

Supplementary Movies

Supplementary Movie 1: Trajectory of a silicone oil drop with radius $R = 1.2$ mm deposited on a liquid nitrogen bath when approaching a wall. The drop is almost perfectly reflected, and bounces at a distance $x_{\min} = 3.5$ mm from the wall. The movie is slowed down 5 times.

Supplementary Movie 2: A silicone oil drop with radius $R = 900$ μm is deposited into an aluminium channel with size $d = 3$ mm, semi-immersed into the bath. The channel directs the drop and accelerates it when it exits.

Supplementary Movie 3: Reflection of a droplet with radius $R = 830$ μm by a parabolic wall, with focal length 5 cm. The droplet is initially directed towards the mirror using a channel, parallel to the axis of the mirror with width 3 mm. The movie is slowed down 2.5 times.