Electronic Supplementary Information for

The thermal conductivity of polymethylsilsesquioxane aerogels and xerogels with varied pore sizes for practical application as thermal superinsulators

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Movie S1 Progress of ambient pressure drying of the sample S10.0. One second in this movie is equal to 10 minutes of the actual time.

Movie S2 Progress of ambient pressure drying of the sample A10.0. One second in this movie is equal to 10 minutes of the actual time.

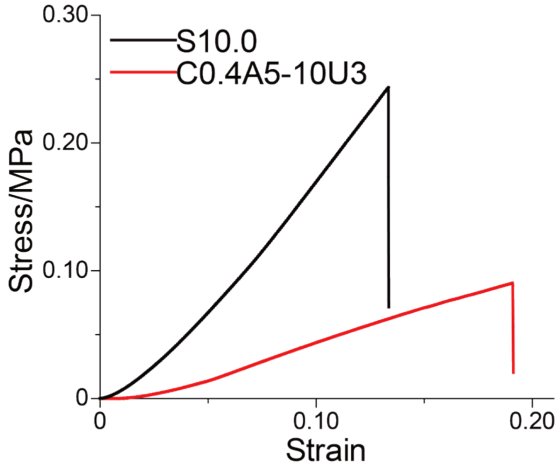

Fig. S1 Stress-strain curves of the MSQ aerogel samples synthesized with surfactant F127 (S10.0, with 5.9 mm of thickness and 8.0 mm of width placed on a 15 mm span) and with *n*-hexadecyltrimethylammonium chloride (CTAC, C0.4A5-10U3 in our previous paper[22], with 5.3 mm of thickness and 9.3 mm of width placed on a 15 mm span) obtained by three-point bending.

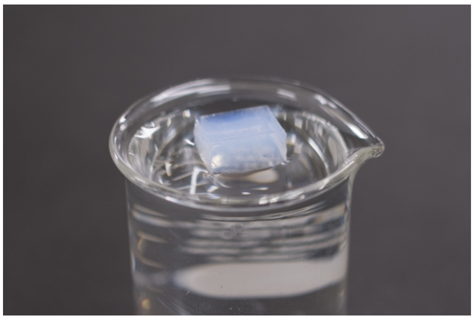

Fig. S2 The aerogel sample S10.0 shows hydrophobicity enough to float on water at least for several weeks.

Table S1 Properties of the A10.0 xerogel via ambient pressure drying and aerogel via supercritical dring.

Materials	E/MPa	T/%	ρ/g cm^{-3}	Φ
aerogel	13	34	0.21	0.85
xerogel	27	29	0.21	0.85

E: Young's modulus from uniaxial compression

T: Normalized total transmittance (at 550 nm, corresponding to sample with 10 mm thickness)

ρ: Bulk density

Φ: Porosity