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Using block copolymer assembly to tailor surface properties.[1]

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A challenge in the design of surfaces is to be able to control molecular function with nm-scale precision. This presentation discusses the use of block copolymers to deliver chemical functions to the near-surface region with precise control of surface functionality. Block copolymers prepared using either anionic or ATRP polymerization were used followed by subsequent functional group modification. By using block copolymers alone and in combination, it is possible to tailor not only surface properties, but thei mechanical behavior of the polymer surface region. The effect of surface composition and patterning on the biological response to self-organized surfaces will be discussed in the context of well characterized surfaces.

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