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Electroosmosis near surfactant laden interfaces

Dr. Anne-Laure Bianco

ILM, Université Lyon 1

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Abstract: Liquid foams are concentrated dispersions of gas bubbles in a liquid matrix. Due to their large area, these systems are thermodynamically unstable and always collapse. In this talk, we will investigate how an electric field can help in stabilizing a liquid foam. After a short introduction on electrokinetic effects and in particular on how the hydrodynamic boundary condition can affect their magnitude, we will present experimental results on electroosmosis near an isolated surfactant laden gas/liquid interface, and show the specificity of such a system. Then the case of one soap film (two interfaces) will be considered. In the end, preliminary results on electroosmosis in a macroscopic liquid foam will be presented.

Related publications:

[1] Bonhomme, Liot, Bianco, Bocquet, PRL 110, 054502 (2013).

[2] Joly, Detcheverry, Bianco, PRL 113(8), 088301 (2014)



主催:

東京大学大学院工学系研究科「機械システム・イノベーション」プログラム (GMSI)
「最先端融合科学イノベーション教育研究コンソーシアム」(CIAiS)

本件連絡先:

東京大学大学院 工学系研究科機械工学専攻 教授 高木 周

GMSIプログラム事務局 E-mail: office@gmsi.t.u-tokyo.ac.jp Phone: 03-5841-0696