

Confined colloidal particles: rods and spheres

*Dr Dirk Aarts
Department of Chemistry
University of Oxford*

The ongoing miniaturization in science and technology increases the importance of surfaces and boundaries and raises new questions about the behaviour of liquids in confinement. One particularly suitable way to study these emerging questions is by combining colloid science with soft-lithography techniques. We will focus on two problems. Firstly, we will study the nematic phase of rodlike fd virus particles confined to channels with wedge structured walls, focusing on the interplay between different elasticities and boundary conditions. Secondly, we will look at the behaviour of colloidal interfaces during demixing and under flow, where thermal fluctuations are seen to play an important role.