UNIVERSITÉ PARIS SUD

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Research Team name: Liquid Interfaces

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Team Presentation – Annual Workshop, COST Action MP1106

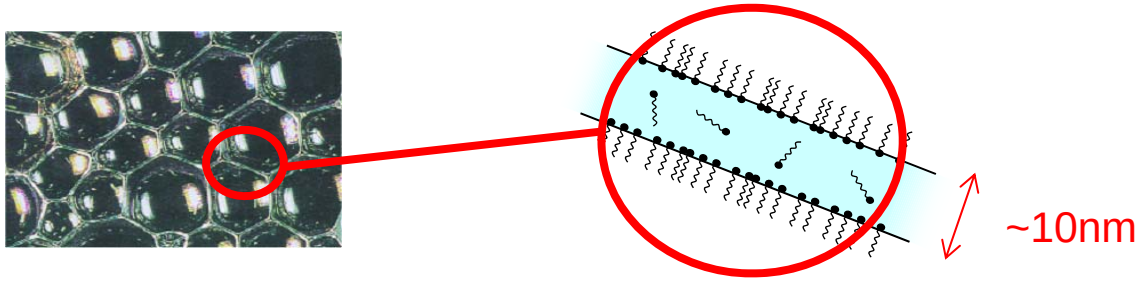
Dublin, September, 2012

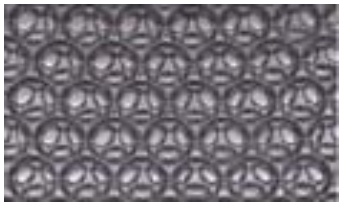
Research interests related to MP1106

FOAMS & EMULSIONS

Stability, rheology

LIQUID FILMS
Confinement





MONODISPERSE FOAMS
(microfluidics)

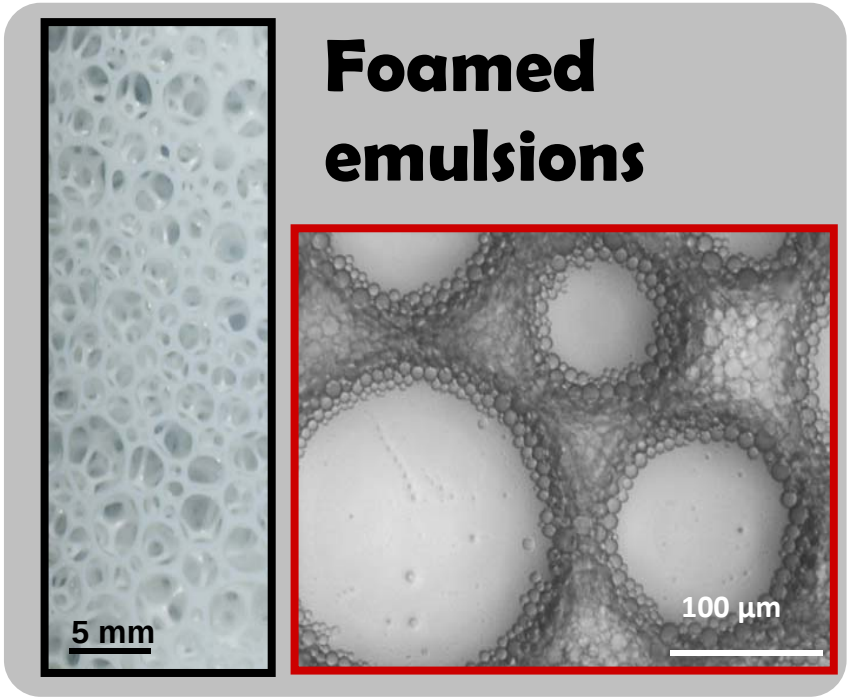
LIQUID SURFACES rheology
(surface)

Basic facilities, equipment, devices

- Surface equilibrium properties : Wilhelmy plates, Langmuir troughs, ellipsometry, BAM
- Surface rheology : excited surface waves, oscillating bubbles/drops, bicone (shear)
- Thin films : thin film balance, thin film withdrawal
- Foams : foams creation (millifluidics, turbulent mixing), electrical conductivity, DWS, foamscan
- Emulsions : granulometry
- Bulk rheology : commercial rheometers
- In other groups : zeta potential, DLS, SAXS, electron microscopy

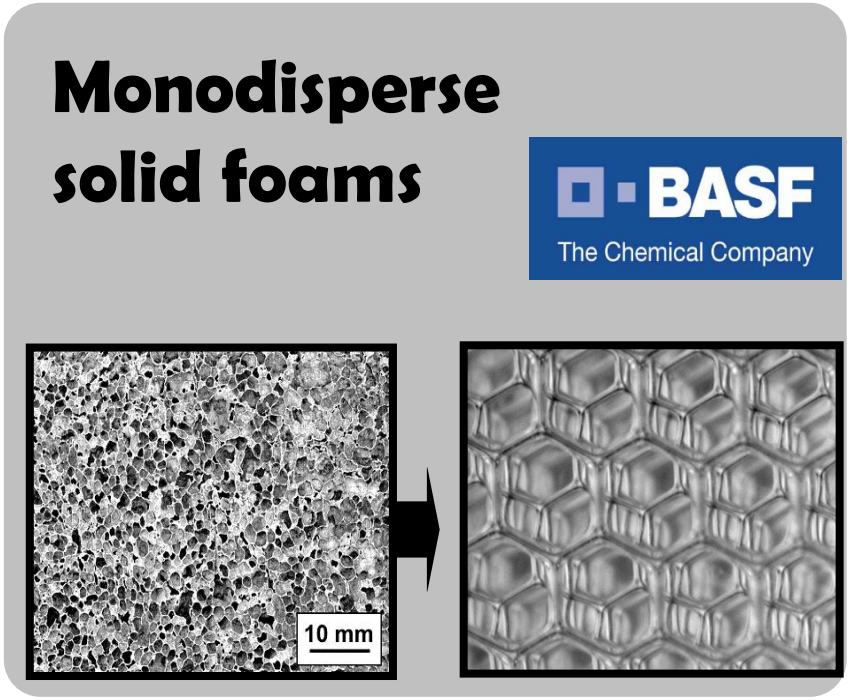
WG1. Single interfaces, bubbles clusters and foams; relation between surface properties & foam and emulsion behaviour, including foamed emulsions and crude oil emulsions (with J.F.Argillier, IFPEN)

Funding : ESA, CNES, ANR, CNRS, MRT, IFPEN



WG2. Design of superhydrophilic and superhydrophobic surfaces, solid foams

Funding : ERC, BASF



WG3. Development of devices to characterize single interfaces (capillary waves excited with electrical field pulses to obtain rapidly the whole frequency response) and on devices to characterize foams (improvment of the foamscan instrument, collaboration with Teclis)

Funding
CNRS, MRT, OSEO