

**2018**

601 C.G. Acevedo-Rocha, M. Ferla, M. T. Reetz  
Directed Evolution of Proteins Based on Mutational Scanning  
*Methods. Mol. Biol.* **2018**, 1685:87-128.

**2017**

- 600 M. T. Reetz  
Combinatorial Libraries Reloaded  
*Israel. J. Chem.* **2017**; DOI: 10.1002/ijch.201700091  
[ Part of special issue *Rosarium Philosophorum* on Organic Chemistry ]
- 599 Z. Sun, L. Wu, M. Bocola, H. C. Chan, R. Lonsdale, X.-D. Kong, S. Yuan, J. Zhou, M. T. Reetz  
Structural and Computational Insight into the Catalytic Mechanism of Limonene Epoxide Mutants in Stereoselective Transformations  
*J. Am. Chem. Soc.* **2017**; DOI: 10.1021/jacs.7b10278
- 598 A. Li, C. G. Acevedo-Rocha, Z. Sun, T. Cox, J. (L) Xu, M. T. Reetz  
Beating Bias in Directed Evolution of Proteins: Combining High-Fidelity On-Chip Solid-Phase Gene Synthesis with Efficient Gene Assembly for Combinatorial Library Construction  
*ChemBioChem* **2017**; DOI: 10.1002/cbic.201700540
- 597 G. Li, M. J. L. J. Fürst, H. R. Mansouri, A. K. Ressmann, A. Ilie, F. Rudhoff, M. D. Mihoviliovic, M. W. Fraaije, M. T. Reetz  
Manipulating the stereoselectivity of the thermostable Baeyer-Villiger monooxygenase TmCHMO by directed evolution  
*Org. Biomol. Chem.* **2017**, 15, 9824-9829. DOI: 10.1039/c7ob02692g
- 596 J. Wang, A. Ilie, S. Yuan, M. T. Reetz  
Investigating Substrate Scope and Enantioselectivity of a Defluorinase by a Stereochemical Probe  
*J. Am. Chem. Soc.* **2017**, 139, 11241-11247. DOI: 10.1021/jacs.7b06019
- 595 G. Li, M. A. Maria-Solano, A. Romero-Rivera, S. Osuna, M. T. Reetz  
Inducing High Activity of a Thermophilic Enzyme at Ambient Temperatures by Directed Evolution  
*Chem. Comm.* **2017**, 53, 9454-9457. DOI: 10.1039/C7CC05377K
- 594 G. Li, J. Wang, M. T. Reetz  
Biocatalysis for the pharmaceutical industry created by structure-guided directed evolution of stereoselective enzymes  
*Bioorg. Med. Chem.* **2017**; DOI: org/10.1016/j.bmc.2017.05.021
- 593 J. Wang, A. Ilie, M. T. Reetz

Chemo- and Stereoselective Cytochrome P450-BM3 Catalyzed Sulfoxidation of 1-Thiochroman-4-ones

*Adv. Synth. Catal.* **2017**, *359*, 2056-2060. DOI: 10.1002/adsc.201700414

- 592 A. Li, B. Wang, A. Ilie, K. D. Dubey, G. Bange, I. V. Korendovych, S. Shaik, M. T. Reetz  
A redox-mediated Kemp eliminase  
*Nature Comm.* **2017**, *8*: 14876. DOI:10.1038/ncomms14876
- 591 G. Li, P. Yao, R. Gong, J. Li, P. Liu, R. Lonsdale, Q. Wu, J. Lin, D. Zhu, M. T. Reetz  
Simultaneous engineering of an enzyme's entrance tunnel and active site: the case of monoamine oxidase MAO-N  
*Chem. Sci.* **2017**, *8*, 4093-4099. DOI: 10.1039/C6SC05381E
- 590 J. Wang, G. Li, M. T. Reetz  
Enzymatic site-selectivity enabled by structure-guided directed evolution  
*Chem. Comm.* **2017**, *53*, 3916-3928. DOI: 10.1039/C7CC00368D
- 589 Y. X. Qiao, N. Theysen, T. Eifert, M. A. Liauw, G. Franco, K. Schenk, W. Leitner, M. T. Reetz  
Concerning the Role of Supercritical Carbon Dioxide in S<sub>N</sub>1 Reactions  
*Chemistry Eur. J.* **2017**, *23*, 3898-3902. DOI: 10.1002/chem.201604151
- 588 M. T. Reetz  
Recent Advances in Directed Evolution of Stereoselective Enzymes  
in M. Alcalde (ed.) *Directed Enzyme Evolution: Advances and Applications*, Springer, Stuttgart, **2017**; pp. 69-99.
- 587 Z. Sun, R. Lonsdale, G. Li, M. T. Reetz  
Developing strategies for engineering efficient biocatalysts for the industrial production of chiral compounds  
*Atlas of Science*, March 3, 2017.
- 586 J. P. Acevedoc, M. T. Reetz, J. A. Asenjof, L. P. Parra  
One-Step Combined Focused epPCR and Saturation Mutagenesis for Thermostability Evolution of a New Cold-Active Xylanase  
*Enzyme Microbiol. Technol.* **2017**, *100*, 60-70. DOI:10.1016/j.enzmictec.2017.02.005
- 2016**
- 585 M. T. Reetz  
*Directed Evolution of Selective Enzymes: Catalysts for Organic Chemistry and Biotechnology*  
Wiley-VCH, Weinheim, **2016**; ISBN: 978-3-527-31660-1
- 584 Z. Sun, P. Torres Salas, E. Siirola, R. Lonsdale, M. T. Reetz

Exploring productive sequence space in directed evolution using binary patterning versus conventional mutagenesis strategies

*Biores. Bioprocess.* **2016**, 3: 44. DOI: 10.1186/s40643-016-0122-8

- 583 A. Li, A. Ilie, Z. Sun, R. Lonsdale, J.-H. Xu, M. T. Reetz  
Whole-Cell Catalyzed Multiple Regio- and Stereoselective Functionalization in Cascade Reactions Enabled by Directed Evolution  
*Angew. Chem.* **2016**, 128, 12205-12208.  
*Angew. Chem.Int. Ed.* **2016**, 55, 12026-12029. DOI: 10.1002/anie.201605990
- 582 Z. Sun, R. Lonsdale, G. Li, M. T. Reetz  
Comparing Different Strategies in Directed Evolution of Enzyme Stereoselectivity: Single versus Double Code Saturation Mutagenesis  
*ChemBioChem* **2016**, 17, 1865-1872. DOI: 10.1002/cbic.201600296
- 581 X. J. Luo, J. Zhao, C. X. Li, Y. P. Bai, M. T. Reetz, H. L. Yu, J. H. Xu  
Combinatorial evolution of phosphotriesterase toward a robust malathion degrader by hierarchical iteration mutagenesis  
*Biotechnol. Bioeng.* **2016**, 113, 2350-2357. DOI: 10.1002/bit.26012
- 580 Z. Sun, G. Li, A. Ilie, M. T. Reetz  
Exploring the substrate scope of mutants derived from the robust alcohol dehydrogenase TbSADH  
*Tetrahedron Lett.* **2016**, 57, 3648-3651. DOI: 10.1016/j.tetlet.2016.06.134
- 579 M. T. Reetz  
What are the Limitations of Enzymes in Synthetic Organic Chemistry?  
*Chemical Record* **2016**, 16, 2449-2459. DOI: 10.1002/tcr.201600040
- 578 G. Li, M. T. Reetz  
Learning Lessons from Directed Evolution of Stereoselective Enzymes  
*Org. Chem. Frontiers* **2016**, 3, 1350-1358. DOI: 10.1039/C6QO00210B
- 577 J.-B. Wang, R. Lonsdale, M. T. Reetz  
Exploring Substrate Scope and Stereoselectivity of P450 Peroxygenase Ole T<sub>JE</sub> in Olefin-forming Oxidative Decarboxylation  
*Chem. Commun.* **2016**, 52, 8131-8133. DOI: 10.1039/C6CC04345C
- 576 G. Li, H. Zhang, Z. Sun, X. Liu, M. T. Reetz  
Multi-parameter Optimization in Directed Evolution: Engineering Thermostability, Enantioselectivity and Activity  
*ACS Catal.* **2016**, 6, 3679-3687. DOI: 10.1021/acscatal.6b01113
- 575 Z. Sun, Y. Wikmark, J.-E. Bäckvall, M. T. Reetz  
New Concepts for Increasing the Efficiency in Directed Evolution of Stereoselective

## Enzymes

*Chem. Eur. J.* **2016**, *22*, 5046-5054. DOI: 10.1002/chem.201504406

- 574 K. M. Krone, R. Warias, C. Ritter, A. Li, C. G. Acevedo-Rocha, M. T. Reetz, D. Belder  
Analysis of Enantioselective Biotransformations Using a Few Hundred Cells on an  
Integrated Microfluidic Chip  
*J. Am. Chem. Soc.* **2016**, *138*, 2102-2105. DOI: 10.1021/jacs.5b12443
- 573 Z. Sun, R. Lonsdale, A. Ilie, G. Li, J. Zhou, M. T. Reetz  
Catalytic Asymmetric Reduction of Difficult-to-Reduce Ketones: Triple Code Saturation  
Mutagenesis of an Alcohol Dehydrogenase  
*ACS Catal.* **2016**, *6*, 1598-1605. DOI: 10.1021/acscatal.5b02752
- 572 Z. Sun, R. Lonsdale, L. Wu, G. Li, A. Li, J. Wang, J. Zhou., M. T. Reetz  
Structure-guided Triple code Saturation Mutagenesis: Efficient Tuning of the  
Stereoselectivity of an Epoxide Hydrolase.  
*ACS Catal.* **2016**, *6*, 1590-1597. DOI: 10.1021/acscatal.5b02751
- 571 C. G. Acevedo-Rocha, M. T. Reetz  
Handling the Numbers Problem in Directed Evolution  
in A. Svendsen (ed.), *Understanding Enzymes: Function, Design, Engineering and  
Analysis*, Pan Stanford Publishing Pte. Ltd., Singapore, **2016**; pp. 613-642.
- 570 Z. Wu, K. Harms, M. T. Reetz  
Crystal Structure of 7,8,9,10-Tetrahydro-benzo[*b*]-naphtho[2,1-*d*]furan  
*Acta Cryst.* **2016**, *E72*, 106-108. DOI: 10.1107/S2056989015024512
- 2015**
- 569 R. Lonsdale, M. T. Reetz  
Reduction of  $\alpha,\beta$ -unsaturated ketones by Old Yellow Enzymes: Mechanistic insights  
from quantum mechanics/molecular mechanics calculations  
*J. Am. Chem. Soc.* **2015**, *137*, 14733-14742.
- 568 U. Keinan, M. T. Reetz  
Guest Editorial: A 50-Year Long Lesson  
*Isr. J. Chem.* **2015**, *55*, 1154-1155.
- 567 J. Wang, M. T. Reetz  
Biocatalysis: Chiral cascades  
*Nature Chem.* **2015**, *7*, 948-949.
- 566 C. Ritter, N. Nett, C. G. Acevedo-Rocha, R. Lonsdale, K. Kräling, F. Dempwolff, S.  
Hoebenreich, P. L. Graumann, M. T. Reetz, E. Meggers  
Bioorthogonal Enzymatic Activation of Caged Compounds

- Angew. Chem.* **2015**, *127*, 13640-13644.  
*Angew. Chem. Int. Ed.* **2015**, *54*, 13440-13443.
- 565 C. G. Acevedo-Rocha, M. T. Reetz, Y. Nov  
Economical Analysis of Saturation Mutagenesis Experiments  
*Scientific Reports* **2015**, *5*: 10654.
- 564 Z. Sun, A. Ilie, M. T. Reetz  
Ansätze zur Produktion von universellem Blut durch strukturgerichtete Evolution von Glykosidhydrolasen  
*Angew. Chem.* **2015**, *127*, 9288-9290.  
Towards the Production of Universal Blood by Structure-guided Directed Evolution of Glycoside Hydrolases  
*Angew. Chem. Int. Ed.* **2015**, *54*, 9158-9160.
- 563 Z. Sun, R. Lonsdale, X.-D. Kong, J.-H. Xu, J. Zhou, M. T. Reetz  
Reshaping an Enzyme Binding Pocket for Enhanced and Inverted Stereoselectivity: Use of Smallest Amino Acid Alphabets in Directed Evolution  
*Angew. Chem.* **2015**, *127*, 12587-12592.  
*Angew. Chem. Int. Ed.* **2015**, *54*, 12410-12415.
- 562 R. Agudo, G.-D. Roiban, R. Lonsdale, A. Ilie, M. T. Reetz  
Biocatalytic Route to Chiral Acyloins: P450-Catalyzed Regio- and Enantioselective  $\alpha$ -Hydroxylation of Ketones  
*J. Org. Chem.* **2015**, *80*, 950-956.
- 561 L. P. Parra, J. P. Acevedo, M. T. Reetz  
Directed evolution of phenylacetone monooxygenase as an active catalyst for the Baeyer-Villiger conversion of cyclohexanone to caprolactone.  
*Biotechnol. Bioeng.* **2015**, *112*, 1354-1364.
- 560 G.-D. Roiban, M. T. Reetz  
Expanding the toolbox of organic chemists: directed evolution of P450 monooxygenases as catalysts in regio- and stereoselective oxidative hydroxylation.  
*Chem. Comm.* **2015**, *51*, 2208-2224.
- 559 S. Hoebenreich, F. E. Zilly, C. G. Acevedo Rocha, M. Zilly, M. T. Reetz  
Speeding up Directed Evolution: Combining the Advantages of Solid-Phase Combinatorial Gene Synthesis with Statistically Guided Reduction of Screening Effort.  
*ACS Synth. Biol.* **2015**, *4*, 317-331.
- 558 A. Ilie, M. T. Reetz,  
Directed Evolution of Artificial Metalloenzymes.  
*Isr. J. Chem.* **2015**, *55*, 51-60.

557 A. Ilie, R. Lonsdale, R. Agudo, M. T. Reetz  
A diastereoselective P450-catalyzed epoxidation reaction: anti versus syn reactivity  
*Tetrahedron Lett.* **2015**, 56, 3435-3437.

556 A. Ilie, R. Agudo, G.-D. Roiban, M. T. Reetz  
P450-catalyzed regio- and stereoselective oxidative hydroxylation of disubstituted cyclohexanes: creation of three centers of chirality in a single CH-activation event.  
*Tetrahedron* **2015**, 71, 470-475.

## 2014

555 Z.-G. Zhang, R. Lonsdale, J. Sanchis, M. T. Reetz  
Extreme Synergistic Mutational Effects in the Directed Evolution of a Baeyer-Villiger Monooxygenase as Catalyst for Asymmetric Sulfoxidation  
*J. Am. Chem. Soc.* **2014**, 136, 17262-17272.

554 G.-D. Roiban, R. Agudo, A. Ilie, R. Lonsdale, M. T. Reetz  
CH-activating oxidative hydroxylation of 1-tetralones and related compounds with high regio- and stereoselectivity  
*Chem. Commun.* **2014**, 50, 14310-14313.

553 M. T. Reetz  
One Hundred Years of the Max-Planck-Institut für Kohlenforschung.  
*Angew. Chem.* **2014**, 126, 8702-8727.  
*Angew. Chem. Int. Ed.* **2014**, 53, 8562-8586.

552 C. G. Acevedo-Rocha, R. Agudo, M. T. Reetz  
Directed evolution of stereoselective enzymes based on genetic selection as opposed to screening systems.  
*J. Biotechnol.* **2014**, 191, 3-10.

551 G.-D. Roiban, R. Agudo, M. T. Reetz  
Cytochrome P450 Catalyzed Oxidative Hydroxylation of Achiral Organic Compounds with Simultaneous Creation of Two Chirality Centers in a Single C-H Activation Step.  
*Angew. Chem.* **2014**, 126, 8803-8807. *Angew. Chem. Int. Ed.* **2014**, 53, 8659-8663.

550 P. Tielmann, H. Kierkels, A. Zonta, A. Ilie, M. T. Reetz  
Increasing the activity and enantioselectivity of lipases by sol-gel immobilization: further advancements of practical interest.  
*Nanoscale* **2014**, 6, 6220-6228.

549 G.-D. Roiban, A. Ilie, M. T. Reetz  
The Chelation-controlled Mukaiyama Aldol Reaction of Chiral  $\alpha$ - and  $\beta$ -Alkoxy Aldehydes.  
*Chem. Lett.* **2014**, 43, 2-10.

548 G.-D. Roiban, G. Mehler, M. T. Reetz  
Palladium-Catalysed Amination of Aryl- and Heteroaryl Halides Using tert-Butyl Tetraisopropylphosphorodiamidite as an Easily Accessible and Air-Stable Ligand.  
*Eur. J. Org. Chem.* **2014**, 2070-2076.

547 C. G. Acevedo-Rocha, S. Kille, M. T. Reetz  
Iterative Saturation Mutagenesis: A Powerful Approach to Engineer Proteins by Simulating Darwinian Evolution.  
In: Directed Evolution Library Creation: Methods and Protocols, 2<sup>nd</sup> Edition  
(Eds.: D. Ackerley, J. Copp, E. Gillam)  
*Methods in Molecular Biology*, Vol 1179, pp 103-128.  
Humana Press, Totowa, **2014**.

546 C. G. Acevedo-Rocha, M. T. Reetz  
Assembly of Designed Oligonucleotides: A Useful Tool in Synthetic Biology for Creating High Quality Combinatorial DNA Libraries.  
In: Directed Evolution Library Creation: Methods and Protocols, 2<sup>nd</sup> Edition  
(Eds.: D. Ackerley, J. Copp, E. Gillam)  
*Methods in Molecular Biology*, Vol 1179, pp 189-206.  
Humana Press, Totowa, **2014**.

## 2013

545 R. Agudo, M. T. Reetz  
Designer Cells for Stereocomplementary De Novo Enzymatic Cascade Reactions Based on Laboratory Evolution.  
*Chem. Comm.* **2013**, 49, 10914-10916.

544 S. Kille, M. T. Reetz  
Protein Engineering: Development of Novel Enzymes for the Improved Reduction of C=C Double Bonds.  
In: Synthetic Methods for Biologically Active Molecules-Exploiting the Potential of Bioreductions.  
(Ed.: E. Brenna)  
Wiley-VCH, Weinheim, **2013**.

543 G.-D. Roiban, R. Agudo, M. T. Reetz  
Stereo- and regioselectivity in the P450-catalyzed oxidative tandem difunctionalization of 1-methylcyclohexene.  
*Tetrahedron*, **2013**, 69, 5306-5311.

- 542 I. Polyak, M. T. Reetz, W. Thiel,  
Quantum mechanical/molecular mechanical study on the enantioselectivity of the enzymatic Baeyer-Villiger reaction of 4-hydroxycyclohexanone.  
*J. Phys. Chem. B*, **2013**, *117*, 4993-5001.
- 541 M. T. Reetz  
Biocatalysis in organic chemistry and biotechnology: Past, present, and future.  
*J. Am. Chem. Soc.* **2013**, *135*, 12480-12496.
- 540 W. Augustyniak, H. Wienk, R. Boelens, M. T. Reetz  
<sup>1</sup>H, <sup>13</sup>C and <sup>15</sup>N resonance assignments of wild-type *Bacillus subtilis* Lipase A and its mutant evolved towards thermostability.  
*Biomol. NMR Assign.* **2013**, *7*, 249-252.
- 539 L. P. Parra, R. Agudo, M. T. Reetz,  
Directed Evolution Using Iterative Saturation Mutagenesis Based on Multi-Residue Sites  
*ChemBioChem* **2013**, *14*, 2301-2309.
- 538 M. T. Reetz  
Practical Protocols for Lipase Immobilization Via Sol-Gel Techniques.  
In: *Methods in Biotechnology*, Vol. 1051 (Immobilization of Enzymes and Cells), (Ed.: J. M. Guisan), 2. Edition, Humana Press: Totowa, **2013**, pp. 241-254.
- 537 Z.-G. Zhang, G.-D. Roiban, J. P. Acevedo, I. Polyak, M. T. Reetz  
A New Type of Stereoselectivity in Baeyer-Villiger Reactions: Access to *E*- and *Z*-Olefins.  
*Adv. Synth. Catal.* **2013**, *355*, 99-106.
- 536 G.-D. Roiban, M. T. Reetz  
Enzympromiskuität: Ein P450-Enzym als Carbentransferkatalysator.  
*Angew. Chem.* **2013**, *125*, 5549-5550.  
Enzyme Promiscuity: Using a P450 Enzyme as a Carbene Transfer Catalyst.  
*Angew. Chem.Int. Ed.* **2013**, *52*, 5439-5440.
- 535 Q. Wu, P. Soni, M. T. Reetz  
Laboratory Evolution of Enantiocomplementary *Candida Antarctica* Lipase B Mutants with Broad Substrate Scope.  
*J. Am. Chem. Soc.* **2013**, *135*, 1872-1881.
- 534 M. T. Reetz  
Die Bedeutung von Additiven und Nicht-Additiven Mutationseffekten im Protein-Engineering.



*Angew. Chem.* **2013**, *125*, 2720-2729.

The Importance of Additive and Non-Additive Mutational Effects in Protein Engineering.  
*Angew. Chem. Int. Ed.* **2013**, *52*, 2658-2666.

- 533 S. Kille, C. G. Acevedo-Rocha, L. P. Parra, Z.-G. Zhang, J. J. Opperman, M. T. Reetz, J. P. Acevedo  
Reducing Codon Redundancy and Screening Effort of Combinatorial Protein Libraries Created by Saturation Mutagenesis.  
*ACS Synth. Biol.* **2013**, *2*, 83-92.
- 532 R. Agudo, G.-D. Roiban, M. T. Reetz  
Induced Axial Chirality in Biocatalytic Asymmetric Ketone Reduction.  
*J. Am. Chem. Soc.* **2013**, *135*, 1665-1668.

## 2012

- 531 W. Augustyniak, H. Wienk, R. Boelens, M. T. Reetz  
<sup>1</sup>H, <sup>13</sup>C and <sup>15</sup>N resonance assignments of wild-type *Bacillus subtilis* Lipase A and its mutant evolved towards thermostability.  
*Biomol. NMR Assign.* **2013**, *7*, 249-252.
- 530 Z.-G. Zhang; L. P. Parra, M. T. Reetz  
Protein Engineering of Stereoselective Baeyer-Villiger Monooxygenases.  
*Chem. Eur. J.* **2012**, *18*, 10160-10172.
- 529 M. T. Reetz  
Laboratory evolution of stereoselective enzymes as a means to expand the toolbox of organic chemists.  
*Tetrahedron* **2012**, *68*, 7530-7548.
- 528 M. T. Reetz  
Artificial Metalloenzymes as Catalysts for Stereoselective Diels-Alder Reactions.  
*Chem. Rec.* **2012**, *12*, 391-406.
- 527 M. T. Reetz  
Directed Evolution of Enzymes.  
In: *Enzyme Catalysis in Organic Synthesis*, 3. Edition, Vol. 1-3,  
(Eds.: K. Drauz, H. Gröger, O. May),  
Wiley-VCH, Weinheim, **2012**, Vol. 1, pp.119-190.

- 526 I. Polyak, M. T. Reetz, W. Thiel  
Quantum Mechanical/Molecular Mechanical Study on the Mechanism of the Enzymatic Baeyer-Villiger Reaction.  
*J. Am. Chem. Soc.* **2012**, *134*, 2732-2741.
- 525 Y. Gumulya, J. Sanchis, M. T. Reetz  
Many Pathways in Laboratory Evolution Can Lead to Improved Enzymes: How to Escape from Local Minima.  
*ChemBioChem* **2012**, *13*, 1060-1066.
- 524 X. Feng, J. Sanchis, M. T. Reetz, H. Rabitz  
Enhancing the Efficiency of Directed Evolution in Focused Enzyme Libraries by the Adaptive Substituent Reordering Algorithm.  
*Chem.-Eur. J.* **2012**, *18*, 5646-5654.
- 523 S. Cesarini, C. Bofill, F. I. J. Pastor, M. T. Reetz, P. Diaz  
A thermostable variant of *P. aeruginosa* cold-adapted Lip C obtained by rational design and saturation mutagenesis.  
*Process Biochem.* **2012**, *47*, 2064-2071.
- 522 W. Augustyniak, A. A. Brzezinska, T. Pijning, H. Wienk, R. Boelens, B. W. Dijkstra, M. T. Reetz  
Biophysical characterization of mutants of *Bacillus subtilis* lipase evolved for thermostability: Factors contributing to increased activity retention.  
*Protein Sci.* **2012**, *21*, 487-497.
- 521 R. Agudo, G.-D. Roiban, M.T. Reetz  
Achieving Regio- and Enantioselectivity of P450-Catalyzed Oxidative CH Activation of Small Functionalized Molecules by Structure-Guided Directed Evolution.  
*ChemBioChem* **2012**, *13*, 1465-1473.
- 520 C. G. Acevedo-Rocha, M. T. Reetz  
Tuning lipase activity with perfluoro carboxylic acids as additives.  
*Catal. Sci. Technol.* **2012**, *2*, 1553-1555.

## 2011

- 519 F. E. Zilly, J. P. Acevedo, W. Augustyniak, A. Deege, U. W. Häusig, M. T. Reetz  
Tuning a P450 Enzyme for Methane Oxidation.  
*Angew. Chem.* **2011**, *123*, 2772-2776. Corrigendum: **2013**, *125*, 13745.  
*Angew. Chem. Int. Ed.* **2011**, *50*, 2720-2724. Corrigendum: **2013**, *52*, 13503.
- 518 M. T. Reetz, H. Zheng  
Manipulating the Expression Rate and Enantioselectivity of an Epoxide Hydrolase by  
Using Directed Evolution.  
*ChemBioChem* **2011**, *12*, 1529-1535.
- 517 M. T. Reetz, G. P. L. Krebs  
Challenges in the directed evolution of stereoselective enzymes for use in organic  
chemistry.  
*C. R. Chimie* **2011**, *14*, 811-818.
- 516 M. T. Reetz  
Die Evolutionsmaschine als Quelle für selektive Biokatalysatoren,  
(Hrsg.: K. Al-Shamery),  
Wiley-VCH: Weinheim, **2011**, 243-273.
- 515 M. T. Reetz  
Gerichtete Evolution stereoselektiver Enzyme: Eine ergiebige Katalysator-Quelle für  
asymmetrische Reaktionen.  
*Angew. Chem.* **2011**, *123*, 144-182.  
Laboratory Evolution of Stereoselective Enzymes: A Prolific Source of Catalysts for  
Asymmetric Reactions.  
*Angew. Chem. Int. Ed.* **2011**, *50*, 138-174.
- 514 S. Prasad, M. Bocola, M. T. Reetz  
Revisiting the Lipase from *Pseudomonas aeruginosa*: Directed Evolution of Substrate  
Acceptance and Enantioselectivity Using Iterative Saturation Mutagenesis.  
*ChemPhysChem* **2011**, *12*, 1550-1557.
- 513 S. Kille, F. E. Zilly, J. P. Acevedo, M. T. Reetz  
Regio- and stereoselectivity of P450-catalysed hydroxylation of steroids controlled by

laboratory evolution.  
*Nature Chem.* **2011**, 3, 738-743.

512 Y. Gumulya, M. T. Reetz  
Enhancing the Thermal Robustness of an Enzyme by Directed Evolution: Least Favorable Starting Points and Inferior Mutants Can Map Superior Evolutionary Pathways.  
*ChemBioChem* **2011**, 12, 2502-2510.

511 P. Braunstein, M. T. Reetz, W.-H. Sun  
Editorial.  
*C. R. Chimie* **2011**, 14, 787-788.

## **2010**

510 H. Zheng, M. T. Reetz  
Manipulating the Stereoselectivity of Limonene Epoxide Hydrolase by Directed Evolution Based on Iterative Saturation Mutagenesis.  
*J. Am. Chem. Soc.* **2010**, 132, 15744-15751.

509 H. Zheng, D. Kahakeaw, J. P. Acevedo, M. T. Reetz  
Directed Evolution of Enantioconvergence: The Case of an Epoxide Hydrolase-Catalyzed Reaction of a Racemic Epoxide.  
*ChemCatChem* **2010**, 2, 958-961.

508 S. Wu, J. P. Acevedo, M. T. Reetz  
Induced Allostery in the Directed Evolution of an Enantioselective Baeyer-Villiger Monooxygenase.  
*Proc. Natl. Acad. Sci. U. S. A.* **2010**, 107, 2775-2780.

507 A. Taglieber, F. Schulz, F. Hollmann, M. Rusek, M. T. Reetz  
Light-driven Stereoselective Biocatalytic Oxidations and Reductions.  
In: *Practical Methods for Biocatalysis and Biotransformations*,  
(Eds.: J. Whittall, P. W. Sutton),  
John Wiley & Sons Ltd, Chichester, U. K., **2010**, pp. 299-305.

- 506 M. T. Reetz, S. Wu, H. Zheng, S. Prasad  
Directed Evolution of Enantioselective Enzymes: An Unceasing Catalyst Source for Organic Chemistry.  
*Pure Appl. Chem.* **2010**, *82*, 1575-1584.
- 505 M. T. Reetz, P. Soni, L. Fernández, Y. Gumulya, J. D. Carballeira  
Increasing the Stability of an Enzyme Toward Hostile Organic Solvents by Directed Evolution Based on Iterative Saturation Mutagenesis Using the B-FIT Method.  
*Chem. Comm.* **2010**, *46*, 8657-8658.
- 504 M. T. Reetz, S. Prasad, J. D. Carballeira, Y. Gumulya, M. Bocola  
Iterative Saturation Mutagenesis Accelerates Laboratory Evolution of Enzyme Stereoselectivity: Rigorous Comparison with Traditional Methods.  
*J. Am. Chem. Soc.* **2010**, *132*, 9144-9152.
- 503 M. T. Reetz  
Enzym Design mit Fernwirkung. Neuer Weg zur Optimierung von Enzymen für industrielle Anwendungen.  
*GIT Labor-Fachzeitschr.* **2010**, *54*, 190-192.
- 502 M. T. Reetz  
Enzyme, Directed Evolution.  
In: Encyclopedia of Industrial Biotechnology, Bioprocess, Bioseparation, and Cell Technology,  
(Ed.: M. C. Flickinger), 7 Volume Set,  
John Wiley & Sons, Inc., Hoboken, NJ, **2010**, Vol. 1, pp.1-22.
- 501 M. T. Reetz  
Enzyme Engineering by Directed Evolution.  
In: Manual of Industrial Microbiology and Biotechnology,  
(Eds.: R. H. Baltz, A. L. Demain, J. E. Davies, A. T. Bull, B. Junker, L. Katz, L. R. Lynd, P. Masurekar, C. D. Reeves, H. Zhao), 3. Edition,  
ASM Press: Washington, U. S. A., **2010**, pp. 466-479.

- 500 J. Podtetenieff, A. Taglieber, E. Bill, E. J. Reijerse, M. T. Reetz  
An Artificial Metalloenzyme: Creation of a Design Copper Binding Site in a Thermostable Protein.  
*Angew. Chem.* **2010**, *122*, 5277-5281; *Angew. Chem. Int. Ed.* **2010**, *49*, 5151-5155.
- 499 D. J. Opperman, M. T. Reetz  
Towards Practical Baeyer-Villiger-Monooxygenases: Design of Cyclohexanone Monooxygenase Mutants with Enhanced Oxidative Stability.  
*ChemBioChem* **2010**, *11*, 2589-2596.
- 498 K. N. Gavrilov, S. V. Zheglov, E. A. Rastorguev, N. N. Groshkin, M. G. Maksimova, E. B. Benetsky, V. A. Davankov, M. T. Reetz  
Asymmetric Catalytic Reactions Using  $P^*$ -Mono,  $P^*$ ,  $N$ - and  $P^*,P^*$ -Bidentate Diamidophosphites with BINOL Backbones and 1,3,2-Diazaphospholidine Moieties: Differences in the Enantioselectivity.  
*Adv. Synth. Catal.* **2010**, *352*, 2599-2610.
- 497 L. Fernández, N. Jiao, P. Soni, Y. Gumulya, L. Gonzaga de Oliveira, M. T. Reetz  
An Efficient Method for Mutant Library Creation in *Pichia pastoris* useful in Directed Evolution.  
*Biocatal. Biotransform.* **2010**, *28*, 122-129.
- 2009**
- 496 F. E. Zilly, A. Taglieber, F. Schulz, F. Hollmann, M. T. Reetz  
Deazaflavins as Mediators in Light-Driven Cytochrome P450 Catalyzed Hydroxylations.  
*Chem. Commun. (Cambridge, U. K.)* **2009**, 7152-7154.
- 495 M. T. Reetz, S. Wu  
Laboratory Evolution of Robust and Enantioselective Baeyer-Villiger Monooxygenases for Asymmetric Catalysis.  
*J. Am. Chem. Soc.* **2009**, *131*, 15424-15432.

- 494 M. T. Reetz, P. Soni, L. Fernández  
Knowledge-Guided Laboratory Evolution of Protein Thermolability.  
*Biotech. Bioeng.* **2009**, *102*, 1712-1717.
- 493 M. T. Reetz, P. Soni, J. P. Acevedo, J. Sanchis  
Creation of an Amino Acid Network of Structurally Coupled Residues in the Directed  
Evolution of a Thermostable Enzyme.  
*Angew. Chem.* **2009**, *121*, 8418-8422;  
*Angew. Chem. Int. Ed.* **2009**, *48*, 8268-8272.
- 492 M. T. Reetz, D. Kahakeaw, J. Sanchis  
Shedding Light on the Efficacy of Laboratory Evolution Based on Iterative Saturation  
Mutagenesis.  
*Mol. BioSyst.* **2009**, *5*, 115-122.
- 491 M. T. Reetz, H. M. Herzog, R. Goddard  
Synthesis and Solid-State Structure of Tetrabutylammonium Imidazolate-Dipyrrole  
Formed by Self Assembly.  
*Eur. J. Org. Chem.* **2009**, 1687-1690.
- 490 M. T. Reetz, H. Guo, J.-A. Ma, R. Goddard, R. J. Mynott  
Helical Triskelion Monophosphites as Ligands in Asymmetric Catalysis.  
*J. Am. Chem. Soc.* **2009**, *131*, 4136-4142.
- 489 M. T. Reetz, M. Bocola, L.-W. Wang, J. Sanchis, A. Cronin, M. Arand, J. Zou, A.  
Archelas, A.-L. Bottalla, A. Naworyta, S. L. Mowbray  
Directed Evolution of an Enantioselective Epoxide Hydrolase: Uncovering the Source of  
Enantioselectivity at Each Evolutionary Stage.  
*J. Am. Chem. Soc.* **2009**, *131*, 7334-7343.
- 488 M. T. Reetz  
Directed Evolution of Enantioselective Enzyme: An Unconventional Approach to  
Asymmetric Catalysis in Organic Chemistry.  
*J. Org. Chem.* **2009**, *74*, 5767-5778.

- 487 M. T. Reetz  
Autoren-Profil. *Angew. Chem.* **2009**, *121*, 3785-3787.  
Author Profile. *Angew. Chem. Int. Ed.* **2009**, *48*, 3731-3733.
- 486 M. T. Reetz  
Directed Evolution of Stereoselective Hybrid Catalysts.  
In: Topics in Organometallic Chemistry, Vol. 25, (Ed.: T. R. Ward),  
Springer-Verlag, Berlin Heidelberg, **2009**, pp. 63-92.
- 485 M. T. Reetz  
A Method for Rapid Directed Evolution.  
In: Protein Engineering Handbook, Vol. 2,  
(Eds.: S. Lutz, U. T. Bornscheuer),  
Wiley-VCH: Weinheim, **2009**, pp. 409-439.
- 484 T. Eggert, S. A. Funke, J. N. Andexer, M. T. Reetz, K.-E. Jaeger  
Evolution of Enantioselective *Bacillus subtilis* Lipase.  
In: Protein Engineering Handbook, Vol. 2,  
(Eds.: S. Lutz, U. T. Bornscheuer),  
Wiley-VCH: Weinheim, **2009**, pp. 441-451.
- 483 D. J. Bougioukou, S. Kille, A. Taglieber, M. T. Reetz  
Directed Evolution of an Enantioselective Enoate-Reductase: Testing the Utility of  
Iterative Saturation Mutagenesis.  
*Adv. Synth. Catal.* **2009**, *351*, 3287-3305.
- 2008**
- 482 A. Taglieber, F. Schulz, F. Hollmann, M. Rusek, M. T. Reetz  
Light-Driven Biocatalytic Oxidation and Reduction Reactions: Scope and Limitations.  
*ChemBioChem* **2008**, *9*, 565-572.
- 481 J. Sanchis, L. Fernández, J. D. Carballeira, J. Drone, Y. Gumulya, H. Höbenreich,  
D. Kahakeaw, S. Kille, R. Lohmer J. J.-P. Peyralans, J. Podtetenieff, S. Prasad, P. Soni,  
A. Taglieber, S. Wu, F. E. Zilly, M. T. Reetz  
Improved PCR Method for the Creation of Saturation Mutagenesis Libraries in Directed



Evolution: Application to Difficult-to-Amplify Templates.  
*Appl. Microbiol. Biotechnol.* **2008**, 81, 387-397.

- 480 M. T. Reetz, S. Wu  
Greatly Reduced Amino Acid Alphabets in Directed Evolution: Making the Right Choice for Saturation Mutagenesis at Homologous Enzyme Positions.  
*Chem. Commun. (Cambridge, U. K.)* **2008**, 5499-5501.
- 479 M. T. Reetz, J. Sanchis  
Constructing and Analyzing the Fitness Landscape of an Experimental Evolutionary Process.  
*ChemBioChem* **2008**, 9, 2260-2267.
- 478 M. T. Reetz, M. Rentzsch, A. Pletsch, A. Taglieber, F. Hollmann, R. J. G. Mondière, N. Dickmann, B. Höcker, S. Cerrone, M. C. Haeger, R. Sterner  
A Robust Protein Host for Anchoring Chelating Ligands and Organocatalysts.  
*ChemBioChem* **2008**, 9, 552-564.
- 477 M. T. Reetz, B. List, S. Jaroch, H. Weinmann (Eds.)  
Organocatalysis. Ernst Schering Foundation Symposium Proceedings, Vol. 2, Springer Verlag: Berlin, **2008**.
- 476 M. T. Reetz, D. Kahakeaw, R. Lohmer  
Addressing the Numbers Problem in Directed Evolution.  
*ChemBioChem* **2008**, 9, 1797-1804.
- 475 M. T. Reetz, H. Höbenreich, P. Soni, L. Fernández  
A Genetic Selection System for Evolving Enantioselectivity of Enzymes.  
*Chem. Commun. (Cambridge, U. K.)* **2008**, 5502-5504.
- 474 M. T. Reetz  
Controlling the Selectivity and Stability of Proteins by New Strategies in Directed Evolution: The Case of Organocatalytic Enzymes.  
In: Organocatalysis. Ernst Schering Foundation Symposium Proceedings, Vol. 2,

(Eds.: M. T. Reetz, B. List, S. Jaroch, H. Weinmann), Springer Verlag: Berlin, **2008**, pp. 321-340.

- 473 M. T. Reetz  
Mixtures of Monodentate P-Ligands in Stereo- and Regioselective Transition Metal Catalysis.  
In: Phosphorus Ligands in Asymmetric Catalysis, (Ed.: A. Börner),  
Wiley-VCH: Weinheim, **2008**, pp.1135-1171.
- 472 M. T. Reetz  
Kombinatorische Übergangsmetallkatalyse: Mischungen einzähniger Liganden zur Kontrolle der Enantio-, Diastereo- und Regioselektivität.  
*Angew. Chem.* **2008**, *120*, 2592-2626.  
Combinatorial Transition-Metal Catalysis: Mixing Monodentate Ligands to Control Enantio-, Diastereo-, and Regioselectivity.  
*Angew. Chem. Int. Ed.* **2008**, *47*, 2556-2588.
- 471 M. T. Reetz  
Directed Evolution as a Means to Engineer Enantioselective Enzymes.  
In: Asymmetric Organic Synthesis with Enzymes,  
(Eds.: V. Gotor, I. Alfonso, E. García-Urdiales),  
Wiley-VCH: Weinheim, **2008**, pp. 21-63.
- 470 M. T. Reetz  
Size-selective Synthesis of Nanostructured Metal and Metal Oxide-Colloids and Their Use as Catalysts.  
In: Nanoparticles and Catalysis, (Ed.: D. Astruc),  
Wiley-VCH: Weinheim, **2008**, pp. 255-279.
- 469 D. Kahakeaw, M. T. Reetz  
A Cell-Based Adrenaline Assay for Automated High-Throughput Activity Screening of Epoxide Hydrolases.  
*Chem.–Asian J.* **2008**, *3*, 233-238.
- 468 S. Becker, H. Höbenreich, A. Vogel, J. Knorr, S. Wilhelm, F. Rosenau, K.-E. Jaeger, M. T. Reetz, H. Kolmar  
Einzelzellbasierte Hochdurchsatz-Durchmusterung zur Identifizierung enantioselektiver

hydrolytischer Enzyme.

*Angew. Chem.* **2008**, *120*, 5163-5166.

Single-Cell High-Throughput Screening to Identify Enantioselective Hydrolytic Enzymes.

*Angew. Chem. Int. Ed.* **2008**, *47*, 5085-5088.

## 2007

- 467 A. Taglieber, H. Höbenreich, J. D. Carballeira, R. J. G. Mondière, M. T. Reetz  
Alternate-Site Enzyme Promiscuity.  
*Angew. Chem.* **2007**, *119*, 8751-8754; *Angew. Chem. Int. Ed.* **2007**, *46*, 8597-8600.
- 466 M. T. Reetz, M. Rentzsch, A. Pletsch, M. Maywald, P. Maiwald, J. J.-P. Peyralans,  
A. Maichele, Y. Fu, N. Jiao, F. Hollmann, R. Mondière, A. Taglieber  
Directed Evolution of Enantioselective Hybrid Catalysts: A Novel Concept in Asymmetric  
Catalysis.  
*Tetrahedron* **2007**, *63*, 6404-6414.
- 465 M. T. Reetz, M. Puls, J. D. Carballeira, A. Vogel, K.-E. Jaeger, T. Eggert, W. Thiel,  
M. Bocola, N. Otte  
Learning from Directed Evolution: Further Lessons from Theoretical Investigations into  
Cooperative Mutations in Lipase Enantioselectivity.  
*ChemBioChem* **2007**, *8*, 106-112.
- 464 M. T. Reetz, R. Mondière, J. D. Carballeira  
Enzyme Promiscuity: First Protein-Catalyzed Morita–Baylis–Hillman Reaction.  
*Tetrahedron Lett.* **2007**, *48*, 1679-1681.
- 463 M. T. Reetz, B. Hauer  
Biocatalysis and Biotransformation. *Frontiers of Biocatalysis: Theory and Applications.*  
*Curr. Opin. Chem. Biol.* **2007**, *11*, 172-173.
- 462 M. T. Reetz, J. D. Carballeira  
Iterative Saturation Mutagenesis (ISM) for Rapid Directed Evolution of Functional

Enzymes.

*Nat. Protoc.* **2007**, 2, 891-903.

- 461 M. T. Reetz, O. Bondarev  
Mixtures of Chiral Phosphorous Acid Diesters and Achiral P Ligands in the Enantio- and Diastereoselective Hydrogenation of Ketimines.  
*Angew. Chem.* **2007**, 119, 4607-4610; *Angew. Chem. Int. Ed.* **2007**, 46, 4523-4526.
- 460 M. T. Reetz  
Evolution in the Test-Tube as a Means to Create Selective Biocatalysts.  
*Chimia* **2007**, 61, 100-103.
- 459 M. T. Reetz  
Evolution im Reagenzglas: Ein Beitrag zur Weißen Biotechnologie.  
In: Schriften der Gesellschaft zur Förderung der Westfälischen Wilhelms-Universität zu Münster e.V., (Hrsg.: O. Schober), Verlag Aschendorff: Münster, **2007**, Heft 81.
- 458 M. T. Reetz  
Directed Evolution of Enzymes for Asymmetric Syntheses.  
In: *Asymmetric Synthesis – The Essentials*, (Eds.: M. Christmann, S. Bräse), Wiley-VCH: Weinheim, **2007**, pp. 207-211.
- 457 F. Hollmann, A. Taglieber, F. Schulz, M. T. Reetz  
A Light-Driven Stereoselective Biocatalytic Oxidation.  
*Angew. Chem.* **2007**, 119, 2961-2964; *Angew. Chem. Int. Ed.* **2007**, 46, 2903-2906.
- 456 K. N. Gavrilov, S. E. Lyubimov, O. G. Bondarev, M. G. Maksimova, S. V. Zheglov, P. V. Petrovskii, V. A. Davankov, M. T. Reetz  
Chiral Ionic Phosphites and Diamidophosphites: A Novel Group of Efficient Ligands for Asymmetric Catalysis.  
*Adv. Synth. Catal.* **2007**, 349, 609-616.
- 455 J. D. Carballeira, P. Krumlinde, M. Bocola, A. Vogel, M. T. Reetz, J.-E. Bäckvall  
Directed Evolution and Axial Chirality: Optimization of the Enantioselectivity of

*Pseudomonas aeruginosa* Lipase towards the Kinetic Resolution of a Racemic Allene.  
*Chem. Commun. (Cambridge, U. K.)* **2007**, 1913-1915.

## 2006

- 454 M. T. Reetz, L.-W. Wang, in part M. Bocola  
Directed Evolution of Enantioselective Enzymes: Iterative Cycles of CASTing for Probing Protein-Sequence Space.  
*Angew. Chem.* **2006**, *118*, 1258-1263; *Erratum*, 2556; *Angew. Chem. Int. Ed.* **2006**, *45*, 1236-1241; *Erratum*, 2494.
- 453 M. T. Reetz, L.-W. Wang  
High-Throughput Selection System for Assessing the Activity of Epoxide Hydrolases.  
*Comb. Chem. High Throughput Screening* **2006**, *9*, 295-299.
- 452 M. T. Reetz, M. Surowiec  
Extending the Concept of Mixtures of Chiral Monodentate P-Ligands in Asymmetric Rh-catalyzed Olefin-Hydrogenation: Use of Oxazaphospholidines.  
*Heterocycles* **2006**, *67*, 567-574.
- 451 M. T. Reetz, J. J.-P. Peyralans, A. Maichele, Y. Fu, M. Maywald  
Directed Evolution of Hybrid Enzymes: Evolving Enantioselectivity of an achiral Rh-complex Anchored to a Protein.  
*Chem. Commun. (Cambridge, U. K.)* **2006**, 4318-4320.
- 450 M. T. Reetz, G. Mehler, O. Bondarev  
Chiral Diphosphites and Diphosphoramidites as Cheap and Efficient Ligands in Rh-Catalyzed Asymmetric Olefin Hydrogenation.  
*Chem. Commun. (Cambridge, U. K.)* **2006**, 2292-2294.
- 449 M. T. Reetz, X. Li  
Asymmetric Hydrogenation of  $\beta$ -Keto Esters Using Chiral Diphosponites.  
*Adv. Synth. Catal.* **2006**, *348*, 1157-1160.
- 448 M. T. Reetz, X. Li  
Asymmetric Hydrogenation of Quinolines Catalyzed by Iridium Complexes of BINOL-

Derived Diphosponites.

*Chem. Commun. (Cambridge, U. K.)* **2006**, 2159-2160.

- 447 M. T. Reetz, X. Li  
An Efficient Catalyst System for the Asymmetric Transfer Hydrogenation of Ketones:  
Remarkably Broad Substrate Scope.  
*J. Am. Chem. Soc.* **2006**, *128*, 1044-1045.
- 446 M. T. Reetz, N. Jiao  
Copper-Phthalocyanine Conjugates of Serum Albumins as Enantioselective Catalysts in  
Diels-Alder Reactions.  
*Angew. Chem.* **2006**, *118*, 2476-2479; *Angew. Chem. Int. Ed.* **2006**, *45*, 2416-2419.
- 445 M. T. Reetz, H. Guo  
Transposition of Allylic Alcohols into Carbonyl Compounds Catalyzed by Rhodium-  
Phosphinine Complexes.  
*Synlett* **2006**, 2127-2129.
- 444 M. T. Reetz, Y. Fu, A. Meiswinkel  
Nonlinear Effects in Rh-Catalyzed Asymmetric Olefin Hydrogenation Using Mixtures of  
Chiral Monodentate P Ligands.  
*Angew. Chem.* **2006**, *118*, 1440-1443; *Angew. Chem. Int. Ed.* **2006**, *45*, 1412-1415.
- 443 M. T. Reetz, J. D. Carballeira, A. Vogel  
Iterative Saturation Mutagenesis on the Basis of B Factors as a Strategy for Increasing  
Protein Thermostability.  
*Angew. Chem.* **2006**, *118*, 7909-7915; *Angew. Chem. Int. Ed.* **2006**, *45*, 7745-7751.
- 442 M. T. Reetz, J. D. Carballeira, J. Peyralans, H. Höbenreich, A. Maichele, A. Vogel  
Expanding the Substrate Scope of Enzymes: Combining Mutations Obtained by  
CASTing.  
*Chem.-Eur. J.* **2006**, *12*, 6031-6038.
- 441 M. T. Reetz  
Practical Protocols for Lipase Immobilization Via Sol-Gel Techniques.

In: *Methods in Biotechnology*, Vol. 22 (Immobilization of Enzymes and Cells), (Ed.: J. M. Guisan), 2. Edition, Humana Press: Totowa, **2006**, pp. 65-76.

- 440 M. T. Reetz  
High-throughput Screening Systems for Assaying the Enantioselectivity of Enzymes.  
In: *Enzyme Assays - High-throughput Screening, Genetic Selection and Fingerprinting*,  
(Ed.: J.-L. Reymond), Wiley-VCH: Weinheim, **2006**, pp. 41-76.
- 439 M. T. Reetz  
Directed Evolution of Enantioselective Enzymes as Catalysts for Organic Synthesis.  
In: *Advances in Catalysis*, Vol. 49, (Eds.: B. C. Gates, K. Knözinger), Elsevier: San  
Diego, **2006**, pp. 1-69.
- 438 M. D. Mihovilovic, F. Rudroff, A. Winninger, T. Schneider, F. Schulz, M. T. Reetz  
Microbial Baeyer-Villiger Oxidation: Stereopreference and Substrate Acceptance of  
Cyclohexanone Monooxygenase Mutants Prepared by Directed Evolution.  
*Org. Lett.* **2006**, 8, 1221-1224.
- 437 M. J. Dröge, Y. L. Boersma, G. van Pouderooyen, T. E. Vrenken, C. J. Rüggeberg,  
M. T. Reetz, B. W. Dijkstra, W. J. Quax  
Directed Evolution of *Bacillus subtilis* Lipase A by Use of Enantiomeric Phosphonate  
Inhibitors: Crystal Structures and Phage Display Selection.  
*ChemBioChem* **2006**, 7, 149-157.
- 436 C. M. Clouthier, M. M. Kayser, M. T. Reetz  
Designing New Baeyer-Villiger Monooxygenases Using Restricted CASTing.  
*J. Org. Chem.* **2006**, 71, 8431-8437.
- 435 D. Belder, M. Ludwig, L.-W. Wang, M. T. Reetz  
Enantioselective Katalyse und Analyse auf einem Mikrochip.  
*Angew. Chem.* **2006**, 118, 2523-2526;  
Enantioselective Catalysis and Analysis on a Chip.  
*Angew. Chem. Int. Ed.* **2006**, 45, 2463-2466.
- 434 S. G. Baca, M. T. Reetz, R. Goddard, I. G. Filippova, Y. A. Simonov, M. Gdaniec,  
N. Gerbeleu

Coordination Polymers Constructed from o-Phthalic Acid and Diamines: Syntheses and Crystal Structures of the Phthalate-Imidazole Complexes  $\{[\text{Cu}(\text{Pht})(\text{Im})_2] \cdot 1.5\text{H}_2\text{O}\}_n$  and  $[\text{Co}(\text{Pht})(\text{Im})_2]_n$  and their Application in Oxidation Catalysis.  
*Polyhedron* **2006**, 25, 1215-1222.

## 2005

- 433 F. Schulz, F. Leca, F. Hollmann, M. T. Reetz  
Towards Practical Biocatalytic Baeyer-Villiger Reactions: Applying a Thermostable Enzyme in the Gram-Scale Synthesis of Optically-Active Lactones in a Two-Liquid-Phase System.  
*Beilstein J. Org. Chem.* **2005**, 1:10.
- 432 M. T. Reetz, K. Sommer  
Gold-catalyzed Hydroarylation of Alkynes.  
In: Handbook of C-H Transformations, Vol. 1 (Applications in Organic Synthesis), chap. 1.3.1.4, (Ed.: G. Dyker), Wiley-VCH: Weinheim, **2005**, pp. 157-166, 268-269.
- 431 M. T. Reetz, A. Meiswinkel, G. Mehler, K. Angermund, M. Graf, W. Thiel, R. Mynott, D. G. Blackmond  
Why are BINOL-Based Monophosphites such Efficient Ligands in Rh-Catalyzed Asymmetric Olefin Hydrogenation?  
*J. Am. Chem. Soc.* **2005**, 127, 10305-10313.
- 430 M. T. Reetz, J.-A. Ma, R. Goddard  
Binol-Derived Monodentate Phosphites and Phosphoramidites with Phosphorus Stereogenic Centers: Novel Ligands for Transition-Metal Catalysis.  
*Angew. Chem.* **2005**, 117, 416-419.  
*Angew. Chem. Int. Ed.* **2005**, 44, 412-415.
- 429 M. T. Reetz, X. Li  
Der Einfluss von Mischungen achiraler einzähniger Liganden auf die Regioselektivität der Übergangsmetallkatalysierten Hydroformylierung.  
*Angew. Chem.* **2005**, 117, 3022-3024.  
The Influence of Mixtures of Monodentate Achiral Ligands on the Regioselectivity of Transition-Metal-Catalyzed Hydroformylation.  
*Angew. Chem. Int. Ed.* **2005**, 44, 2962-2964.
- 428 M. T. Reetz, X. Li  
Mischungen konfigurationsstabiler und fluxionaler atropisomerer einzähniger P-Liganden in der asymmetrischen Rh-katalysierten Olefin-Hydrierung.  
*Angew. Chem.* **2005**, 117, 3019-3021.  
Mixtures of Configurationally Stable and Fluxional Atropisomeric Monodentate P Ligands in Asymmetric Rh-Catalyzed Olefin Hydrogenation.  
*Angew. Chem. Int. Ed.* **2005**, 44, 2959-2962.
- 427 M. T. Reetz, X. Li  
Rhodium-Catalyzed Enantioselective Hydrogenation of  $\beta,\beta$ -Disubstituted  $\alpha$ -Acetamido



Acrylates Using Cheap Monodentate P-Ligands.  
*Synthesis* **2005**, 3183-3185.

- 426 M. T. Reetz, M. Hermes  
Gelenkte *in vitro*-Evolution enantioselektiver Enzyme. Eine Automationslösung für Hochdurchsatz-Screening von Enzymlibliotheken.  
*BIOspektrum* **2005**, 681-682.
- 425 M. T. Reetz, H. Guo  
Mixtures of Monodentate P-Ligands as a Means to Control the Diastereoselectivity in Rh-Catalyzed Hydrogenation of Chiral Alkenes.  
*Beilstein J. Org. Chem.* **2005**, 1:3.
- 424 M. T. Reetz, O. G. Bondarev, H.-J. Gais, C. Bolm  
BINOL-Derived *N*-Phosphino Sulfoximines as Ligands for Asymmetric Catalysis.  
*Tetrahedron Lett.* **2005**, 46, 5643-5646.
- 423 M. T. Reetz, M. Bocola, J. D. Carballeira, D. Zha, A. Vogel  
Expanding the Range of Substrate Acceptance of Enzymes: Combinatorial Active-Site Saturation Test.  
*Angew. Chem.* **2005**, 117, 4264-4268; *Angew. Chem. Int. Ed.* **2005**, 44, 4192-4196.
- 422 M. T. Reetz  
Evolution im Reagenzglas: Neue Perspektiven für die Weiße Biotechnologie.  
In: Max-Planck-Gesellschaft Jahrbuch 2005 Tätigkeitsbericht, Generalverwaltung der Max-Planck-Gesellschaft: München, **2005**, S. 327-331.
- 421 T. Eggert, S. A. Funke, N. M. Rao, P. Acharya, H. Krumm, M. T. Reetz, K.-E. Jaeger  
Multiplex-PCR-Based Recombination as a Novel High-Fidelity Method for Directed Evolution.  
*ChemBioChem* **2005**, 6, 1062-1067.
- 420 M. Bocola, F. Schulz, F. Leca, A. Vogel, M. W. Fraaije, M. T. Reetz  
Converting Phenylacetone Monooxygenase into Phenylcyclohexanone Monooxygenase by Rational Design: Towards Practical Baeyer-Villiger Monooxygenases.  
*Adv. Synth. Catal.* **2005**, 347, 979-986.
- 419 H. Bernsmann, M. van den Berg, R. Hoen, A. J. Minnaard, G. Mehler, M. T. Reetz, J. G. de Vries, B. L. Feringa  
PipPhos and MorfPhos: Privileged Monodentate Phosphoramidite Ligands for Rhodium-Catalyzed Asymmetric Hydrogenation.  
*J. Org. Chem.* **2005**, 70, 943-951.

**2004**

- 418 M. T. Reetz, W. Wiesenhöfer  
Liquid Poly(Ethylene Glycol) and Supercritical Carbon Dioxide as a Biphasic Solvent System for Lipase-catalyzed Esterification.  
*Chem. Commun. (Cambridge, U. K.)* **2004**, 2750-2751.
- 417 M. T. Reetz, J. G. de Vries  
Ligand-free Heck Reactions Using Low Pd-loading.  
*Chem. Commun. (Cambridge, U. K.)* **2004**, 1559-1563
- 416 M. T. Reetz, C. Torre, A. Eipper, R. Lohmer, M. Hermes, B. Brunner, A. Maichele, M. Bocola, M. Arand, A. Cronin, Y. Genzel, A. Archelas, R. Furstoss  
Enhancing the Enantioselectivity of an Epoxide Hydrolase by Directed Evolution.  
*Org. Lett.* **2004**, 6, 177-180.
- 415 M. T. Reetz, P. Tielmann, A. Eipper, A. Ross, G. Schlotterbeck  
A High-throughput NMR-based *ee*-Assay using Chemical Shift Imaging.  
*Chem. Commun. (Cambridge, U. K.)* **2004**, 1366-1367.
- 414 M. T. Reetz, H. Schulenburg, M. Lopez, B. Spliethoff, B. Tesche  
Platinum-Nanoparticles on Different Types of Carbon Supports: Correlation of Electrocatalytic Activity with Carrier Morphology.  
*Chimia* **2004**, 58, 896-899.
- 413 M. T. Reetz, G. Mehler, A. Meiswinkel  
Mixtures of Chiral Monodentate Phosphites, Phosponites and Phosphines as Ligands in Rh-catalyzed Hydrogenation of *N*-acyl Enamines: Extension of the Combinatorial Approach.  
*Tetrahedron: Asymmetry* **2004**, 15, 2165-2167.  
Corrigendum: M. T. Reetz, G. Mehler, A. Meiswinkel, T. Sell  
*Tetrahedron: Asymmetry* **2004**, 15, 3483.
- 412 M. T. Reetz, X. Li  
Combinatorial Approach to the Asymmetric Hydrogenation of  $\beta$ -Acylamino Acrylates: Use of Mixtures of Chiral Monodentate P-Ligands.  
*Tetrahedron* **2004**, 60, 9709-9714.
- 411 M. T. Reetz, F. Daligault, B. Brunner, H. Hinrichs, A. Deege  
Directed Evolution of Cyclohexanone Monooxygenases: Enantioselective Biocatalysts for the Oxidation of Prochiral Thioethers.  
*Angew. Chem.* **2004**, 116, 4170-4173.  
*Angew. Chem. Int. Ed.* **2004**, 43, 4078-4081.
- 410 M. T. Reetz, B. Brunner, T. Schneider, F. Schulz, C. M. Clouthier, M. M. Kayser  
Directed Evolution as a Method to Create Enantioselective Cyclohexanone Monooxygenases for Catalysis in Baeyer-Villiger Reactions.  
*Angew. Chem.* **2004**, 116, 4167-4170.  
*Angew. Chem. Int. Ed.* **2004**, 43, 4075-4078.
- 409 M. T. Reetz

Changing the Enantioselectivity of Enzymes by Directed Evolution.

In: *Methods in Enzymology*, Vol. 388 (Protein Engineering), (Eds.: D. E. Robertson, J. P. Noel), Elsevier Academic Press: San Diego, California, **2004**, pp. 238-256.

408 M. T. Reetz

High-throughput Screening of Enantioselective Industrial Biocatalysts.

In: *Evolutionary Methods in Biotechnology - Clever Tricks for Directed Evolution*, (Eds.: S. Brakmann, A. Schwienhorst), Wiley-VCH: Weinheim, **2004**, pp. 113-141.

407 M. T. Reetz

Controlling the Enantioselectivity of Enzymes by Directed Evolution: Practical and Theoretical Ramifications.

*Proc. Natl. Acad. Sci. U. S. A.* **2004**, *101*, 5716-5722.

406 M. T. Reetz

Evolution im Reagenzglas: Biokatalysatoren auf dem Vormarsch.

*Votr. - Nordrhein-Westfäl. Akad. Wiss., Naturwiss., Medizin* **2004**, *N 462*, 5-20.

405 M. T. Reetz

Screening for Enantioselective Enzymes.

In: *Enzyme Functionality - Design, Engineering, and Screening*, (Ed.: A. Svendsen), Marcel Dekker: New York, **2004**, pp. 559-598.

404 M. T. Reetz

Combinatorial Methods in Catalysis by Metal Complexes.

In: *Comprehensive Coordination Chemistry II*, Vol. 9 (Applications of Coordination Chemistry), (Ed.: M. D. Ward), Elsevier: Amsterdam, **2004**, pp. 509-548.

403 A. Pundt, M. Suleiman, C. Bähz, M. T. Reetz, R. Kirchheim, N. M. Jisrawi

Hydrogen and Pd-Clusters.

*Mater. Sci. Eng., B* **2004**, *108*, 19-23.

402 T. Eggert, M. T. Reetz, K.-E. Jaeger

Directed Evolution by Random Mutagenesis: A Critical Evaluation.

In: *Enzyme Functionality - Design, Engineering, and Screening*, (Ed.: A. Svendsen), Marcel Dekker: New York, **2004**, pp. 375-390.

401 M. Bocola, N. Otte, K.-E. Jaeger, M. T. Reetz, W. Thiel

Learning from Directed Evolution: Theoretical Investigations into Cooperative Mutations in Lipase Enantioselectivity.

*ChemBioChem* **2004**, *5*, 214-223.

**2003**

- 400 D. Zha, A. Eipper, M. T. Reetz  
Assembly of Designed Oligonucleotides as an Efficient Method for Gene Recombination:  
A New Tool in Directed Evolution.  
*ChemBioChem* **2003**, *4*, 34-39.
- 399 P. Tielmann, M. Boese, M. Luft, M. T. Reetz  
A Practical High-Throughput Screening System for Enantioselectivity by Using FTIR  
Spectroscopy.  
*Chem.-Eur. J.* **2003**, *9*, 3882-3887.
- 398 M. Suleiman, N. M. Jisrawi, O. Dankert, M. T. Reetz, C. Bähz, R. Kirchheim, A. Pundt  
Phase Transition and Lattice Expansion During Hydrogen Loading of Nanometer Sized  
Palladium Clusters.  
*J. Alloys Compd.* **2003**, *356-357*, 644-648.
- 397 M. T. Reetz, W. Wiesenhöfer, G. Franciò, W. Leitner  
Continuous Flow Enzymatic Kinetic Resolution and Enantiomer Separation using Ionic  
Liquid/Supercritical Carbon Dioxide Media.  
*Adv. Synth. Catal.* **2003**, *345*, 1221-1228.
- 396 M. T. Reetz, P. Tielmann, W. Wiesenhöfer, W. Könen, A. Zonta  
Second Generation Sol-Gel Encapsulated Lipases: Robust Heterogeneous Biocatalysts.  
*Adv. Synth. Catal.* **2003**, *345*, 717-728.
- 395 M. T. Reetz, K. Sommer  
Gold-Catalyzed Hydroarylation of Alkynes.  
*Eur. J. Org. Chem.* **2003**, 3485-3496.
- 394 M. T. Reetz, T. Sell, A. Meiswinkel, G. Mehler  
Ein neuartiges Prinzip in der kombinatorischen asymmetrischen Übergangsmetall-  
Katalyse: Mischungen von chiralen einzähnigen P-Liganden.  
*Angew. Chem.* **2003**, *115*, 814-817.  
A New Principle in Combinatorial Asymmetric Transition-Metal Catalysis: Mixtures of  
Chiral Monodentate P Ligands.  
*Angew. Chem. Int. Ed.* **2003**, *42*, 790-793.
- 393 M. T. Reetz, T. Sell, R. Goddard  
Chiral Phosphoric Acid Diesters as Ligands in Asymmetric Transition Metal Catalyzed  
Hydrogenation.  
*Chimia* **2003**, *57*, 290-292.
- 392 M. T. Reetz, H. Oka, R. Goddard  
Binaphthylidiamine-Based Diazaphospholidines as a New Class of Chiral Monodentate  
P-Ligands.  
*Synthesis* **2003**, 1809-1814.
- 391 M. T. Reetz, G. Mehler  
Mixtures of Chiral and Achiral Monodentate Ligands in Asymmetric Rh-Catalyzed Olefin  
Hydrogenation: Reversal of Enantioselectivity.

- Tetrahedron Lett.* **2003**, *44*, 4593-4596.
- 390 M. T. Reetz, M. Lopez, W. Grünert, W. Vogel, F. Mahlendorf  
Preparation of Colloidal Nanoparticles of Mixed Metal Oxides Containing Platinum, Ruthenium, Osmium, and Iridium and Their Use as Electrocatalysts.  
*J. Phys. Chem. B* **2003**, *107*, 7414-7419.
- 389 M. T. Reetz, L. J. Goossen, A. Meiswinkel, J. Paetzold, J. Feldthusen Jensen  
Enantioselective Rh-Catalyzed Hydrogenation of Vinyl Carboxylates with Monodentate Phosphite Ligands.  
*Org. Lett.* **2003**, *5*, 3099-3101.
- 388 M. T. Reetz  
Mixtures of Chiral Monodentate P-Ligands: A New Principle in Combinatorial Asymmetric Transition Metal Catalysis.  
*Chim. Oggi* **2003**, *21(10/11)*, 5-8.
- 387 M. T. Reetz  
Chiral Monophosphites and Monophosphonites as Ligands in Asymmetric Transition Metal Catalysis.  
*Russ. J. Org. Chem.* **2003**, *39*, 392-396.
- 386 M. T. Reetz  
Select Protocols of High-Throughput ee-Screening Systems for Assaying Enantioselective Enzymes.  
In: *Methods in Molecular Biology*, Vol. 230 (Directed Enzyme Evolution: Screening and Selection Methods), (Eds.: F. H. Arnold, G. Georgiou), Humana Press: Totowa, New Jersey, **2003**, pp. 283-290.
- 385 M. T. Reetz  
An Overview of High-Throughput Screening Systems for Enantioselective Enzymatic Transformations.  
In: *Methods in Molecular Biology*, Vol. 230 (Directed Enzyme Evolution: Screening and Selection Methods), (Eds.: F. H. Arnold, G. Georgiou), Humana Press: Totowa, New Jersey, **2003**, pp. 259-282.
- 384 M. T. Reetz  
Cheap Chiral Ligands for Asymmetric Transition Metal Catalyzed Reactions.  
In: *Perspectives in Organometallic Chemistry* (Eds.: C. G. Screttas, B. R. Steele), The Royal Society of Chemistry: Cambridge, U. K., **2003**, pp. 265-274.
- 383 S. A. Funke, A. Eipper, M. T. Reetz, N. Otte, W. Thiel, G. van Pouderoyen, B. W. Dijkstra, K.-E. Jaeger, T. Eggert  
Directed Evolution of an Enantioselective *Bacillus subtilis* Lipase.  
*Biocatal. Biotransform.* **2003**, *21*, 67-73.
- 382 M. J. Dröge, C. J. Rüggeberg, A. M. van der Sloot, J. Schimmel, D. S. Dijkstra, R. M. D. Verhaert, M. T. Reetz, W. J. Quax

Binding of Phage Displayed *Bacillus Subtilis* Lipase A to a Phosphonate Suicide Inhibitor.  
*J. Biotechnol.* **2003**, *101*, 19-28.

- 381 F. Cedrone, S. Niel, S. Roca, T. Bhatnagar, N. Ait-Abdelkader, C. Torre, H. Krumm, A. Maichele, M. T. Reetz, J. C. Baratti  
Directed Evolution of the Epoxide Hydrolase from *Aspergillus niger*.  
*Biocatal. Biotransform.* **2003**, *21*, 357-364.

## 2002

- 380 W. Schrader, A. Eipper, D. J. Pugh, M. T. Reetz  
Second-Generation MS-Based High-Throughput Screening System for Enantioselective Catalysts and Biocatalysts.  
*Can. J. Chem.* **2002**, *80*, 626-632.
- 379 M. T. Reetz, W. Wiesenhöfer, G. Franciò, W. Leitner  
Biocatalysis in Ionic Liquids: Batchwise and Continuous Flow Processes Using Supercritical Carbon Dioxide as the Mobile Phase.  
*Chem. Commun. (Cambridge, U. K.)* **2002**, 992-993.
- 378 M. T. Reetz, C. J. Rüggeberg, M. J. Dröge, W. J. Quax  
Immobilization of Chiral Enzyme Inhibitors on Solid Supports by Amide-forming Coupling and Olefin Metathesis.  
*Tetrahedron* **2002**, *58*, 8465-8473.
- 377 M. T. Reetz, C. J. Rüggeberg  
A Screening System for Enantioselective Enzymes based on Differential Cell Growth.  
*Chem. Commun. (Cambridge, U. K.)* **2002**, 1428-1429.
- 376 M. T. Reetz, M. Rentzsch, A. Pletsch, M. Maywald  
Towards the Directed Evolution of Hybrid Catalysts.  
*Chimia* **2002**, *56*, 721-723.
- 375 M. T. Reetz, G. Mehler, A. Meiswinkel, T. Sell  
Enantioselective Hydrogenation of Enamides Catalyzed by Chiral Rhodium-Monodentate Phosphite Complexes.  
*Tetrahedron Lett.* **2002**, *43*, 7941-7943.
- 374 M. T. Reetz, P. Maiwald  
Multiply Chiral Phosphite/Phosphonite Ligands: Tuning Enantioselectivity by Choice of Diastereomers.  
*C. R. Chim.* **2002**, *5*, 341-344.
- 373 M. T. Reetz, I. D. Kostas, S. R. Waldvogel  
Synthesis of a Gold(I) Complex with a (Thio)phosphine-Modified  $\beta$ -Cyclodextrin.  
*Inorg. Chem. Commun.* **2002**, *5*, 252-254.
- 372 M. T. Reetz, K.-E. Jaeger  
Directed Evolution as a Means to Create Enantioselective Enzymes for Use in Organic Chemistry.  
In: Directed Molecular Evolution of Proteins or How to Improve Enzymes for Biocatalysis, (Eds.: S. Brakmann, K. Johnsson), Wiley-VCH Verlag GmbH: Weinheim, **2002**, pp. 245-279.

- 371 M. T. Reetz, A. Gosberg, D. Moulin  
Copper-catalyzed Enantioselective Conjugate Addition of Diethylzinc to  $\alpha,\beta$ -Unsaturated Carbonyl Compounds Using Diphosphonites as Chiral Ligands.  
*Tetrahedron Lett.* **2002**, *43*, 1189-1191.
- 370 M. T. Reetz, A. Eipper, P. Tielmann, R. Mynott  
A Practical NMR-Based High-Throughput Assay for Screening Enantioselective Catalysts and Biocatalysts.  
*Adv. Synth. Catal.* **2002**, *344*, 1008-1016.
- 369 M. T. Reetz  
Directed Evolution of Selective Enzymes and Hybrid Catalysts.  
*Tetrahedron* **2002**, *58*, 6595-6602
- 368 M. T. Reetz  
Neue Methoden für das Hochdurchsatz-Screening von enantioselektiven Katalysatoren und Biokatalysatoren.  
*Angew. Chem.* **2002**, *114*, 1391-1394.  
New Methods for the High-Throughput Screening of Enantioselective Catalysts and Biocatalysts.  
*Angew. Chem. Int. Ed.* **2002**, *41*, 1335-1338.
- 367 M. T. Reetz  
Directed Evolution of Enantioselective Enzymes as Catalysts in the Production of Chiral Pharmaceuticals.  
In: Pharmacochimistry Library, Vol. 32 (Trends in Drug Research III),  
(Ed.: H. van der Goot), Elsevier: Amsterdam, **2002**, pp. 27-37.
- 366 M. T. Reetz  
Lipases as Practical Biocatalysts.  
*Curr. Opin. Chem. Biol.* **2002**, *6*, 145-150.
- 365 M. T. Reetz  
Titanium in Organic Synthesis.  
In: Organometallics in Synthesis - A Manual (Ed.: M. Schlosser), 2. Edition, Wiley: New York, **2002**, pp. 817-923.
- 364 A. Pundt, M. Dornheim, M. Guerdane, H. Teichler, H. Ehrenberg, M. T. Reetz, N. M. Jisrawi  
Evidence for a Cubic-to-icosahedral Transition of Quasi-free Pd-H-clusters Controlled by the Hydrogen Content: On the Phase Transitions in Pd-H-Clusters.
- 363 J. P. M. Niederer, A. B. J. Arnold, W. F. Hölderich, B. Spliethoff, B. Tesche, M. T. Reetz, H. Bönemann  
Noble Metal Nanoparticles Incorporated in Mesoporous Hosts.  
*Top. Catal.* **2002**, *18*, 265-269.  
*Eur. Phys. J. D* **2002**, *19*, 333-337.
- 362 K.-E. Jaeger, M. T. Reetz, B. W. Dijkstra  
Directed Evolution to Produce Enantioselective Biocatalysts.  
*ASM News* **2002**, *68*, 556-562.

361 R. Goddard, H. M. Herzog, M. T. Reetz  
Cation-anion CH $\cdots$ O $^-$  Interactions in the Metal-free Phenolate, Tetra-*n*-butylammonium phenol-phenolate.  
*Tetrahedron* **2002**, *58*, 7847-7850.

## 2001

360 D. Zha, S. Wilensek, M. Hermes, K.-E. Jaeger, M. T. Reetz  
Complete Reversal of Enantioselectivity of an Enzyme-catalyzed Reaction by Directed Evolution.  
*Chem. Commun. (Cambridge, U. K.)* **2001**, 2664-2665.

359 H. Wang, C. Wingender, H. Baltruschat, M. Lopez, M. T. Reetz  
Methanol Oxidation on Pt, PtRu, and Colloidal Pt Electrocatalysts: a DEMS Study of Product Formation.  
*J. Electroanal. Chem.* **2001**, *509*, 163-169.

358 C. Sachs, A. Pundt, R. Kirchheim, M. Winter, M. T. Reetz, D. Fritsch  
Solubility of Hydrogen in Single-Sized Palladium Clusters.  
*Phys. Rev. B: Condens. Matter Mater. Phys.* **2001**, *64*, 075408/1-075408/10.

357 M. T. Reetz, M. Winter, R. Breinbauer, T. Thurn-Albrecht, W. Vogel  
Size-Selective Electrochemical Preparation of Surfactant-Stabilized Pd-, Ni- and Pt/Pd Colloids.  
*Chem.-Eur. J.* **2001**, *7*, 1084-1094.

356 M. T. Reetz, S. Wilensek, D. Zha, K.-E. Jaeger  
Gerichtete Evolution eines enantioselektiven Enzyms durch kombinatorische multiple Kassetten-Mutagenese.  
*Angew. Chem.* **2001**, *113*, 3701-3703.  
Directed Evolution of an Enantioselective Enzyme through Combinatorial Multiple-Cassette Mutagenesis.  
*Angew. Chem. Int. Ed.* **2001**, *40*, 3589-3591.

355 M. T. Reetz, S. Sostmann  
2,15-Dihydroxy-hexahelicene (HELIXOL): Synthesis and Use as an Enantioselective Fluorescent Sensor.  
*Tetrahedron* **2001**, *57*, 2515-2520.

354 M. T. Reetz, J. Rudolph, R. Goddard  
Diastereotopic Group Recognition in the Solid State – A Unique Intramolecular  $\beta$ -Cyclodextrin Inclusion Complex.  
*Can. J. Chem.* **2001**, *79*, 1806-1811.

353 M. T. Reetz, D. Moulin, A. Gosberg  
BINOL-Based Diphosphonites as Ligands in the Asymmetric Rh-Catalyzed Conjugate Addition of Arylboronic Acids.  
*Org. Lett.* **2001**, *3*, 4083-4085.

352 M. T. Reetz, W. K. Lee  
New Uses of Amino Acids as Chiral Building Blocks in Organic Synthesis.  
*Org. Lett.* **2001**, *3*, 3119-3120.



- 351 M. T. Reetz, K. M. Kühling, S. Wilensek, H. Husmann, U. W. Häusig, M. Hermes  
A GC-Based Method for High-Throughput Screening of Enantioselective Catalysts.  
*Catal. Today* **2001**, 67, 389-396.
- 350 M. T. Reetz, M. Hermes, M. H. Becker  
Infrared-Thermographic Screening of the Activity and Enantioselectivity of Enzymes.  
*Appl. Microbiol. Biotechnol.* **2001**, 55, 531-536.
- 349 M. T. Reetz  
Evolution im Reagenzglas – Biokatalysatoren auf dem Vormarsch.  
In: 52. Jahresversammlung der Max-Planck-Gesellschaft in Berlin, S. 14-27 (2001).  
Evolution im Reagenzglas als Methode zur Erzeugung enantioselektiver Biokatalysatoren.  
In: Jahrb. - Max-Planck-Ges., Vandenhoeck & Ruprecht: Göttingen, **2001**, S. 49-63.
- 348 M. T. Reetz  
Evolution im Reagenzglas als neuer Weg zu selektiven Biokatalysatoren. In: Unter jedem  
Stein liegt ein Diamant. Struktur – Dynamik – Evolution, (Eds.: E.-L. Winnacker,  
J. Dichgans, G. Erker), Hirzel Verlag: Stuttgart, **2001**, S. 93-101.
- 347 M. T. Reetz  
Kombinatorische und evolutionsgesteuerte Methoden zur Bildung enantioselektiver  
Katalysatoren.  
*Angew. Chem.* **2001**, 113, 292-320.  
Combinatorial and Evolution-Based Methods in the Creation of Enantioselective  
Catalysts.  
*Angew. Chem. Int. Ed.* **2001**, 40, 284-310.
- 346 J. P. M. Niederer, A. B. J. Arnold, W. F. Hoelderich, B. Spliethoff, B. Tesche,  
M. T. Reetz, H. Boennemann  
On the Direct Synthesis of Noble Metal Cluster Containing MCM-41 Using Surfactant  
Stabilised Metal Nanoparticles.  
*Stud. Surf. Sci. Catal.* **2001**, 135 (Zeolites and Mesoporous Materials at the Dawn of the  
21st Century), 4780-4787.
- 345 K.-E. Jaeger, T. Eggert, A. Eipper, M. T. Reetz  
Directed Evolution and the Creation of Enantioselective Biocatalysts.  
*Appl. Microbiol. Biotechnol.* **2001**, 55, 519-530.
- 344 A. Fürstner, D. Voigtländer, W. Schrader, D. Giebel, M. T. Reetz  
A "Hard/Soft" Mismatch Enables Catalytic Friedel-Crafts Acylations.  
*Org. Lett.* **2001**, 3, 417-420.

## 2000

- 343 M. T. Reetz, E. Westermann  
Phosphanfreie Palladium-katalysierte Kupplungen: die entscheidende Rolle von Pd-  
Nanoteilchen.  
*Angew. Chem.* **2000**, 112, 170-173.  
Phosphane-free Palladium-catalyzed Coupling Reactions: The Decisive Role of Pd  
Nanoparticles.

- Angew. Chem. Int. Ed.* **2000**, 39, 165-168.
- 342 M. T. Reetz, R. Wenkel, D. Avnir  
Entrapment of Lipases in Hydrophobic Sol-Gel-Materials: Efficient Heterogeneous Biocatalysts in Aqueous Medium.  
*Synthesis* **2000**, 781-783.
- 341 M. T. Reetz, S. R. Waldvogel, R. Goddard  
Regioselective Hydroformylation of Citronellene Using a Novel Rhodium-Catalyst.  
*Heterocycles* **2000**, 52, 935-938.
- 340 M. T. Reetz, S. Sostmann  
Kinetic Resolution in Pd-catalyzed Allylic Substitution Using the Helical PHelix Ligand.  
*J. Organomet. Chem.* **2000**, 603, 105-109.
- 339 M. T. Reetz, T. Sell  
Rhodium-catalyzed Enantioselective Hydrogenation Using Chiral Monophosphonite Ligands.  
*Tetrahedron Lett.* **2000**, 41, 6333-6336.
- 338 M. T. Reetz, M. Pastó  
Mixed Bidentate Ligands: The First Chiral Phosphonite-Phosphite.  
*Tetrahedron Lett.* **2000**, 41, 3315-3317.
- 337 M. T. Reetz, G. Mehler  
Hoch enantioselektive Rh-katalysierte Hydrierungen unter Verwendung von chiralen Monophosphit-Liganden.  
*Angew. Chem.* **2000**, 112, 4047-4049.  
Highly Enantioselective Rh-catalyzed Hydrogenation Reaction Based on Chiral Monophosphite Ligands.  
*Angew. Chem. Int. Ed.* **2000**, 39, 3889-3890.
- 336 M. T. Reetz, M. Maase, T. Schilling, B. Tesche  
Computer Image Processing of Transmission Electron Micrograph Pictures as a Fast and Reliable Tool to Analyze the Size of Nanoparticles.  
*J. Phys. Chem. B* **2000**, 104, 8779-8781.
- 335 M. T. Reetz, K. M. Kühling, H. Hinrichs, A. Deege  
Circular Dichroism as a Detection Method in the Screening of Enantioselective Catalysts.  
*Chirality* **2000**, 12, 479-482.
- 334 M. T. Reetz, K. M. Kühling, A. Deege, H. Hinrichs, D. Belder  
Super-Hochdurchsatz-Screening von enantioselektiven Katalysatoren mittels parallelisierter Kapillarelektrophorese.  
*Angew. Chem.* **2000**, 112, 4049-4052.  
Super-High-Throughput Screening of Enantioselective Catalysts by Using Capillary Array Electrophoresis.  
*Angew. Chem. Int. Ed.* **2000**, 39, 3891-3893.

- 333 M. T. Reetz, K.-E. Jaeger  
Enantioselective Enzymes for Organic Synthesis Created by Directed Evolution.  
*Chem.-Eur. J.* **2000**, *6*, 407-412.
- 332 M. T. Reetz, G. Haderlein, K. Angermund  
Chiral Diketimines as Ligands in Pd-catalyzed Reactions: Prediction of Catalyst Activity by the AMS Model.  
*J. Am. Chem. Soc.* **2000**, *122*, 996-997.
- 331 M. T. Reetz, D. Giebel  
Quervernetzte Scandium-haltige Dendrimere: eine neue Klasse heterogener Katalysatoren.  
*Angew. Chem.* **2000**, *112*, 2614-2617.  
Cross-linked Scandium-containing Dendrimers: A New Class of Heterogeneous Catalysts.  
*Angew. Chem. Int. Ed.* **2000**, *39*, 2498-2501.
- 330 M. T. Reetz, M. H. Becker, M. Liebl, A. Fürstner  
IR-Thermographie-Screening von thermoneutralen oder endothermen Reaktionen: die Ringschluss-Olefin-Metathese.  
*Angew. Chem.* **2000**, *112*, 1294-1298.  
IR-thermographic Screening of Thermoneutral or Endothermic Transformations: The Ring-closing Olefin Metathesis Reaction.  
*Angew. Chem. Int. Ed.* **2000**, *39*, 1236-1239.
- 329 M. T. Reetz  
Application of Directed Evolution in the Development of Enantioselective Enzymes.  
*Pure Appl. Chem.* **2000**, *72*, 1615-1622.
- 328 M. T. Reetz  
Evolution im Reagenzglas als Methode zur Erzeugung von enantioselektiven Biokatalysatoren für die Organische Chemie.  
In: Jahrbuch 1999 der Deutschen Akademie der Naturforscher Leopoldina (Halle/Saale) (Ed.: B. Parthier), *LEOPOLDINA (R. 3)*, **2000**, *45*, 435-446.
- 327 M. T. Reetz  
Evolution in the Test Tube as a Means to Create Enantioselective Enzymes for Use in Organic Synthesis.  
*Sci. Prog. (Northwood, U. K.)* **2000**, *83*, 157-172.
- 326 K. Liebeton, A. Zonta, K. Schimossek, M. Nardini, D. Lang, B. W. Dijkstra, M. T. Reetz, K.-E. Jaeger  
Directed Evolution of an Enantioselective Lipase.  
*Chem. Biol.* **2000**, *7*, 709-718.
- 325 K.-E. Jaeger, M. T. Reetz  
Directed Evolution of Enantioselective Enzymes for Organic Chemistry.

*Curr. Opin. Chem. Biol.* **2000**, *4*, 68-73.

- 324 R. Goddard, S. Hütte, M. T. Reetz  
Tetrabutylammonium  $\alpha$ -Acetyl- $\gamma$ -butyrolactonate Containing a Three-dimensional Hydrogen-bonded network.  
*Acta Crystallogr., Sect. C.: Cryst. Struct. Commun.* **2000**, *56*, 878-880.
- 323 J. S. Bradley, B. Tesche, W. Busser, M. Maase, M. T. Reetz  
Surface Spectroscopic Study of the Stabilization Mechanism for Shape-selectively Synthesized Nanostructured Transition Metal Colloids.  
*J. Am. Chem. Soc.* **2000**, *122*, 4631-4636.

## 1999

- 322 T. Thurn-Albrecht, G. Meier, P. Müller-Buschbaum, A. Patkowski, W. Steffen, G. Grübel, D. L. Abernathy, O. Diat, M. Winter, M. G. Koch, M. T. Reetz  
Structure and Dynamics of Surfactant-stabilized Aggregates of Palladium Nanoparticles under Dilute and Semidilute Conditions: Static and Dynamic X-ray Scattering.  
*Phys. Rev. E: Stat. Phys., Plasmas, Fluids, Relat. Interdiscip. Top.* **1999**, *59*, 642-649.
- 321 C. Schmitz, M. T. Reetz  
Solid-phase Enzymatic Synthesis of Oligonucleotides.  
*Org. Lett.* **1999**, *1*, 1729-1731.
- 320 M. T. Reetz, M. Willuhn, C. Psiorz, R. Goddard  
Donor Complexes of Bis(1-indenyl)phenylborane Dichlorozirconium as Isospecific Catalysts in Propene Polymerization.  
*Chem. Commun. (Cambridge, U. K.)* **1999**, 1105-1106.
- 319 M. T. Reetz, A. Schmitz  
Stereoselective Reductive Amination of Chiral *N,N*-Dibenzylamino Ketones.  
*Tetrahedron Lett.* **1999**, *40*, 2741-2742.
- 318 M. T. Reetz, A. Schmitz  
Stereoselective Grignard-type Reactions of Chiral *N,N*-Dibenzylamino Ketones.  
*Tetrahedron Lett.* **1999**, *40*, 2737-2740.
- 317 M. T. Reetz, T. Neugebauer  
Neue Diphosphitliganden für die katalytische asymmetrische Hydrierung: die entscheidende Rolle von konformationsenantiomeren Diolen.  
*Angew. Chem.* **1999**, *111*, 134-137.  
New Diphosphite Ligands for Catalytic Asymmetric Hydrogenation: The Crucial Role of Conformationally Enantiomeric Diols.  
*Angew. Chem. Int. Ed.* **1999**, *38*, 179-181.
- 316 M. T. Reetz, M. Maase  
Redox-controlled Size-selective Fabrication of Nanostructured Transition Metal Colloids.  
*Adv. Mater. (Weinheim, Ger.)* **1999**, *11*, 773-777.
- 315 M. T. Reetz, M. G. Koch  
Water-soluble Colloidal Adams Catalyst: Preparation and Use in Catalysis.  
*J. Am. Chem. Soc.* **1999**, *121*, 7933-7934.
- 314 M. T. Reetz, K.-E. Jaeger

- Superior Biocatalysts by Directed Evolution.  
*Top. Curr. Chem.* **1999**, *200*, 31-57.
- 313 M. T. Reetz, S. Hütte, R. Goddard  
Tetrabutylammonium Phenyl(phenylsulfonyl)methylide: A Chiral Metal-free "Carbanion".  
*Eur. J. Org. Chem.* **1999**, 2475-2478.
- 312 M. T. Reetz, S. Hütte, R. Goddard  
Supramolecular Structure of the Tetrabutylammonium Salt of 2-Phenylpropionitrile.  
*J. Prakt. Chem. (Weinheim, Ger.)* **1999**, *341*, 297-301.
- 311 M. T. Reetz, A. Gosberg  
New Non- $C_2$ -symmetric Phosphine-Phosphonites as Ligands in Asymmetric Metal Catalysis.  
*Tetrahedron: Asymmetry* **1999**, *10*, 2129-2137.
- 310 M. T. Reetz, C. Frömbgen  
Chemoselective Reduction of Halo-nitro Aromatic Compounds by  $\beta$ -Cyclodextrin-modified Transition Metal Catalysts in a Biphasic System.  
*Synthesis* **1999**, 1555-1557.
- 309 M. T. Reetz, M. Dugal  
Entrapment of Nanostructured Palladium Clusters in Hydrophobic Sol-Gel Materials.  
*Catal. Lett.* **1999**, *58*, 207-212.
- 308 M. T. Reetz, M. W. Drewes, R. Schwickardi  
Preparation of Enantiomerically Pure  $\alpha$ -*N,N*-Dibenzylamino Aldehydes: S-2-(*N,N*-Dibenzylamino)-3-phenylpropanal (Benzenepropanal,  $\alpha$ -[bis(phenylmethyl)amino]-, (S)-).  
*Org. Synth.* **1999**, *76*, 110-122.
- 307 M. T. Reetz, E. Bohres, R. Goddard, M. C. Holthausen, W. Thiel  
Synthesis, Solid-state Structure, and Electronic Nature of a Phosphinine-stabilized *triangulo* Palladium Cluster.  
*Chem.-Eur. J.* **1999**, *5*, 2101-2108.
- 306 M. T. Reetz, E. W. Beuttenmüller, R. Goddard, M. Pastó  
A New Class of Chiral Diphosphines Having Planar Chirality.  
*Tetrahedron Lett.* **1999**, *40*, 4977-4980.
- 305 M. T. Reetz, M. H. Becker, H.-W. Klein, D. Stöckigt  
Eine Methode zum High-Throughput-Screening von enantioselektiven Katalysatoren.  
*Angew. Chem.* **1999**, *111*, 1872-1875.  
A Method for High-throughput Screening of Enantioselective Catalysts.  
*Angew. Chem. Int. Ed.* **1999**, *38*, 1758-1761.
- 304 M. T. Reetz  
Strategies for the Development of Enantioselective Catalysts.  
*Pure Appl. Chem.* **1999**, *71*, 1503-1509.
- 303 M. T. Reetz  
New Palladium Catalysts for Heck Reactions of Unreactive Aryl Halides.  
In: Transition Metal Catalysed Reactions: A 'Chemistry for the 21st Century' Monograph (Eds.: S.-I. Murahashi, S. G. Davies), IUPAC, Blackwell Science: Oxford, **1999**, pp. 207-224.

- 302 M. T. Reetz  
Synthesis and Diastereoselective Reactions of *N,N*-Dibenzylamino Aldehydes and Related Compounds.  
*Chem. Rev. (Washington, D. C.)* **1999**, *99*, 1121-1162.
- 301 M. T. Reetz  
Evolution im Reagenzglas als Methode zur Erzeugung enantioselektiver Biokatalysatoren.  
In: Jahrb. - Max-Planck-Ges., Vandenhoeck & Ruprecht: Göttingen, **1999**, S. 555-561.
- 295 D. H. Adamson, M. T. Reetz  
Poly(methyl methacrylate) Stereocomplexes by a Single Polymerization.  
*Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1999**, *40*, 860-861.
- 296 D. G. Blackmond, T. Rosner, T. Neugebauer, M. T. Reetz  
Kinetische Einflüsse auf die Enantioselektivität von nichtdiastereomerenreinen Katalysatormischungen.  
*Angew. Chem.* **1999**, *111*, 2333-2335.  
Kinetic Influences on Enantioselectivity for Non-diastereopure Catalyst Mixtures.  
*Angew. Chem. Int. Ed.* **1999**, *38*, 2196-2199.
- 297 N. Brinkmann, D. Giebel, G. Lohmer, M. T. Reetz, U. Kragl  
Allylic Substitution with Dendritic Palladium Catalysts in a Continuously Operating Membrane Reactor.  
*J. Catal.* **1999**, *183*, 163-168.
- 298 J. Huskens, M. T. Reetz  
Observation of Stereotopic Group Recognition in Chiral Borate Complexes in Solution.  
*Eur. J. Org. Chem.* **1999**, 1775-1786.
- 299 K.-E. Jaeger, B. W. Dijkstra, M. T. Reetz  
Bacterial Biocatalysts: Molecular Biology, Three-dimensional Structures, and Biotechnological Applications of Lipases.  
*Annu. Rev. Microbiol.* **1999**, *53*, 315-351.
- 300 A. Pundt, C. Sachs, M. Winter, M. T. Reetz, D. Fritsch, R. Kirchheim  
Hydrogen Sorption in Elastically Soft Stabilized Pd-clusters.  
*J. Alloys Compd.* **1999**, *293-295*, 480-483.

## **1998**

- 294 M. T. Reetz, A. Zonta, V. Vijayakrishnan, K. Schimossek  
Entrapment of Lipases in Hydrophobic Magnetite-containing Sol-Gel Materials: Magnetic Separation of Heterogeneous Biocatalysts.  
*J. Mol. Catal. A: Chem.* **1998**, *134*, 251-258.
- 293 M. T. Reetz, E. Westermann, R. Lohmer, G. Lohmer  
A Highly Active Phosphine-free Catalyst System for Heck Reactions of Aryl Bromides.  
*Tetrahedron Lett.* **1998**, *39*, 8449-8452.

- 292 M. T. Reetz, R. Wenkel, A. Zonta  
Immobilisierung von Lipasen in hydrophoben Sol-Gel-Materialien.  
In: Biokonversion nachwachsender Rohstoffe, Workshop am 30.06. und 01.07.1997 in  
Detmold, Landwirtschaftsverlag: Münster, **1998**, S. 73-79 (*Schriftenr. Bundesminist.  
Ernähr., Landwirtsch. Forsten, Schriftenr. „Nachwachsende Rohstoffe“*, Bd. 10).  
Immobilization of Lipases on Hydrophobic Sol-Gel-material.  
*Chem. Abstr.* **1999**, 130, 164611.
- 291 M. T. Reetz, C. Merk, G. Mehler  
Preparation of Novel HIV-protease Inhibitors.  
*Chem. Commun. (Cambridge, U. K.)* **1998**, 2075-2076.
- 290 M. T. Reetz, G. Lohmer, R. Schwickardi  
Ein neues Katalysatorsystem für die Heck-Reaktion von reaktionsträgen Arylhalogeniden.  
*Angew. Chem.* **1998**, 110, 492-495.  
A New Catalyst System for the Heck Reaction of Unreactive Aryl Halides.  
*Angew. Chem. Int. Ed.* **1998**, 37, 481-483.
- 289 M. T. Reetz, K.-E. Jaeger  
Overexpression, Immobilization and Biotechnological Application of *Pseudomonas* Lipases.  
*Chem. Phys. Lipids* **1998**, 93, 3-14.
- 288 M. T. Reetz, A. Gosberg, R. Goddard, S.-H. Kyung  
Diphosponites as Highly Efficient Ligands for Enantioselective Rhodium-catalyzed  
Hydrogenation.  
*Chem. Commun. (Cambridge, U. K.)* **1998**, 2077-2078.
- 287 M. T. Reetz, R. Demuth, R. Goddard  
2-Pyrimidylphosphines: A New Class of Ligands for Transition Metal Catalysis.  
*Tetrahedron Lett.* **1998**, 39, 7089-7092.
- 286 M. T. Reetz, R. Breinbauer, P. Wedemann, P. Binger  
Nanostructured Nickel-clusters as Catalysts in [3+2]Cycloaddition Reactions.  
*Tetrahedron* **1998**, 54, 1233-1240.
- 285 M. T. Reetz, E. Bohres, R. Goddard  
Chiral Diiminophosphoranes: A New Class of Ligands for Enantioselective Transition Metal  
Catalysis.  
*Chem. Commun. (Cambridge, U. K.)* **1998**, 935-936.
- 284 M. T. Reetz, M. H. Becker, K. M. Kühling, A. Holzwarth  
Zeitaufgelöste IR-thermographische Detektion und Screening von enantioselektiven  
katalytischen Reaktionen.  
*Angew. Chem.* **1998**, 110, 2792-2795.  
Time-resolved IR-thermographic Detection and Screening of Enantioselectivity in Catalytic  
Reactions.  
*Angew. Chem. Int. Ed.* **1998**, 37, 2647-2650
- 283 M. T. Reetz  
New Supramolecular Transition Metal Catalysts.  
*J. Heterocycl. Chem.* **1998**, 35, 1065-1073.
- 282 M. T. Reetz

Supramolecular Transition Metal Catalysts in Two-Phase Systems.  
*Catal. Today* **1998**, *42*, 399-411.

- 281 J. Lohau, S. Friedrichowski, G. Dumpich, E. F. Wassermann, M. Winter, M. T. Reetz  
Electron-beam Lithography with Metal Colloids: Direct Writing of Metallic Nanostructures.  
*J. Vac. Sci. Technol., B* **1998**, *16*, 77-79.
- 280 K.-E. Jaeger, M. T. Reetz  
Microbial Lipases Form Versatile Tools for Biotechnology.  
*Trends Biotechnol.* **1998**, *16*, 396-403.
- 279 J. Huskens, R. Goddard, M. T. Reetz  
Direct Observation of Stereotopic Group Recognition in Solution and Solid State.  
*J. Am. Chem. Soc.* **1998**, *120*, 6617-6618.
- 278 G. Dumpich, J. Lohau, E. F. Wassermann, M. Winter, M. T. Reetz  
Direct Writing of Metallic Nanostructures by Means of Metal Colloids.  
*Mater. Sci. Forum* **1998**, *287-288*, 413-415.
- 277 V. B. Arion, E. Bill, M. T. Reetz, R. Goddard, D. Stöckigt, M. Massau, V. Levitsky  
Synthesis, Structure and Characterization of Zinc(II), Copper(II), Zinc(II)barium(II) and  
Copper(II)barium(II) Complexes of Macrocyclic Heteronucleating Ligands Based on  
Isothiosemicarbazide.  
*Inorg. Chim. Acta* **1998**, *282*, 61-70.
- 1997**
- 276 M. T. Reetz, A. Zonta, K. Schimossek, K. Liebeton, K.-E. Jaeger  
Erzeugung enantioselektiver Biokatalysatoren für die Organische Chemie durch  
In-vitro-Evolution.  
*Angew. Chem.* **1997**, *109*, 2961-2963.  
Creation of Enantioselective Biocatalysts for Organic Chemistry by in Vitro Evolution.  
*Angew. Chem., Int. Ed. Engl.* **1997**, *36*, 2830-2832.
- 275 M. T. Reetz, M. Winter, B. Tesche  
Self-assembly of Tetraalkylammonium Salt-stabilized Giant Palladium Clusters on  
Surfaces.  
*Chem. Commun. (Cambridge, U. K.)* **1997**, 147-148.
- 274 M. T. Reetz, M. Winter, G. Dumpich, J. Lohau, S. Friedrichowski  
Fabrication of Metallic and Bimetallic Nanostructures by Electron Beam Induced  
Metallization of Surfactant Stabilized Pd and Pd/Pt Clusters.  
*J. Am. Chem. Soc.* **1997**, *119*, 4539-4540.
- 273 M. T. Reetz, K. Wanninger, M. Hermes  
Regioselective Palladium-catalysed Coupling Reactions of Vinyl Chlorides with Carbon  
Nucleophiles.  
*Chem. Commun. (Cambridge, U. K.)* **1997**, 535-536.
- 272 M. T. Reetz, S. R. Waldvogel, R. Goddard  
Substituent Effects in the Rhodium-catalyzed Hydroformylation of Olefins Using  
Bis(diarylphosphino)methylamino Ligands.  
*Tetrahedron Lett.* **1997**, *38*, 5967-5970.



- 271 M. T. Reetz, S. R. Waldvogel  
Mit  $\beta$ -Cyclodextrin-modifizierten Diphosphanen als Liganden zu supramolekularen Rhodiumkatalysatoren.  
*Angew. Chem.* **1997**, *109*, 870-873.  
 $\beta$ -Cyclodextrin-modified Diphosphanes as Ligands for Supramolecular Rhodium Catalysts.  
*Angew. Chem., Int. Ed. Engl.* **1997**, *36*, 865-867.
- 270 M. T. Reetz, C. Merk, G. Naberfeld, J. Rudolph, N. Griebenow, R. Goddard  
3,3'-Dinitro-octahydrobinaphthol: A New Chiral Ligand for Metal-catalyzed Enantioselective Reactions.  
*Tetrahedron Lett.* **1997**, *38*, 5273-5276.
- 269 M. T. Reetz, G. Lohmer, R. Schwickardi  
Synthese und katalytische Wirkung von dendritischen Diphosphan-Metallkomplexen.  
*Angew. Chem.* **1997**, *109*, 1559-1562.  
Synthesis and Catalytic Activity of Dendritic Diphosphane Metal Complexes.  
*Angew. Chem., Int. Ed. Engl.* **1997**, *36*, 1526-1529.
- 268 M. T. Reetz, H. Haning  
Ligand Effects in Selective Addition Reactions of Organoindium Reagents with Carbonyl Compounds.  
*J. Organomet. Chem.* **1997**, *541*, 117-120.
- 267 M. T. Reetz, E. W. Beuttenmüller, R. Goddard  
First Enantioselective Catalysis Using a Helical Diphosphane.  
*Tetrahedron Lett.* **1997**, *38*, 3211-3214.
- 266 M. T. Reetz  
New Approaches to Supramolecular Transition Metal Catalysis.  
*Top. Catal.* **1997**, *4*, 187-200.
- 265 M. T. Reetz  
Entrapment of Biocatalysts in Hydrophobic Sol-Gel Materials for Use in Organic Chemistry.  
*Adv. Mater. (Weinheim, Ger.)* **1997**, *9*, 943-954.
- 264 M. T. Reetz  
New Transition Metal Catalysts for Organic Synthesis.  
In: Eur. Conf. Ser. Catal., 3rd G.-M. Schwab Symp. Catal. Org. Synth., 6-10 July 1997, Berlin, Book of Abstracts, (Dechema e.V.), S. V 4.
- 263 M. T. Reetz  
Größenselektive Synthese von Nanostrukturierten Metall-Clustern.  
*Vortr. – Nordrhein-Westfael. Akad. Wiss., Nat.-, Ing.-Wirtschaftswiss.*, **1997**, *N 427*, 7-25.
- 262 K.-E. Jaeger, B. Schneidinger, F. Rosenau, M. Werner, D. Lang, B. W. Dijkstra, K. Schimossek, A. Zonta, M. T. Reetz  
Bacterial Lipases for Biotechnological Applications.  
*J. Mol. Catal. B: Enzym.* **1997**, *3*, 3-12.

## 1996

- 261 M. T. Reetz, A. Zonta, J. Simpelkamp, A. Ruffińska, B. Tesche  
Characterization of Hydrophobic Sol-Gel Materials Containing Entrapped Lipases.

*J. Sol-Gel Sci. Technol.* **1996**, *7*, 35-43.

- 260 M. T. Reetz, A. Zonta, J. Simpelkamp, W. Könen  
In Situ Fixation of Lipase-containing Hydrophobic Sol-Gel Materials on Sintered Glass - Highly Efficient Heterogeneous Biocatalysts.  
*Chem. Commun. (Cambridge, U. K.)* **1996**, 1397-1398.
- 259 M. T. Reetz, A. Zonta, J. Simpelkamp  
Efficient Immobilization of Lipases by Entrapment in Hydrophobic Sol-Gel Materials.  
*Biotechnol. Bioeng.* **1996**, *49*, 527-534.
- 258 M. T. Reetz, T. J. Strack, F. Mutulis, R. Goddard  
Asymmetric Dihydroxylation of Chiral  $\gamma$ -Amino  $\alpha,\beta$ -Unsaturated Esters: Turning the Mismatched into the Matched Case via Protective Group Tuning.  
*Tetrahedron Lett.* **1996**, *37*, 9293-9296.
- 257 M. T. Reetz, T. J. Strack, J. Kanand, R. Goddard  
Stereospecific Synthesis of Chiral Alkynologous Amino Acids.  
*Chem. Commun. (Cambridge, U. K.)* **1996**, 733-734.
- 256 M. T. Reetz, K. Schimossek  
Lipase-catalyzed Dynamic Kinetic Resolution of Chiral Amines: Use of Palladium as the Racemization Catalyst.  
*Chimia* **1996**, *50*, 668-669.
- 255 M. T. Reetz, J. Rudolph, R. Mynott  
Enantiotopic Group Recognition: Direct Evidence for Selective Complexation of Enantiotopic Groups by a Chiral Host.  
*J. Am. Chem. Soc.* **1996**, *118*, 4494-4495.
- 254 M. T. Reetz, S. A. Quaiser, M. Winter, J. A. Becker, R. Schäfer, U. Stimming, A. Marmann, R. Vogel, T. Konno  
Nanostrukturierte Metalloxidcluster durch Luftoxidation von stabilisierten Metallclustern.  
*Angew. Chem.* **1996**, *108*, 2228-2230.  
Nanostructured Metal Oxide Clusters by Oxidation of Stabilized Metal Clusters with Air.  
*Angew. Chem., Int. Ed. Engl.* **1996**, *35*, 2092-2094.
- 253 M. T. Reetz, S. A. Quaiser, C. Merk  
Electrochemical Preparation of Nanostructured Titanium Clusters: Characterization and Use in McMurry-type Coupling Reactions.  
*Chem. Ber.* **1996**, *129*, 741-743.
- 252 M. T. Reetz, G. Lohmer  
Propylene Carbonate Stabilized Nanostructured Palladium Clusters as Catalysts in Heck Reactions.  
*Chem. Commun. (Cambridge, U. K.)* **1996**, 1921-1922.
- 251 M. T. Reetz, S. Hütte, H. M. Herzog, R. Goddard  
Synthetic and Mechanistic Aspects of Metal-free Polymerizations of Acrylates.  
*Macromol. Symp.* **1996**, *107*, 209-217.
- 250 M. T. Reetz, S. Hütte, R. Goddard, C. Robyr  
Synthesis, Structure, and Stereoselective Reaction of a Chiral Hydroxy-stabilized Metal-free Enolate.  
*Chem.-Eur. J.* **1996**, *2*, 382-384.

- 249 M. T. Reetz, H. M. Herzog, W. Könen  
A New Method for the Polymerization of Methyl Methacrylate.  
*Macromol. Rapid Commun.* **1996**, *17*, 383-388.
- 248 M. T. Reetz, W. Helbig, S. A. Quaiser  
Electrochemical Methods in the Synthesis of Nanostructured Transition Metal Clusters.  
In: *Active Metals: Preparation, Characterization, Applications* (Ed.: A. Fürstner), VCH:  
Weinheim, **1996**, pp. 279-297.
- 247 M. T. Reetz, N. Griebenow  
Synthesis and Stereoselective C-C Bond-forming Reactions of Peptide Aldehydes.  
*Liebigs Ann.* **1996**, 335-348.
- 246 M. T. Reetz, R. Breinbauer, K. Wanninger  
Suzuki and Heck Reactions Catalyzed by Preformed Palladium Clusters and  
Palladium/Nickel Bimetallic Clusters.  
*Tetrahedron Lett.* **1996**, *37*, 4499-4502.
- 245 M. T. Reetz  
Simultaneous Binding of Cations and Anions.  
In: *Comprehensive Supramolecular Chemistry*, Vol. 2, (Ed.: F. Vögtle), Elsevier: Oxford,  
**1996**, pp. 553-562.
- 244 M. T. Reetz  
Molecular Recognition and Stereotopic Group Recognition.  
*Pure Appl. Chem.* **1996**, *68*, 1279-1283.
- 243 M. T. Reetz  
Size-selective Synthesis of Metal-Clusters: New Homogeneous and Heterogeneous  
Catalysts.  
In: *Proc. 50th Anniversary Conf. Korean Chem. Soc.*, Seoul, Korea, May 24-25, 1996,  
pp. 588-594.
- 242 F. Mutulis, M. T. Reetz  
Formation of an Olefin Bond. A Side Reaction Occurring During Swern Oxidation.  
*Latv. Kim. Z.* **1996**, Nr. 3-4, 115-117.
- 241 U. Kolb, S. A. Quaiser, M. Winter, M. T. Reetz  
Investigation of Tetraalkylammonium Bromide Stabilized Palladium/Platinum Bimetallic  
Clusters Using Extended X-ray Absorption Fine Structure Spectroscopy.  
*Chem. Mater.* **1996**, *8*, 1889-1894.
- 240 U. Kolb, I. Abraham, R. Breinbauer, M. Winter, M. T. Reetz  
Investigation of Tetraalkylammonium Stabilized Palladium Clusters Using EXAFS-  
Spectroscopy.  
*HASYLAB-Jahresbericht*, **1996**, 787-788.
- 239 K.-E. Jaeger, K. Liebeton, A. Zonta, K. Schimossek, M. T. Reetz  
Biotechnological Application of *Pseudomonas Aeruginosa* Lipase: Efficient Kinetic  
Resolution of Amines and Alcohols.  
*Appl. Microbiol. Biotechnol.* **1996**, *46*, 99-105.

- 238 K.-E. Jaeger, B. Schneidinger, K. Liebeton, D. Haas, M. T. Reetz, S. Philippou, G. Gerritse, S. Ransac, B. W. Dijkstra  
Lipase of *Pseudomonas Aeruginosa*: Molecular Biology and Biotechnological Application.  
In: Molecular Biology of Pseudomonads (Eds.: T. Nakazawa, K. Furukawa, D. Haas, S. Silver), ASM Press: Washington, **1996**, pp. 319-330.
- 237 J. A. Becker, R. Schäfer, J. R. Festag, J. H. Wendorff, F. Hensel, J. Pebler, S. A. Quaiser, W. Helbig, M. T. Reetz  
Magnetic Properties of Cobalt-cluster Dispersions Generated in an Electrochemical Cell.  
*Surf. Rev. Lett.* **1996**, 3, 1121-1126.

## 1995

- 236 M. T. Reetz, A. Zonta, J. Simpelkamp  
Effiziente heterogene Biokatalysatoren durch den Einschluß von Lipasen in hydrophoben Sol-Gel-Materialien.  
*Angew. Chem.* **1995**, 107, 373-376.  
Efficient Heterogeneous Biocatalysts by Entrapment of Lipases in Hydrophobic Sol-Gel Materials.  
*Angew. Chem., Int. Ed. Engl.* **1995**, 34, 301-303.
- 235 M. T. Reetz, K. Töllner  
Cobalt-catalyzed Partial Oxidation of Olefins and Ethers Using Molecular Oxygen.  
*Tetrahedron Lett.* **1995**, 36, 9461-9464.
- 234 M. T. Reetz, S. A. Quaiser, R. Breinbauer, B. Tesche  
Eine neue Strategie in der heterogenen Katalyse: das Design von Cortex-Katalysatoren.  
*Angew. Chem.* **1995**, 107, 2956-2958.  
A New Strategy in Heterogeneous Catalysis: The Design of Cortex Catalysts.  
*Angew. Chem., Int. Ed. Engl.* **1995**, 34, 2728-2730.
- 233 M. T. Reetz, S. A. Quaiser  
Eine neue Methode zur Herstellung nanostrukturierter Metallcluster.  
*Angew. Chem.* **1995**, 107, 2461-2463.  
A New Method for the Preparation of Nanostructured Metal Clusters.  
*Angew. Chem., Int. Ed. Engl.* **1995**, 34, 2240-2241.

- 232 M. T. Reetz, A. Kindler  
The Kharasch Reaction Revisited:  $\text{CuX}_3\text{Li}_2$ -Catalyzed Conjugate Addition Reactions of Grignard Reagents.  
*J. Organomet. Chem.* **1995**, 502, C5-C7.
- 231 M. T. Reetz, S. Hütte, R. Goddard, U. Minet  
Tetrabutylammonium Salts of Carbazole and Dibenzazepine: Synthesis, Crystal Structures and Use in Anionic Polymerization.  
*J. Chem. Soc., Chem. Commun.* **1995**, 275-277.
- 230 M. T. Reetz, S. Hütte, R. Goddard  
Synthetic and Mechanistic Aspects of Anionic Polymerization of (Meth)acrylates Initiated by Metal-free Salts of CH-Acidic Compounds.  
*J. Phys. Org. Chem.* **1995**, 8, 231-241.
- 229 M. T. Reetz, S. Hütte, R. Goddard  
Tetrabutylammonium Salts of 2-Nitropropane, Cyclopentadiene and 9-Ethylfluorene: Crystal Structures and Use in Anionic Polymerization.  
*Z. Naturforsch., B: Chem. Sci.* **1995**, 50, 415-422.
- 228 M. T. Reetz, W. Helbig, S. A. Quaiser, U. Stimming, N. Breuer, R. Vogel  
Visualization of Surfactants on Nanostructured Palladium Clusters by a Combination of STM and High-resolution TEM.  
*Science (Washington, D. C.)* **1995**, 267, 367-369.
- 227 M. T. Reetz, W. Helbig, S. A. Quaiser  
Electrochemical Preparation of Nanostructured Bimetallic Clusters.  
*Chem. Mater.* **1995**, 7, 2227-2228.
- 226 M. T. Reetz, N. Griebenow, R. Goddard  
Stereoselective Syntheses of  $\alpha$ -Hydroxy- $\gamma$ -amino Acids: Possible  $\gamma$ -Turn Mimetics.

*J. Chem. Soc., Chem. Commun.* **1995**, 1605-1606.

- 225 M. T. Reetz, H. Brümmer, M. Kessler, J. Kuhnigk  
Preparation and Catalytic Activity of Boron-substituted Zirconocenes.  
*Chimia* **1995**, *49*, 501-503.
- 224 M. T. Reetz, V. B. Arion, R. Trültzsch, H.-J. Buschmann, E. Cleve  
Unusual Complexation Behavior of Metallomacrocycles Based on Isothiosemicarbazides with Respect to Alkali and Alkaline Earth Metal Ions: Novel 2:1 Associates.  
*Chem. Ber.* **1995**, *128*, 1089-1093.
- 223 M. T. Reetz, V. B. Arion, R. Goddard, Y. A. Simonov, V. Ch. Kravtsov, J. Lipkowski  
Synthesis and Structure of Metallomacrocycles Based on Isothiosemicarbazides.  
*Inorg. Chim. Acta* **1995**, *238*, 23-33.
- 222 M. T. Reetz  
Titanium Tetrakis(diethylamide).  
In: *Encyclopedia of Reagents for Organic Synthesis*, Vol. 2, (Ed.: L. A. Paquette), Wiley: New York, **1995**, pp. 4936-4938.
- 221 M. T. Reetz  
1,2-Diethoxy-1,2-bis(trimethylsilyloxy)ethylene.  
In: *Encyclopedia of Reagents for Organic Synthesis*, Vol. 2, (Ed.: L. A. Paquette), Wiley: New York, **1995**, pp. 1761-1762.
- 220 M. T. Reetz  
Dichlorodimethyltitanium.  
In: *Encyclopedia of Reagents for Organic Synthesis*, Vol. 2, (Ed.: L. A. Paquette), Wiley: New York, **1995**, pp. 1708-1709.

219 M. T. Reetz

Chlorotris(diethylamino)titanium.

In: Encyclopedia of Reagents for Organic Synthesis, Vol. 2, (Ed.: L. A. Paquette), Wiley: New York, **1995**, pp. 1250-1251.

218 V. Jonas, G. Frenking, M. T. Reetz

Mechanism of the Chelation Controlled Addition of  $\text{CH}_3\text{TiCl}_3$  to  $\alpha$ -Alkoxy Carbonyl Compounds. A Theoretical Study.

*Organometallics* **1995**, *14*, 5316-5324.

217 N. V. Gerbeleu, S. S. Palanciuc, Y. A. Simonov, A. A. Dvorkin, P. N. Bourosh,

M. T. Reetz, V. B. Arion, K. Töllner

Nickel(II) and Copper(II) Complexes with Amidrazone-based Ligands: Structure and Catalytic Activity.

*Polyhedron* **1995**, *14*, 521-527.

216 J. A. Becker, R. Schäfer, R. Festag, W. Ruland, J. H. Wendorff, J. Pebler, S. A. Quaiser, W. Helbig, M. T. Reetz

Electrochemical Growth of Superparamagnetic Cobalt Clusters.

*J. Chem. Phys.* **1995**, *103*, 2520-2527.

## **1994**

215 M. T. Reetz, K. Rölfing, N. Griebenow

A Simple Method for Chelation Controlled Additions to  $\alpha$ -Amino Aldehydes.

*Tetrahedron Lett.* **1994**, *35*, 1969-1972.

214 M. T. Reetz, D. Röhrig, K. Harms, G. Frenking

Stereoselective Synthesis of  $\beta$ -Amino Hydroxylamines.

*Tetrahedron Lett.* **1994**, *35*, 8765-8768.

- 213 M. T. Reetz, A. Kindler  
CuX<sub>3</sub>Li<sub>2</sub>-catalysed Conjugate Addition of Dialkylmagnesium Reagents to  $\alpha,\beta$ -Unsaturated Carbonyl Compounds.  
*J. Chem. Soc., Chem. Commun.* **1994**, 2509-2510.
- 212 M. T. Reetz, F. Kayser, K. Harms  
Stereoselective Synthesis of  $\beta$ -Amino Nitriles and 1,3-Diamines.  
*Tetrahedron Lett.* **1994**, 35, 8769-8772.
- 211 M. T. Reetz, B. M. Johnson, K. Harms  
A Novel Receptor for Ditopic Binding of Alkali Metal Halides.  
*Tetrahedron Lett.* **1994**, 35, 2525-2528.
- 210 M. T. Reetz, M. Hübel, R. Jaeger, R. Schwickardi, R. Goddard  
Stereoselective Synthesis of  $\alpha,\beta$ -Diamino Nitriles from Amino Acids.  
*Synthesis* **1994**, 733-738.
- 209 M. T. Reetz, J. Huff, J. Rudolph, K. Töllner, A. Deege, R. Goddard  
Highly Efficient Transport of Amino Acids through Liquid Membranes via Three-component Supramolecules.  
*J. Am. Chem. Soc.* **1994**, 116, 11588-11589.
- 208 M. T. Reetz, J. Huff, R. Goddard  
Borylated Lyxofuranosides as Selective Host Molecules for Amines.  
*Tetrahedron Lett.* **1994**, 35, 2521-2524.



- 207 M. T. Reetz, S. Höger, K. Harms  
Reversibler Protonentransfer-bedingter Phasenübergang im 4,4'-Bipyridiniumsalz der Quadratsäure.  
*Angew. Chem.* **1994**, *106*, 193-195.  
Proton-transfer-dependent Reversible Phase Changes in the 4,4'-Bipyridinium Salt of Squaric Acid.  
*Angew. Chem., Int. Ed. Engl.* **1994**, *33*, 181-183.
- 206 M. T. Reetz, W. Helbig  
Size-selective Synthesis of Nanostructured Transition Metal Clusters.  
*J. Am. Chem. Soc.* **1994**, *116*, 7401-7402.
- 205 M. T. Reetz, C. Dreisbach  
Highly Efficient Lipase-catalyzed Kinetic Resolution of Chiral Amines.  
*Chimia* **1994**, *48*, 570.
- 204 M. T. Reetz  
Organometallic Compounds for Selective C-C Bond Formation and for Molecular Recognition.  
In: Stereocontrolled Organic Synthesis (Ed.: B. M. Trost), Blackwell: Oxford, **1994**, pp. 67-95.
- 203 M. T. Reetz  
Titanium in Organic Synthesis.  
In: Organometallics in Synthesis - A Manual (Ed.: M. Schlosser), Wiley: Chichester, **1994**, pp. 195-282.
- 202 M. T. Reetz  
Steuerung der Selektivität bei organisch-chemischen Synthesen.  
In: Jahrb. - Max-Planck-Ges., Vandenhoeck & Ruprecht: Göttingen, **1994**, S. 435-439.

201 V. Jonas, G. Frenking, M. T. Reetz

Comparative Theoretical Study of Lewis Acid-Base Complexes of  $\text{BH}_3$ ,  $\text{BF}_3$ ,  $\text{BCl}_3$ ,  $\text{AlCl}_3$ , and  $\text{SO}_2$ .

*J. Am. Chem. Soc.* **1994**, 116, 8741-8753.

200 G. Frenking, K. F. Köhler, M. T. Reetz

Conformational Analysis of 2-Chloro-2-fluoroacetaldehyde and Calculated Transition State Structures of Nucleophilic Addition Reactions.

*Tetrahedron* **1994**, 50, 11197-11204.

199 M. Böhme, G. Frenking, M. T. Reetz

Theoretical Studies of Organometallic Compounds. 9. Structures and Bond Energies of the Methylcuprates  $\text{CH}_3\text{Cu}$ ,  $(\text{CH}_3)_2\text{Cu}^-$ ,  $(\text{CH}_3)_2\text{CuLi}$ ,  $(\text{CH}_3)_2\text{CuLi} \cdot \text{H}_2\text{O}$ ,  $[(\text{CH}_3)_2\text{CuLi}]_2$ , and  $[(\text{CH}_3)_2\text{CuLi}]_2 \cdot 2 \text{H}_2\text{O}$ .

*Organometallics* **1994**, 13, 4237-4245.

## 1993

198 M. T. Reetz, S. Stanchev

Unprecedented Stereoselectivity in the Addition of Organoiron(II) Reagents to Cyclohexanone Derivatives.

*J. Chem. Soc., Chem. Commun.* **1993**, 328-330.

197 M. T. Reetz, J. Rudolph

Synthesis of a Phosphine-Modified Cyclodextrin and its Rhodium Complex.

*Tetrahedron: Asymmetry* **1993**, 4, 2405-2406.

196 M. T. Reetz, B. Raguse, T. Seitz

First Direct NMR Spectroscopic Observation of a Cram-Chelate Involving a Chiral  $\alpha$ -Alkoxy Aldehyde.

*Tetrahedron* **1993**, 49, 8561-8568.

- 195 M. T. Reetz, E. H. Lauterbach  
Stereoselective Synthesis of Highly Functionalized  $\gamma$ -Lactones via Iodolactonization.  
*Heterocycles* **1993**, *35*, 627-630.
- 194 M. T. Reetz, W. Könen, T. Strack  
Supercritical Carbon Dioxide as a Reaction Medium and Reaction Partner.  
*Chimia* **1993**, *47*, 493.
- 193 M. T. Reetz, S. Hütte, R. Goddard  
Tetrabutylammonium Salts of CH-Acidic Carbonyl Compounds: Real Carbanions or Supramolecules?  
*J. Am. Chem. Soc.* **1993**, *115*, 9339-9340.
- 192 M. T. Reetz, H. Haning  
 $\alpha$ -Methylation of Ketones via Manganese-Enolates: Absence of Undesired Polyalkylation.  
*Tetrahedron Lett.* **1993**, *34*, 7395-7398.
- 191 M. T. Reetz, A. Gansäuer  
Catalysis by Lithium Perchlorate in Dichloromethane: Diels-Alder Reactions and 1,3-Claisen Rearrangements.  
*Tetrahedron* **1993**, *49*, 6025-6030.
- 190 M. T. Reetz, D. N. A. Fox  
Carbon-Carbon Bond Formation Catalyzed by Lithium Perchlorate in Dichloromethane.  
*Tetrahedron Lett.* **1993**, *34*, 1119-1122.
- 189 M. T. Reetz, C. Bingel, K. Harms  
Structure of Carbanions Having Carbocations as Counterions.  
*J. Chem. Soc., Chem. Commun.* **1993**, 1558-1560.

- 188 M. T. Reetz  
Structural, Mechanistic, and Theoretical Aspects of Chelation-Controlled Carbonyl Addition Reactions.  
*Acc. Chem. Res.* **1993**, 26, 462-468.
- 187 V. Jonas, G. Frenking, M. T. Reetz  
Theoretical Studies of Organometallic Compounds 4. Chelate Complexes of  $\text{TiCl}_4$  and  $\text{CH}_3\text{TiCl}_3$ .  
*Organometallics* **1993**, 12, 2111-2120.
- 186 R. Goddard, C. M. Niemeyer, M. T. Reetz  
Structure of 1,3-Xylyl-(18-crown-5)-Ammonium Catecholborate (1/1).  
*Acta Crystallogr., Sect. C: Cryst. Struct. Commun.* **1993**, C49, 402-404.
- 185 G. Frenking, K. F. Köhler, M. T. Reetz  
On the Origin of  $\pi$ -Facial Diastereoselectivity in Nucleophilic Additions to Chiral Carbonyl Compounds 4. Calculated Transition State Structures for the Addition of Nucleophiles to 2-Methoxypropanal and 2-*N,N*-Dimethylaminopropanal.  
*Tetrahedron* **1993**, 49, 3983-3994.
- 184 G. Frenking, K. F. Köhler, M. T. Reetz  
On the Origin of  $\pi$ -Facial Diastereoselectivity in Nucleophilic Additions to Chiral Carbonyl Compounds 3. Rotational Profiles of 2-Methoxypropanal and 2-*N,N*-Dimethylaminopropanal.  
*Tetrahedron* **1993**, 49, 3971-3982.
- 1992**
- 183 M. T. Reetz, S. Stanchev, H. Haning  
Cram Selectivity in the Reaction of 2-Phenylpropanal with Alkylolithium Reagents: Myth and Reality.  
*Tetrahedron* **1992**, 48, 6813-6820.

- 182 M. T. Reetz, B. Raguse, C. F. Marth, H. M. Hügel, T. Bach, D. N. A. Fox  
A Rapid Injection NMR Study of the Chelation Controlled Mukaiyama Aldol Addition:  $\text{TiCl}_4$  Versus  $\text{LiClO}_4$  as the Lewis Acid.  
*Tetrahedron* **1992**, *48*, 5731-5742.
- 181 M. T. Reetz, C. M. Niemeyer, M. Hermes, R. Goddard  
Molekulare Erkennung von primären Aminen durch Dreipunktwechselwirkungen mit borhaltigen Wirtmolekülen.  
*Angew. Chem.* **1992**, *104*, 1054-1056.  
Molecular Recognition of Primary Amines by Three-Point Binding with Boron-Containing Host Molecules.  
*Angew. Chem., Int. Ed. Engl.* **1992**, *31*, 1017-1019.
- 180 M. T. Reetz, F. Kayser, K. Harms  
Cycloaddition Reactions of  $\gamma$ -Amino  $\alpha,\beta$ -Didehydro Amino Acid Esters: A Test Case for the Principle of 1,3-Allylic Strain.  
*Tetrahedron Lett.* **1992**, *33*, 3453-3456.
- 179 M. T. Reetz, F. Kayser  
Stereoselective Synthesis of  $\alpha,\gamma$ -Diamino Acid Esters.  
*Tetrahedron: Asymmetry* **1992**, *3*, 1377-1380.
- 178 M. T. Reetz, J. Kanand, N. Griebenow, K. Harms  
Stereoselektive nucleophile Additionsreaktionen an reaktiven Pseudopeptiden.  
*Angew. Chem.* **1992**, *104*, 1638-1641.  
Stereoselective Nucleophilic Addition Reactions of Reactive Pseudopeptides.  
*Angew. Chem., Int. Ed. Engl.* **1992**, *31*, 1626-1629.

- 177 M. T. Reetz, N. Harmat, R. Mahrwald  
Ligandeneffekte bei Grignard-Additionen.  
*Angew. Chem.* **1992**, *104*, 333-334.  
Ligand Effects in Grignard Additions.  
*Angew. Chem., Int. Ed. Engl.* **1992**, *31*, 342-344.
- 176 M. T. Reetz, H. Haning, S. Stanchev  
Ligand Effects in Selective Carbonyl Addition Reactions of Organomanganese and Cerium Reagents.  
*Tetrahedron Lett.* **1992**, *33*, 6963-6966.
- 175 M. T. Reetz  
Metal, Ligand and Protective Group Tuning as a Means to Control Selectivity.  
*Pure Appl. Chem.* **1992**, *64*, 351-359.
- 174 V. Jonas, G. Frenking, M. T. Reetz  
Theoretical Studies of Organometallic Compounds. II. All Electron and Pseudopotential Calculations of  $M(\text{CH}_3)_n\text{Cl}_{4-n}$  ( $M = \text{C, Si, Ge, Sn, Pb}$ ;  $n = 0-4$ ).  
*J. Comput. Chem.* **1992**, *13*, 935-943.
- 173 V. Jonas, G. Frenking, M. T. Reetz  
Theoretical Studies of Organometallic Compounds. I. All Electron and Pseudopotential Calculations of  $\text{Ti}(\text{CH}_3)_n\text{Cl}_{4-n}$  ( $n = 0-4$ ).  
*J. Comput. Chem.* **1992**, *13*, 919-934.
- 172 T. Bach, D. N. A. Fox, M. T. Reetz  
Cationic Mono- and Bi-nuclear Iron Complexes as Lewis Acid Catalysts in Mukaiyama Reactions.  
*J. Chem. Soc., Chem. Commun.* **1992**, 1634-1636.

## 1991

171 M. T. Reetz, C. M. Niemeyer, K. Harms

Heterotope Wirtmoleküle zur Einlagerung von zwei verschiedenen Gästen.

*Angew. Chem.* **1991**, *103*, 1517-1519.

Heterotopic Host Molecules for Binding Two Different Guests.

*Angew. Chem., Int. Ed. Engl.* **1991**, *30*, 1474-1476.

170 M. T. Reetz, C. M. Niemeyer, K. Harms

Kronenether mit einem Lewis-sauren Zentrum, eine neue Klasse heterotoper Wirtmoleküle.

*Angew. Chem.* **1991**, *103*, 1515-1517.

Crown Ethers with a Lewis Acidic Center: A New Class of Heterotopic Host Molecules.

*Angew. Chem., Int. Ed. Engl.* **1991**, *30*, 1472-1474.

169 M. T. Reetz, U. Minet, C. Bingel, L. Vogdanis

Metal-free Anionic Polymerization of Acrylic Acid Esters.

*Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **1991**, *32* (1), 296-297.

168 M. T. Reetz, E. H. Lauterbach

Stereoselective [2,3]-Sigmatropic Rearrangement of Chiral Amine Oxides Derived from Amino Acids.

*Tetrahedron Lett.* **1991**, *32*, 4481-4482.

167 M. T. Reetz, E. H. Lauterbach

Stereoselective Epoxidation of Chiral Electron-poor  $\gamma$ -Aminoolefins.

*Tetrahedron Lett.* **1991**, *32*, 4477-4480.

- 166 M. T. Reetz, R. Jaeger, R. Drewlies, M. Hübel  
Stereoselektive Synthese von vicinalen Diaminen.  
*Angew. Chem.* **1991**, *103*, 76-78.  
Stereoselective Synthesis of Vicinal Diamines.  
*Angew. Chem., Int. Ed. Engl.* **1991**, *30*, 103-106.
- 165 M. T. Reetz, Fan Wang, K. Harms  
Novel 1,4-Asymmetric Induction in Nucleophilic 1,2-Additions to Chiral  $\gamma$ -Amino Enals.  
*J. Chem. Soc., Chem. Commun.* **1991**, 1309-1311.
- 164 M. T. Reetz  
Neue Wege zur Nutzung von Aminosäuren als chirale Bausteine in der organischen Synthese.  
*Angew. Chem.* **1991**, *103*, 1559-1573.  
New Approaches to the Use of Amino Acids as Chiral Building Blocks in Organic Synthesis.  
*Angew. Chem., Int. Ed. Engl.* **1991**, *30*, 1531-1546.
- 163 M. T. Reetz  
Neue Entwicklungen auf dem Gebiet der Stereoselektivität.  
In: Neue Richtungen der Organischen Synthese, Kurzfassungen der Vorträge für das Leopoldina-Meeting vom 20. bis 21. September 1991 zu Halle (Saale), Barth: Leipzig, **1991**, S. 8-9 (*Nova Acta Leopold., NF*).
- 162 G. Frenking, K. F. Köhler, M. T. Reetz  
On the Origin of  $\pi$ -Facial Diastereoselectivity in Nucleophilic Additions to Chiral Carbonyl Compounds. 2. Calculated Transition State Structures for the Addition of Nucleophiles to Propionaldehyde 1, Chloroacetaldehyde 2, and 2-Chloropropionaldehyde 3.  
*Tetrahedron* **1991**, *47*, 9005-9018.
- 161 G. Frenking, K. F. Köhler, M. T. Reetz  
On the Origin of  $\pi$ -Facial Diastereoselectivity in Nucleophilic Additions to Chiral Carbonyl Compounds. 1. Rotational Profiles of Propionaldehyde 1, Chloroacetaldehyde 2, and 2-Chloropropionaldehyde 3.  
*Tetrahedron* **1991**, *47*, 8991-9004.



- 160 G. Frenking, K. F. Köhler, M. T. Reetz  
Über den Ursprung der diastereofacialen Selektivität bei Additionsreaktionen an Cyclohexanone.  
*Angew. Chem.* **1991**, *103*, 1167-1170.  
On the Origin of  $\pi$ -Facial Diastereoselectivity in Addition Reactions of Cyclohexane-based Systems.  
*Angew. Chem., Int. Ed. Engl.* **1991**, *30*, 1146-1149.

## 1990

- 159 M. T. Reetz, T. Wünsch, K. Harms  
Stereoselective Synthesis of  $\alpha,\gamma$ -Diamino- $\beta$ -hydroxy Amino Acid Esters: A New Class of Amino Acids.  
*Tetrahedron: Asymmetry* **1990**, *1*, 371-374.
- 158 M. T. Reetz, T. Wünsch  
Reactions of 2-Lithio- and 2-Titano-methyl-quinoline Reagents: The Necessity of Using an Excess of Titanating Agents in Adjusting Molecular Recognition.  
*J. Chem. Soc., Chem. Commun.* **1990**, 1562-1564.
- 157 M. T. Reetz, M. Sauerwald  
Stereoselective  $\alpha$ -Alkylation of Carbonyl Compounds Using Tricarbonylchromium-complexed Benzyl Acetates.  
*J. Organomet. Chem.* **1990**, *382*, 121-128.
- 156 M. T. Reetz, E. Rivadeneira, C. Niemeyer  
Reagent Control in the Aldol Addition of Chiral Boron Enolates Based on the 2,5-Diphenylborolane Ligand System.  
*Tetrahedron Lett.* **1990**, *31*, 3863-3866.
- 155 M. T. Reetz, M. W. Drewes, K. Lennick, A. Schmitz, X. Holdgrün  
Non-racemizing Synthesis and Stereoselective Reduction of Chiral  $\alpha$ -Amino Ketones.  
*Tetrahedron: Asymmetry* **1990**, *1*, 375-378.
- 154 R. P. Bonar-Law, A. P. Davis, B. J. Dorgan, M. T. Reetz, A. Wehrsig  
The "Benzostabase" Protecting Group for Primary Amines; Application to Aliphatic Amines.  
*Tetrahedron Lett.* **1990**, *31*, 6725-6728.

- 153 S. Berger, W. Bock, C. F. Marth, B. Raguse, M. T. Reetz  
<sup>47/49</sup>Ti NMR of Some Titanium Compounds.  
*Magn. Reson. Chem.* **1990**, *28*, 559-60.

**1989**

- 152 M. T. Reetz, A. Schmitz, X. Holdgrün  
Tandem Aldolization/Lactonization/Dyotropic Rearrangement of  $\alpha$ -Amino-aldehydes.  
*Tetrahedron Lett.* **1989**, *30*, 5421-5424.
- 151 M. T. Reetz, D. Röhrig  
Stereoselektive Synthese von  $\gamma$ -Aminocarbonsäureestern.  
*Angew. Chem.* **1989**, *101*, 1732-1734.  
Stereoselective Synthesis of  $\gamma$ -Aminocarboxylates.  
*Angew. Chem., Int. Ed. Engl.* **1989**, *28*, 1706-1709.
- 150 M. T. Reetz, W. Reif, X. Holdgrün  
Stereoselective Addition of Lithiated Heterocycles to Chiral  $\alpha$ -Amino Aldehydes.  
*Heterocycles* **1989**, *28*, 707-710.
- 149 M. T. Reetz, P. Hois  
Non-*ipso* Electrophilic Substitution of Vinylstannanes and Silanes.  
*J. Chem. Soc., Chem. Commun.* **1989**, 1081-1082.
- 145 M. T. Reetz  
Synthetic and Mechanistic Studies of Lewis Acid Mediated C-C-Bond Formation.  
In: *Selectivities in Lewis Acid Promoted Reactions* (Ed.: D. Schinzer), Kluwer: Dordrecht,  
**1989**, pp. 107-125 (*NATO ASI Ser., Ser. C*, Vol. 289).
- 148 M. T. Reetz, M. W. Drewes, B. R. Matthews, K. Lennick  
A Simple Synthetic Route to Statine and Statine Analogues.  
*J. Chem. Soc., Chem. Commun.* **1989**, 1474-1475.
- 147 M. T. Reetz, J. Binder  
Protective Group Tuning in the Stereoselective Conversion of  $\alpha$ -Amino Aldehydes into  
Aminoalkyl Epoxides.  
*Tetrahedron Lett.* **1989**, *30*, 5425-5428.
- 146 M. T. Reetz  
Organotitanium Reagents in Organic Synthesis.  
*S. Afr. J. Chem.* **1989**, *42*, 49-56.

## 1988

- 144 M. T. Reetz, T. Zierke  
Highly Enantioselective Additions of a Chirally Modified Allylboron Reagent to Aldehydes.  
*Chem. Ind. (London)* **1988**, 663-664.
- 143 M. T. Reetz, R. Ostarek  
Polymerization of Acrylic Acid Esters initiated by Tetrabutylammonium Alkyl- and Aryl-  
thiolates.  
*J. Chem. Soc., Chem. Commun.* **1988**, 213-215.
- 142 M. T. Reetz, T. Knauf, U. Minet, C. Bingel  
Metallfreie Carbanionsalze als Initiatoren für die anionische Polymerisation von Acryl- und  
Methacrylsäureestern.  
*Angew. Chem.* **1988**, 100, 1422-1424.  
Metal-free Carbanion Salts as Initiators for the Anionic Polymerization of Acrylic and  
Methacrylic Acid Esters.  
*Angew. Chem., Int. Ed. Engl.* **1988**, 27, 1373-1374.
- 141 M. T. Reetz, A. Jung, C. Bolm  
Stereoselective Intramolecular Allylsilane Additions to Chiral Aldehydes.  
*Tetrahedron* **1988**, 44, 3889-3898.
- 140 M. T. Reetz, K. Harms, W. Reif  
An X-ray Structural Analysis of a Chiral  $\alpha$ -Alkoxy-ketone/SnCl<sub>4</sub> Chelate.  
*Tetrahedron Lett.* **1988**, 29, 5881-5884.
- 139 M. T. Reetz, M. W. Drewes, A. Schmitz, X. Holdgrün, T. Wünsch, J. Binder  
Stereoselective Reactions of Chiral  $\alpha$ -Amino Aldehydes.  
*Philos. Trans. R. Soc. London, Ser. A* **1988**, 326, 573-578.
- 138 M. T. Reetz, M. W. Drewes, K. Harms, W. Reif  
Stereoselective Cyanohydrin-forming Reactions of Chiral  $\alpha$ -Amino Aldehydes.  
*Tetrahedron Lett.* **1988**, 29, 3295-3298.
- 137 M. T. Reetz  
Aminosäuren: Nicht nur Bausteine des Lebens.  
In: Alma Mater Philippina, Wintersemester 1988/1989, **1988**, S. 26-27.

136 M. T. Reetz  
New Methods for the Anionic Polymerization of  $\alpha$ -Activated Olefins.  
*Angew. Chem.* **1988**, *100*, 1026-1030.  
*Angew. Chem., Int. Ed. Engl.* **1988**, *27*, 994-998.

135 M. T. Reetz  
Asymmetric C-C Bond Formation Using Organometallic Chemistry.  
*Pure Appl. Chem.* **1988**, *60*, 1607-1614.

## 1987

134 M. T. Reetz, A. E. Vougioukas  
Rhodium-diphosphine Complexes as Catalysts in Aldol Additions.  
*Tetrahedron Lett.* **1987**, *28*, 793-796.

133 M. T. Reetz, T. Seitz  
Regio- und stereoselektive Carbosulfonylierung von Olefinen.  
*Angew. Chem.* **1987**, *99*, 1081-1082.  
Regio- and Stereoselective Carbosulfonylation of Olefins.  
*Angew. Chem., Int. Ed. Engl.* **1987**, *26*, 1028-1029.

132 M. T. Reetz, M. Sauerwald  
 $\alpha$ -Alkylation of Carbonyl Compounds Using 1-Acetoxy-1-ferrocenylethane.  
*J. Organomet. Chem.* **1987**, *328*, 155-160.

131 M. T. Reetz, R. Peter, M. von Itzstein  
Titanium-mediated Stereoselective Knoevenagel Condensation of Ethyl  
(Diethoxyphosphoryl)acetate with Aldehydes.  
*Chem. Ber.* **1987**, *120*, 121-122.

130 M. T. Reetz, S. Maus  
Kinetic Studies of the Addition of Methyltitanium Reagents to Carbonyl Compounds.  
*Tetrahedron* **1987**, *43*, 101-108.

129 M. T. Reetz, S.-H. Kyung  
Direct Geminal Dimethylation of Aromatic Aldehydes with Dichlorodimethyltitanium.  
*Chem. Ber.* **1987**, *120*, 123.

- 128 M. T. Reetz, M. von Itzstein  
Structural Study of Titanated Phosphonoacetates: Reagents for Stereoconvergent Knoevenagel Condensations.  
*J. Organomet. Chem.* **1987**, 334, 85-90.
- 127 M. T. Reetz, M. Hüllmann, T. Seitz  
Der erste direkte Nachweis eines Cram-Chelats.  
*Angew. Chem.* **1987**, 99, 478-480.  
The First Direct Evidence for a Cram Chelate.  
*Angew. Chem., Int. Ed. Engl.* **1987**, 26, 477-479.
- 126 M. T. Reetz, H. Hugel, K. Dresely  
The Relative Reactivity of Cyclic Ketones Towards Methyltitanium Reagents.  
*Tetrahedron* **1987**, 43, 109-114.
- 125 M. T. Reetz, M. W. Drewes, A. Schmitz  
Stereoselektive Synthese von  $\beta$ -Aminoalkoholen aus optisch aktiven  $\alpha$ -Aminosäuren.  
*Angew. Chem.* **1987**, 99, 1186-1188.  
Stereoselective Synthesis of  $\beta$ -Amino Alcohols from Optically Active  $\alpha$ -Amino Acids.  
*Angew. Chem., Int. Ed. Engl.* **1987**, 26, 1141-1143.
- 1986**
- 124 M. T. Reetz, J. Rheinheimer  
Synthesis and Properties of Cyclopropanone Hydrazones.  
*J. Org. Chem.* **1986**, 51, 5465-5467.
- 123 M. T. Reetz, R. Ostarek, K.-E. Piejko, D. Arlt, B. Bömer  
Gruppentransfer-Polymerisation von Acrylsäureestern mit Alkylthio- oder Arylthiosilanen als Initiatoren.  
*Angew. Chem.* **1986**, 98, 1116-1118.  
Group Transfer Polymerization of Acrylic Acid Esters with Alkylthio- or Arylthiosilanes as Initiators.  
*Angew. Chem., Int. Ed. Engl.* **1986**, 25, 1108-1109.
- 122 M. T. Reetz, S.-H. Kyung, M. Hüllmann  
 $\text{CH}_3\text{Li}/\text{TiCl}_4$ : A Non-basic and Highly Selective Grignard Analogue.  
*Tetrahedron* **1986**, 42, 2931-2935.
- 121 M. T. Reetz, S.-H. Kyung, C. Bolm, T. Zierke  
Enantioselective C-C Bond Formation with Chiral Lewis Acids.  
*Chem. Ind. (London)* **1986**, 824.

- 120 M. T. Reetz, F. Kunisch, P. Heitmann  
Chiral Lewis Acids for Enantioselective C-C Bond Formation.  
*Tetrahedron Lett.* **1986**, *27*, 4721-4724.
- 119 M. T. Reetz, T. Kükenhöfner, P. Weinig  
Enantioselective Addition of Chirally Modified Methyltitanium Reagents to Aromatic Aldehydes.  
*Tetrahedron Lett.* **1986**, *27*, 5711-5714.
- 118 M. T. Reetz, M. Hüllmann, W. Massa, S. Berger, P. Rademacher, P. Heymanns  
Structure and Electronic Nature of the Benzaldehyde/Boron Trifluoride Adduct.  
*J. Am. Chem. Soc.* **1986**, *108*, 2405-2408.
- 117 M. T. Reetz, M. Hüllmann  
Non-chelation-controlled Nucleophilic Addition to Chiral  $\alpha$ -Siloxyketones.  
*J. Chem. Soc., Chem. Commun.* **1986**, 1600-1602.
- 116 M. T. Reetz  
Organotitanium Reagents in Organic Synthesis.  
Springer-Verlag: Berlin, **1986**, 236 pp. (*React. Struct.: Concepts Org. Chem.*, Vol. 24).

## 1985

- 115 M. T. Reetz, J. Westermann, R. Steinbach, B. Wenderoth, R. Peter, R. Ostarek, S. Maus  
Chemoselective Addition of Organotitanium Reagents to Carbonyl Compounds.  
*Chem. Ber.* **1985**, *118*, 1421-1440.
- 114 M. T. Reetz, J. Westermann, S.-H. Kyung  
Direct Geminal Dimethylation of Ketones and Exhaustive Methylation of Carboxylic Acid Chlorides Using Dichlorodimethyltitanium.  
*Chem. Ber.* **1985**, *118*, 1050-1057.
- 113 M. T. Reetz, B. Wenderoth, R. Urz  
Synthese von  $\beta,\gamma$ - und  $\alpha,\beta$ -ungesättigten Ketonen mittels Allyltitan-Agenzien.  
*Chem. Ber.* **1985**, *118*, 348-353.  
Synthesis of  $\beta,\gamma$ - and  $\alpha,\beta$ -Unsaturated Ketones Using Allyltitanium Reagents.  
*Chem. Abstr.* **1985**, *102*, 148824.

- 112 M. T. Reetz, R. Steinbach, J. Westermann, R. Peter, B. Wenderoth  
Stereoselective Addition of Organotitanium Reagents to Carbonyl Compounds.  
*Chem. Ber.* **1985**, *118*, 1441-1454.
- 111 M. T. Reetz, S.-H. Kyung  
A Simple Access to  $\alpha,\beta$ -Diketoesters.  
*Tetrahedron Lett.* **1985**, *26*, 6333-6336.
- 110 M. T. Reetz, K. Kessler, A. Jung  
Chelat-kontrollierte stereoselektive Synthese von Cyanhydrinen.  
*Angew. Chem.* **1985**, *97*, 989-990.  
Chelation-controlled Stereoselective Synthesis of Cyanohydrins.  
*Angew. Chem., Int. Ed. Engl.* **1985**, *24*, 989-991.
- 109 M. T. Reetz, K. Kessler  
Chelation- and Non-chelation-controlled Additions to 2-O-Benzyl-3-O-(*tert*-butyldimethylsilyl)-  
glyceraldehyde.  
*J. Org. Chem.* **1985**, *50*, 5434-5436.
- 108 M. T. Reetz  
Selective Synthetic Reaction by Organotitanium Reagent.  
*Kagaku, Zokan (Kyoto)* **1985**, No. 105, 63-70.  
*Chem. Abstr.* **1985**, *103*, 5639.
- 107 M. T. Reetz  
Selective Reactions of Organotitanium Reagents.  
*Pure Appl. Chem.* **1985**, *57*, 1781-1788.

## 1984

- 106 M. T. Reetz, P. Walz, F. Hübner, S. H. Hüttenhain, H. Heimbach, K. Schwellnus  
Regioselektive Lewis-Säure-bedingte  $\alpha$ -*sek*-Alkylierung von Carbonylverbindungen.  
*Chem. Ber.* **1984**, *117*, 322-335.  
Regioselective Lewis Acid-mediated  $\alpha$ -*sec*-Alkylation of Carbonyl Compounds.  
*Chem. Abstr.* **1984**, *100*, 84894.
- 105 M. T. Reetz, M. Sauerwald  
Reversal of Diastereoselectivity in the  $\text{BF}_3$ -Promoted Addition of  
Halobis(cyclopentadienyl)crotyltitanium Compounds to Aldehydes.  
*J. Org. Chem.* **1984**, *49*, 2292-2293.

- 104 M. T. Reetz, H. Müller-Starke  
 $\alpha$ -Alkylthio-nitriles via Cyanation of Thio-acetals and Ketals.  
*Tetrahedron Lett.* **1984**, 25, 3301-3304.
- 103 M. T. Reetz, S.-H. Kyung, J. Westermann  
Enantioselective Grignard-Type Addition of Allyltitanium Reagents Having the Center of Chirality at Titanium.  
*Organometallics* **1984**, 3, 1716-1717.
- 102 M. T. Reetz, K. Kessler, A. Jung  
Concerning the Role of Lewis Acids in Chelation Controlled Addition to Chiral Alkoxy Aldehydes.  
*Tetrahedron Lett.* **1984**, 25, 729-732.
- 101 M. T. Reetz, K. Kessler, A. Jung  
Aldol-Additions to  $\alpha$ - and  $\beta$ -Alkoxy Aldehydes: The Effect of Chelation on Simple Diastereoselectivity.  
*Tetrahedron* **1984**, 40, 4327-4336.
- 100 M. T. Reetz, K. Kessler  
Non-chelation-control in Nucleophilic Additions to Chiral  $\alpha$ - and  $\beta$ -Alkoxy Aldehydes.  
*J. Chem. Soc., Chem. Commun.* **1984**, 1079-1080.
- 99 M. T. Reetz, H. Heimbach, K. Schweltnus  
A Mild and Variable Synthesis of  $\alpha$ -Ketoesters.  
*Tetrahedron Lett.* **1984**, 25, 511-514.
- 98 M. T. Reetz, I. Chatziosifidis, F. Hübner, H. Heimbach  
 $\alpha$ -*tert*-Alkylation of Ketones: 2-*tert*-Pentylcyclopentanone (Cyclopentanone, 2-(*tert*-pentyl-)).  
*Org. Synth.* **1984**, 62, 95-100.
- 97 M. T. Reetz  
Chelat- oder Nicht-Chelat-Kontrolle bei Additionsreaktionen von chiralen  $\alpha$ - und  $\beta$ -Alkoxy-carbonyl-Verbindungen.  
*Angew. Chem.* **1984**, 96, 542-555.  
Chelation or Non-chelation Control in Addition Reactions of Chiral  $\alpha$ - and  $\beta$ -Alkoxy Carbonyl Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1984**, 23, 556-569.



## 1983

- 96 M. T. Reetz, J. Westermann  
Direct Geminal Dialkylation of Ketones Using Organotitanium Reagents. A Simple Entry into Synthetic Tetrahydrocannabinoids.  
*J. Org. Chem.* **1983**, *48*, 254-255.
- 95 M. T. Reetz, B. Wenderoth, R. Peter  
Chemoselective in Situ Protection of Aldehydes and Ketones Using Titanium Tetrakis(dialkylamides).  
*J. Chem. Soc., Chem. Commun.* **1983**, 406-408.
- 94 M. T. Reetz, R. Urz, T. Schuster  
An Economical Large-scale Synthesis of Titanium Tetrakis[diethylamide] and Chlorotitanium Tris[diethylamide].  
*Synthesis* **1983**, 540.
- 93 M. T. Reetz, K. Schwellnus, F. Hübner, W. Massa, R. E. Schmidt  
Lewis-Säure-bedingte  $\alpha$ -*tert*-Alkylierung von Carbonsäuren und Carbonsäureestern.  
*Chem. Ber.* **1983**, *116*, 3708-3724.  
Lewis Acid-Mediated  $\alpha$ -*tert*-Alkylation of Carboxylic Acids and Carboxylic Esters.  
*Chem. Abstr.* **1984**, *100*, 33782.
- 92 M. T. Reetz, M. Sauerwald  
Stereoselective  $\alpha$ -Alkylation of Ketones and Esters Using Chromiumtricarbonyl-complexed Benzyl Acetates.  
*Tetrahedron Lett.* **1983**, *24*, 2837-2840.
- 91M. T. Reetz, H. Müller-Starke  
Lewis-Säure-bedingte  $\alpha$ -Alkoxyalkylierung von Carbonylverbindungen mit  $\alpha$ -Halogen- und  $\alpha$ -Acetoxyethern. Synthese von C-Glycosiden.  
*Liebigs Ann. Chem.* **1983**, 1726-1738.  
Lewis Acid-mediated  $\alpha$ -Alkoxyalkylation of Carbonyl Compounds Using  $\alpha$ -Halo and  $\alpha$ -Acetoxy Ethers.  
*Chem. Abstr.* **1984**, *100*, 22922.

- 90 M. T. Reetz, K. Kessler, S. Schmidtberger, B. Wenderoth, R. Steinbach  
Chelat- oder Nicht-Chelat-Kontrolle bei stereoselektiven Reaktionen von Titan-Reagentien mit chiralen Alkoxy-carbonyl-Verbindungen.  
*Angew. Chem.* **1983**, *95*, 1007-1008.  
Chelation or Non-chelation Control in Stereoselective Reactions of Titanium Reagents with Chiral Alkoxy-carbonyl Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1983**, *22*, 989-990.  
*Angew. Chem., Suppl.* **1983**, 1511-1526.
- 89 M. T. Reetz, A. Jung  
1,3-Asymmetric Induction in Addition Reactions of Chiral  $\beta$ -Alkoxy Aldehydes: Efficient Chelation Control via Lewis Acidic Titanium Reagents.  
*J. Am. Chem. Soc.* **1983**, *105*, 4833-4835.
- 88 M. T. Reetz, H. Heimbach  
Regioselektive Lewis-Säure-bedingte  $\alpha$ -tert-Alkylierung von Acyloinen und Glycolsäure.  
*Chem. Ber.* **1983**, *116*, 3702-3707.  
Regioselective Lewis Acid-mediated  $\alpha$ -tert-Alkylation of Acyloins and Glycolic Acid.  
*Chem. Abstr.* **1984**, *100*, 67877.
- 87 M. T. Reetz, I. Chatziosifidis, H. Künzer, H. Müller-Starke  
Trimethylsilyl Cyanide Promoted Cyanation of Tertiary Alkyl Chlorides and Other  $S_N1$  Active Compounds.  
*Tetrahedron* **1983**, *39*, 961-965.
- 86 J. Chandrasekhar, P. von Rague Schleyer, R. O. W. Baumgärtner, M. T. Reetz  
Structures and Relative Energies of Silabenzene Isomers.  
*J. Org. Chem.* **1983**, *48*, 3453-3457.

## 1982

- 85 M. T. Reetz, B. Wenderoth  
Controlled Reversal of Chemoselectivity in Reactions of Allyltitanium Ate Complexes with Carbonyl Compounds.  
*Tetrahedron Lett.* **1982**, *23*, 5259-5262.

- 84 M. T. Reetz, R. Steinbach, J. Westermann, R. Urz, B. Wenderoth, R. Peter  
Stereoselektivität und relative Reaktivität bei der Reaktion von Organotitan- und -zirconium-  
Agentien mit Carbonylverbindungen.  
*Angew. Chem.* **1982**, *94*, 133-134.  
Stereoselectivity and Relative Reactivity in the Reaction of Organotitanium and -zirconium  
Reagents with Carbonyl Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1982**, *21*, 135.  
*Angew. Chem., Suppl.* **1982**, 257-268.
- 83 M. T. Reetz, R. Steinbach, K. Keßeler  
*Erythro*-selektive aldolartige Addition von titanierten Aldehyd-Hydrazone.  
*Angew. Chem.* **1982**, *94*, 872.  
*Erythro*-selective Aldol-type Addition of Titanated Aldehyde-hydrazones.  
*Angew. Chem., Int. Ed. Engl.* **1982**, *21*, 864.  
*Angew. Chem., Suppl.* **1982**, 1899-1905.
- 82 M. T. Reetz, I. Chatziiosifidis  
An Improved Synthesis of Cyanotrimethylsilane.  
*Synthesis* **1982**, 330.
- 81 M. T. Reetz  
Lewis-Säure-bewirkte  $\alpha$ -Alkylierung von Carbonylverbindungen.  
*Angew. Chem.* **1982**, *94*, 97-109:  
Lewis Acid Induced  $\alpha$ -Alkylation of Carbonyl Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1982**, *21*, 96-108.
- 80 M. T. Reetz  
Organotitanium Reagents in Organic Synthesis. A Simple Means to Adjust Reactivity and  
Selectivity of Carbanions.  
*Top. Curr. Chem.* **1982**, *106*, 1-54.
- 1981**
- 79 M. T. Reetz, J. Westermann, R. Steinbach  
Direct Geminal Dimethylation of Ketones Using Dimethyl-titanium Dichloride.  
*J. Chem. Soc., Chem. Commun.* **1981**, 237-239.
- 78 M. T. Reetz, J. Westermann  
Octahedral Titanium(IV)-Reagents in Organic Synthesis.  
*Synth. Commun.* **1981**, *11*, 647-654.

- 77 M. T. Reetz, W. Stephan  
An ab Initio Study of Hydride Abstraction from Alkylolithium Compounds.  
*J. Chem. Res., Synop.* **1981**, 44.  
*J. Chem. Res., Miniprint* **1981**, 583-594.
- 76 M. T. Reetz, R. Steinbach, B. Wenderoth, J. Westermann  
Variable Adjustment of Carbanion-selectivity by Conversion into Titanium Reagents.  
*Chem. Ind. (London)* **1981**, 541-542.
- 75 M. T. Reetz, R. Steinbach, B. Wenderoth  
Carbon-Carbon Bond Formation Using Alkyl-Titanium-(IV) Compounds.  
*Synth. Commun.* **1981**, 11, 261-266.
- 74 M. T. Reetz, M. Sauerwald, P. Walz  
Retention of Configuration in Lewis Acid Mediated  $\alpha$ -Alkylation of Carbonyl Compounds  
using  $S_N1$  Reactive Alkyl Halides.  
*Tetrahedron Lett.* **1981**, 22, 1101-1104.
- 73 M. T. Reetz, M. Sauerwald  
Einfache Synthese von Nortricyclylchlorid.  
*Chem. Ber.* **1981**, 114, 2355-2356.  
Simple Synthesis of Nortricyclyl Chloride.  
*Chem. Abstr.* **1981**, 95, 61597.
- 72 M. T. Reetz, R. Peter  
Erythro Selective Aldol Condensation Using Titanium Enolates.  
*Tetrahedron Lett.* **1981**, 22, 4691-4694.
- 71 M. T. Reetz, G. Neumeier  
Intermolekulare Silylgruppen-Wanderung bei (Trimethylsiloxy)enonen.  
*Liebigs Ann. Chem.* **1981**, 1234-1243.  
Intermolecular Migration of Silyl Groups in (Trimethylsiloxy)enones.  
*Chem. Abstr.* **1981**, 95, 149634.
- 70 M. T. Reetz, S. Hüttenhain, F. Hübner  
Lewis Acid Alkylation of Ketones Using  $S_N1$ -Reactive Acetates.  
*Synth. Commun.* **1981**, 11, 217-222.
- 69 M. T. Reetz, A. Giannis  
Lewis Acid Mediated  $\alpha$ -Thioalkylation of Ketones.  
*Synth. Commun.* **1981**, 11, 315-322.

- 68 M. T. Reetz, I. Chatziiosifidis, K. Schwellnus  
Allgemeines Verfahren zur intramolekularen  $\alpha$ -*tert*-Alkylierung von Carbonylverbindungen.  
*Angew. Chem.* **1981**, 93, 716-717.  
General Procedure for the Intramolecular  $\alpha$ -*tert*-Alkylation of Carbonyl Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1981**, 20, 687-689.
- 67 M. T. Reetz, I. Chatziiosifidis  
Cyanierung tertiärer Alkylchloride: Eine neue Methode zur geminalen Dialkylierung von Ketonen.  
*Angew. Chem.* **1981**, 93, 1075-1076.  
Cyanation of Tertiary Alkyl Chlorides: A New Method for Geminal Dialkylation of Ketones.  
*Angew. Chem., Int. Ed. Engl.* **1981**, 20, 1017-1018.
- 66 M. T. Reetz  
Organotitan-Agenzien zur Modifizierung der Carbanionen-Selektivität.  
*Nachr. Chem., Tech. Lab.* **1981**, 29, 165-168.  
Organotitanium Agents for the Modification of Carbanion Selectivity.  
*Chem. Abstr.* **1981**, 95, 23601.
- 65 B. Ciommer, H. Schwarz, A. Maaroufi, M. T. Reetz, K. Levsen  
Silyl-Assistierte Etherspaltung bei Radikalkationen von Hydroxylaminderivaten.  
*Z. Naturforsch., B: Anorg. Chem., Org. Chem.* **1981**, 36B, 771-773.  
Mass Spectroscopic Studies of Organic Nitrogen Compounds. Part 34. Silyl-assisted Ether Cleavage in Radical Cations of Hydroxylamine Derivatives.  
*Chem. Abstr.* **1981**, 95, 149364.

## 1980

- 64 M. T. Reetz, J. Westermann, R. Steinbach  
Chemoselektive und positionsspezifische Methylierung von *tert*-Alkylhalogeniden mit Methyltitan(IV)-chloriden.  
*Angew. Chem.* **1980**, 92, 933-934.  
Chemoselective and Position-specific Methylation of *tert*-Alkyl Halides with Methyltitanium(IV) Chlorides.  
*Angew. Chem., Int. Ed. Engl.* **1980**, 19, 901-902.
- 63 M. T. Reetz, J. Westermann, R. Steinbach  
Geminal Dialkylierung von Ketonen mit Grignard-Verbindungen und Methyltitan(IV)-chloriden.  
*Angew. Chem.* **1980**, 92, 931-933.  
Geminal Dialkylation of Ketones with Grignard Compounds and Methyltitanium(IV) Chlorides.  
*Angew. Chem., Int. Ed. Engl.* **1980**, 19, 900-901.

- 62 M. T. Reetz, B. Wenderoth, R. Peter, R. Steinbach, J. Westermann  
Efficient Coupling of Tertiary Alkyl Halides with Dialkyl-zinc and Titanium Compounds.  
*J. Chem. Soc., Chem. Commun.* **1980**, 1202-1204.
- 61 M. T. Reetz, W. F. Maier, H. Heimbach, A. Giannis, G. Anastassious  
Lewis-Säure-bedingte  $\alpha$ -Alkylierung von Carbonylverbindungen, VI. Optimierung des  
Verfahrens zur  $\alpha$ -tert-Alkylierung von Ketonen und Aldehyden.  
*Chem. Ber.* **1980**, 113, 3734-3740.  
Lewis Acid Mediated  $\alpha$ -Alkylation of Carbonyl Compounds. VI. Optimization of the  
Procedure for the  $\alpha$ -tert-Alkylation of Ketones and Aldehydes.  
*Chem. Abstr.* **1981**, 94, 139159.
- 60 M. T. Reetz, W. F. Maier  
Einfache Darstellung von Lithiumdiisopropylamid in molarem Maßstab.  
*Liebigs Ann. Chem.* **1980**, 1471-1473.  
Simple Synthesis of Lithium Diisopropylamide in Molar Quantities.  
*Chem. Abstr.* **1981**, 94, 83549.
- 59 M. T. Reetz, W. Stephan, W. F. Maier  
Facile Hydride Ion Abstraction from Enamines, Allylamines and Imines.  
*Synth. Commun.* **1980**, 10, 867-871.
- 58 M. T. Reetz, W. Stephan  
Hydrideliminierungen, IX. Aromatisierung von Arenocyclohexanonen.  
*Liebigs Ann. Chem.* **1980**, 533-541.  
Hydride Eliminations. IX. Aromatization of Arenocyclohexanones.  
*Chem. Abstr.* **1980**, 93, 71336.
- 57 M. T. Reetz, W. Stephan  
Hydrideliminierungen, VIII. Notiz über positionsspezifische Übergangsmetallbedingte  
Hydridabstraktion aus Carbanionen.  
*Liebigs Ann. Chem.* **1980**, 171-173.  
Hydride Eliminations. VIII. Note on Site-specific Transition Metal-limited Hydride Abstraction  
from Carbanions.  
*Chem. Abstr.* **1980**, 92, 180585.
- 56 M. T. Reetz, R. Steinbach, J. Westermann, R. Peter  
Chemo- und diastereoselektive Addition von Alkyl- und Aryltitan(IV)-Verbindungen an  
Aldehyde und Ketone.  
*Angew. Chem.* **1980**, 92, 1044-1045.  
Chemo- and Diastereoselective Addition of Alkyl and Aryl Titanium(IV) Compounds to  
Aldehydes and Ketones.  
*Angew. Chem., Int. Ed. Engl.* **1980**, 19, 1011.

- 55 M. T. Reetz, W. F. Maier, I. Chatziiosifidis, A. Giannis, H. Heimbach, U. Löwe  
Lewis-Säure-bedingte  $\alpha$ -Alkylierung von Carbonylverbindungen, VII. Regio- und  
positionsspezifische  $\alpha$ -*tert*-Alkylierung von Ketonen.  
*Chem. Ber.* **1980**, *113*, 3741-3757.  
Lewis Acid Mediated  $\alpha$ -Alkylation of Carbonyl Compounds. VII. Regio and Position Specific  
 $\alpha$ -*tert*-Alkylation of Ketones.  
*Chem. Abstr.* **1981**, *94*, 139305.
- 54 M. T. Reetz, A. Maaroufi, N. Greif  
Anchimer beschleunigte Homolysen, V. Thermische und Fluorid-ionen-katalysierte  
Umlagerungen von Benzyl-[9-(trimethyl-germyl)-9-fluorenyl]-ether.  
*Chem. Ber.* **1980**, *113*, 808-810.  
Anchimerically Accelerated Homolyses. V. Thermal and Fluoride Ion-catalyzed  
Rearrangements of Benzyl 9-(Trimethylgermyl)-9-fluorenyl Ether.  
*Chem. Abstr.* **1980**, *93*, 7384.
- 53 M. T. Reetz, S. H. Hüttenhain  
 $\alpha$ -Cumylation of Ketones.  
*Synthesis* **1980**, 941-942.
- 52 M. T. Reetz  
Lewis-saure Nucleophile in der Organischen Synthese.  
In: 30 Jahre Fonds der Chemischen Industrie 1950-1980, Verband der Chemischen  
Industrie e. V.: Frankfurt/Main, **1980**, S. 29-36.

## 1979

- 51 H. Schwarz, M. T. Reetz, W. F. Maier, C. Wesdemiotis, I. Chatziiosifidis, M. Schilling  
Adamanten in der Gasphase.  
*Angew. Chem.* **1979**, *91*, 1019-1020.  
Adamantene in the Vapor Phase.  
*Angew. Chem., Int. Ed. Engl.* **1979**, *19*, 952-953.
- 50 M. T. Reetz, G. Neumeier  
Diels-Alder-Reaktionen von 2,3-Bis(trimethylsilyloxy)-1,3-dienen.  
*Chem. Ber.* **1979**, *112*, 2209-2219.  
Diels-Alder Reactions of 2,3-Bis(trimethylsilyloxy)-1,3-dienes.  
*Chem. Abstr.* **1979**, *91*, 57102.

- 49 M. T. Reetz, W. F. Maier, K. Schwellnus, I. Chatziiosifidis  
Allgemeine Synthese potentiell antiviral wirksamer  $\alpha$ -Adamantyl-carbonylverbindungen.  
*Angew. Chem.* **1979**, *91*, 78-79.  
General Synthesis of Active Antiviral  $\alpha$ -Adamantyl Carbonyl Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1979**, *18*, 72.
- 48 M. T. Reetz, S. Hüttenhain, P. Walz, U. Löwe  
Lewis Acid Mediated  $\alpha$ -Alkylation of Ketones Using S<sub>N</sub>1 Reactive Alkylating Agents.  
*Tetrahedron Lett.* **1979**, 4971-4974.
- 47 M. T. Reetz, I. Chatziiosifidis, U. Löwe, W. F. Maier  
Position Specific  $\alpha$ -*tert*-Alkylation of Ketones.  
*Tetrahedron Lett.* **1979**, *20*, 1427-1428.
- 46 M. T. Reetz  
Anchimer beschleunigte Homolysen.  
*Angew. Chem.* **1979**, *91*, 185-192.  
Anchimer Accelerated Homolyses.  
*Angew. Chem., Int. Ed. Engl.* **1979**, *18*, 173-180.

## 1978

- 45 H. Schwarz, C. Wesdemiotis, M. T. Reetz  
Massenspektrometrische Untersuchung zu dyotropen Umlagerungen. III. Ether-Spaltungen, Silylen- und Carben-Eliminierung durch anchimere Effekte von Silylgruppen bei Zerfällen ionisierter Alkyl-(silylmethyl)-ether.  
*J. Organomet. Chem.* **1978**, *161*, 153-164.  
Mass Spectrometric Studies on Dyotropic Rearrangements. III. Ether Cleavage, Silyl and Carbene Elimination by Anchimeric Effects of Silyl Groups During the Decomposition of Ionized Alkyl(silylmethyl) Ethers.  
*Chem. Abstr.* **1979**, *90*, 86177.
- 44 M. T. Reetz, K. Schwellnus  
 $\alpha$ -*tert*-Alkylierung von Carbonsäure-Estern.  
*Tetrahedron Lett.* **1978**, 1455-1458.  
 $\alpha$ -*tert*-Alkylation of Carboxylic Acid Esters.  
*Chem. Abstr.* **1978**, *89*, 196926.
- 43 M. T. Reetz, W. F. Maier  
*tert*-Alkylierung von Ketonen und Aldehyden.  
*Angew. Chem.* **1978**, *90*, 50.  
*tert*-Alkylation of Ketones and Aldehydes.  
*Angew. Chem., Int. Ed. Engl.* **1978**, *17*, 48.



- 42 M. T. Reetz, M. Kliment, N. Greif  
Anchimer beschleunigte Homolysen, II. Synthese, Thermolyse und Photolyse von Alkyl-(silylmethyl)-ethern.  
*Chem. Ber.* **1978**, *111*, 1083-1094.  
Anchimerically Accelerated Homolyses, II. Synthesis, Thermolysis, and Photolysis of Alkyl (Silylmethyl) Ethers.  
*Chem. Abstr.* **1978**, *88*, 190963.
- 41 M. T. Reetz, N. Greif, M. Kliment  
Anchimer beschleunigte Homolysen, III. Mechanismus der thermischen Umlagerung von Alkyl-(silylmethyl)-ethern.  
*Chem. Ber.* **1978**, *111*, 1095-1107.  
Anchimerically Accelerated Homolyses, III. Mechanims of the Thermal Rearrangement of Alkyl (Silylmethyl) Ethers.  
*Chem. Abstr.* **1978**, *88*, 189725.
- 40 M. T. Reetz, F. Eibach  
Hydrideliminierungen, VII. Deprotonierung-Hydrideliminierung als Methode zur Aromatisierung.  
*Justus Liebigs Ann. Chem.* **1978**, 1598-1606.  
Hydride Eliminations, VII. Deprotonation-Hydride Elimination as a Method of Aromatization.  
*Chem. Abstr.* **1979**, *90*, 54227.
- 39 M. T. Reetz, F. Eibach  
Hydrideliminierungen, VI. Deprotonierung-Hydrideliminierung als Methode zur Dehydrierung.  
*Angew. Chem.* **1978**, *90*, 285-286.  
Hydride Eliminations. 6. Deprotonation-Hydride Elimination as a Method for Dehydrogenation.  
*Angew. Chem., Int. Ed. Engl.* **1978**, *17*, 278.
- 38 M. T. Reetz  
Neue Eliminierungs- und Umlagerungsreaktionen auf dem Gebiet der metallorganischen Chemie.  
In: Jahrbuch der Akademie der Wissenschaften in Göttingen, Vandenhoeck & Ruprecht: Göttingen, **1978**, S. 15-19.
- 37 R. W. Hoffmann, H. R. Kurz, J. Becherer, M. T. Reetz  
Bicyclofulvene, IV. Synthesen von Methylentricyclo-[4.2.1.0<sup>2,5</sup>]nonan- und -tricyclo[3.2.1.0<sup>2,4</sup>]-octan-Derivaten.  
*Chem. Ber.* **1978**, *111*, 1264-1274.  
Bicyclofulvenes, IV. Synthesen of Methylentricyclo[4,2,1,0<sup>2,5</sup>]nonane and -tricyclo[3.2.1.0<sup>2,4</sup>]octane Derivatives.  
*Chem. Abstr.* **1978**, *89*, 146484.

1977

- 36 M. T. Reetz, C. Weis  
Inverse Anwendung der Grignard-Reduktion zur Synthese von Alkenen.  
*Synthesis* **1977**, 135-136.  
Inverse Applications of Grignard Reduction for the Synthesis of Alkenes.  
*Chem. Abstr.* **1977**, *86*, 189059.
- 35 M. T. Reetz, W. Stephan  
Hydrideliminierungen, IV. Ab initio Rechnungen zur Hydriddonor-Eigenschaft von Lithiumalkylen.  
*Tetrahedron Lett.* **1977**, 2693-2696.  
Hydride Eliminations. Part 4. Ab Initio Calculations on the Hydride Donor Property of Alkylolithium Compounds.  
*Chem. Abstr.* **1978**, *88*, 50054.
- 34 M. T. Reetz, W. Stephan  
Hydrideliminierungen, 2. Stereoselektive Hydrideliminierung aus organischen Lithium- und Magnesium-Verbindungen.  
*Angew. Chem.* **1977**, *89*, 46.  
Hydride Eliminations. 2. Stereoselective Hydride Elimination from Organic Lithium and Magnesium Compounds.  
*Angew. Chem., Int. Ed. Engl.* **1977**, *16*, 44.
- 33 M. T. Reetz, D. Schinzer  
Hydrideliminierungen, III. Nucleophile Substitution von Vinyl-Wasserstoffatomen durch Carbanionen.  
*Angew. Chem.* **1977**, *89*, 46-47.  
Hydride Eliminations. 3. Nucleophilic Substitution of Vinyl Hydrogen Atoms by Carbanions.  
*Angew. Chem., Int. Ed. Engl.* **1977**, *16*, 44.
- 32 M. T. Reetz, N. Greif  
Dyotrope Umlagerungen, 14. Thermische Umlagerung von (Silyl)methyl-acetaten.  
*Angew. Chem.* **1977**, *89*, 765-766.  
Dyotropic Rearrangements. 14. Thermal Rearrangement of (Silyl)methyl Acetates.  
*Angew. Chem., Int. Ed. Engl.* **1977**, *16*, 712.
- 31 M. T. Reetz, N. Greif  
Dyotrope Umlagerungen, XIII. Fluoridionen-katalysierte Umlagerungen von Allyl- und Benzyl-(silylmethyl)-ethern.  
*Chem. Ber.* **1977**, *110*, 2958-2959.  
Dyotropic Rearrangements. XIII. Fluoride Ion-catalyzed Rearrangements of Allyl and Benzyl Trimethylsilyl Ethers.  
*Chem. Abstr.* **1977**, *87*, 151464.

- 30 M. T. Reetz, F. Eibach  
Über Acidität und Olefinierungsreaktionen von  $\alpha$ -(Diphenylphosphino)-  
carbonylverbindungen.  
*Justus Liebigs Ann. Chem.* **1977**, 242-253.  
Acidity and Olefination Reactions of  $\alpha$ -Diphenylphosphino Carbonyl Compounds.  
*Chem. Abstr.* **1977**, 87, 135594.
- 29 M. T. Reetz  
Dyotrope Umlagerungen, XI. Mechanismus der thermischen Umlagerung von Allyl-  
(silylmethyl)-ethern.  
*Chem. Ber.* **1977**, 110, 965-978.  
Dyotropic Rearrangements, XI. Mechanism of the Thermal Rearrangement of Allyl  
(Silylmethyl) Ethers.  
*Chem. Abstr.* **1977**, 86, 188858.
- 28 M. T. Reetz  
Dyotrope Umlagerungen, X. Synthese und thermische Umlagerung von Allyl-(silylmethyl)-  
ethern.  
*Chem. Ber.* **1977**, 110, 954-964.  
Dyotropic Rearrangements, X. Synthesis and Thermal Rearrangement of Allyl (Silylmethyl)  
Ethers.  
*Chem. Abstr.* **1977**, 86, 170506.
- 27M. T. Reetz  
Olefinbildende Hydrideliminierungen, V.  
*Nachr. Chem., Tech. Lab.* 1977, **25**, 594, 596.  
Olefin-forming Hydride Eliminations.  
*Chem. Abstr.* **1978**, 88, 36711.
- 26 M. T. Reetz  
Dyotropic Rearrangements and Related  $\sigma$ - $\sigma$  Exchange Processes.  
*Adv. Organomet. Chem.* **1977**, 16, 33-65.

1976

- 25 H. Schwarz, M. T. Reetz  
Massenspektrometrische Untersuchungen zu dyotropen Umlagerungen,  
2. Elektronenstoßinduzierte Etherspaltung durch anchimere Beteiligung von Silyl- und  
Germlygruppen.  
*Angew. Chem.* **1976**, *88*, 726-728.  
Mass Spectrometric Investigations of Dyotropic Rearrangements. 2. Electron Impact  
Induced Ether Cleavage by Anchimeric Participation of Silyl and Germly Groups.  
*Angew. Chem., Int. Ed. Engl.* **1976**, *15*, 705-706.
- 24 H. Schwarz, M. Kliment, M. T. Reetz, G. Holzmann  
Massenspektrometrische Untersuchungen zu dyotropen Umlagerungen.  
*Org. Mass Spectrom.* **1976**, *11*, 989-994.  
Mass Spectrometric Investigations of Dyotropic Rearrangements.  
*Chem. Abstr.* **1977**, *86*, 71118.
- 23 M. T. Reetz, M. Plachky  
*trans*-Stereospezifische Desoxygenierung von Epoxiden mittels Dimethylphenylsilyllithium.  
*Synthesis* **1976**, 199-200.  
The *trans* Stereospecific Deoxygenation of Epoxides Using Dimethylphenylsilyllithium.  
*Chem. Abstr.* **1976**, *85*, 20702.
- 22 M. T. Reetz, M. Kliment, M. Plachky, N. Greif  
Dyotrope Umlagerungen, VIII. Mechanismus der Umlagerung von (Silyl)methyl-silyl-  
äthern.  
*Chem. Ber.* **1976**, *109*, 2728-2742.  
Dyotropic Rearrangements. VIII. Mechanism of the Rearrangement of (Silyl)methyl Silyl  
Ethers.  
*Chem. Abstr.* **1976**, *85*, 191943.
- 21 M. T. Reetz, M. Kliment, M. Plachky  
Dyotrope Umlagerungen, VII. Synthese und thermische Umlagerung von (Silyl)methyl-  
silyl-äthern.  
*Chem. Ber.* **1976**, *109*, 2716-2727.  
Dyotropic Rearrangements. VII. Synthesis and Thermal Rearrangement of Silyl(methyl)  
Silyl Ethers.  
*Chem. Abstr.* **1976**, *85*, 191942.
- 20 M. T. Reetz  
Stereochemie der thermischen Umlagerung von (Silyl)Methyl-Allyl-Äthern.  
*Tetrahedron Lett.* **1976**, 817-820.  
Dyotropic Rearrangements. 9. Stereochemistry of the Thermal Rearrangement of  
Silyl(methyl)allyl Ethers.  
*Chem. Abstr.* **1976**, *85*, 45863.

## 1975

- 19 M. T. Reetz, D. Schinzer  
Aza-Wittig Rearrangement of (9-Lithio-9-fluorenyl)-allyl-methyl-amine.  
*Tetrahedron Lett.* **1975**, 3485-3486.
- 18 M. T. Reetz, G. Neumeier, M. Kaschube  
Thermische Umlagerung von Quadratsäure-bis(trimethylsilyl)ester.  
*Tetrahedron Lett.* **1975**, 1295-1296.  
Thermal Rearrangement of Squaric Acid Bis(trimethylsilyl) Ester.  
*Chem. Abstr.* **1975**, 83, 58931.
- 17 M. T. Reetz, M. Kliment  
Dyotrope Umlagerung von (Silyl)methyl-silyl-thio-äthern.  
*Tetrahedron Lett.* **1975**, 2909-2910.  
Diatropic Rearrangement of Silylmethyl Silyl Thio Ethers.  
*Chem. Abstr.* **1975**, 83, 177909.
- 16 M. T. Reetz, M. Kliment  
Thermolysis of (Silyl)methyl-benzyl-ethers: Evidence for Anchimerically Accelerated Bond Homolysis.  
*Tetrahedron Lett.* **1975**, 797-798.
- 15 W. F. Maier, M. T. Reetz  
An ab Initio Study of Acyloxy Cations.  
*J. Am. Chem. Soc.* **1975**, 97, 3687-3690.
- 14 R. W. Hoffmann, H. Kurz, M. T. Reetz, R. Schüttler  
Bicyclofulvene, I. Darstellung von Methylenbicyclo[2.2.1]heptadien und Methylenbicyclo[4.2.1]nonatrien.  
*Chem. Ber.* **1975**, 108, 109-118.  
Bicyclofulvenes. I. Synthesis of Methylenebicyclo[2.2.1]heptadiene and Methylenebicyclo[4.2.1]nonatriene.  
*Chem. Abstr.* **1975**, 82, 155495.

## 1974

- 13 M. T. Reetz, W. F. Maier  
The Electronic Structure and Energy of Acyloxy and Dioxacyclopropyl Cations.  
*Theor. Chim. Acta* **1974**, 35, 163-167.

- 12 M. T. Reetz, M. Kliment, M. Plachky  
Dyotrope Umlagerung von (Silyl)methyl-Silyl-Äthern.  
*Angew. Chem.* **1974**, 86, 899.  
Dyotropic Rearrangement of (Silyl)methyl Silyl Ethers.  
*Angew. Chem., Int. Ed. Engl.* **1974**, 13, 813.
- 11 M. T. Reetz  
Umlagerung von (Trimethylsilyl)methyl-Allyl-Äthern, eine dyotrope Reaktion?  
*Angew. Chem.* **1974**, 86, 416.  
Rearrangement of (Trimethylsilyl)methyl Allyl Ethers, a Dyotropic Reaction?  
*Angew. Chem., Int. Ed. Engl.* **1974**, 13, 402.

### 1973

- 10 M. T. Reetz, U. Schöllkopf, B. Banhidai  
Untersuchungen über Heterocarbone, XIII. Brom-, Jod- und Chlor-äthoxycarbonylcarben  
aus Brom-, Jod- und Chlordiazoessigsäure-äthylester.  
*Justus Liebigs Ann. Chem.* **1973**, 599-610.  
Heterocarbenes. XIII: Bromo-, Iodo-, and Chloro(ethoxycarbonyl)carbenes from Ethyl  
Bromo-, Iodo-, and Chlorodiazooacetates.  
*Chem. Abstr.* **1973**, 79, 77721.
- 9 M. T. Reetz, R. W. Hoffmann, W. Schäfer, A. Schweig  
Methylen-bicyclo[4.2.1]nona-2,4,7-trien.  
*Angew. Chem.* **1973**, 85, 45-46.  
Methylenebicyclo[4.2.1]nona-2,4,7-triene.  
*Angew. Chem., Int. Ed. Engl.* **1973**, 12, 81.
- 8 M. T. Reetz  
Primary and Secondary Orbital Effects in Dyotropic Rearrangements.  
*Tetrahedron* **1973**, 29, 2189-2194.

### 1972

- 7 M. T. Reetz  
Dyotrope Umlagerungen, eine neue Klasse orbitalsymmetriesteuerter Reaktionen.  
Typ II.  
*Angew. Chem.* **1972**, 84, 163.  
Dyotropic Rearrangements, a New Class of Orbital-symmetry Controlled Reactions.  
Type II.  
*Angew. Chem., Int. Ed. Engl.* **1972**, 11, 130.

6 M. T. Reetz  
Dyotrope Umlagerungen, eine neue Klasse orbitalsymmetriesteuerter Reaktionen.  
Typ I.  
*Angew. Chem.* **1972**, *84*, 161-162.  
Dyotropic Rearrangements, a New Class of Orbital-symmetry Controlled Reactions.  
Type I.  
*Angew. Chem., Int. Ed. Engl.* **1972**, *11*, 129.

5 R. W. Hoffmann, R. Hirsch, R. Fleming, M. T. Reetz  
Thermisches Verhalten von Allyloxy-carbenen.  
*Chem. Ber.* **1972**, *105*, 3532-3541.  
Thermal Behavior of Allyloxy Carbenes.  
*Chem. Abstr.* **1973**, *79*, 31276.

#### 1969

4 U. Schöllkopf, M. T. Reetz  
Zur Stabilität von Brom- und Jod-Diazoessigsäureäthylester und zum Verhalten von Brom-  
und Jod-Äthoxycarbonylcarben.  
*Tetrahedron Lett.* **1969**, 1541-1544.  
Stability of Ethyl Bromodiazooacetate and Ethyl Iododiazooacetate and Behavior of Bromo-  
and Iodo(ethoxycarbonyl)-carbenes.  
*Chem. Abstr.* **1969**, *71*, 30101.

#### 1968

3 U. Schöllkopf, F. Gerhart, M. T. Reetz, H. Frasnelli, H. Schumacher  
Halogen-diazoessigsäureäthylester aus Quecksilber-bis-diazoessigsäureäthylester.  
*Justus Liebigs Ann. Chem.* **1968**, *716*, 204-206.  
Ethyl Halodiazooacetate from Ethyl Mercuricbis(diazoacetate).  
*Chem. Abstr.* **1969**, *70*, 11071.

#### 1967

2 M. T. Reetz  
An LCAO-HMO Treatment of the Acidity of Unsaturated Carboxylic Acids.  
*Tetrahedron Lett.* **1967**, 3549-3552.

1 D. T. Longone, M. T. Reetz  
Paracyclophanes. Resolution of a Dissymmetric Tetramethyl[2,2]paracyclophane.  
*Chem. Commun. (London)* **1967**, 46-47.