The optimum conditions of the hot press compression were tested using PVDF substrates. After making sample with different press temperature and pressure, the optimum conditions were judged from the measurement of air permeation.

Table S1 Air permeability of porous PVDF film after hot press treatment

Temperature $(^{\circ}\!\mathbb{C})$	Pressure (MPa)	Air Permeability (mol/sec·m²·Pa)	Porosity (%)
140	4	1.3×10 <sup>-6</sup>	38
150	4	5.2×10 <sup>-7</sup>	33
153	4	4.1×10 <sup>-7</sup>	30
155	4	1.8×10 <sup>-7</sup>	28
157	4	1.8×10 <sup>-7</sup>	29
157	8	2.4×10 <sup>-8</sup>	28
159	4	1.4×10 <sup>-8</sup>	28
160	6	1.6×10 <sup>-10</sup>	15