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Journal Name

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Supporting information

On the mechanical and electrical properties of self-assemblybased organosilicate porous films

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Figure S2. Pore size distributions (PSD) calculated from the adsorption branch of the toluene EP isotherms for MSQ films. Similar PSDs were obtained for the OCS films.

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Figure S3. FTIR spectra of the region corresponding to the low-k matrices as a function of the templating agent



Thermal

cure

30

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2.1

Thermal

cure

Thermal +

UV cure

OCSL4 MSQC MSQF127 OCSS10 MSQS10

Thermal +

UV cure

Figure S6. UV cure leads, generally, to increase of open porosity and Young's modulus and decrease of dielectric constant. More detailed information can be found in Table S1

3.5

Thermal

cure

Thermal +

UV cure

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	Thermal cure					Thermal + UV				
	RI	YM (GPa)	k	Pore volume %	Density [g/cm³]	RI	YM (GPa)	k	Pore volume %	Density [g/cm³]
MSQC	1.2711	5.00	2.35	34.88	0.95	1.2600	5.99	2.21	37.05	0.94
OCSC	1.2852	5.20	2.35	35.92	0.93	1.2700	6.70	2.28	38.72	0.88
MSQL4	1.2851	6.90	2.36	30.52	1.02	1.2820	7.65	2.34	30.21	1.02
OCSL4	1.2843	6.60	2.30	37.47	0.92	1.2760	7.30	2.27	38.33	0.91
MSQS10	1.2565	4.60	2.26	38.07	0.90	1.2470	5.31	2.13	39.29	0.86
OCSS10	1.2642	4.00	2.23	38.35	0.85	1.2540	5.12	2.14	43.80	0.83
MSQF127	1.2725	6.00	2.32	33.86	0.98	1.2610	6.31	2.20	39.60	0.93
OCSF127	1.3115	8.10	2.48	30.85	1.03	1.3030	8.82	2.42	32.50	1.01

Table S1. Properties of MSQ and OCS observed before and after UV cure. Pore volume was calculated from EP measurements



Figure S7. UV cure leads to small increase in network and decrease of cage



Relative pressure

Figure S8. Surface water contact angle measurements (a) and water adsorption isotherms demonstrating the hydrophobicity of the MSQ and OCS films. The apparent water adsorption of up to 1.5% is attributed to surface adsorption which is affected by differences in film roughness.