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From Multilayer Films to Capsules

Tuesday April 16th, 2013 1:00pm
Otto Maass room 10

In recent years there has been tremendous progress to prepare films from polyelectrolytes, particles, proteins or multiply charged entities in a layer-by layer fashion. The films may keep their layered nature with a precision of 1 nm. Because they are build up in a modular way ,they can be made multifunctional, and because the fabrication relies on adsorption they can be also prepared on micro-and nanoparticles. Using a sacrificial template one thus obtains microcapsules with precisely defined walls.

In the presentation I would like to demonstrate, how to control and to characterize

- Capsule and film structure,
- Loading and release, in special controlled release via the environment and via external fields,
- Mechanical Properties and their temperature dependence,
- Fabrication of multifunctional and multicompartment capsules.

I will like to draw attention to underlying physical-chemical principles of fabrication loading and release, which enable to estimate the limits and the potential of this technology together with applications in biosensing, biotechnology and corrosion protection.

EVERYONE IS WELCOME!
