Supporting Information

“Grafting Through” Polymerization involving surface-bound monomers

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Figure S1. a) cosine of the water contact angles measured along the length of the gradient of OTS and OTS/MPS. b) fractional coverage of MPS in the OTS/MPS molecular gradient.
The fractional surface coverage by MPS is estimated from the values of contact angle measured along the OTS/MPS gradient (cf. Figure S1). The MPS fraction at a given location on the gradient can be determined from water contact angle data using the Cassie-Baxter equation.

\[
\cos(\theta) = f_{\text{MPS}} \cos(\theta_{\text{MPS}}) + (1 - f_{\text{MPS}}) \cos(\theta_{\text{OTS}})
\]

(S1)

where \( \theta \) is the measured contact angle, \( \theta_{\text{MPS}} \) is the water contact angle for MPS monolayer, \( \theta_{\text{OTS}} \) is the water contact angle for OTS monolayer, and \( f_{\text{MPS}} \) is the areal fraction of MPS. The contact angles for OTS (\( \theta_{\text{OTS}} \)) and MPS (\( \theta_{\text{MPS}} \)) monolayers are 110° and 70°, respectively. The contact angle data was converted to fraction of MPS as a function of distance along the gradient.

**Figure S2.** A typical high resolution XPS data showing a) carbon and b) bromine edge.