



**Fig. S4.** Melting curves of OafA<sub>STM</sub><sup>C-long</sup>, OafA<sub>STM</sub><sup>C-short</sup>, OafB<sub>SPA</sub><sup>C-long</sup>, OafB<sub>SPA</sub><sup>C-short</sup>, with melting temperatures of OafA<sub>STM</sub><sup>C-long</sup> = 63.8 °C, OafA<sub>STM</sub><sup>C-short</sup> = 58.1 °C, OafB<sub>SPA</sub><sup>C-long</sup> = 58.9 , OafB<sub>SPA</sub><sup>C-short</sup> = 50.0 °C.