

Supporting information for

# **Switchable Surface and Loading/Release of Target Molecules in Hierarchically Porous PLA Nonwoven based on Shape Memory Effect**

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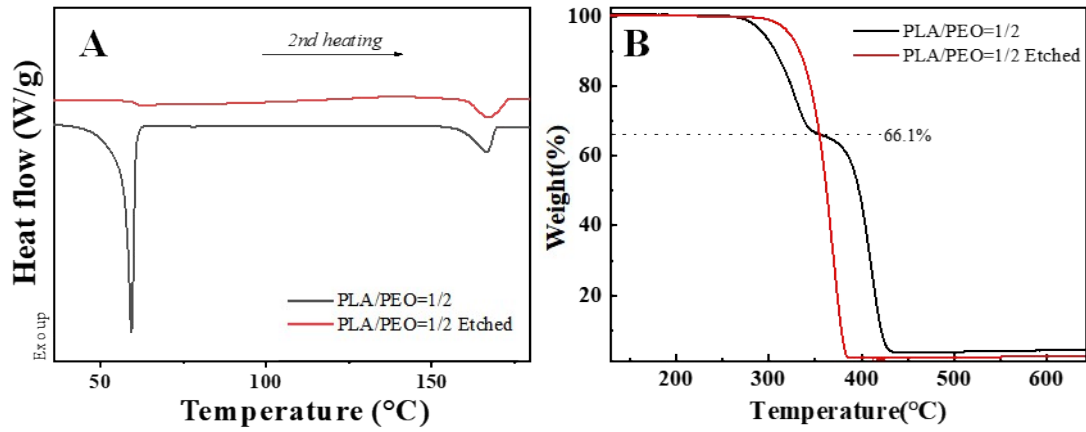


Fig. S1. The DSC (A) and TGA (B) curves of PLA/PEO blend and PLA nonwoven.

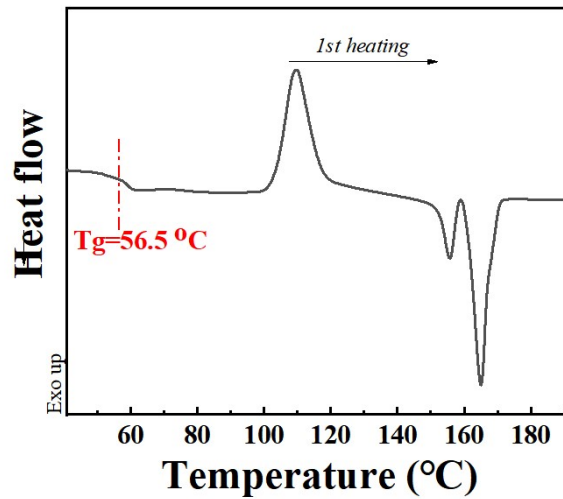


Fig. S2, DSC heating curve. The arrow represents the endothermal direction. The glass transition temperature of PLA locates at 56.5 °C

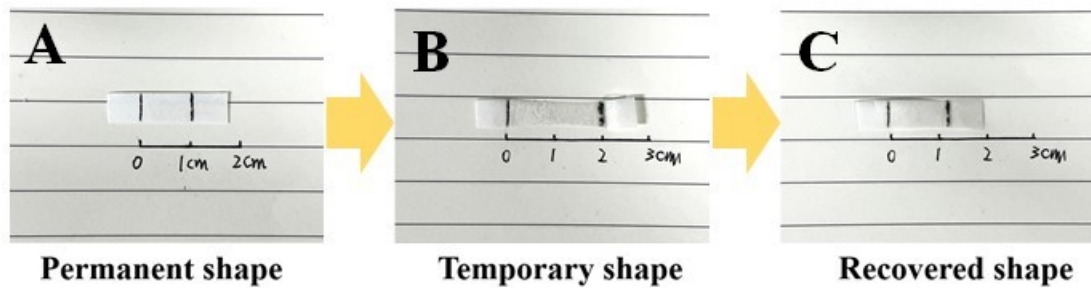


Fig. S3, a typical shape memory cycle including permanent shape (A), temporary shape (B) and recovered shape (C).

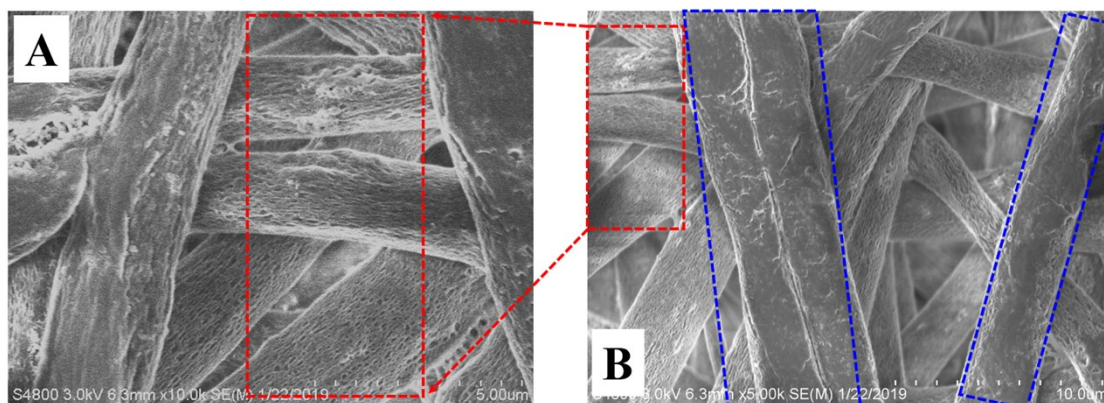


Fig. S4, SEM images of recovered nonwoven surface. In the blue regions, the porous structures have not recovered to permanent shape completely. In other regions (e.g., red regions), there are typical porous structures from crystallization template.

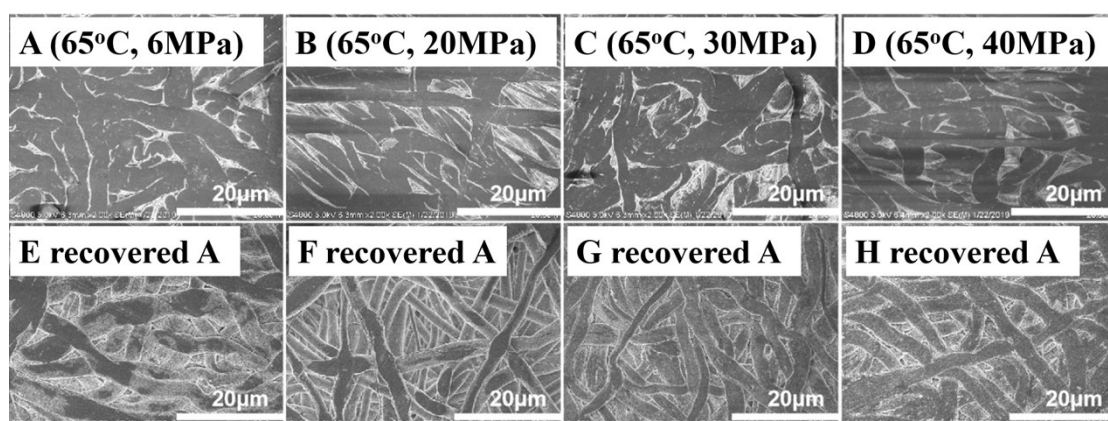


Fig. S5, SEM images of PLA nonwoven surface upon hot-pressing (A to D) and recovery (E to H) at the indicated operation conditions.

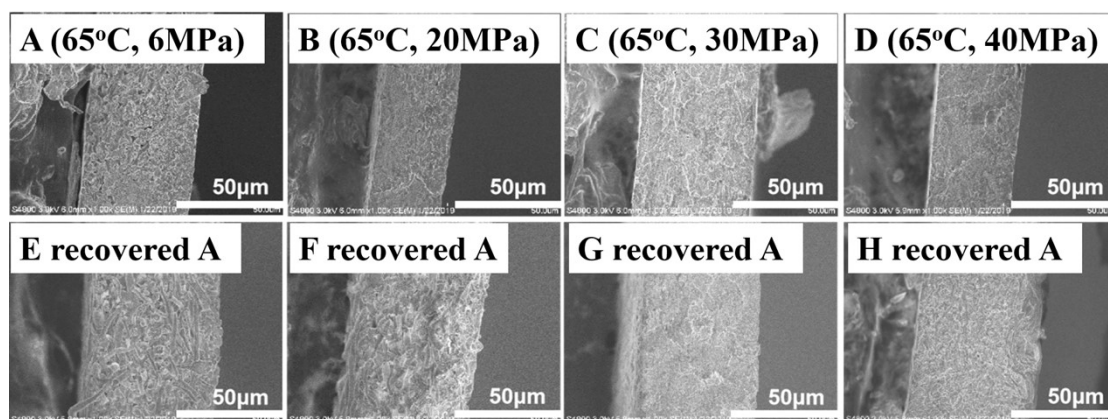


Fig. S6, SEM images of PLA nonwoven cross-sections upon hot-pressing (A to D) and recovery (E to H) at the indicated operation conditions.

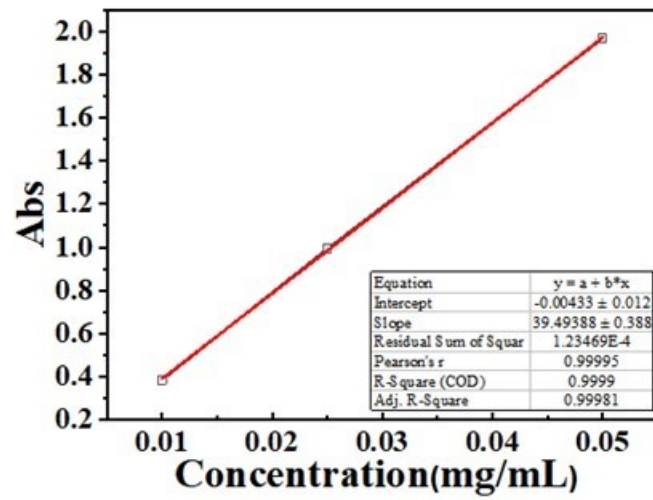


Fig. S7. The calibration curve for the solution of Coomassie Blue.

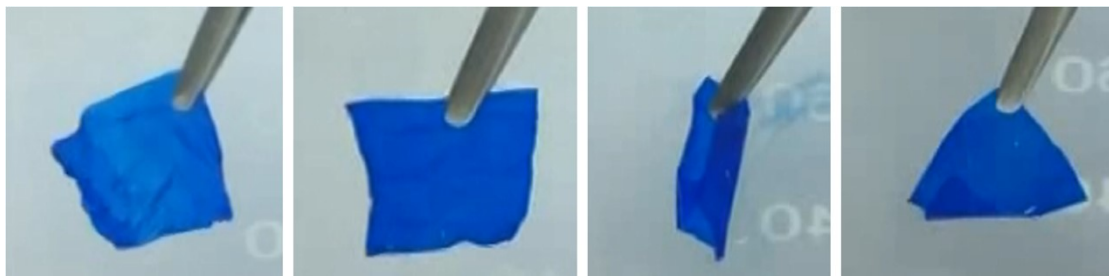


Fig. S8, photographs of PLA nonwoven with CB during release at high temperatures

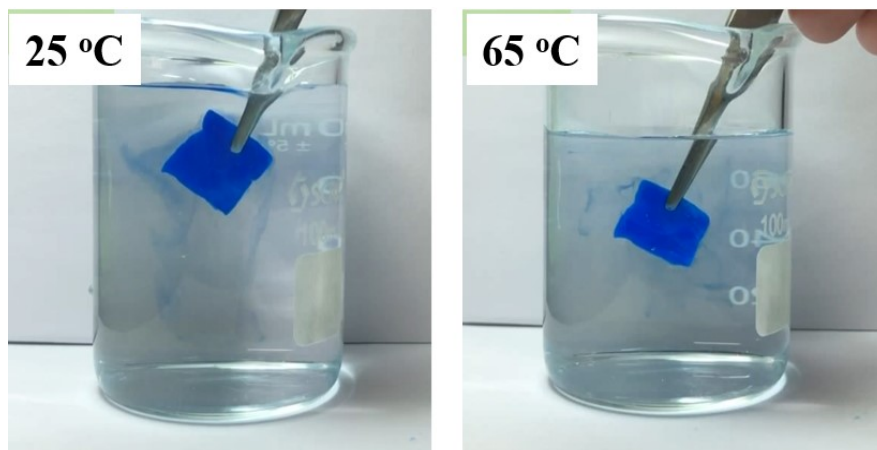


Fig. S9, photographs of PLA nonwoven with CB (without hot-pressing) during release at the indicated temperatures