

Wednesday May 17th, at 11:30, room G

Prof. Dr. Peter Seeberger

- Editor-in-Chief of the **Beilstein Journal of Organic Chemistry**
- Director at the **Max-Planck Institute** for Colloids and Interfaces (Potsdam, Germany)
- Inventor of the **first automated glycan synthesizer**

will deliver the seminar:

Automated Glycan Assembly as Basis for Life Science and Material Science Applications

Rapid preparation of polysaccharides by automated glycan assembly (AGA) using a synthesizer provides access to diverse glycans as large as 151-mers. Accelerated microwave-assisted synthesis methods, used to prepare ever more complex glycans including cis-linked polysaccharides, are enabling fundamental investigations into the structure and function of polysaccharides.

Synthetic glycans in combination with single molecule imaging, molecular modelling and other physical methods allow us to address fundamental questions of carbohydrate structure, folding and material science. Recently, we described the design, synthesis, and characterization of the first stapled oligosaccharides with increased enzymatic stability and cell penetration.

Synthetic glycans are the basis for the development of vaccines against different bacteria that are currently in clinical evaluation. Monoclonal antibodies and nanobodies against glycans are the basis for a program aimed at developing novel diagnostics and therapeutics.

Your presence will be highly appreciated

Fernando Formaggio

Head of the Department of Chemical Sciences
Michele Maggini