

EuroTech Seminar

Does the Gibbs Phase Rule apply to the Phase Behaviour of Colloid-Polymer Mixtures?



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15:00-16:00 CET

Zoom link:

<https://us02web.zoom.us/j/85946790723>

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In the last decades it was shown that the stability of colloidal dispersions can be controlled by adding non-adsorbing polymers. Often the depletion-interaction is used as the tool to induce a controlled, tuneable attraction between colloidal particles. In this lecture it is discussed whether a colloid-polymer mixture can be treated as an effective one-component system with controlled attraction and how this description is related to understanding the phase behaviour. In this talk it is demonstrated that mixtures of rod-like colloids plus added depletants exhibit a strikingly rich multi-phase behaviour involving even four- and five-phase equilibria. It is discussed whether the Gibbs phase rule still applies for colloid-polymer mixtures.