

# Acoustic excitation of superharmonic capillary waves on a meniscus in a planar micro-geometry

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The effects of ultrasound on the dynamics of an air-water meniscus in a planar micro-geometry are investigated experimentally. The sonicated meniscus exhibits harmonic traveling waves or standing waves, the latter corresponding to a higher ultrasound level. Standing capillary waves with subharmonic and superharmonic frequencies are also observed, and are explained in the framework of parametric resonance theory, using the Mathieu equation.

Subjects: **Adaptation and Self-Organizing Systems (nlin.AO)**; Pattern Formation and Solitons (nlin.PS)

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