

COINS Seminar #37

[Date] 10/3/2018 (Wed.) 16 : 00~17 : 15 (Registration Open at 15 : 30)

[Venue] Life Science & Environment research center. ([LiSE](#)) 1F Conference room

*It's located opposite side of iCONM

[Research Mixer] 17 : 15~18 : 15 ※Fee 500yen ★Please pay the exact amount.

[Registration] https://www.cis-trans.jp/coins_seminar37/index.html

Title : New pharmapolymers and nanoparticles for applications in nanomedicine

Abstract : Pharmapolymers feature a great potential for the delivery of various active pharmaceutical ingredients (API). An optimum carrier material should be non-toxic, bind and protect its cargo from degradation, be invisible to the immune system and direct the API to its desired place of action, where it should release the cargo without reducing its effectiveness. Here, a modular approach is described to decouple the various requirements from each other: One section is to bind the API, a second part is to reduce toxicity and shield from recognition by the immune system, and an attached "director" is to navigate the carrier to a specific target. However, necessary approvals make it difficult to translate current polymer research into products relevant to the pharmaceutical industry, and optimum combinations cannot be realized sticking to one polymer type. The lecture provides an overview about how traditional pharmapolymers such as poly(lactic acid) (PLA), poly(ethylene glycol) (PEG) or linear poly(ethylene imine) (l-PEI) can be modified, coupled to relevant building blocks, or be replaced by more tailor-made alternatives such as, e.g. poly(2-oxazoline)s.

Speaker : Ulrich S. Schubert

Affiliation : Friedrich Schiller University Jena

Position : Professor of Organic-/Macromolecular Chemistry

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<CV>

Ulrich S. Schubert was born in Tübingen (Germany) in 1969. He studied chemistry in Frankfurt and Bayreuth (both Germany) and at the Virginia Commonwealth University, Richmond (USA). His PhD studies were performed at the Universities of Bayreuth and South Florida. After a postdoctoral training with J.-M. Lehn at the University of Strasbourg (France), he moved to the TU Munich (Germany) and obtained his Habilitation in 1999. During 1999-2000 he was Professor at the University of Munich, and during 2000-2007 Full-Professor at the TU Eindhoven (the Netherlands). Since 2007, he is a Full-Professor at the Friedrich Schiller

University Jena, Germany.

<Awards>

Heisenberg-Fellowship (German Science Foundation), Guest professorship Université Catholique de Louvain (Belgium), VICI award of the Netherland Organization for Scientific Research (1.25 M€), International Biannual BPG Award of the Belgian Polymer Group. ACS Division of Polymer Chemistry, Polymer Division Fellow (USA), ISI "Highly cited researcher" in Materials Science (since 2014) & Chemistry (2016), Molecular Science Forum Professorship, Institute of Chemistry, Chinese Academy of Science, Beijing. Fellow Royal Society of Chemistry (FRSC, UK). Elected member of the German National Academy of Science and Engineering (acatech) and fellow of the National Academy of Inventors (NAI), USA. External scientific member of the Max-Planck-Gesellschaft (MPI for Colloid and Interfaces, Golm).

Administrative functions: 2013-2017 Dean of the Faculty of Chemistry and Earth Sciences, Friedrich Schiller University (FSU) Jena, Director of the Jena Center for Soft Matter and the Center for Energy and Environmental Chemistry Jena. Coordinator of the Priority Program (SPP 1568) "Design and Generic Principles of Self-healing Materials" of the German Science Foundation (2010-2017). Vice chairman of the Board of the Division Macromolecular Chemistry of the German Chemical Society (since 2012). Deputy spokesman research board polymer research of the German Science Foundation (DFG). Spokesman DFG Center of Excellence (SFB 1278 "Polytarget").

>980 refereed publications in reviewed international journals, 38 patent applications, two text books,

Web-of-Science ranking: Sum of citations >40900, h-index: 94.

Google Scholar: Sum of citations >55900, h-index 110.

<Key words>

Polymer Science, Nanotechnology, Nanomedicine, Polymer Batteries, Inkjet Printing, Self-healing Materials

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