

Table S1. Effect of different types of carbon sources on yield, water flux, thickness, and density of BC membranes.

Sample	Mannitol	Fructose	Sucrose	Glycerol	Glucose
BC Yield (g L⁻¹)	0.95±0.003	1.82±0.003	0.7±0.001	2.05±0.003	0.42±0.001
Flux (kg/m²h)	12.4±2.5	18.7±1.7	10.9±1.1	27.5±0.67	8.6±1.4
Thickness (mm)	0.26±0.078	0.46±0.191	0.70±0.130	0.76±0.137	0.21±0.042
Density¹ (g/cm³)	0.04±0.013	0.05±0.018	0.01±0.002	0.03±0.005	0.02±0.003

Table S2. Results of Bubble Point and Capillary Flow Porometry tests on BC membranes obtained from different carbon source.

Sample	Mannitol	Fructose	Sucrose	Glycerol	Glucose
Bubble Point Pressure (psi)	9.3280	7.863	1.506	10.477	20.183
Bubble Point Diameter (μ)	0.7074	0.8392	4.3807	0.6298	0.3269

¹ The density as calculated from the mass and volume of the membranes.

Mean Flow Pore Pressure (psi)	29.402	11.206	72.818	10.646	73.752
Mean Flow Pore Diameter (μ)	0.22±0.1608	0.59±0.4661	0.09±0.6794	0.62±0.5067	0.09±0.0609
Smallest Detected Pore Diameter (μ)	0.0659	0.1992	----	0.1974	----
