Physikalisches Kolloquium

Universität Konstanz

Dr. Antonia Statt
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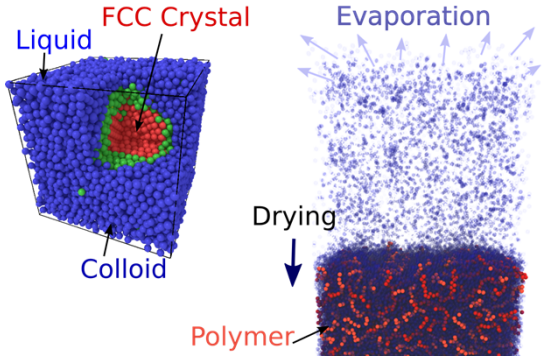
Di 4.12.18
15:15 Uhr
14:45 Uhr, Kaffee/Tee
R 513



Pathways to structure formation in colloid and polymer mixtures

Soft matter is important in technological applications, biology and everyday life. Its behaviour on mesoscopic scales is challenging to predict because dominant energy scales are of the magnitude of thermal fluctuations. I will present simulation results for two examples of structure formation in soft matter: colloidal crystal nucleation and inverted stratification in drying polymer mixtures. We developed a novel method to determine nucleation barriers without calculating the anisotropic interfacial tension or locating the interface precisely. By demonstrating the importance of hydrodynamic interactions during evaporation, we show that hydrodynamics need to be incorporated when predicting the structure of drying films.