

Supporting Information to:

Surface functionality control of nanoporous 1,2-polybutadiene based on atom transfer radical polymerization or click chemistry

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Figure S1. SAXS 1D profiles of the additional samples. (a) SAXS 1D profiles of PB precursor, PB-g-PHEMA (wet chem. 0.5 h), and the latter in H₂O. (b) SAXS 1D profiles of PB precursor, PB-g-PPEGMA (photo chem. 1 h), and the latter in H₂O. Similar scattering patterns are acquired as in the case of PB-g-PPEGMA (wet chem. 1 h). Scattering intensity is reduced when the modified sample is soaked in H₂O from the reduced electron density contrast between polymer and H₂O compared to the contrast between polymer and air. (c) SAXS 1D profiles of PB precursor, PB-*click*-MPEG (click chem.) and PB-*click*-MPEG (click chem.) in H₂O. There is no enhancement of intensities of scattering peaks at relative q positions of $20^{1/2}$, $22^{1/2}$, $24^{1/2}$ and $26^{1/2}$ for dry PB-*click*-MPEG, one of the possible explanations is that due to low surface density of attached MPEG the pore surface might not be evenly covered by the MPEG layer, as a result a destructive interference can be formed. When PB-*click*-MPEG is soaked in H₂O, a relatively homogeneous layer of MPEG swelled in H₂O is formed. The increase of intensities of scattering peaks at relative q positions of $20^{1/2}$, $22^{1/2}$, $24^{1/2}$ and $26^{1/2}$ is observed.

