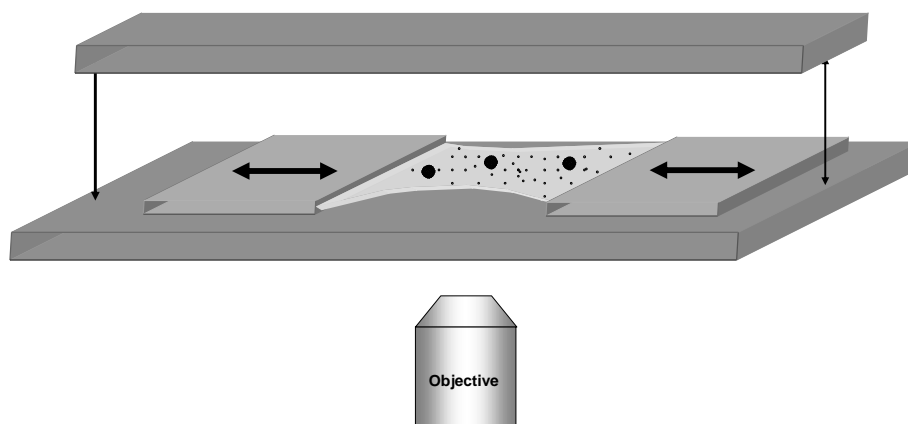


Supplementary information

Methods

Fusion of bubbles armoured with colloidal particles

Borosilicate glass slides 50 x 70 mm (Corning Glassworks) were placed on the stage of an inverted microscope (DM-IRB, Leica). Two 24 x 60 x 0.14 mm cover slips (Corning Glassworks) were placed on the microscope slide to act as side walls of a small chamber, which was used as a fusion chamber (Supplementary Figure 1). Typically we introduced between the slides 100 μ l of a solution containing the armoured bubbles. Another glass slide was placed on top of this assembly to form a closed chamber. Manual translation of the sidewalls allowed us to produce large deformations of the trapped shells. Vigorous translation of the sidewalls also allows us to input enough energy to the particles to coat the bubbles with the colloidal particles.



Supplementary Figure 1: Schematic of the fusion chamber; armored bubbles were stressed by squeezing the two side plates together. The top plate confines the bubbles within the rectangular chamber formed by the edges of the side plates.