

Dynamically Cell Separating Thermo-functional Biointerfaces with Densely Packed Polymer Brushes

Kenichi Nagase,^a Ayaka Kimura,^{a,b} Tatsuya Shimizu,^a Katsuhisa Matsuura,^a

Masayuki Yamato,^a Naoya Takeda,^b and Teruo Okano^{a*}

- a. Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University (TWIns) 8-1 Kawadacho, Shinjuku, Tokyo 162-8666, Japan.
- b. Department of Life Science and Medical Bioscience, School of Advanced Science and Engineering, Waseda University (TWIns), 2-2 Wakamatsucho, Shinjuku, Tokyo 162-8480, Japan.

AUTHOR EMAIL ADDRESS: tokano@abmes.twmu.ac.jp

Methods

Measurement for calibration curve of grafted amount of PIPAAm

Poly(*N*-isopropylacrylamide)(PIPAAm) (Mn: 11200, Mn/Mw: 1.40) prepared by ATRP were dissolved in 2-propanol and methanol mixed solvent (2-propanol: methanol = 9: 1) at predetermined concentrations (0.115 g/L, 0.230 g/L, 0.461 g/L, and 0.691 g/L for 0.5 $\mu\text{g}/\text{cm}^2$, 1.0 $\mu\text{g}/\text{cm}^2$, 2.0 $\mu\text{g}/\text{cm}^2$, and 3.0 $\mu\text{g}/\text{cm}^2$). The solutions (25 μL) were casted onto glass coverslips (24 x 24 mm, 0.2 mm in thickness) (Matsunami Glass, Osaka). Solvent of PIPAAm solution was volatilized for overnight. The peak intensity ratio of I_{1650} / I_{1000} of the prepared PIPAAm casted cover glasses were measured by an attenuated total reflection Fourier transform infrared spectroscope (ATR/FT-IR) (Nicolet 6700) (Thermo Fisher Scientific) and prepared a calibration curve for determining the amount of PIPAAm on glass substrate.

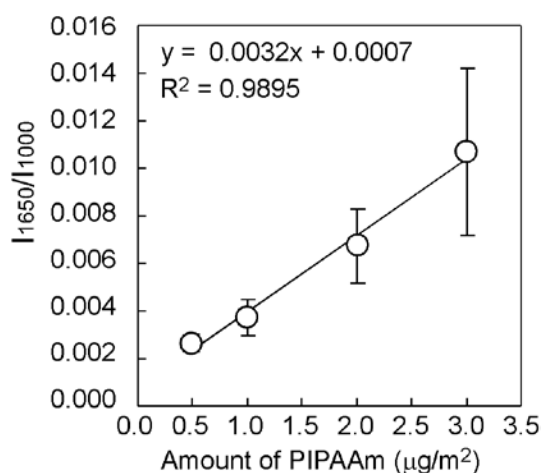


Fig. S1. Calibration curve for determining the grafted amount of PIPAAm on glass substrate. The y-axis represents the intensity ratio of peaks at 1650 and 1000 cm^{-1} in ATR/FT-IR spectrum.