

Abstract Submitted
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We need wrinkle on the skin SUNGSOOK AHN, SANG JOON LEE,
Pohang University of Science and Technology (POSTECH) — Wrinkle formation on the skin is an unwelcome guest to everybody. But if we truly understand how wrinkles can contribute to important biological functions, then we readily admit the wrinkles positively. In this study, we show how the wrinkles are advantageous and useful in many systems. In a plant system for example, by forming line patterned wrinkles the hydrogels covering on the seed surface contribute to delay the dehydration against varying water supply environments. Inspired by this plant hydrogel, it is experimentally and theoretically investigated how lined wrinkles are useful to conserve water inside while protect the individual from drying-out. This study would contribute to a variety of humidity-sensitive system development including artificial skin, humidity-actuated sensors and the like.

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