Supplementary Materials: Temperature-Dependent Stiffening and Inelastic Behavior of Newly Synthesized Fiber-Reinforced Super Flexible Silica Aerogels

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The following supplementary material provides individual compressive stress-strain curves for each type of fiber-reinforced aerogel (FC, THZ, FFM, TH) at each temperature condition (50°C, 0°C and -50°C). Stress strain curves provided are of the following two kinds: under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60%, and from cyclic compression up to 80% strain, where every cycle was repeated three times.

Figure S1. Stress-strain curves of FC under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 50°C
Figure S2. Stress-strain curves of FC under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 0°C

Figure S3. Stress-strain curves of FC under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at -50°C
Figure S4. Stress-strain curves of FC from cyclic compression up to 80% strain, where every cycle was repeated three times, at 50°C

Figure S5. Stress-strain curves of FC from cyclic compression up to 80% strain, where every cycle was repeated three times, at 0°C
Figure S6. Stress-strain curves of FC from cyclic compression up to 80% strain, where every cycle was repeated three times, at -50°C.

Figure S7. Stress-strain curves of THZ under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 50°C.
Figure S8. Stress-strain curves of THZ under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 0°C

Figure S9. Stress-strain curves of THZ under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at -50°C
Figure S10. Stress-strain curves of THZ from cyclic compression up to 80% strain, where every cycle was repeated three times, at 50°C

Figure S11. Stress-strain curves of THZ from cyclic compression up to 80% strain, where every cycle was repeated three times, at 0°C
Figure S12. Stress-strain curves of THZ from cyclic compression up to 80% strain, where every cycle was repeated three times, at -50°C.

Figure S13. Stress-strain curves of FFM under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 50°C.
Figure S14. Stress-strain curves of FFM under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 0°C

Figure S15. Stress-strain curves of FFM under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at -50°C
Figure S16. Stress-strain curves of FFM from cyclic compression up to 80% strain, where every cycle was repeated three times, at 50°C.

Figure S17. Stress-strain curves of FFM from cyclic compression up to 80% strain, where every cycle was repeated three times, at 0°C.
Figure S18. Stress-strain curves of FFM from cyclic compression up to 80% strain, where every cycle was repeated three times, at 50°C.

Figure S19. Stress-strain curves of TH under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 50°C.
Figure S20. Stress-strain curves of TH under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at 0°C

Figure S21. Stress-strain curves of TH under cyclic compression with stepwise increasing strain amplitude of 20%, 40% and 60% at -50°C
Figure S22. Stress-strain curves of TH from cyclic compression up to 80% strain, where every cycle was repeated three times, at 50°C.

Figure S23. Stress-strain curves of TH from cyclic compression up to 80% strain, where every cycle was repeated three times, at 0°C.
Figure S24. Stress-strain curves of TH from cyclic compression up to 80% strain, where every cycle was repeated three times, at -50°C.