

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Image stack of optical micrographs of a hetero-microstructure, taken at different temperatures between 20 °C and 50 °C.

File Name: Supplementary Movie 2

Description: Bright-field optical movie of 3x3 nominally identical hetero-microstructures. The temperature is increased from 20 °C to 45 °C. Playback speed was increased by factor of five.

File Name: Supplementary Movie 3

Description: Bright-field optical movie of four hetero-microstructures with lengths from 30 μm to 60 μm . The temperature is increased from 20 °C to 45 °C. Playback speed was increased by factor of five.

File Name: Supplementary Movie 4

Description: Bright-field optical movie of a hetero-microstructure with beam length of 120 μm . The temperature is decreased from 45 °C to 20 °C. Playback speed was increased by factor of five.

File Name: Supplementary Movie 5

Description: Bright-field optical movie of a hetero-microstructure with two alternating material segments. The temperature is increased from 20 °C to 45 °C. Playback speed was increased by factor of five.

File Name: Supplementary Movie 6

Description: Bright-field optical movie of a hetero-microstructure with three alternating material segments. The temperature is increased from 20 °C to 45 °C. Playback speed was increased by factor of five.

File Name: Supplementary Movie 7

Description: Bright-field optical movie of four hetero-microstructure with a distance of 100 μm . The laser spot is focused on the post of the second structure and the shutter opened and closed several times.

File Name: Supplementary Movie 8

Description: Sequence of bright-field optical movies of a single hetero-microstructure. The exposure and settling time of the focused laser spot is changed between the movies to generate different actuation responses.

