Self-Crosslinkable Poly(urethane urea)-Reinforced Silica Aerogels

Yannan Duan, <sup>†,§</sup> Sadhan C. Jana, <sup>§, \*</sup> Bimala Lama,<sup>≠</sup> Matthew P. Espe <sup>≠</sup>

<sup>§</sup>Department of Polymer Engineering, The University of Akron, Akron, Ohio, 44325-0301, USA

<sup>\*</sup>Department of Chemistry, The University of Akron, Akron, Ohio, 44325-3601, USA

Supplemental Information

## Contents:

- Figure S1 page S2
  Figure S2 page S3
- 2. Tigure 32 page 33
- 3. Figure S3 page S4
- 4. Figure S4 page S5
- 5. Figure S5 page S6



Figure S1. FT-IR spectra of self-crosslinkable polyurethane-urea, (a) PTMG1000, (b) prepolymer with isocyante end-goups, (c)





Figure S2. Images of sPU gel and sPU-reinforced silica aerogels (a) TA-0, (b) TA-sPU-5, (c) TA-sPU-10, (d) TA-sPU-15, (e) TA-sPU-20, (f) TA-sPU-25. (g) transparent sPU gel (in DMF), (h) transparent sPU gel (in DMF) compressed with fingers.



Figure S3. Adsorption and desorption isotherms of silica aerogels.



Figure S4. Porod's Plot of SAXS intensity as a function of q on a log-log scale.