Soft.Matter@PT 2015

Bruno F. B. Silva

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Expertise: Interfaces and wetting of simple fluids and liquid crystals

	Colloids	Liquid Crystals	Polymers and Gels	Interfaces, surfactants	Foams, emulsions	Granular materials	Biological	Other (specify)
Experimental	✓	✓	✓	✓	✓		✓	
Computacional								
Theoretical								

Description of expertise:

- Soft Matter; Physical Chemistry; Biomaterials; Biophysics; Nanotechnology; Liquid Crystals; Colloidal Science
- Small-angle x-ray scattering (SAXS); microfluidics with in-situ SAXS
- Drug and gene delivery; self-assembly; lipid-DNA nanoparticles; cytoskeletal protein self-assembly; microfluidic methods for nanoparticle structure control

Selected Publications (max 5):

- *Nematic director reorientation at solid and liquid interfaces under flow: SAXS studies in a microfluidic device, Langmuir 31, 4361 (2015)*
- *PEGylated Cationic Liposome – DNA Complexation in Brine is Pathway-Dependent, Biochim. Biophys. Acta – Biomembranes. 1838, 398 (2014)*
- *Rheochaos and flow instability phenomena in a nonionic lamellar phase, Soft Matter 9, 1133 (2013)*
- *Size, shape, and charge of salt-free catanionic microemulsion droplets: a small-angle neutron scattering and modeling study, J. Phys. Chem. B 113, 10230 (2009)*

- *Unusual vesicle-micelle transitions in a salt-free catanionic surfactant: temperature and concentration effects, Langmuir 24, 0746 (2008)*