

Publication List 2019
Dr. Roger E. Marti

PUBLIKATIONS

- A. Hafner, R. O. Duthaler, R. Marti, G. Rihs, P. Rothe-Streit, F. Schwarzenbach, *J. Am. Chem. Soc.* **1992**, *114*, 2321-2336.
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On the Ti-TADDOLate-Catalyzed Diels-Alder Addition of 3-Butenoyl-1,3-oxazolidin-2-one to Cyclopentadiene. General Features of Ti-BINOLate- and Ti-TADDOLate-Mediated Reactions.
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Preparation and Reactions of Silyl Nitronates Derived from 2,2,2-Trifluoronitroethane. Diastereoselective Synthesis of Trifluoromethyl-Substituted Aminoethanols and-propanols.
- R. E. Marti, D. Seebach, "O,O-Dilithio-1-nitropropene" in *Encyclopedia of Reagents for Organic Synthesis* (Ed. L. Paquette), J. Wiley & Sons, Chichester, **1995**, Vol. 3, 1946-1948.
- R. E. Marti, D. Seebach, "Lithium α -Lithiomethanenitronate" in *Encyclopedia of Reagents for Organic Synthesis* (Ed. L. Paquette), J. Wiley & Sons, Chichester, **1995**, Vol. 5, 3138-3140.
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- D. Seebach, R. E. Marti, T. Hintermann, *Helv. Chim. Acta* **1996**, *79*, 1710-1740.
Polymer- and Dendrimer-Bound Ti-TADDOLates in Catalytic (and Stoichiometric) Enantioselective Reactions – Are Pentacoordinate Cationic Ti-Complexes the Catalytically Active Species ?–
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Enhanced Resolution in MAS NMR for Combinatorial Chemistry.
- R. E. Marti, K. H. Bleicher, K. W. Bair, *Tetrahedron Lett.* **1997**, *35*, 6145-6148.
Solid Phase Synthesis of β -Peptides *via* Arndt-Eistert Homologation of Fmoc-Protected Amino Acid Diazoketones.
- T. Storz, R. Marti, R. Meier, P. Nury, M. Roeder, K. Zhang, *Org. Process Res. Dev.* **2004**, *8*, 663-665.
First Safe and Practical Synthesis of 2-Amino-8-hydroxyquinoline.
- J.-N. Aebischer, G. Corminboeuf, R. Marti, E. Vanoli, *Chimia* **2004**, *58*, 753-755.
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- R. Marti, S. Höck, *Transfer* August **2007** (HSW Wädenswil), page 6.
Mikroreaktoren – Rundkolben der Zukunft!?
- R. Marti, V. Luginbühl, *Transfer* **3-2008** (www.lsfm.zhaw.ch), page 6.
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- Ch. Sparr, U. Michel, R. Marti, C. Müller, R. Schibli, R. Moser, V. Groehn, *Synthesis* **2009**, 787-792.
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- H. Sprecher, S. Pletscher, M. Möri, R. Marti, Ch. Gaul, K. Patora-Komisarska, E. Otchertianova, A. K. Beck, D. Seebach, *Helv. Chim. Acta* **2010**, 93, 90-110.
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ADIBO-Based “Click” Chemistry for Diagnostic Peptide Micro-Array Fabrication: Physicochemical and Assay Characteristics.
- Wolfgang Riedl, Fabian Fischer, Roger Marti, Dominik Brühwiler, *CHIMIA* **2013**, 67, 611-613.
Energy-related Chemical Research at the Universities of Applied sciences.
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- Daniel Meyer, Lara Rentsch, Roger Marti, *RSC Adv.*, **2014**, 4, 32327-32334.
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- Raymond Behrendt, Simon Huber, Roger Marti, Peter White, *J. Pept. Sci.* **2015**, 21, 680–687.
New t-butyl based aspartate protecting groups preventing aspartimide formation in Fmoc SPPS
- Daniel Meyer, Roger Marti, Dieter Seebach, *Eur. J. Org. Chem.* **2015**, 4883–4891
Scalable Enantioselective Synthesis of Fmoc- β 2-Serine and Fmoc- β 2-Threonine by an Organocatalytic Mannich Reaction
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- Michal Dabros, Olivier Vorlet, Roger Marti, Wolfgang Riedl, Gerhard Grundler, Aldo Vaccari, Manfred Zinn, Achim Ecker, Christian Hinderling, *CHIMIA* **2015**, 69, 482-484.
PAT at the Universities of Applied Sciences.

- Kerstin Bodmann, Roger Marti, *Chimia* **2015**, 69, 698-707.
Conference Report of the 12. Freiburger Symposium 2015: Smart Solutions in the Chemical Process & Product Development – Case Studies from the Chemical Industry
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Continuous Process for Phase-Transfer-Catalyzed Bisalkylation of Cyclopentadiene for the Synthesis of Spiro[2.4]hepta-4,6-diene
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- Roger Marti, Michal Dabros, Michael Pieles, Urban Frey, Achim Ecker, *CHIMIA* **2016**, 70, 555-556.
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- Christophe Allemann, Roger Marti, Olivier Vorlet, Olivier Martin, Peter Riedlberger, Tobias Leonhardt, Angelo Gössi, Wolfgang Riedl, Jean-Manuel Segura, Manfred Zinn, Simon Crelier, *Chimia* **2017**, 71, 525-527.
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- Pilar Pérez López, Stephanie Uhl, Edith Laux, Pauline Sanglard, Roger Marti, Herbert Keppner, Ennio Vanoli, *Materials Today: Proceedings* **2018**, 5, 10298–10305.
Synthesis and Structure modification of Ionic Liquids to optimize their Thermoelectric Properties
- Edith Laux, Stefanie Uhl, Nicolas Gauthier, Laure Jeandupeux, Herbert Keppner, Pilar Pérez López, Sanglard Pauline, Ennio Vanoli, Roger Marti, *Materials Today: Proceedings* **2018**, 5, 10195–10202.
Development of Thermoelectric generator based on Ionic Liquids for high temperature applications
- Edith Laux, Stefanie Uhl, Laure Jeandupeux, Pilar Pérez López, Pauline Sanglard, Ennio Vanoli, Roger Marti, Herbert Keppner, *J. Elect. Mat.* **2018**, 6, 3193-3197.
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One-Pot Synthesis of Trifluoromethylated Quinazolin-4(3H)-ones with Trifluoroacetic Acid as CF₃ Source
- Sophie Front, Sofia Almeida, Vincent Zoete, Julie Charollais-Thoenig, Estelle Gallienne, Cécile Marmy, Vincent Pilloud, Roger Marti, Tim Wood, Olivier R. Martin, Stéphane Demotz, *Bioorg. Med. Chem.* **2018**, 26, 5462–5469.
5a-C-Substituted 4-Epi-Isogomine Derivatives as Pharmacological Chaperones for the Treatment of Lysosomal Diseases Linked to β -Galactosidase Mutations: Improved Synthesis and Biological Investigations
- Lara Amini-Rentsch, Ennio Vanoli, Sylvia Richard-Bildstein, Roger Marti, Gianvito Vilé, *Ind. Eng. Chem. Res.* **2019**, 58, 10164–10171.
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- Pierre Brodard, Michal Dabros, Roger Marti, Ennio Vanoli, Manfred Zinn, Urban Frey, Christian Adlhart, Lucy Kind, Franziska Koch, Floriana Burgio, Johan Stenqvist, Sina Saxer, Uwe Pieles, Patrick Shahgaldian, and Sebastian Wendeborn, *Chimia* **2019**, 73, 645–655.
Materials Science at Swiss Universities of Applied Sciences

PATENTS

- Raja Khalifah, Roger E. Marti (Biostratum & CarboGen), WO 2008013660 (**2008**)
Inhibitors of Advanced Glycation End Products.
- P. Buholzer, A. Räber, P. Price, D. Zwald, B. Pinschewer, R. Marti, J. Weidmann, Ch. Stamm, (Prionics & ZHAW) WO 2009003497 (**2009**)
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- Roger Marti, Ennio Vanoli, Sandrine Aeby, Manuel Happe, Fabian Fischer (HEIA-FR), WO 2013008172 (**2013**)
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- Benoit Plomb, Jérémie Geinoz, Roger Marti, Ennio Vanoli, Jean-Pascal Bourgeois (Applicant: Belenos Clean Power Holding AG) US 2015/0218002
Method of Production of Graphite Oxide and Uses Thereof
- Stephane Demotz, Olivier Martin, Estelle Boivineau, Sophie Front, Julie Charollais-Thoenig, Roger Marti, Jean-Pascal Bourgeois, Sofia Almeida, WO2016174131 (A1)
4-Epi-Isogomine Enantiomer Derivatives for the Treatment of Lysosomal Storage Diseases.

PRESENTATIONS

- R. Marti, S. Höck, Poster at the Fall Meeting of the *Swiss Chemical Society*, ETH Zürich **2006**.
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- S. Höck, R. Marti, Poster at the *Workshop on Micro-Structured Devices in PRD for Fine Chemical Production*, Buchs **2007**.
Peptide-Coupling in Microreactors: Synthesizing Mixed Anhydrides.
- M. Giezendanner, H. Sprecher, M. N. Pérez-Payán, D. Weibel, M. Weber, L. Federer, M. Hofer, R. Marti, Poster at the *ERA-Chemistry Conference "Chemistry without Metals"*, Evora **2007**.
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- Roger Marti, Justine Yerly, Jean-Nicolas Aebischer, Olivier Naef, Romolo Ciccirelli, Yann Sirisin, Poster at the Fall Meeting of the *Swiss Chemical Society*, ETH Zürich **2010**.
Synthetic and Kinetic Understanding of Sulfide Oxidation for Fast & *Green* Transfer from Batch to Micro Reactor.
- Justine Yerly, Roger Marti, Jean-Nicolas Aebischer, Olivier Naef, Oral Presentation at the *Swiss Society for Thermal Analysis and Calorimetry Meeting* **2010**.
Mechanistic Studies of Oxidation Reaction based on Calorimetric Data.
- Roger Marti, Ennio Vanoli, Sandrine Aeby, Poster at the Fall Meeting of the *Swiss Chemical Society*, EPF Lausanne **2011**.
Synthesis of Novel Zwitterionic Liquids.
- Roger Marti, Romain Despland, Poster at the Fall Meeting of the *Swiss Chemical Society*, EPF Lausanne **2011**.
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Andrea Skvorcova, Roger Marti, Dieter Seebach, Poster at the Fall Meeting of the *Swiss Chemical Society*, ETH Zürich **2012**.

Scale-up Studies and Process optimization of the Synthesis of β^2 -Amino acids by Organocatalysis.

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Biolubricants by Lipase catalysis in microwave barrel reactor.

Vincent Cosandey, Fabien Debrot, Jérémy Kaeser, Roger Marti, Philippe Passeraub, Jannick Pétremand, Denis Prim Marc E. Pfeifer, Poster at the Fall Meeting of the *Swiss Chemical Society*, ETH Zürich **2012**.

Peptide Microarrays by Click Chemistry for Application in Breast Cancer Diagnostic.

Pauline Sanglard, Frank Rogano, Ennio Vanoli, Roger Marti, Poster at the 3rd Conference on CO₂, Essen, **2014**.

Novel process of catalytic hydrogenation of carbon dioxide to methanol

Raymond Behrendt, Simon Huber, Roger Marti, Peter White, Poster at the Peptide Symposium **2014** (Sofia)

Minimization of Aspartimide Formation through the serendipitous Combination of a Novel Aspartate Protection and the Acidic Modifier Oxyma Pure

Roger Marti, Stephane Demotz, Swiss BiotechTM Innovation Day **2015** (Zug)

Dorphan – HEIA-FR: Chemistry and biology challenges in the development of a drug candidate for the treatment of the rare and orphan disease GM1-gangliosidosis

Daniel Meyer, Yvan Stampfli, Pierre Brodard, Roger Marti, Poster at the Fall Meeting of the Swiss Chemical Society **2015**

Hyaluronic Acid-Based Hydrogels for Drug Delivery

Stefan Hengsberger, Benoît Droz, Frédéric Dux, Ennio Vanoli, Roger Marti, Stéphane Jotterand, Marc Jobin, Poster at the Nanoconvention **2015** (Lausanne)

Nanoadditives in Plastics: Examples for Tribological and Electrical Applications

David Ramonet, Radek Skupiński, Roger Marti, Kim Do, Poster at the NCCR-SYNAPSY 6th Annual Meeting 2016 in Villars.

Finding Novel Modulators of Redox Homeostasis in Schizophrenia

Pilar Pérez, Quentin Recordon, Pauline Sanglard, Roger Marti, Ennio Vanoli, Poster at the 14th European Conference on Thermoelectrics (ECT2016) in Lisbon.

Synthesis and modification of the structure of the ionic liquids to optimize their thermoelectric properties

Marti Roger and McCormick Mark, Presentation at the conference "Smart Cities" organized by SwissNex India, September 2016, Bangalore, India.

Smart Cities CO₂MeOH – Methanol from CO₂

Roger Marti, Presentation at the Centre for Earth Sciences of the Indian Institute of Science Bangalore (IIS) in 2016, Bangalore, India.

Chemistry at UAS Western Switzerland From Synthesis to Flow

Pilar Pérez, Stephanie Uhl, Edith Laux, Pauline Sanglard, Roger Marti, Herbert Keppner, Ennio Vanoli, Poster at the STK Meeting 2017 in Geneva.

Synthesis and structure modification of Ionic Liquids to optimize their thermoelectric properties

Roger Marti, Presentation within the SCS Seminar 2017 in Process Chemistry organized by the SCS.
The Chemistry Pilot Plant - Introduction and Visit.

S. Farine-Brunner, E. Condemmi, M. Geiser, E. Hochstrasser, A. Homsy, L. Jeandupeux, R. Marti, M. E. Pfeifer, Gabriel Rittiner, P. Roduit, C. Schalcher, J.-M. Segura, A. Sierro, A. Simalatsar, F. Telmont, F. Truffer, Poster at the Medi-Labo-Tech 2017 in Lausanne.
DrugSens: A system for Continuous Monitoring of the Anticancer Agent Methotrexate in Patient's Blood

Céline Marmy, Vincent Pilloud, Luca Roselli, Julie Charollais, Stéphane Demotz, and Roger Marti, Poster at the Fall Meeting SCS 2017 in Bern.
Process Optimization for the Scale-Up of a Ribose-Derivative.

Pilar Pérez, Stephanie Uhl, Edith Laux, Pauline Sanglard, Roger Marti, Herbert Keppner and Ennio Vanoli, Poster at the Fall Meeting SCS 2017 in Bern.
Synthesis and structure modification of Ionic Liquids to optimize their thermoelectric properties.

Sophie Farine-Brunner, Enrico Condemmi, Martial Geiser, Eric Hochstrasser, Alexandra Homsy, Laure Jeandupeux, Roger Marti, Marc Pfeifer, Gabriel Rittiner, Pierre Roduit, Christophe Schalcher, Jean-Manuel Segura, Alexandre Sierro, Alena Simalatsar, Florian Telmont, Frederic Truffer, Poster at the Medical Cyber-Physical Systems Workshop 2018
DrugSens: A system for Continuous Monitoring of the Anticancer Agent Methotrexate in Patient's Blood

Roger Marti, Article in the Freiburger Nachrichten 22. Februar 2018
Zwei neuartige Moleküle sollen helfen

Roger Marti at the "Journée HES-SO Diagnostic Biochips 2018" by "Health Valley" and Inartis in Etoy.
"Which drug in your blood?" and "Creating energy with thermoelectric generators"

Roger Marti at the Network Meeting on "Biocatalysis – Innovation in Application and Education" in Wädenswil 2018
SiBeC2 – Smooth Integration of Biocatalysis Elements into Chemistry Curricula

Roger Marti at "Plastikmüll – auch ein Schweizer Problem - Einstein – SRF" (June 2018)
Die riesigen Plastikteppiche in den Ozeanen, wir kennen sie unterdessen alle. Doch auch in der Schweiz landen tausende Tonnen Plastikabfall in der Natur – oft unwissentlich.
<https://www.srf.ch/sendungen/einstein/plastikmuell-auch-ein-schweizer-problem>

Roger Marti at RTS CQFD (18. July 2018)
Interviewed and presentation of the project on thermoelectric generators
<https://www.rts.ch/la-1ere/programmes/cqfd/9693400-une-nouvelle-generation-de-piles-a-la-haute-ecole-dingenierie-et-darchitecture-de-fribourg-18-07-2018.html?mediaShare=1>

Matthieu Kaehr, Ennio Vanoli and Roger Marti, Poster at the Fall Meeting SCS 2018 in Lausanne.
Miniaturized Continuous Stirred-tank Reactors – mini-CSTR, a New Process Tool for the Lab.

Florian Dardano, Silvia Brandao, and Roger Marti, Poster at the Fall Meeting SCS 2019 in Zürich.
Bioinspired Synthesis of Lignans.

Roger Marti, Ennio Vanoli, Pauline Sanglard, Poster at EuropaCat 2019 in Aachen (D).
Catalytic Hydrogenation of CO₂-based Ionic Liquids into Methanol – Process Intensification and Optimization

OUTREACH ACTIVITIES

TecDays organized by SATW (<https://www.satw.ch/en/tecdays/>)

TecDays support technology education at secondary schools. Presentation of the chemistry on "Sustainable & Renewable Plastics – from Idea to Realization". (2013, 2014, and 2017)

SCS Seminar 2017 in Process Chemistry organized by the Swiss Chemical Society - introduction to the institute ChemTech and pilot plant tour and participation in the teaching & case studies.