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Erratum

Two-dimensional shear modulus of a Langmuir foam

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A few years after the publication of paper [1], we regret that we have not been able to experimentally reproduce the data of fig. 3b. As a consequence of that, we cannot directly measure the shear modulus of a Langmuir foam by a mechanical method, based on the flow of the foam relative to a circular obstacle. We have serious reasons to believe that fig. 3b is flawed, and we therefore decided to retract it.

It is still possible to probe foam rheology simultaneously by a mechanical measurement and by the optical method developed in [1]. In particular, this has been achieved in the case of the 2D flow of foam around an asymmetric obstacle, a cambered airfoil [2]: in that study, the mechanically measured lift agreed quantitatively with the contributions of elastic stress and pressure obtained by image analysis.

The other data of [1] have been checked, and the other conclusions remain valid. In particular, fig. 3a shows a correlation between the stress and bubble deformation based on image measurements. This has been checked in other foams, *e.g.*, in refs. [3–5].

Note also that the link to the thesis which was formerly quoted as ref. [25] has changed [6].

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