

Supporting information

Photocrosslinking Patterning of Single-Layered Polymer Actuators for Controllable Motility and Automatic Devices

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Figure S1. A sketch showing the definition of “top” side and “down” side of the photocrosslinking PVDF@PAM film.

Legends for Supplementary Movies

Movie S1. Strips that were cut out with the soft-hard patterns aligned at $+30^\circ$, $+45^\circ$ and $+60^\circ$ to the long axis, demonstrated different variations of the coiling pitches in response to acetone vapor sorption and desorption. The video was shown at two times the real speed.

Movie S2. The soft-to-hard patterning ratio effects on the coiling motions. The video was shown at two times the real speed.

Movie S3. Motion of a homemade artificial hand that was composed of the patterned strip of PVDF@PAM. The video was shown at two times the real speed.

Movie S4. Demonstration on the acetone vapor-induced contraction. The video was shown at ten times the real speed.

Movie S5. An automatic device driven by acetone vapor-induced contraction and expansion of the patterning strip of PVDF@PAM. The video was shown at fifteen times the real speed.

Movie S6. A 3.5 mg strip worked in the automatic device capable of lifting 5.09 g weights to a height of 3.33 cm. The video was shown at ten times the real speed.