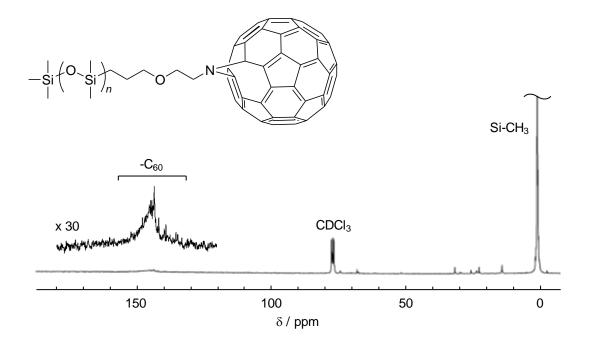


Figure S1. <sup>13</sup>C NMR spectrum of as-prepared PDMS-C<sub>60</sub> in CDCl<sub>3</sub> at 25 °C.

<sup>&</sup>lt;sup>1</sup> Department of Materials Chemistry, Faculty of Science and Technology, Ryukoku University, Oe-cho, Seta, Otsu, Shiga 520-2194, Japan

<sup>&</sup>lt;sup>2</sup>Department of Environmental and Life Sciences, Toyohashi University of Technology, Tempaku-cho, Toyohashi, Aichi 441-8580, Japan

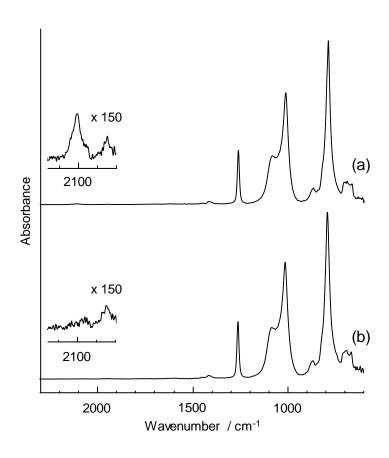
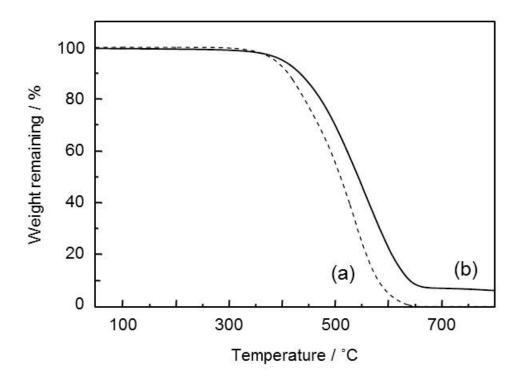
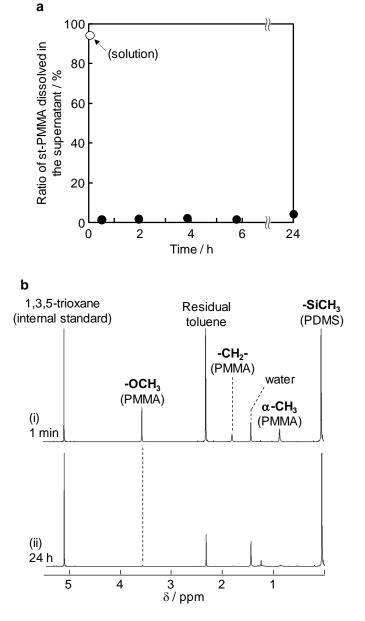


Figure S2. IR spectra of PDMS- $N_3$  (a) and as-prepared PDMS- $C_{60}$  (b).



**Figure S3.** TGA thermograms of PDMS-OH (a, dotted line) and as-prepared PDMS-C<sub>60</sub> (b, solid line).



**Figure S4.** (a) Changes in the ratio of st-PMMA dissolved in the supernatant toluene layer with time. The st-PMMA (5 mg) was dissolved in the toluene solution of as-prepared PDMS-C<sub>60</sub> ( $f_{C60} = 42\%$ , 10 mg/mL, 1 mL) with heating at 110 °C. The solution was then stored in an incubator at 25 °C to form the st-PMMA/PDMS-C<sub>60</sub> complex gel. After predetermined time, the toluene layer of 300 μL was sampled. The sample was dried under vacuum and then subjected to NMR measurement using 1,3,5-trioxane as the internal standard to determine the amount of the residual st-PMMA. (b) <sup>1</sup>H NMR spectra of the toluene layer obtained from the st-PMMA/PDMS-C<sub>60</sub> gel stored at room temperature for 1 min (i) and 24 h (ii).