

Supplementary Material for

Characterization, thermal, mechanical properties and hydrophobicity of resorcinol-furfural/silicone hybrid aerogels synthesized by ambient-pressure drying

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Table S1 RF and Si-RF aerogels element content, derived from the XPS analysis.

Sample	C	N	O	Si
RF	72.75	1.55	25.70	0
Si0.2-RF	61.23	3.04	23.13	12.59
Si0.4-RF	54.84	3.61	23.79	17.77
Si0.6-RF	51.25	4.33	24.13	20.29

Table S2 XPS analysis data of RF and Si-RF aerogels.

Sample	Binding Energy Peak(eV)	Peak Area	Peak Area Ratio	Chemical bond
RF	399.32	1894.045	100%	HNC2
Si0.6-RF	399.38	3081.765	54.87%	HNC2
	400.47	2534.864	45.13%	NC3

Table S3 Compressive properties of CBCF/RF and CBCF/Si-RF aerogel composites.

Sample	Z direction		XY direction	
	Strength	Modulus	Strength	Modulus
	(MPa)	(MPa)	(MPa)	(MPa)
CBCF/RF	0.577±0.043	18.733±2.566	1.337±0.113	42.212±8.307
CBCF/Si0.2-RF	0.759±0.054	15.329±0.560	1.637±0.252	48.381±9.019
CBCF/Si0.4-RF	0.823±0.052	17.200±1.648	2.053±0.116	58.867±14.503
CBCF/Si0.6-RF	0.927±0.052	17.214±2.368	2.940±0.505	80.147±7.584