

## MATERIALS AND METHODS:

PDMS elastomer (Sylgard 184) was purchased from Dow Corning. For fabrication of a buckling structure, PDMS precursor was mixed with curing agent (10:1) and cured at 65°C for 4 h.

Wrinkled pattern was made using PDMS strip (20x40x0.5 mm<sup>3</sup>) which was clamped and stretched (20%) in the longitudinal direction using a custom-built stretching device. Subsequently the stretched sample was placed in UV-Ozone photoreactor (PR-100 from UVP) and after UV-Ozone treatment the sample was carefully relaxed.

Photonic crystals were fabricated by the convective self-assembly approach, using the suspending power of ethanol on the colloidal particles, in combination with an appropriate vapor pressure for corresponding solvents at 32°C for ethanol and 55°C for water. The self-assembly experiments were performed on a relatively small scale, using about 5mL of dilute, and recently sonicated colloid suspension (around 1%) in a small glass vial with a diameter of 2.5 cm. The longest side of the PDMS slab, vertically deposited against the side of the vial, end up with a coating after 2 days of evaporation at fixed temperature (32°C - ethanol, 55°C - water).

Contact angles were measured using a CCD camera (Qicam F1394 from Qimaging) equipped with a 20x objective. 3 drops of 10µL were deposited on each substrate. Contact angles were determined from pictures using ImageJ software. Reported values correspond to the mean values.

Optical images were recorded by Leica DM4000 M optical microscope.

The optical properties were investigated by UV-Vis-NIR Varian Cary 5G spectrophotometer and Ocean optic spectrometer USB4000. Extinction at various angles was measured using a quartz lamp (Ocean Optics LS-1). The light was guided to the sample by use of a fiber (Ocean Optics P1000-2-VIS-NIR) fitted with a collimating lens (Ocean Optics 74-UV) at one extremity. The sample was mounted on a rotation stage with a custom-made sample holder. The transmitted light was sent through a pinhole (1 mm<sup>2</sup>) and collected by use of a fiber (Ocean Optics QP400-2-VIS/BX) and a charge coupled device (CCD) spectrometer (Ocean Optics USB4000).

SEM images were recorded by JSM-6100 (Joel) high resolution scanning electronic microscope.

Polystyrene particles were purchased from PolyScience, Germany.