

## Supporting Information

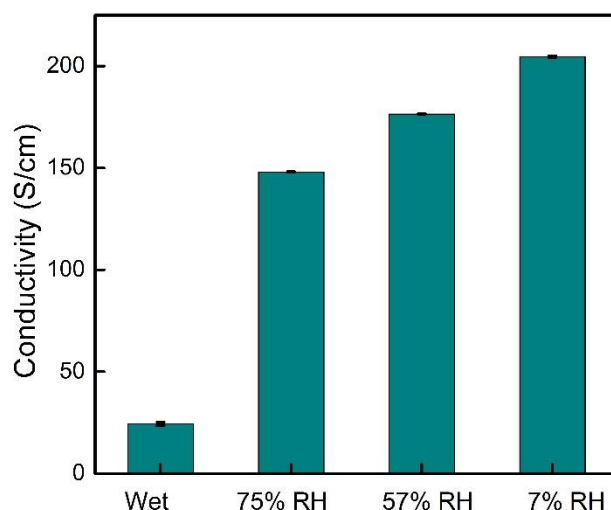
### Environmentally responsive composite films fabricated using silk nanofibrils and silver nanowires

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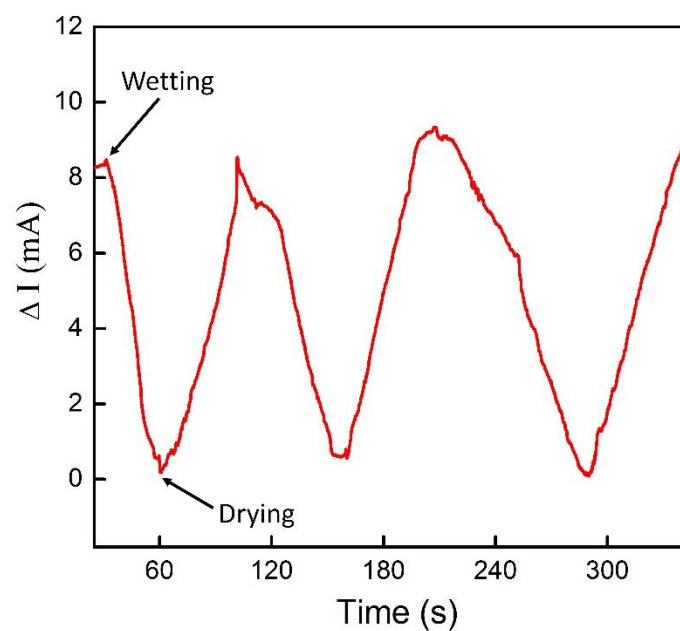
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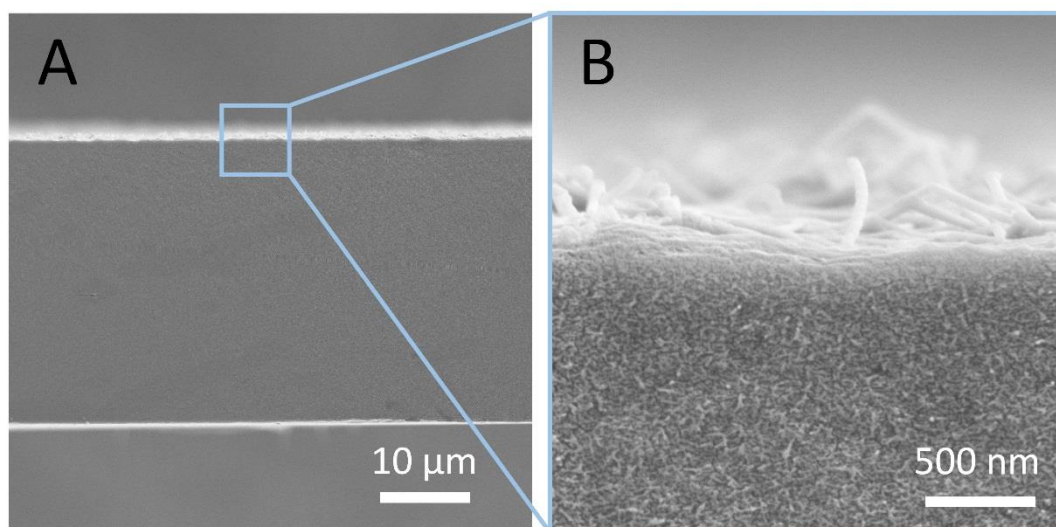
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**Fig. S1** Conductivity of AgNWs/SNFs hybrid film at different relative humidity (RH) and in wet state. AgNWs content: 9%. 75% RH is achieved by NaCl saturated aqueous solution, 57% RH is achieved by NaBr saturated aqueous solution, and 7% RH is achieved by LiBr saturated aqueous solution, respectively.



**Fig. S2** Real-time current change of AgNWs/SNFs hybrid film during three wetting and blow-drying cycles. AgNWs content: 7 wt%.



**Fig. S3** (A) SEM image and (B) its enlarged portion of the cross-section of AgNWs/SNFs layered film. AgNWs density:  $200 \text{ mg m}^{-2}$ .