Séminaire externe du LI2C

Nous avons le plaisir d’inviter, sur le thème « chimie et microfluidique » :

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“Modeling phase behavior for quantifying micro-pervaporation experiments”

We present a theoretical model for the evolution of mixture concentrations in a micro-pervaporation device, similar to those recently presented experimentally. The described device makes use of the pervaporation of water through a thin PDMS membrane to build up a solute concentration profile inside a long microfluidic channel. We simplify the evolution of this profile in binary mixtures to a one-dimensional model which comprises two concentration-dependent coefficients. The model then provides a link between directly accessible experimental observations, such as the widths of dense phases or their growth velocity, and the underlying chemical potentials and phenomenological coefficients. It shall thus be useful for quantifying the thermodynamic and dynamic properties of dilute and dense binary mixtures.

Mardi 25 novembre 2008 à 10h30
Bibliothèque du LI2C (pièce 754)
Université Pierre et Marie Curie
Bâtiment F, escalier 74, 7ème étage