

**Colloquium of the International Graduate  
Research Training Group I524 – SSNI –  
Self-Assembled Soft-Matter Nanostructures  
at Interfaces**



**Wednesday, March 21<sup>st</sup> 2012, 14.15 h  
Technische Universität Berlin  
EW-building, room EW 73 I  
Hardenbergstrasse 36, 10623 Berlin**

**Dr. Christoph Gögelein**

Max-Planck-Institut f. Dynamik und Selbstorganisation – Abteilung Dynamik komplexer Fluide

**“Phase Behavior of Proteins, Colloids  
and Colloid-Polymer Mixtures”**

Understanding the equilibrium and non-equilibrium phase behavior of colloidal suspensions is of great interest for food science, paint production, and biotechnological applications. In the latter case, the challenge is to predict solution conditions that enhance protein nucleation and crystal growth. Of particular importance here is to have accurate models to describe the protein-protein interactions. I will present a simple model that takes into account the influence of anisotropic attractions on the phase behavior of lysozyme solutions. In addition, I will introduce a DLVO-like model that describes the effect of additives such as dimethyl siloxane or glycerol on the phase diagram of lysozyme. Thereafter, I will discuss the non-equilibrium phase behavior of mixtures of charged colloids and non-adsorbing polymers. In particular, I will discuss the interplay between phase separation and colloidal aggregation.

We cordially invite everybody who is interested.

**Prof. Dr. Martin Schoen**  
IGRTG I524 Chairman  
<http://www.ssni.tu-berlin.de>

**Prof. Dr. Sabine Klapp**  
Contact Person  
[klapp@physik.tu-berlin.de](mailto:klapp@physik.tu-berlin.de)



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