

Supplementary Movie M1: Confocal microscopy observations of a moving cloud of cavitating bubbles near a glass surface covered by a supported DPPC bilayer with 1% of fluorescent NBD-PC. Left side corresponds to the fluorescence channel (488nm line) and right side the transmission channel. Time step between two images is 5 sec. The bubble diameter is 12mm.

Supplementary Movie M2: Fast fluorescence microscopy observations (NBD-PC lipids) of the dynamics of a jumping bubble on a supported DLPC bilayer at low magnification (10X). The frame represents the region depicted in Fig. 2A of the manuscript. Time step between two images is 0.066 sec. The bubble diameter is 12 μ m.

Supplementary Movie M3: Fluorescence microscopy observations (NBD-PC lipids) of the dynamics of a jumping bubble on a supported DLPC bilayer at high magnification (40X). Time step between two images is 0.14 sec. The bubble diameter is 12 μ m.

Supplementary Movie M4: Fluorescence microscopy observations of the liquid around the jumping bubbles thanks to the soluble dye SRB (high magnification 40X). Time step between two images is 0.055 sec. Initially, the dark halo indicates that gas is present inside the bubble of 14 μ m diameter.