CURRICULUM VITAE

Personal data

Name: **Bartosz Zambroń**
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Education

2021: **Habilitation** (Ph.D. with habilitation) granted by the resolution of Scientific Council of the Institute of Organic Chemistry PAS

2011: **Defense of PhD Thesis** entitled „ The alkylation of nucleophilic arenes with 4-acyloxy-azetidinones" under supervision of prof. Marek Chmielewski

2006-2011: **PhD Studies** at the Institute of Organic Chemistry, Polish Academy of Sciences

2006: **Defense of Master Thesis** entitled „ The reactions of cyanohydrins with 1,ω-dihaloalkanes under basic conditions" under supervision of prof. Michał Fedoryński.

2001-2006: **M.Sc. studies** at Warsaw University of Technology, Faculty of Chemistry, Department of Technology of Biologically Active Compounds and Cosmetics, Warsaw, Poland

History of employment

02.2022 - present: **Institute of Organic Chemistry PAS**, Warsaw, Poland;
Assistant professor, prof. Jacek Młynarski's group

01.2014 - 02.2022: **Institute of Organic Chemistry PAS**, Warsaw, Poland;
Assistant professor (head of the subgroup IIc), prof. Bartłomiej Furman's group

11.2011 - 10.2013: **Swiss Federal Institute of Technology (EPFL)**, Lausanne, Switzerland;
Postdoctoral fellow, prof. Pierre Vogel's group

02.2011 - 10.2011: **Jagiellonian University**; Faculty of Chemistry; Cracow, Poland;
Postdoctoral fellow, prof. Jacek Młynarski's group

Research stays at home and abroad

- Swiss Federal Institute of Technology (EPFL), Laboratory of Organomettalic and Medicinal Chemistry, prof. Pierre Voge's group; Lausanne, Switzerland; 11.2011 - 10.2013 (24 months, Fellowship awarded by Swiss National Science Foundation under the SCIEX-NMSch program), postdoctoral internship
- Jagiellonian University in Kraków, Faculty of Chemistry, Department of Organic Chemistry, prof. dr. hab. Jacek Młynarski's group, Kraków, Poland; 02.2011 - 10.2011 (9 months), postdoctoral internship
- Universite de Reims, Champagne-Ardene, prof. Jan Szymoniak's group, Reims, France; 10.2009 - 11.2009 (2 months, French Government Fellowship awarded by Embassy of France in Poland) research stay

- Industrial Chemistry Research Institute, Department of Pro-ecological Modernization of Technology, prof. dr. hab. eng. Jacek Kijeński's group, Warsaw, Poland; 07.2005 (1 month), apprenticeships

Management and participation in domestic and international research projects

- "Stereoselective dearomatization of nonactivated arenes via an „alkene walk" pathway: Rapid access to high-added value poly- and spirocyclic systems from readily available aromatic compounds" project financed by the National Science Center, Grant SONATA BIS no. UMO-2022/46/E/ST4/00163; participation in the project: the manager and the main executive

- "An application of new catalytic reactions of chiral 4-vinyl- and 4-ethynyl-azetidin-2-ones in the stereo-divergent synthesis of nonracemic heterocyclic compounds" project financed by the National Science Center, Grant SONATA no. UMO-2015/19/D/ST5/00713; participation in the project: the manager and the main executive

- "Reactions of chiral β-lactam-derived ε-amino-allylic anions with aldehydes. An application in stereo-divergent synthesis of non-racemic heterocyclic compounds" project financed by the Foundation for Polish Science under the HOMING PLUS program, grant no. HOMING PLUS/2013-8/14; participation in the project: the manager and the main executive

- "Combinatorial synthesis of libraries of long-chain polyketide and polypropionate antibiotics and anti-tumor agents (COMBIOTICS)" project funded by the European Community under the 7th Framework Program, FP7-2007-2013, grant HEALTH-F2-2011-256986 (2011-2016) and Swiss National Science Foundation under the SCIEX-NMSch program (fellowship for a research stay in Switzerland); Head: Prof. Pierre Vogel (EPFL, Switzerland); participation in the project: the executive

- "Integrating chemical approaches to treat pancreatic cancer: making new leads for a cure (PANACREAS)" project financed by the European Community under the 7th Framework Program, FP7-2007-2013, grant HEALTH-F2-2011-256986, Head: Prof. Pierre Vogel (EPFL, Switzerland) as a partner in a consortium coordinated by the University Hospital of Bonn (Germany); participation in the project: the executive

- „Biomimetic asymmetric carbon-carbon bond formation – catalyst design and application" project funded by the Foundation for Polish Science in the TEAM program, grant no. TEAM/2010-5/7; head: Prof. Jacek Młynarski; participation in the project: executive.

- "Stereoselective synthesis of 4-aryl-β-lactams with potential pharmacological properties" project funded by the National Science Center, Promotional Grant No. 1241/B/H03/2009/37; head: Prof. Marek Chmielewski; participation in the project: the main executive.

Publications

- Zambroń, B. K.* Internal Chelation within Functionalized Organoindium Reagents: Prospects for Regio- and Stereocontrol in the Allylation, Propargylation and Allenylation of Carbonyl Compounds. *Synthesis* **2020**, *52*, 1147.

- Domin, S.; Kędzierski, J.; Zambroń, B. K.* Remote 1,5-Stereoselectivity Control by an *N*-Ligand Switch in the Pd(0)/Inl-Promoted Reactions of 4-Ethynyl-β-lactams with Aldehydes. *Org. Lett.* **2019**, *21*, 3904.

- Domin, S.; Plata, P.; Zambroń, B. K.* Diastereoselectivity switch in the Pd(0)/InI-mediated reactions of β-lactams with aldehydes. An entry into nonracemic semi-protected (3*E*)-2,6-enediols. *J. Org. Chem.* **2019**, *84*, 12268.
- Plata, P.; Klimczak, U.; Zambroń, B. K. * Acyclic Remote 1,5-and 1,4,5-Stereocontrol in the Catalytic Stereoselective Reactions of β-Lactams with Aldehydes: The Effect of the *N*-Methylimidazole Ligand. *J. Org. Chem.* **2018**, *83*, 14527.
- Bello, C.*; Bai, J.; Zambroń, B. K.; Elías-Rodríguez, P.; Gajate, C.; Robina, I.; Caffa, I.; Cea, M.; Montecucco, F.; Nencioni, A.; Nahimana, A.; Aubry, D.; Breton, C.; Duchosal, M. A.; Mollinedo, F.; Vogel, P. Induction of cell killing and autophagy by amphiphilic pyrrolidine derivatives on human pancreatic cancer cells. *Eur. J. Med. Chem.* **2018**, *150*, 457.
- Klimczak, U.; Staszewska-Krajewska, O.; Zambroń, B. K.* Reverse regioselectivity in Pd(0)/InI-mediated allylation of aldehydes with ε-amido-allylindiums generated from β-lactams. A new entry to non-racemic highly substituted γ-butyrolactones. *RSC Adv.* **2016**, *6*, 26451

  Highlighted in *Cheminform* **2016**, *46*
- Klimczak, U. K.; Zambroń, B. K.* Effective 1,5-stereocontrol in Pd(0)/InI promoted reactions of chiral *N*-Ts- 4-vinylazetidin-2-ones with aldehydes. An efficient entry into nonracemic semi-protected (3*Z*)-2,6-*anti*-enediols. *Chem. Commun.* **2015**, *51*, 6796.

  Highlighted in *Synfacts*: Yamamoto, H.; Tsuji, H. *Synfacts* **2015**, *11*, 0726
  and *Cheminform* **2015**, *46*
- Bai, J.; Zambroń, B. K.; Vogel, P.* Amides in One Pot from Carboxylic Acids and Amines via Sulfinylamides. *Org. Lett.* **2014**, *16*, 604.

  Highlighted in *ChemInform* **2014,** *45* (25)
- Zambroń, B. K.; Dubbaka, S. R.; Markovic, D.; Moreno-Clavijo, E.; Vogel, P.* Amide Formation in One Pot from Carboxylic Acids and Amines via Carboxyl and Sulfinyl Mixed Anhydrides *Org. Lett.* **2013**, *15*, 2550.

  Highlighted in *ChemInform* **2013,** *44* (37)
- Popik, O.; Zambroń, B.; Młynarski, J.* Biomimetic *syn*-Aldol Reaction of Dihydroxyacetone Promoted by Water-Compatible Catalysts *Eur. J. Org. Chem.* **2013**, 7484.
- Zambroń, B.; Masnyk, M.; Furman, B.; Kalicki, P.; Chmielewski, M.* Synthesis of 4-aryl-azetidinones via intramolecular alkylation of nucleophilic arenes using acyliminium cations. *Tetrahedron* **2010**, *66*, 8974.
- Zambroń, B.; Masnyk, M.; Furman, B.; Chmielewski, M.* An entry to 4-aryl-azetidinones via alkylation of nucleophilic arenes using four-membered acyliminium cations. *Tetrahedron* **2009**, *65*, 4440.

Monographs and chapters in books

- Klimczak, U.; Furman, B.; Zambroń, B.* 4-Vinyloxyazetidin-2-one, a Novel Substrate for β-Lactam Synthesis, In: "Beta-Lactams. Novel Synthetic Pathways and Applications" Bimal K. Banik Eds; Springer International Publishing AG, 2017.

Domestic and international awards and distinctions for scientific achievements

- Award of the 3rd Department of the Polish Academy of Sciences in the field of chemistry (Włodzimierz Kołos Award) in 2020 for a cycle of thematically related publications published in 2018-2020
- Scientific Award of the Director of the IOC PAS for outstanding scientific achievements in 2019
- Fellowship for a research stay in Switzerland awarded by the Swiss National Science Foundation under the SCIEX-NMS^{ch} Program in 2012 (Postdoctoral internship, EPFL, Lausanne)
- French Goverment Fellowship (Internship in Reims, France); 2009
- Mazovian PhD Scholarship, Scientific potential as a support for Mazovia economy – scholarship for PhD students program; 2009