Electronic Supplementary Information for:

Controlled formation and disappearance of creases

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Supplementary Movie 1

When the substrate is subject to a pre-strain of $\varepsilon_0 = 0.15$ and the bilayer is subject to an additional compressive strain of $\varepsilon = 0.42$, between the Maxwell strain and the snap-forward strain, the flat surface is metastable. A gentle poke overcomes the energy barrier and the flat surface snaps into a deep crease. The deep crease propagates at both ends and crosses the entire surface of the sample over time.

Supplementary Movie 2

When the substrate is subject to a pre-strain of $\varepsilon_0 = 0.15$ and the bilayer is subject to an additional compressive strain of $\varepsilon = 0.37$, below the snap-backward strain, the flat surface is stable. A poke creates a crease, but the crease disappears afterwards.

Supplementary Movie 3

An isolated crease is formed by poking the surface of a sample compressed to a strain between the Maxwell strain and the snap-forward strain. The crease propagates forward. When the compressive strain is reduced stepwise, the velocity decreases. When the strain is reduced to the Maxwell strain, the crease arrests. When the strain is reduced below the Maxwell strain, the crease retracts.