FACULTY OF SCIENCE
Charles University

School of Chemistry, Faculty of Science (FoS) would like to invite you to attend the lecture

# Quo Vadis Chemie

# Adaptive and Autonomous Bioinspired Self-Assembled Material Systems

which will be delivered by

## Prof. Andreas Walther

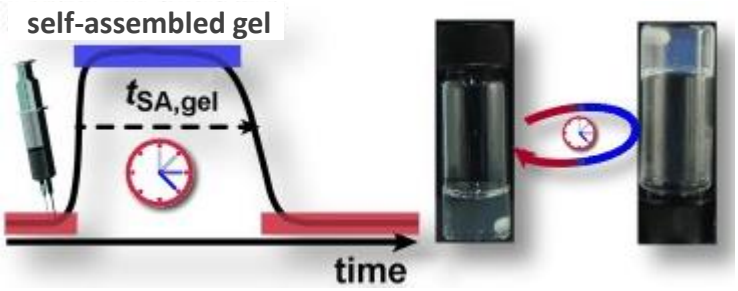
Albert-Ludwigs-University Freiburg, Germany.

A$^3$BMS Lab – Adaptive, Active and Autonomous Bioinspired Material Systems, Institute for Macromolecular Chemistry, Freiburg Materials Research Center (FMF), and Freiburg Institute for Interactive Materials and Bioinspired Technologies (FIT).

## on 18.04. at 14:00

the Lecture Hall **CH2**, the School of Chemistry Building, FoS CU, Hlavova 8, Praha 2

**Abstract**: In man-made self-assemblies we have mastered to a large extent near-equilibrium structure formation in space and have gained an increasing understanding of how to construct very complex, hierarchically structured soft matter by using co-assemblies, competing interactions and hierarchical length scales. This has allowed to create real-life materials with unprecedented functionalities, inaccessible without control over molecular interactions and sophisticated nano- and mesostructuration.
The first part will deal with a concept exploiting antagonistic interactions (force, time and length scales) to make complex compartmentalized colloids based on sequence-defined multiblock copolymers.




The second part will focus on a platform concept, which allows to program self-assembling systems outside equilibrium with a *lifetime* by kinetic control of promoter/deactivator pairs and simple internal feedback systems.