

Abstract Submitted
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Faraday waves at foam/liquid interface¹ HERVE CAPS, GILES DELON, GRASP-Optofluidics — Monodisperse foams are produced in Hele-Shaw cells and submitted to vertical oscillations. This leads to a destabilization of the interface between the foam and the liquid bath. Faraday instability has been identified and characterized in terms of wavelength and destabilization threshold. The control parameters which are considered are: the frequencies of the oscillations, varying between 10 Hz and 100 Hz, the amplitudes of the oscillations, ranging from 1 mm to 15 mm and the bubble size, which is millimetric. Considering the foam as a continuous media, the waves at the interface can be linked to an effective surface tension of the interface, which depends on the bubble size and the oscillation parameters. Results are interpreted with help of fast-cam recording and energy considerations. This study paves the way to a new continuous approach of liquid/foam interfaces.

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