Supporting Information

Manuscript « Aeropectin: fully biomass-based mechanically strong and thermal super-insulating aerogel”

by Cyrielle RUDAZ, Rémi COURSON, Laurent BONNET, Sylvie CALAS-ETIENNE, Hébert SALLÉE, Tatiana BUDTOVA

Table S1. Mechanical properties of citrus-based aeropectins. The experimental error for the mechanical parameters is ± 15%.

Pectin wt% in the starting solution	ρ_{bulk}, g/cm^3	E, MPa	σ_{yield}, MPa	ε_{yield}	$W_{40\%}$, kJ/m^3
3	0.09	4.1	0.21	0.041	138
4	0.115	5	0.37	0.044	309
5	0.128	10	0.79	0.053	455
6	0.167	18	0.8	0.053	772

Thermal conductivity as a function of pressure at room temperature for citrus aeropectin from 4wt% solution is shown in Figure S1. The contribution of solid+radiative conductivity is $\lambda_{solid+radiative}$ = 0.01 W/(m.K).

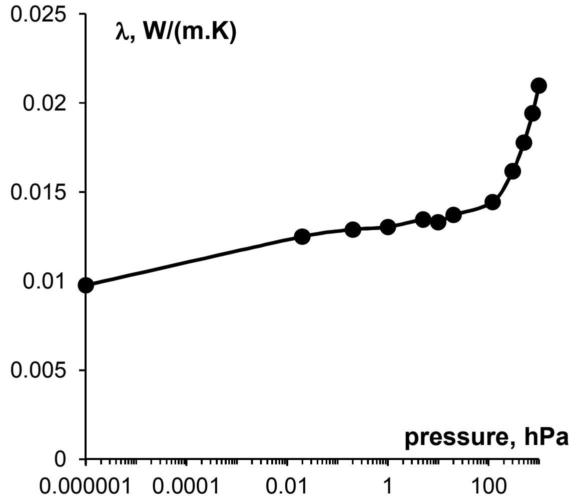

Figure S1

Table S2. Thermal conductivity λ and $\boldsymbol{\lambda_{gas+solid}}$ contributions of citrus- and apple-based aeropectins obtained with Fox 150. All conductivities are in W/(m.K).

Pectin type	Pectin wt% in solution	ρ_{bulk}, g/cm^3	λ	$\lambda_{gas+solid}$
citrus	2	0.05	0.020	0.0145
	3	0.09	0.024	0.0163
	4	0.115	0.024	0.0170
	5	0.128	0.025	0.0180
apple	2	0.05	0.020	0.0133
	3	0.08	0.022	0.0143