Research data for

Optical bistability in shape-memory nanowire metamaterial array

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The corresponding manuscript contains all information required to reproduce the results that it contains. Here, we make the data shown in the manuscript available.

Research data - Shape-memory photonic nanowire array.xlsx

Sheet Fig3: Measured resistance of a 175-nm-thick NiTi control sample deposited on a SiO₂ substrate. The resistance measurement was performed by 4-probe measurement in a vacuum chamber. The probes were physically fixed on the sample with conductive adhesive agents to prevent their separation during the temperature cycle.

Sheets Fig4...: Deformation-dependent optical properties of the shape-memory nanowire array.

(Sheet Fig4a) Spectral dispersion of the difference between reflectivities of the nanostructure measured at 110 °C and 210 °C, relative to reflectivity at 210 °C. Column B and column C correspond to the heating and cooling parts of the hysteresis cycle, respectively.

(Sheet Fig4a_inset) Reference reflectivity spectrum at 210 °C.

(Sheet Fig4b) Difference between the sample reflectivity at temperatures T and 210 °C relative to the reflectivity level at 210 °C at a wavelength of 835 nm.

(Sheet Fig4c) Simulated out-of-plane deformation profile of a nanowire with trench cuts at each end for NiTi in the martensite phase and austenite phase states at a temperature of 110 °C.