Control of cell attachment and spreading on poly(acrylamide) brushes with varied grafting density

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Supporting Information
Figure S-1. Plot of contact angles vs. the fraction of MUBiB in the assembly solution.
The contact angle results were further used to calculate the surface coverage compositions of the binary SAMs. Based on the data for the two neat monolayers and by using the Israelachvili equation the fraction of initiator on the surface was calculated, as shown in Figure S-2.\(^1\) This equation is applicable, because the assumption is fulfilled that the surface coverage in a binary system is composed of a homogeneous mixed surface, rather than discrete patches.

\[
(1 + \cos \theta)^2 = f_1(1 + \cos \theta_1)^2 + f_2(1 + \cos \theta_2)^2
\]

\(f_1\) and \(f_2\): fractional areas of the components, \(\theta\): contact angle

**Figure S-2:** Plot of the fraction of MUBiB on the surface vs. fraction of MUBiB in solution.

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Figure S-3. Grazing angle reflection mode FTIR spectrum of a mixed SAM prepared with a fraction of MUBiB in solution of 0.5. The spectrum was deconvoluted in two components: MHDA (2917 cm\(^{-1}\); blue) and MUBiB (2927 cm\(^{-1}\); red). The dashed grey line is the envelope of the fitted peaks.
Figure S-4. XPS survey scans of SAMs of MHDA (grey) and MUBiB (black) on Au.
Figure S-5. High resolution XPS spectrum of the gold and bromine peaks of a neat MUBiB SAM. The spectrum was fitted with two components: Au 5p (74.3 eV; blue) and Br 3d (70.0 eV; red). The original data is displayed in black and the dashed green line is the envelope of the fitted peaks.
Figure S-6. ToF SIMS spectra of the mixed SAMs prepared with varied fractions of initiator in the assembly solution.
Figure S-7. Plot of the fraction of MUBiB on the surface determined by CA (Israelachvili) vs. the fraction of bromine determined by ToF SIMS (○) and FTIR (●) with a linear fit (represented as a dotted line) as a guide to the eye.
**Figure S-8.** Plot of the fraction of MUBiB on the surface vs. the water contact angle of PAAm brushes.
Figure S-9. Plot of the thickness vs. the water contact angle of PAAm brushes
Figure S-10. Plot of the fraction of initiator on the surface vs. the number of cells per cm$^2$ on PAAm brushes