Приглашенный лектор из Ягеллонского университета Краткий курс <u>Practical Asymmetric Synthesis</u>



2 – 5 октября 2017 года

Dr. Sebastian Baś studied chemistry at Jagiellonian University in Krakow (Poland) where he joined Jacek Mlynarski group in 2009.

Year later he received M.Sc. degree in chemistry and in 2011 he graduated engineering studies in chemistry technology at University of Science and Technology in Krakow.

He received Ph.D. under the guidance of Professor Jacek Mlynarski in 2014.

Since 2017 he has been assistant professor in Faculty of Chemistry at Jagiellonian University and visiting professor of Université d'Orléans as Erasmus lecturer in Institut de Chimie Organique et Analytique I.C.O.A.

His scientific interest includes enantioselective synthetic methodology that relies on metal-based and metal-free (organocatalytic) chiral catalysts with its practical application in synthesis of natural product and drug development.

Recent Articles:

A. Świerczek, E. Wyska, S. Baś, M. Woyciechowska, J. Mlynarski, "PK/PD studies on non-selective PDE inhibitors in rats using cAMP as marker of pharmacological response" *Naunyn Schmiedeberg's Arch. Pharmacol.* **2017**, https://doi.org/10.1007/s00210-017-1406-z

S. Baś, J. Mlynarski, "Synthesis of 2-Keto-D- and L-Gluconic Acid via Stereoselective Direct Aldol Reactions" *J. Org. Chem.* **2016** *81* 6112.

M. A. Molenda, S. Baś, J. Mlynarski, "A Concise Organocatalytic Synthesis of 3-deoxy-2-Ulosonic Acids via Cinchona Alkaloid-Promoted Aldol Reaction of Pyruvate" *Eur. J. Org. Chem.* **2016**, 4394. Book chapters:

S. Baś, M. Szewczyk, J. Młynarski "Zinc-based Chirac Lewis acids" in "Chirac Lewis Acids in Organic Synthesis" Jacek Mlynarski (Ed.) Wiley-VCH, Weinheim, 2017, p 137-181.

Content of the lecture programme:

- 1. Chirality basic terms and general concept. Introduction to asymmetric synthesis and organocatalysis historical backgoround and concept of subject.
- 2. The basic knowledge of the organic stereochemistry extension. Presentation of selective reaction examples and their classification.
- 3. Theoretical models presentation along with their practical applications for prediction of the obtained products stereochemistry.
- 4. Presentation of asymmetric reactions: oxidations, reductions, halogenation, aldol reaction and other selective C-C bond-formation examples.
- 5. Chiral metal complexes and organocatalysts in asymmetric synthesis. The lecture focus on various type of reaction and their mechanistic explanation in more detailed form.
- 6. Discussing historical background and recent development in the field of organocatalysis. Important part of lecture is an application of methodology to the synthesis of natural products and modern techniques like flow chemistry.

Для студентов бакалавриата и магистратуры

Начало лекций: 1515

Место проведения: ауд. 01