

COST D43: Colloid and Interface Chemistry for Nanotechnology

Program Workgroup 6: Soft nanoscale devices and machines

Target of the WG activities

Nanoscale and microfluidics devices are very promising tools in the interfacial science and engineering laboratory. First prototype machines have been fabricated already in 1991, such as flow-through devices to carry out complicated chemical and biological analyses with minute amounts of the substance. Currently, these devices are gaining complexity and decrease in size at a breathtaking speed, mainly driven by the vigorous progress in soft-lithography and nanostructured surfaces. There are many open questions on the characterisation of single drops and drop-drop interactions, behaviour of microscopic films in between, and all those entities under flow conditions as it is the case in microfluidic devices. We will look at their impact on more complex systems and finally on practical technologies, including systems containing nanoparticles, such as Pickering systems. The main targets of the WG6 will be discussed in detail during the kick-off meeting and specified in form of a work programme, including activities such as organisation of workshops, conferences and exchange of young scientists via STSM.

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