

Supporting information

Folding and birefringence behavior of poly(vinyl alcohol) hydrogel film induced by freezing and thawing

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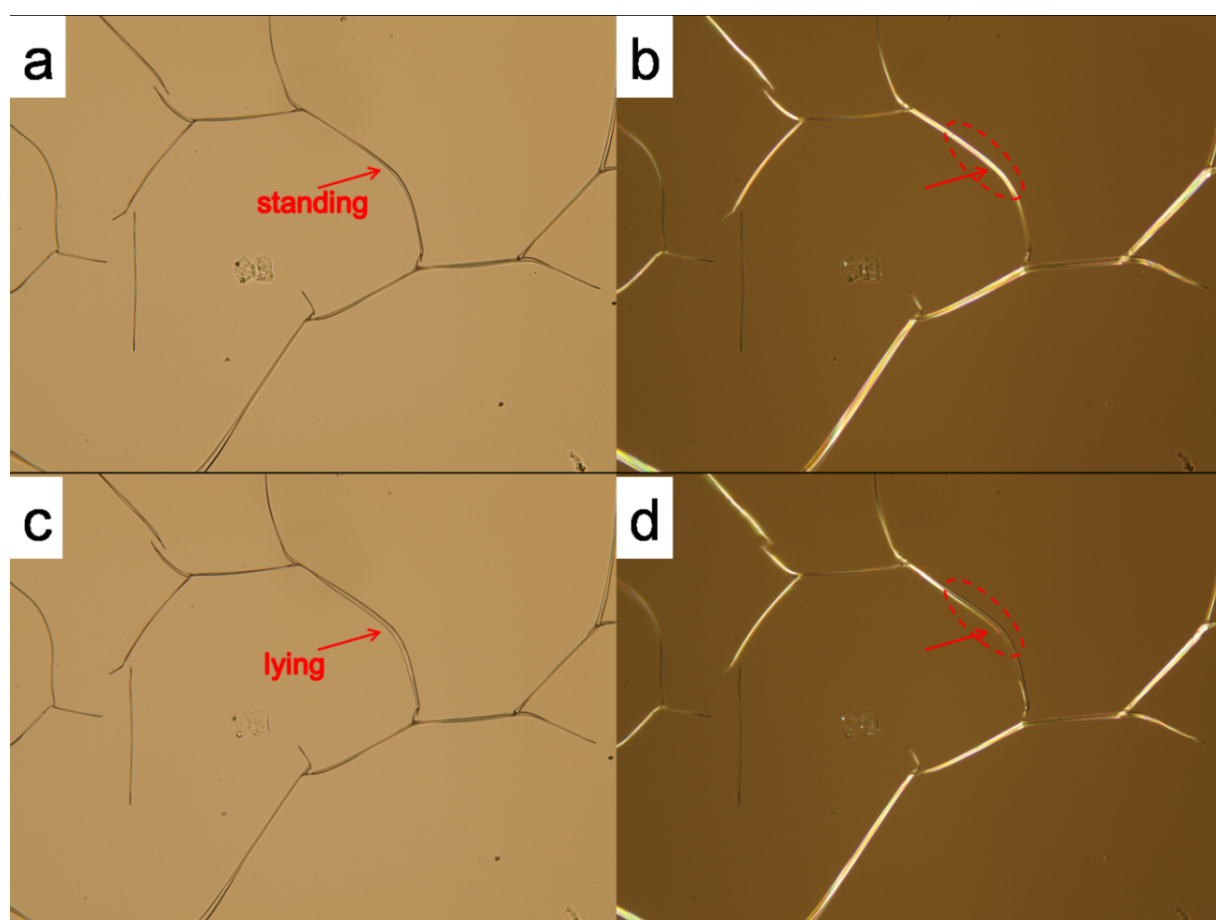


Fig. S1 The optical micrographs of the PVA hydrogel film with folds, (a) before and (c) after putting one “standing” fold to “lying”, (b) and (d) are the polarized micrographs corresponding to (a) and (c), respectively. After putting to “lying” state, the birefringence behavior of this part disappeared.

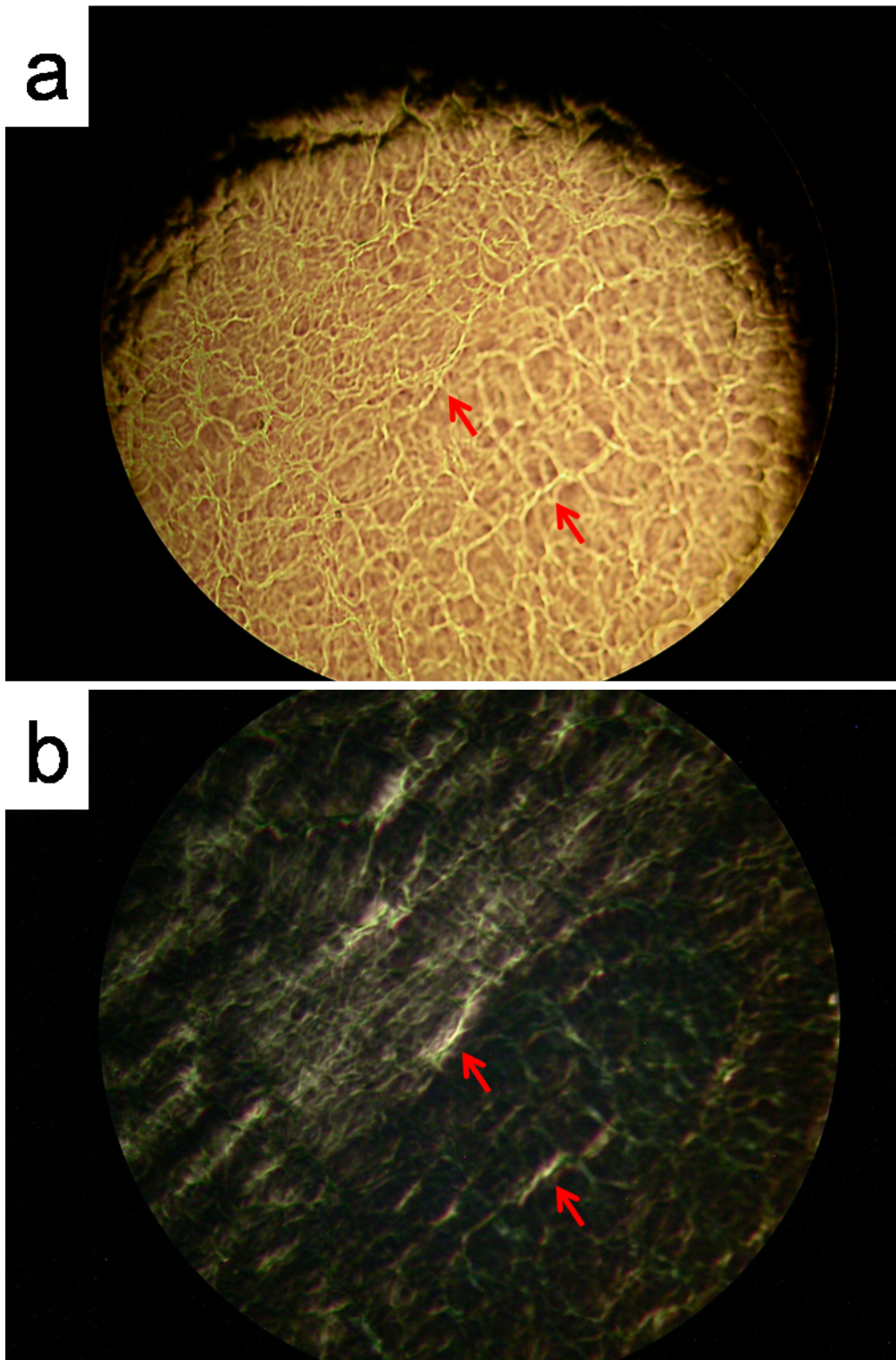


Fig. S2 (a) The optical micrograph of the thick hydrogel film that cannot form folds, (b) the polarized micrograph corresponding to (a). The brighter line in (a) is the shallow ridge formed during the freezing-thawing process, these ridges display weak birefringence behavior.