

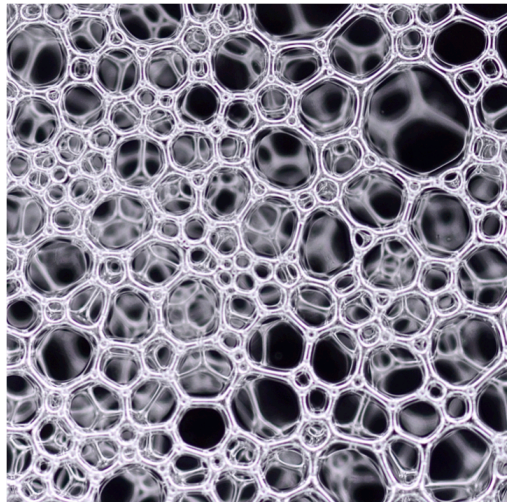
Marangoni effects and foam films

Isabelle Cantat

Univ Rennes, CNRS, IPR (Institut de Physique de Rennes) - UMR 6251, F- 35000 Rennes.

isabelle.cantat@univ-rennes1.fr

Surface tension gradients induce flows, known as Marangoni flows. They play an enhanced role in systems with a large amount of free interfaces, such as foams, emulsions and thin liquid films. In such systems, the interfaces are deformable and the stress at the interface is usually unknown, making the prediction of the flow difficult. We produce controlled deformations of a liquid structure made of few films connected to each other by menisci, and measure films thickness maps and velocity fields to determine the nature of the flow in the structure. This is an important step to understand the origin of the especially high effective viscosity of liquid foams.



- [1] *Extension of a suspended soap film: A homogeneous dilatation followed by new film extraction.*
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- [2] *Theoretical study of the generation of soap films: role of interfacial visco-elasticity.*
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- [3] *Velocity field in a vertical foam film.*
J. Seiwert, R. Kervil, S. Nou, I. Cantat. Phys. Rev. Lett. **118** p. 048001 (2017).