

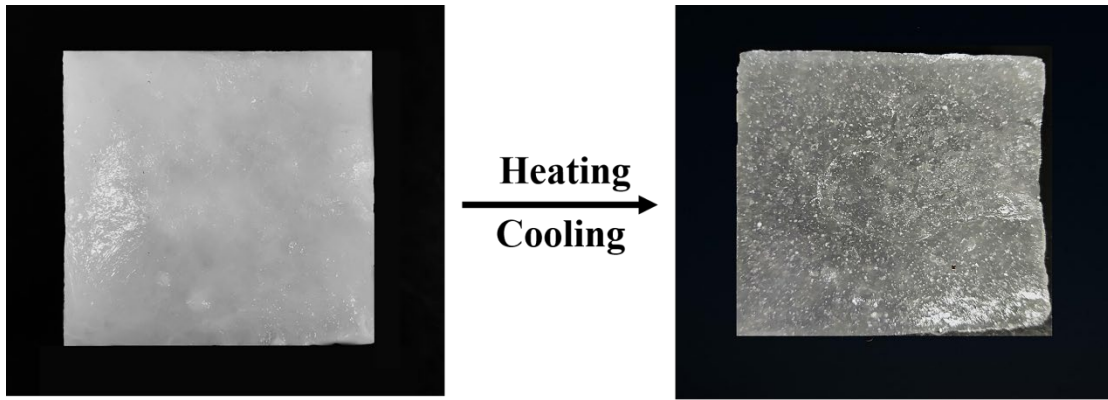
## **Preparation and characterization of a form-stable phase change hydrogel for heat-protective clothing**

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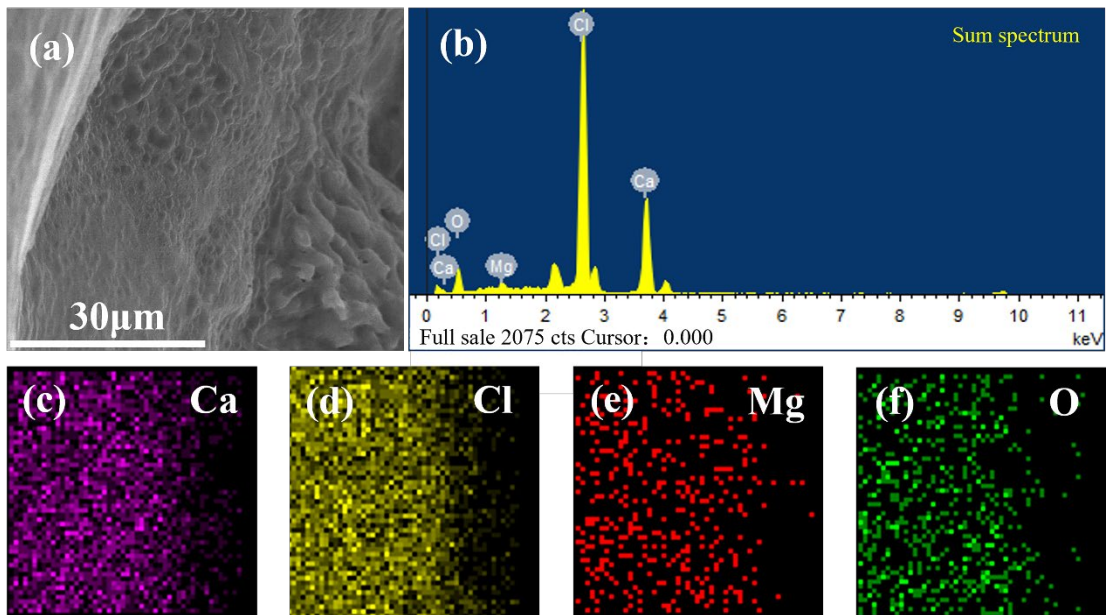
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**Fig. S1** Physical diagram of PCH before and after the phase transition.



**Fig. S2** FE-SEM image of the PCH (a); element distribution spectrum (b); and the corresponding elemental mapping of (c) calcium, (d) chlorine, (e) magnesium, and (f) oxygen.

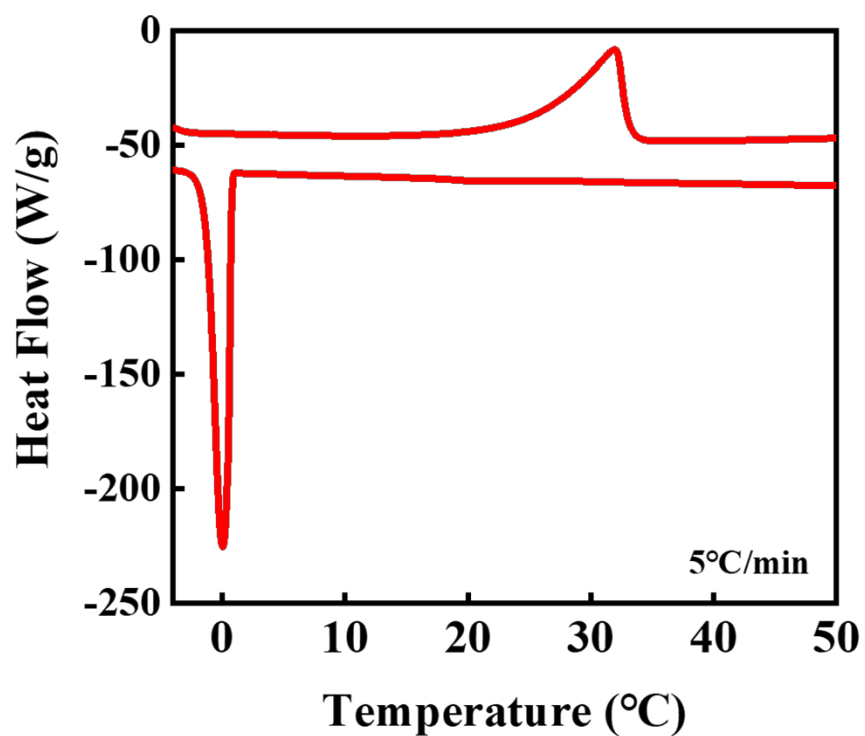


Fig.S3 DSC curves of the prepared PCH with 15wt.% MgCl<sub>2</sub>·6(H<sub>2</sub>O) content.

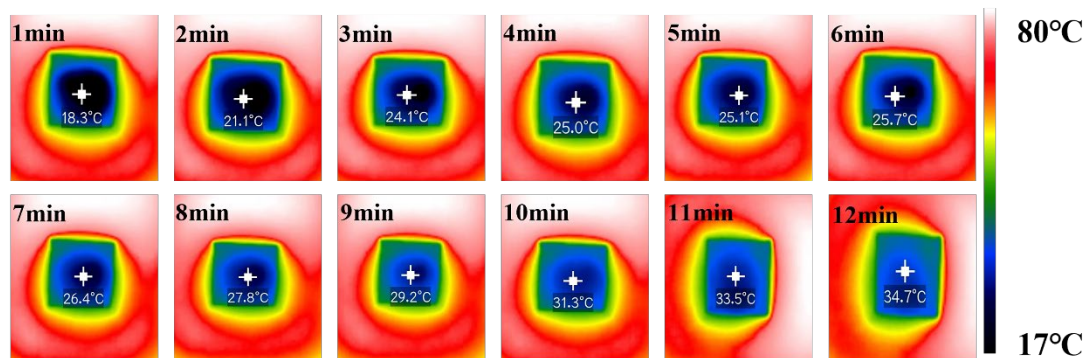


Fig. S4 Heating IR images of PCH on a 70 °C heating plate.

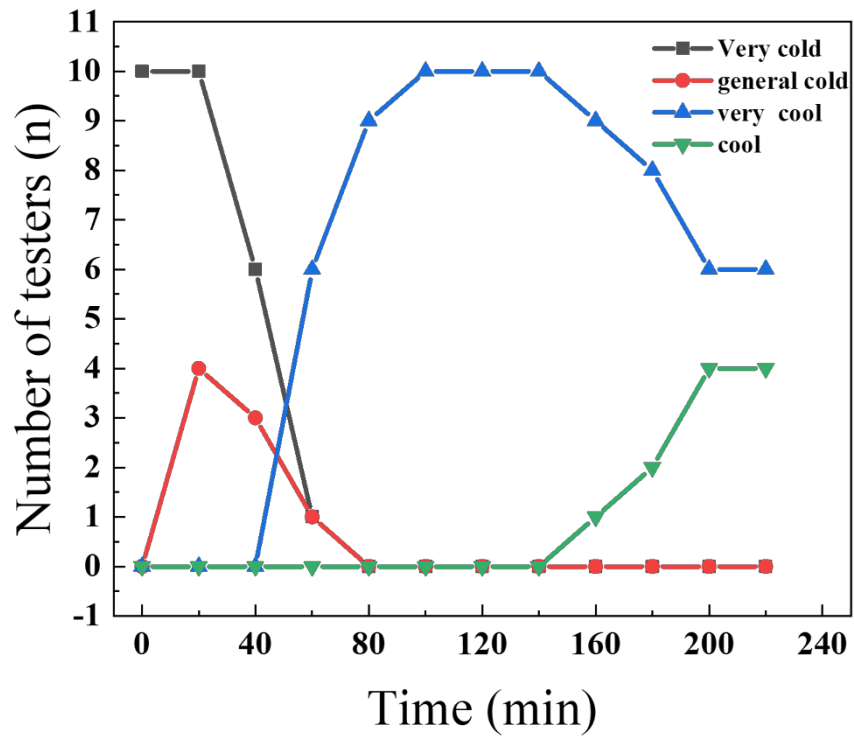


Fig. S5. Target user evaluation