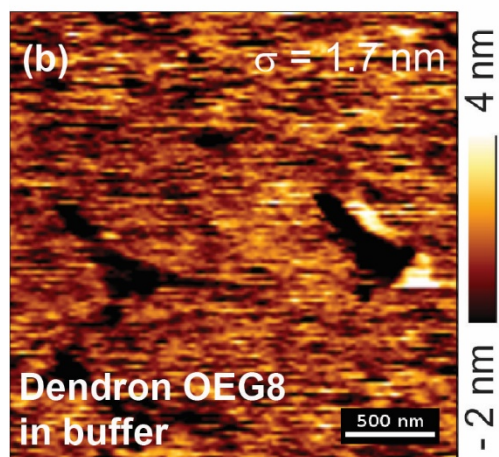
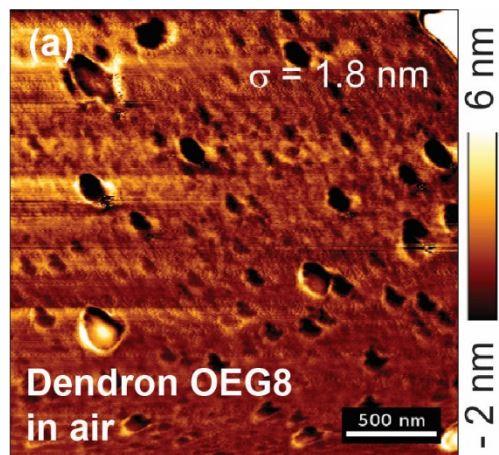


Electronic Supplementary Information to

Dendronized Oligoethylene Glycols with Posphonate *Tweezers* for Cell-Repellent Coating of Oxide Surfaces: Coarse-Scale and Nanoscopic Interfacial Forces

Julian Czajor, Wasim Abuillan, Dinh Vu Nguyen, Christopher Heidebrecht, Evan A. Mondarte, Oleg V. Konovalov, Tomohiro Hayashi, Delphine Felder-Flesch, Stefan Kaufmann, and Motomu Tanaka

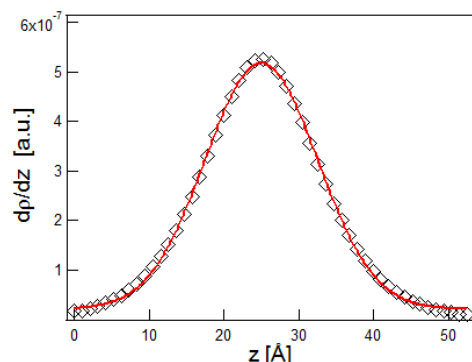
ESI Figure S1. Tapping mode AFM images of dendron OEG8 monolayers prepared by incubating the substrates with an aqueous solution of dendrons (1 mg/mL) for 30 min by following a previous report (Ref. 11).



ESI Table S1. Summary of rms roughness values obtained by tapping mode AFM. Note that all the data were collected for the samples prepared by the optimized protocol (see Materials and Methods).

	rms roughness in air [\AA]	rms roughness in buffer [\AA]
Dendron OEG4	0.2	0.6
Dendron OEG8	0.6	0.9

ESI Figure S2. The first derivative of the SLD profile (open symbols) and the Gaussian fit (solid line). The obtained FWHM of the Gaussian fit represents the film thickness.



In this study, the SLD profile is modeled by a hyperbolic tangent function,

$$\rho(z) = \rho_w + \frac{1}{2}(\rho_s - \rho_w)[1 + \tanh((z - z_0)/\xi)]. \quad \text{Eq. 1}$$

ρ_w is SLD of water, ρ_s SLD of substrate, z_0 position of layer center, and ξ decay parameter. The analytical SLD profile was split into a set of 1 Å-thick slabs, and the reflectivity curve was computed as a function of q_z using the Abelè's formalism. EST Fig. S3 shows the first derivative of the SLD profile (open symbols) and the Gaussian fit (solid line). The film thickness was determined from the full width at half maximum (FWHM) of the Gaussian function used to fit.

ESI Figure S3. Phase contrast (PhC) images of platelets on (a) bare glass, (b) glass coated with hydrophobic octadecyltrimethoxysilane (ODTMS), (c) glass coated with dendron OEG4 and (d) glass coated with dendron OEG8. Scale bar: 25 μm.

