## **Supporting Information**

## Position Dependent Segmental Relaxation in Bottlebrush Polymers

## Karin J. Bichler<sup>1\*</sup>, Bruno Jakobi<sup>1</sup>, Alice Klapproth<sup>2</sup>, Richard A. Mole<sup>2</sup>, Gerald J. Schneider<sup>1,3\*</sup>

<sup>1</sup> Department of Chemistry, Louisiana State University, Baton Rouge, Louisiana 70803, United States

<sup>2</sup> Australian Nuclear Science and Technology Organisation, New Illawarra Road, Lucas Heights, 2234, NSW, Australia

<sup>3</sup> Department of Physics & Astronomy, Louisiana State University, Baton Rouge, Louisiana 70803, United States

Correspondence: kbichler@lsu.edu, gjschneider@lsu.edu



**Figure S1:** Differential refractive index (dRI) (solid line) and 90° light scattering (90° LS) (dotted line) signal of the GPC chromatogram of all inner parts, macromonomers, and bottlebrushes for the samples inside (top) and outside (bottom).



Figure S2: 1H NMR of the inner part of the macromonomer for the sample inside (top), and outside (bottom).



Figure S3: 1H NMR of the complete macromonomer for the sample inside (top), and outside (bottom).



Figure S4: 1H NMR of finished bottlebrush for the sample inside (top), and outside (bottom).