

## Text for supplementary information

Flow of a mixture of particles with three different sizes ( $\approx 10 \mu\text{m}$  and  $\approx 3 \mu\text{m}$  silica and 67 nm PS latex) in water over the buckled surfaces in a microfluidic cell. The biggest silica particles order predominantly in the grooves between the G4 buckles. The 3  $\mu\text{m}$  silica particles are detected on the top of the G4 buckles, meandering among the G3 buckles.