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## Electronic Supplementary Information for Living Spontaneous Gradient Copolymers of

## Acrylic Acid and Styrene: One-Pot Synthesis of pH-Responsive Amphiphiles

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Figure S1. GPC traces for polymerization of 1a (normalized to conversion)

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Figure S2. GPC traces for polymerization of **1b** (normalized to conversion)



Figure S3. GPC traces for polymerization of **2** (normalized to conversion)

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Figure S4. GPC traces for polymerization of **3a** (normalized to conversion)



Figure S5. GPC traces for polymerization of **3b** (normalized to conversion)



**Figure S6.** AFM tapping mode height images of annealed and hydrated block copolymers (1a, 1b, 2, 3a, 3b) on silicon wafers (scan size: 1 µm, height scale: 5 nm)



Figure S7. Intensity-weighted size distributions of 2 as a function of pH



Figure S8. Intensity-weighted size distributions of **1a** as a function of pH



Figure S9. Intensity-weighted size distributions of **1b** as a function of pH



Figure S10. Intensity-weighted size distributions of **3a** as a function of pH



Figure S11. Intensity-weighted size distributions of **3b** as a function of pH