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Shape oscillation and mode transition of bubble(s) under ultrasonic vibration[1] ICHIRO UENO, Tokyo Univ. Science, TATSUNORI KOJO[2], Tokyo Univ. Science — Behaviors of bubble(s) exhibiting non-linear shape oscillation under ultrasonic vibration are focused. Size of the bubbles interested in the present study is of O(1 mm) in diameter. The bubbles were injected through the micro syringe to the test fluid (water or water/surfactant mixture) filled in the rectangular tank. Ultrasonic vibration were triggered after the detach of the bubble from the tip of the syringe; thus the bubbles were exposed to the periodic oscillation in rising the test fluid. The authors clearly detect radial and shape oscillations under the large-amplitude vibration by use of high-speed camera. Preferable mode number of the shape oscillation, and the transition process from the radial to the shape oscillation are discussed.

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