

# Curriculum Vitae of Prof. Waldvogel



## Personal Data

Title	Prof. Dr.
First name	Siegfried R.
Name	Waldvogel
Birth/marital status	09.06.1969/married one child
Current position	Director / Professor (W3)
Current institution(s)/site(s), country	Max-Planck-Institute for Chemical Energy Conversion, Department of Electrosynthesis, Stiftstr. 34-36, 45470 Mülheim/Ruhr, Germany
Academic affiliation	Hon.-Prof. of Karlsruhe Institute of Technology (KIT)
Identifiers/ORCID	0000-0002-7949-9638

## Qualifications and Career

Stages	Periods and Details
Degree programme	<b>Chemistry (Diploma), 1989-1994</b> , Konstanz, Germany (with distinction)
Doctorate	<b>1991</b> , Prof. Dr. Manfred T. Reetz, Mülheim, Germany (summa cum laude)
Stages of academic/professional career	<b>Since 2023</b> , Director at the MPI CEC in Mülheim/Ruhr, Germany <b>2010-2023</b> Professor for Physical Organic Chemistry (W3) Department of Chemistry, Johannes Gutenberg University Mainz, Germany <b>2004-2010</b> Professor for Organic Chemistry (W2/C3), Rheinische Friedrich-Wilhelms-University Bonn, Germany <b>1998-2004</b> Habilitation in Organic Chemistry, Westfälische Wilhelms University Münster, 2004, mentor Prof. Dr. D. Hoppe, Germany <b>1997-1998</b> Postdoctoral researcher, Chemistry with J. Rebek, Jr., The Scripps Research Institute, La Jolla, CA, USA

## Activities in the Research System

since 2023	Speaker of ETOS–Electrifying Technical Organic Synthesis (Clusters4Future)
2023	Head of Zeiss-research network HALOCYCLES
2021-2023	Head of Zeiss-research network ECHELON
2019-2023	Initiator & Director of Top-level Research Area SusInnoScience
2019-2023	Director of the Gutenberg Research Committee (GFK)

since 2018	Member of the managing board of the GDCh division Sustainable Chemistry (Speaker since 2023, Vice-speaker 2018-2023)
since 2016	Member of Advisory Board of ChemElectroChem and Reaction Chemistry & Engineering
2016-2023	Board Member of Gutenberg Research Committee (GFK)
since 2013	Associated PI at CENSURF – University of California Santa Barbara
since 2012	Member advisory board of DECHEMA, since 2018 vice director
since 2011	Board member ProcessNet “Electrochemical Processes”
2012-2020	Managing Director of the Institute of Organic Chemistry at the JGU and Preparing it for the merger into the Department of Chemistry

### Supervision of Researchers in Early Career Phases

1998-present: 14 Postdocs, 71 PhD theses (completed), 21 PhD theses (ongoing), 58 Master theses, 81 Bachelor theses

### Entrepreneurship

Co-founder of ESy-Labs GmbH, Regensburg ([www.esy-labs.de](http://www.esy-labs.de)), which was launched 2018 and provides: Custom electrosynthesis, contract R&D and Upcycling of Pollutants.

Prior he was helping MIOPAS GmbH ([www.miopas.de](http://www.miopas.de)) establishing laser-based sensing.

Currently, launching of further start-ups is prepared being devoted to solve environmental and medical issues by electrochemistry.

### Scientific Publications (selection)

#### Category A – Original Work

- (1) P. Moreno-García, M. J. Gálvez-Vázquez, T. Prenzel, J. Winter, L. Gálvez-Vázquez, P. Broekmann and S. R. Waldvogel  
Self-standing Metal Foam Catalysts for Cathodic Electro-organic Synthesis  
*Adv. Mater.* **2023**, 2307461. DOI: 10.1002/adma.202307461
- (2) M. Zirbes, T. Graßl, R. Neuber and S. R. Waldvogel,  
Peroxodicarbonate as a Green Oxidizer for the Selective Degradation of Kraft Lignin into Vanillin  
*Angew. Chem. Int. Ed.* **2023**, e202219217. DOI: 10.1002/anie.202219217
- (3) M. Klein, D. Troglauer and S. R. Waldvogel  
Dehydrogenative Imination of Low-Valent Sulfur Compounds – Fast and Scalable Synthesis of Sulfilimines, Sulfinamidines, and Sulfinimidate esters,  
*JACS Au* **2023**, 3, 575–583. DOI: 10.1021/jacsau.2c00663
- (4) J. Nikl, K. Hofman, S. Mossazghi, I. C. Möller, D. Mondeshki, F. Weinelt, F.-E. Baumann and S. R. Waldvogel  
Electrochemical oxo-functionalization of cyclic alkanes and alkenes using nitrate and oxygen.  
*Nat. Commun.* **2023**, 14, 4565. DOI: 10.1038/s41467-023-40259-0
- (5) A.-K. Seitz, P. J. Kohlpaintner, T. van Lingen, M. Dyga, F. Sprang, M. Zirbes, S. R. Waldvogel and L. J. Gooßen  
Concentrated Aqueous Peroxodicarbonate: Efficient Electrosynthesis and Use as Oxidizer in Epoxidations, S-, and N-Oxidations,  
*Angew. Chem. Int. Ed.* **2022**, 61, e202117563. DOI: 10.1002/anie.202117563

- (6) X. Dong, J. L. Röckl, S. R. Waldvogel and B. Morandi  
Merging shuttle reactions and paired electrolysis for reversible vicinal dihalogenations  
*Science* **2021**, 371, 507–514. DOI: 10.1126/science.abf2974
- (7) S. P. Blum, T. Karakaya, D. Schollmeyer, A. Klapars, S. R. Waldvogel  
Metal-free Electrochemical Synthesis of Sulfonamides Directly from (Hetero)arenes, SO<sub>2</sub> and Amines.  
*Angew. Chem. Int. Ed.* **2021**, 60, 5056–5062. DOI: 10.1002/anie.202016164
- (8) S. Arndt, D. Weis, K. Donsbach and S. R. Waldvogel  
The “Green” Electrochemical Synthesis of Periodate.  
*Angew. Chem. Int. Ed.* **2020**, 59, 8036–8041. DOI: 10.1002/anie.202002717
- (9) D. Pollok and S. R. Waldvogel  
Electro-organic Synthesis – A 21st Century Technique,  
*Chem. Sci.* **2020**, 11, 12375–12592. DOI: 10.1039/D0SC01848A
- (10) A. Wiebe, T. Gieshoff, S. Möhle, E. Rodrigo, M. Zirbes and S. R. Waldvogel  
Electrifying Organic Synthesis  
*Angew. Chem. Int. Ed.* 2018, 57, 5594–5619. DOI: 10.1002/anie.201711060

### Publications for Outreach

- (1) I. Waldvogel and S. R. Waldvogel  
Elektrochemische Gewinnung - Vanillin aus Lignin als innovative, „grüne“ und nachhaltige Methode  
*Der Lebensmittelbrief* **2023**, 34, May-June, 42-43.
- (2) J. L. Röckl and S. R. Waldvogel  
Trendberichte Organische Chemie - Rubrik "Elektrosynthese",  
*Nachr. Chem.* **2022**, 70, 58–59. DOI: 10.1002/nadc.20224122453
- (3) R. J.-R. Bednarz, C. Brauer and S. R. Waldvogel  
Out of its infancy – Modular flow cell offers enormous scaling potential for electrosynthesis  
*GIT Laboratory Journal* **2021**. <https://analyticalscience.wiley.com/content/article-do/out-its-infancy>
- (4) M. Breiner, S. R. Waldvogel,  
Biogene Produkte: Guter Geschmack aus Holz  
*Nachr. Chem.* **2020**, 68, 42–44. DOI: 10.1002/nadc.20204100604

### Academic Distinctions

2023	Unipreneurs Award (Stifterverband/BMBF/BMWK)
2022	Sigma-Aldrich Lecture (Merck)
2020	Pitch of the year (CHEManager) with ESy-Labs GmbH
2020	Manuel M. Baizer Award in Organic Electrochemistry (Electrochemical Society)
2019-2020	Novartis Chemistry Lecture Award (Cambridge, USA/ Basel, Switzerland)
2018	Jaroslav Heyrovsky Award of the International Society of Electrochemistry
2013	Future Award Palatinate (for innovative and disruptive electrochemical processes)

2008 Nikolaus-August-Otto Award for Innovation  
2008 Innovation Award "Patente Erfinder" of the State NRW  
2003 Fellowship by the Hellmut Bredereck-Foundation (GDCh)  
2003 Award for Up-coming Young Scientists of Westfälische Wilhelms-Universität  
Münster  
2001 Donation by the Dr.-Otto-Röhm-Foundation  
2001 Bennigsen-Foerder-Award of the state of North Rhine Westphalia  
2000-2002 DFG Fellowship for Habilitation  
1998-2000 Liebig Fellowship by VCI  
1997 Otto Hahn Medal of the Max Planck Society  
1995-1996 Kekulé Fellowship by VCI  
1990-1994 Studienstiftung des deutschen Volkes  
1989 Federal finalist youth research contest - Jugend forscht (4<sup>th</sup> in Chemistry)