## **Supporting Information**

## HIGH CRYSTALLINE P<sub>L</sub>LA POROUS FILMS PREPARED WITH CO<sub>2</sub>-PHILIC, HYBRID, LIQUID CELL NUCLEATORS

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Figure S1. EDX analysis of the cross-section of the entire thickness of the unprocessed neat P<sub>L</sub>LA films.



**Figure S2.** EDX analysis of the cross-section of the entire thickness of the neat P<sub>L</sub>LA films processed with supercritical CO<sub>2</sub> at SP=20.7 MPa and ST=313 K for S<sub>time</sub>=24 hours and depressurized with VR=10.94 MPa/min.



Figure S3. EDX analysis of the cross-section of the entire thickness of the unprocessed MP<sub>L</sub>LA films.



**Figure S4.** EDX analysis of the cross-section of the entire thickness of the MP<sub>L</sub>LA films processed with supercritical CO<sub>2</sub> at SP=20.7 MPa and ST=313 K for S<sub>time</sub>=24 hours and depressurized with VR=10.94 MPa/min.



Figure S5. EDX analysis of the cross-section of the entire thickness of the unprocessed IP<sub>L</sub>LA films.



**Figure S6.** EDX analysis of the cross-section of the entire thickness of the IP<sub>L</sub>LA films processed with supercritical CO<sub>2</sub> at SP=20.7 MPa and ST=313 K for S<sub>time</sub>=24 hours and depressurized with VR=10.94 MPa/min.



**Figure S7.** First heating DSC thermogram of MP<sub>L</sub>LA films (Labeling of the processed samples were denoted as SP-S<sub>time</sub>-VR, where SP is the saturation pressure (10.3 or 20.7 MPa), S<sub>time</sub> is the saturation time (2 or 24 hours) and VR is the venting rate (0.4 or 10.9 MPa/min as slow (s) or fast (f), respectively))



**Figure S8.** First heating DSC thermogram of IP<sub>L</sub>LA films (Labeling of the processed samples were denoted as SP-S<sub>time</sub>-VR, where SP is the saturation pressure (10.3 or 20.7 MPa), S<sub>time</sub> is the saturation time (2 or 24 hours) and VR is the venting rate (0.4 or 10.9 MPa/min as slow (s) or fast (f), respectively))