

# CURRICULUM VITAE

## PERSONAL DATA

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Name: **Bartholomäus Pieber**  
Citizenship: Austria  
Date of Birth: February, 5<sup>th</sup> 1988  
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## EXPERIENCE

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Jan. 2018 – present **Group Leader** at the Max Planck Institute of Colloids and Interfaces, Potsdam, Germany  
April 2020 – present **Lecturer (Dozent)** at the University of Potsdam, Germany  
Jan. 2016 – Dez. 2017 **Postdoctoral researcher** with Prof. P. H. Seeberger at the Max Planck Institute of Colloids and Interfaces, Potsdam, Germany  
Aug. 2015 – Dez. 2015 **Postdoctoral researcher** with Prof. C. O. Kappe at the Institute of Chemistry, University of Graz, Austria

## HIGHER EDUCATION

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August, 20<sup>th</sup> 2015 **PhD in Natural Science** (with distinction)  
Nov. 2011 – Aug. 2015 **Doctoral thesis:** "Organic Chemistry in Single- and Multiphase Continuous Flow Regimes" under the supervision of Prof. C. Oliver Kappe at the Institute of Chemistry, University of Graz, Austria  
November, 24<sup>th</sup> 2011 **Master's degree in chemistry** (with distinction)  
Mar. 2011 – Nov. 2011 **Master thesis:** "Process Intensification in C-H Activation - Direct Arylation of Unactivated Benzene with Aryl Halides" under the supervision of Prof. C. Oliver Kappe at the Institute of Chemistry, University of Graz, Austria  
2009-2011 Master studies of Chemistry at the University of Graz and Graz University of Technology, Austria  
August, 31<sup>st</sup> 2009 **Bachelor's Degree in Chemistry**  
Mar. 2009-Sep. 2009 **Bachelor thesis:** "Synthesis and analysis of sterol glycosides" under the supervision of Prof. Martin Mittelbach at the Institute of Chemistry, University of Graz, Austria  
2006-2009 Bachelor studies of Chemistry at the University of Graz and Graz University of Technology, Austria

## **FURTHER EDUCATION**

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- 2019 Seminar "Leadership in a Junior Research Group", April 1, **2019**, Frankfurt, Germany
- 2014 Summer School "NAWI Graz DocDays & Summer School 2014" June 5-6, **2013**, Graz, Austria
- 2011 Summer School "Homogeneous Catalysis and Fine Chemicals", September 12-14, **2011**, Antwerp, Belgium

## **FELLOWSHIPS & GRANTS**

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- 2021 - 2024 Research Grant - German Science Foundation (*DFG*)
- 2019 - 2022 Project leader, Cluster of Excellence Unifying Systems in Catalysis (UniSysCat) - German Science Foundation (*DFG*) within the German Excellence Initiative
- 2018 - 2021 Project leader, International Max Planck Research School on Multiscale Bio-Systems - (*MPI*)
- 2018 - 2022 Liebig Fellowship - German chemical Industry Funds (*VCI*)

## **AWARDS**

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- 2020 Thieme Chemistry Journals Award (*Thieme*)
- 2018 Brandenburg Post-Doc Award (*Ministry of Science, Research & Cultural Affairs*)
- 2018 Science Award of the Austrian Chemical Society (*GÖCH & Chemistry Monthly*)
- 2017 Inventor Award (University of Graz)
- 2016 Doctoral Thesis Award of the Austrian Chemical Society (*GÖCH*)
- 2015 Merit Scholarship (*University of Graz*)
- 2013 IUPAC Poster Prize (*Bi-Annual Meeting of the Austrian Chemical Society*)
- 2013 Presentation Award (*DocDays, University of Graz*)
- 2012 Award of the Doctoral School (*University of Graz*)
- 2011 Merit Scholarship (*University of Graz*)

## **SCIENTIFIC AFFILIATIONS**

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- Since 2020 GeCatS (German Catalysis Society)
- Since 2018 GDCh (German Chemical Society)
- Since 2018 Verein zur Förderung der Forschung an Biomolekularen Systemen e.V.
- Since 2011 GÖCH (Austrian Chemical Society)

## **BOARD MEMBERSHIPS & SERVICE IN SCIENTIFIC SOCIETIES**

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- Since 2021 Member of the executive Board of the Cluster of Excellence Unifying Systems in Catalysis (UniSysCat)
- Since 2020 Vice-chairman of the local GDCh section in Potsdam

## TEACHING & SUPERVISION

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- Since 2018 Currently supervisor of 5 PhD students  
Alumni: 1 student Bachelor
- Since 2020 Teaching at the University of Potsdam:
- Flow chemistry (lecture, 2 SWS, WS 2020/2021)
  - Advanced Organic Chemistry (lecture, 3 SWS; SS 2020)
  - Advanced Organic Chemistry (seminar, 2 SWS; SS 2020)
- 2011 - 2017 Co-supervision of several postdocs, PhD and MSc students in research projects on single- and multiphase continuous flow processing techniques and photocatalysis
- 2009 - 2015 Tutoring and teaching at the University of Graz.  
General Chemistry Laboratory  
Organic Chemistry Laboratory for Bachelor students  
Organic Chemistry Laboratory for Master students  
Chemical Informatics (lecture)

## ORGANIZATION OF SCIENTIFIC EVENTS

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- 2019 Organization of the "Ringberg Conference 2019", September 2-6. **2019**, Kreuth, Germany
- 2018 Organization of the "7<sup>th</sup> Biomolecular Systems Day", December 13<sup>th</sup>, **2018**, Potsdam, Germany
- 2014 Organization of the "DocDays & Summer School 2014" June 5-6, **2013**, Graz, Austria

## REFeree FOR SCIENTIFIC JOURNALS

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*Nature Catalysis, Journal of the American Chemical Society, Angewandte Chemie International Edition, Science Advances, Nature Communications, ACS Sustainable Chemistry & Engineering, Chemistry a European Journal, Advanced Synthesis & Catalysis, Journal of Organic Chemistry, European Journal of Organic Chemistry, ChemCatChem, Organic Process and Research Development, Advanced Energy Materials, Beilstein Journal of Organic Chemistry, Catalysis Letters, Journal of Flow Chemistry, Monatshefte für Chemie – Chemistry Monthly*

## EDITORIAL WORK

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- 2020-2021 Guest editor *Frontiers in Chemical Engineering*

## INVITED LECTURES

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- 9 **B. Pieber**, The Overlooked Role of Oxidative Addition in Metallaphotocatalysis. *University of Padua & University of Trieste*, December 3, **2020**, Virtual Seminar
- 8 **B. Pieber**, The Overlooked Role of Oxidative Addition in Metallaphotocatalysis. *WWU Münster*, November 26, **2020**, Virtual Seminar
- 7 **B. Pieber**, The Overlooked Role of Oxidative Addition in Metallaphotocatalysis. *Free University of Berlin*, June 18, **2020**, Virtual Seminar

- 6 **B. Pieber**, Heterogeneous Photocatalysis using Graphitic Carbon Nitrides. *University of Graz*, October 2, **2019**, Graz, Austria
- 5 **B. Pieber**, Heterogeneous Photocatalysis using Graphitic Carbon Nitrides. *Austrian Chemistry Days*, September 24, **2019**, Linz, Austria
- 4 **B. Pieber**, Heterogeneous Photocatalysis using Graphitic Carbon Nitrides. *University of Potsdam*, June 26, **2019**, Potsdam, Germany
- 3 **B. Pieber**, Selective protein modifications using heterogeneous photoredox catalysis. *IMPRS Autumn Workshop*, October 11, **2018**, Potsdam, Germany
- 2 **B. Pieber**, Continuous Heterogeneous Photoredox Catalysis in Serial-Micro Batch Reactors. *Technical University of Berlin*, October 18, **2017**, Berlin, Germany
- 1 **B. Pieber**, Organic Reactions in Multiphase Continuous Flow Regimes. *Max Planck Institute for Colloids and Interfaces*, July 28, **2015**, Potsdam, Germany

#### **ORAL PRESENTATIONS AT CONFERENCES**

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- 8 **B. Pieber**, The Overlooked Role of Oxidative Addition in Metallaphotocatalysis, *Chemiedozententagung*, March 15-17, **2021**, Rostock, Germany (virtual event)
- 7 **B. Pieber**, Cross-Coupling Reactions using Heterogeneous Photocatalysis. *Ringberg Conference*, September 2-6, **2019**, Kreuth, Germany
- 6 **B. Pieber**, Heterogeneous Photoredox Catalysis using Graphitic Carbon Nitrides, *Chemiedozententagung*, March 18-20, **2019**, Koblenz, Germany
- 5 **B. Pieber**, Carbon-Heteroatom Cross-Couplings using Heterogeneous Photocatalysis, *7<sup>th</sup> Biomolecular Systems Day*, December 13, **2018**, Potsdam, Germany
- 4 **B. Pieber**, Unpacking the Bed – Heterogeneous Photocatalysis in Serial Micro-Batch Reactors. *Ringberg Conference*, September 25-29, **2017**, Kreuth, Germany
- 3 **B. Pieber**, T. Glasnov, C. O. Kappe, Continuous Olefin Reduction using Diimide for Semi-Synthetic Pharmaceuticals. *16<sup>th</sup> Brazilian Meeting on Organic Synthesis*, November 15-18, **2015**, Búzios, Brazil
- 2 **B. Pieber**, C. O. Kappe, *In Situ* Generation of Diimide from Hydrazine and Oxygen: Continuous-Flow Transfer Hydrogenation of Olefins. *248<sup>th</sup> ACS National Meeting & Exposition*, August 10-14, **2014**, San Francisco, CA, USA
- 1 **B. Pieber**, S. Teixeira Martinez, D. Cantillo, C. O. Kappe, Hydrogenation of Olefins Using *in situ* generated Diimide in Continuous Flow. *Doc Days*, June 5-6, **2013**, Graz, Austria

## SCIENTIFIC PUBLICATIONS

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Co-author of **34 scientific publications:**

**25 research articles** (10 x first author, 10 x corresponding author)  
**5 reviews** (2 x first author, 3 x corresponding author)  
**1 perspective** (1 x first author)  
**1 essay**  
**1 book chapter**

Inventor on **2 patents.**

## RESEARCH ARTICLES

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- 25 S. Reischauer, **B. Pieber,\*** Recyclable, bifunctional metallaphotocatalysts for C-S cross-couplings. *ChemPhotoChem*, **2021**, *accepted article*, DOI: 10.1002/cptc.202100062R1
- 24 L. Schmermund, S. Reischauer, S. Bierbaumer, C. K. Winkler, A. Diaz-Rodriguez, L. J. Edwards, S. Kara, T. Mielke, J. Cartwright, G. Grogan, **B. Pieber,\*** W. Kroutil,\* Chromoselective Photocatalysis Enables Stereocomplementary Biocatalytic Pathways. *Angewandte Chemie International Edition*, **2021**, *60*, 6965-6969 (preprint available via *ChemRxiv*. <https://doi.org/10.26434/chemrxiv.13521527.v1>)
- 23 C. Cavedon, E. Sletten, A. Madani, O. Niemeyer, P. H. Seeberger,\* **B. Pieber,\*** Visible-Light-Mediated Oxidative Debenzylation Enables the Use of Benzyl Ethers as Temporary Protecting Groups. *Organic Letters*, **2021**, *23*, 514-518 (preprint available via *ChemRxiv*. <https://doi.org/10.26434/chemrxiv.13135814.v1>)
- 22 S. Reischauer, V. Strauss, **B. Pieber,\*** Modular, self-assembling metallaphotocatalyst for cross couplings using the full visible-light spectrum. *ACS Catalysis*, **2020**, *10*, 13269-13274. (preprint available via *ChemRxiv*. <https://doi.org/10.26434/chemrxiv.13135814.v1>)
- 21 S. Gisbertz, S. Reischauer, **B. Pieber,\*** Overcoming Limitations in Dual Photoredox/Nickel-catalysed C-N Cross-Couplings due to Catalyst Deactivation. *Nature Catalysis* **2020**, *3*, 611-620. (preprint available via *ChemRxiv*. <https://doi.org/10.26434/chemrxiv.10298735.v1>)
- 20 J. A. Malik, A. Madani, **B. Pieber,\*** P. H. Seeberger,\* Evidence for Photocatalyst Involvement in Oxidative Additions of Nickel-Catalyzed Carboxylate O-Arylations. *Journal of the American Chemical Society* **2020**, *142*, 11042-11049 (preprint available via *ChemRxiv*. <https://doi.org/10.26434/chemrxiv.11973141.v1>)
- 19 C. Rosso, S. Gisbertz, J.D. Williams, H.P.L. Gemoets, W. Debrouwer, **B. Pieber,\*** C. O. Kappe,\* An oscillatory plug flow photoreactor facilitates semi-heterogeneous dual nickel/carbon nitride photocatalytic C-N couplings. *Reaction Chemistry & Engineering* **2020**, *5*, 597-604.
- 18 S. Mazzanti, B. Kurpil, **B. Pieber**, M. Antonietti, A. Savateev,\* Dichloromethylation of Enones by Carbon Nitride Photocatalysis. *Nature Communications*, **2020**, *11*, 1387.
- 17 M. Guberman, **B. Pieber**, P. H. Seeberger\* Safe and Scalable Continuous Flow Azidophenylselenylation of Galactal to Prepare Galactosamine Building Blocks. *Organic Process and Research Development* **2019**, *23*, 2764-2770.
- 16 C. Cavedon, A. Madani, P. H. Seeberger, **B. Pieber,\*** Semi-Heterogeneous Dual Nickel/Photocatalytic (Thio)Etherification using Carbon Nitrides. *Organic Letters* **2019**, *21*, 5331-5334. (preprint available via *ChemRxiv*. <https://doi.org/10.26434/chemrxiv.8231144.v1>)

- 15 **B. Pieber,\*** J. A. Malik, C. Cavedon, S. Gisbertz, A. Savateev, D. Cruz, T. Heil, G. Zhang, P. H. Seeberger, Semi-Heterogeneous Dual Nickel/Photo-catalysis using Carbon Nitrides: Esterification of Carboxylic Acids with Aryl Halides. *Angewandte Chemie International Edition* **2019**, *58*, 9575-9580
- 14 **B. Pieber,** M. Shalom, M. Antonietti, P. H. Seeberger,\* K. Gilmore,\* Continuous Heterogeneous Photoredox Catalysis in Serial Micro-Batch reactors. *Angewandte Chemie International Edition* **2018**, *57*, 9976-9979.
- 13 **B. Pieber,\*** C. O. Kappe,\* Generation and Synthetic Application of Trifluoromethyl Diazomethane Utilizing Continuous Flow Technologies. *Organic Letters* **2016**, *18*, 1076-1079.
- 12 **B. Pieber,** P. D. Cox, C. O. Kappe,\* Selective Olefin Reduction in Thebaine Using Hydrazine Hydrate and O<sub>2</sub> under Intensified Continuous Flow Conditions. *Organic Process Research & Development* **2016**, *20*, 376-385.
- 11 J. L. Monteiro, **B. Pieber,** A. G. Corrêa, C. O. Kappe,\* Continuous Synthesis of Hydantoins: Intensifying the Bucherer-Bergs Reaction. *Synlett* **2016**, *27*, 83-87.
- 10 C. E. M. Salvador, **B. Pieber,** P. M. Neu, A. Torvisco, C. K. Z. Andrade, C. O. Kappe,\* A Sequential Ugi Multicomponent/Cu-Catalyzed Azide-Alkyne Cycloaddition Approach for the Continuous Flow Generation of Cyclic Peptoids. *Journal of Organic Chemistry* **2015**, *80*, 4590-4602.
- 9 **B. Pieber,** T. Glasnov, C. O. Kappe,\* Continuous Flow Reduction of Artemisinic Acid Utilizing Multi-Injection Strategies – Closing the Gap Toward a Fully Continuous Synthesis of Antimalaria Drugs. *Chemistry a European Journal* **2015**, *21*, 4368-4376.
- 8 M. M. Moghaddam, **B. Pieber,** T. Glasnov, C. O. Kappe,\* Immobilized Iron Oxide Nanoparticles as Stable and Reusable Catalysts for Hydrazine-mediated Nitro Reductions in Continuous Flow. *ChemSusChem* **2014**, *7*, 3122-3131.
- 7 F. F. Hofbauer, F. H. Schopf, H. Schleifer, O. L. Knittelfelder, **B. Pieber,** G. N. Rechberger, H. Wolinski, M. L. Gaspar, C. O. Kappe, J. Stadlmann, K. Mechtler, A. Zenz, K. Lohner, O. Tehlivets, S. A. Henry, S. D. Kohlwein,\* Regulation of Gene Expression through a Transcriptional Repressor that Senses Acyl-Chain length in Membrane Phospholipids. *Developmental Cell* **2014**, *29*, 729-739.
- 6 **B. Pieber,** T. N. Glasnov, C. O. Kappe,\* Flash Carboxylation: Fast Lithiation – Carboxylation Sequence at Room Temperature in Continuous Flow. *RSC Advances* **2014**, *4*, 13430-13433.
- 5 **B. Pieber,** S. Teixeira Martinez, D. Cantillo C. O. Kappe,\* *In situ* Generation of Diimide from Hydrazine and Oxygen – Transfer Hydrogenation of Olefins in Continuous Flow. *Angewandte Chemie International Edition* **2013**, *52*, 10241-10244.
- 4 **B. Pieber,** C. O. Kappe,\* Direct aerobic oxidation of 2-benzylpyridines in a gas-liquid continuous-flow regime using propylene carbonate as solvent. *Green Chemistry* **2013**, *15*, 320-324.
- 3 G. S. Kumar, **B. Pieber,** K. R. Reddy,\* C. O. Kappe,\* Copper-Catalyzed Formation of C-O Bonds by Direct  $\alpha$ -C-H Bond Activation of Ethers Using Stoichiometric Amounts of Peroxide in Batch and Continuous-Flow Formats. *Chemistry a European Journal* **2012**, *18*, 6124-6128.
- 2 **B. Pieber,** D. Cantillo, C. O. Kappe,\* Direct Arylation of Benzene with Aryl Bromides using High-Temperature/High-Pressure Process Windows: Expanding the Scope of C-H Activation Chemistry. *Chemistry a European Journal* **2012**, *18*, 5047-5055.

- 1 **B. Pieber**, S. Schober, C. Göbl, M. Mittelbach,\* Rapid and sensitive determination of steryl glycosides in biodiesel by gas chromatography-mass spectroscopy. *Journal of Chromatography A* **2010**, 1217, 6555–6561

## REVIEWS

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- 5 S. Reischauer, **B. Pieber**,\* Emerging Concepts in Photocatalytic Organic Synthesis. *iScience*, **2021**, 24, 102209.
- 4 S. Gisbertz, **B. Pieber**,\* Heterogeneous photocatalysis in organic synthesis. *ChemPhotoChem* **2020**, 4, 456-475.
- 3 C. Cavedon, Peter. H. Seeberger, **B. Pieber**,\* Photochemical Strategies for Carbon–Heteroatom Bond Formation. *European Journal of Organic Chemistry* **2020**, 1379-1392.
- 2 M. B. Plutschak<sup>a</sup>, **B. Pieber**<sup>a</sup>, K. Gilmore,\* P. H. Seeberger,\* The Hitchhikers Guide to Flow Chemistry. *Chemical Reviews* **2017**, 117, 11796-11893. [<sup>a</sup>contributed equally]
- 1 **B. Pieber**, C. O. Kappe,\* Taming “Forbidden” Olefin Reductions Using Hydrazine and Oxygen by Continuous Flow Technology. *Chimica Oggi/Chemistry Today* **2016**, 34, 38-42.

## ESSAYS, COMMENTARIES, PERSPECTIVES, ETC.

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- 2 **B. Pieber**, K. Gilmore,\* P. H. Seeberger,\* Integrated Flow Processing – Challenges in Continuous Multistep Synthesis. *Journal of Flow Chemistry* **2017**, 7, 129-136
- 1 C. O. Kappe,\* **B. Pieber**, D. Dallinger, Microwave Effects in Organic Synthesis – Myth or Reality. *Angewandte Chemie International Edition* **2013**, 52, 1088-1094.

## BOOK CHAPTERS

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- 1 **B. Pieber**, C. O. Kappe, Aerobic Oxidations in Continuous Flow. *Topics in Organometallic Chemistry* **2016**, 57, 97-136

## PATENTS

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- 2 K. Gilmore, P. H. Seeberger, S. Chatterjee, **B. Pieber**, Modular Continuous Flow Device. WO 2017/148874.
- 1 P. D. Cox, C. O. Kappe, **B. Pieber**, Selective reduction of morphinan alkaloids. US 2017/0137432 A1.

## MISCELLANEOUS

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- 3 **Cover Profile**: S. Gisbertz, **B. Pieber**, Heterogeneous Photocatalysis in Organic Synthesis. *ChemPhotoChem*, **2020**, 4, 452.
- 2 **Journal Cover**: S. Gisbertz, **B. Pieber**, Heterogeneous Photocatalysis in Organic Synthesis. *ChemPhotoChem*, **2020**, 4, 451.
- 1 K. Gilmore,\* **B. Pieber**, P. H. Seeberger, Controlled Conditions, Controlled Chemistry. *Max Planck Society Yearbook* **2017**, www.mpg.de [in German]