# Surface tension, soft solids and fluid-structure interactions

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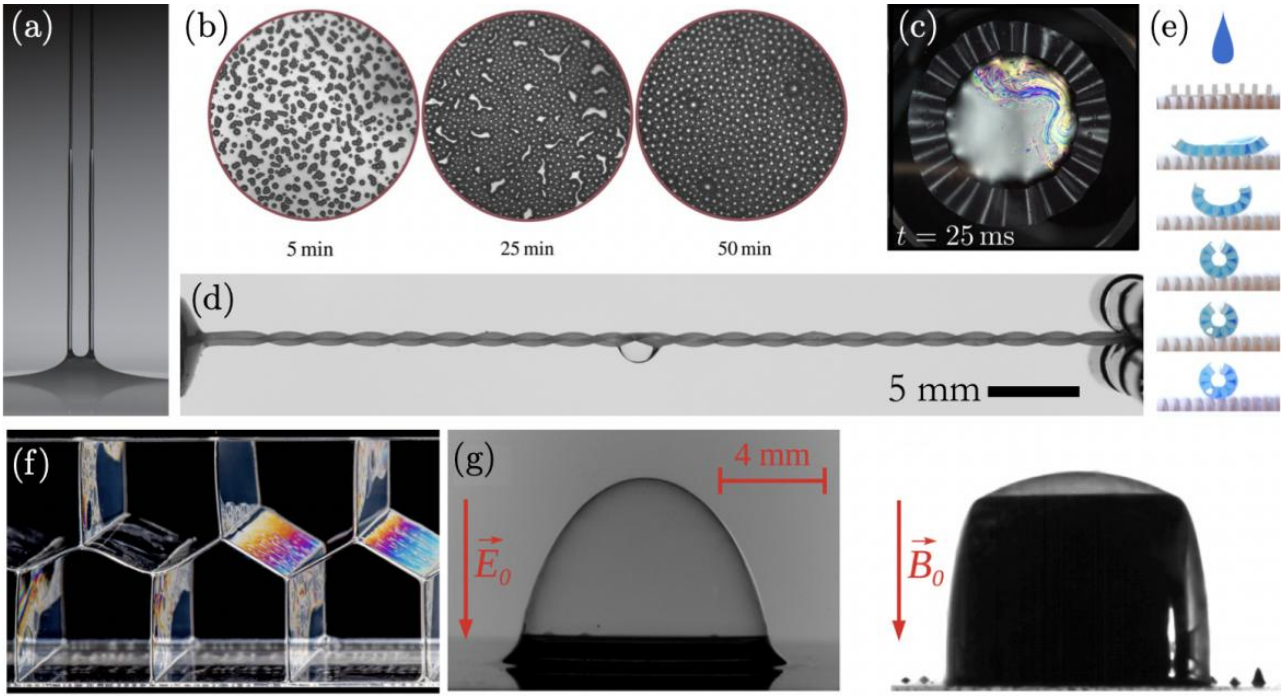


(a) Fibers withdrawn from a bath (E. Siefert, H.Bense) (b). Dew formation on a soft gel (A. Bouillant). (c) Dynamic buckling of an elastic ring (F. Box). (d) Imbibition of a droplet on 2 twisted fibers (P. van de Velde). (e) Capillary induced morphing of a ribbed sheet (J. Cappello). (f) Deformation of an elastic strip in a 2D bubble column (M. Jouanlanne) (g) Deformation of a bubble in an electric field (left) or magnetic field (right) (S. Mawet).

Multiphase systems involving an interplay between capillarity and elasticity have raised considerable attention in recent decades, advancing and enriching our comprehension of soft objects and highly deformable interfaces. This field presents compelling scientific questions at the intersection of physics, mechanics and material science. Capillarity, elasticity, and geometry are key parameters that underlie various phenomena, including soft lubrication, wetting on soft materials, imbibition of fibrous or spongeous materials, phase transition within or onto elastomers, with many fundamental applications in cell biology, soap films or foams, soft materials, and elastocapillary of slender structures. Beyond fundamental understanding of model systems, applications of such phenomena could impact multiple emerging fields, from the development of soft robotics or smart surfaces to the understanding of biomechanics or animal locomotion, and could provide novel strategies for the fabrication of materials (responsive or not) with intriguing or unconventional properties.

**This mini-colloque welcomes scientists from physics, mechanics and connected disciplines with an interest in capillarity and elastocapillary systems at large.**

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