

## List of Publications on Ti-TADDOLate related Chemistry

\* = Review Articles

\* Dieter Seebach, Beat Weidmann, Leo Widler

### **Titanium and Zirconium Derivatives in Organic Synthesis.A Review with Procedures**

Modern Synthetic Methods 1983, Vol. **3**, Ed. R. Scheffold,Salle + Sauerländer (Aarau, Switzerland) and J. Wiley and Sons (New York, USA), 1983, 217 - 353

\*Dieter Seebach, Albert K. Beck, Martin Schiess, Leo Widler, Anne Wonnacott

### **Some recent advances in the use of titanium reagents for organic synthesis**

Pure & Appl. Chem. **55**, 1807 - 1822 (1983)

Dieter Seebach, Albert K. Beck, René Imwinkelried, Silvio Roggo, Anne Wonnacott

### **Chirale Alkoxytitan(IV)-Komplexe für enantioselektive nucleophile Additionen an Aldehyde und als Lewis-Säuren in Diels-Alder-Reaktionen**

Helv. Chim. Acta **70**, 954 - 974 (1987)

Beat Schmidt, Dieter Seebach

### **Katalytische und stöchiometrische enantioselektive Additionen von Diethylzink an Aldehyde mit Hilfe eines neuartigen chiralen Spirotitanats**

Angew. Chem. **103**, 100 - 101 (1991)

Angew. Chem. Int. Ed. Engl. **30**, 99 - 101 (1991)

Dieter Seebach, Linda Behrendt, Dorothee Felix

### **Titanat-katalysierte enantioselektive Addition von *in situ* aus Grignard-Reagentien in Ether erzeugten Alkylzinkverbindungen an Aldehyde**

Angew. Chem. **103**, 991 - 992 (1991)

Angew. Chem. Int. Ed. Engl. **30**, 1008 - 1009 (1991)

Albert K. Beck, Bahram Bastani, Dietmar A. Plattner, Walter Petter, Dieter Seebach, Hans Braunschweiger, Peter Gysi, Luigi La Vecchia

**Grossansätze zur Herstellung von  $\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-1,3-dioxolan-4,5-dimethanolen (TADDOLe): Nützliche Hilfsstoffe für die EPC-Synthese und ihre Struktur im Festkörper**

Chimia **45**, 238 - 244 (1991)

Beat Schmidt, Dieter Seebach

**2,2-Dimethyl- $\alpha,\alpha,\alpha',\alpha'$ -tetra(naphth-2-yl)-1,3-dioxolan-4,5-dimethanol (DINOL) für die Titanat-vermittelte, enantioselektive Addition von Diethylzink an Aldehyde**

Angew. Chem. **103**, 1383 - 1385 (1991)

Angew. Chem. Int. Ed. Engl. **30**, 1321 - 1323 (1991)

Beat Weber, Dieter Seebach

**Enantiomerenreine tertiäre Alkohole durch TADDOL-vermittelte Additionen an Ketone – oder wie man ein Grignard-Reagens enantioselektiv macht**

Angew. Chem. **104**, 96 - 97 (1992)

Angew. Chem. Int. Ed. Engl. **31**, 84 - 86 (1992)

Christoph von dem Bussche-Hünnefeld, Albert K. Beck, Urs Lengweiler, Dieter Seebach

**$\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-1,3-dioxolane-4,5-dimethanols (TADDOLs) for Resolution of Alcohols and as Chiral Solvating Agents in NMR Spectroscopy**

Helv. Chim. Acta **75**, 438 - 441 (1992)

Joanna Linda von dem Bussche-Hünnefeld, Dieter Seebach

**Enantioselective Preparation of *sec.* Alcohols from Aldehydes and Dialkyl Zinc Compounds, Generated *in situ* from Grignard Reagents, Using Substoichiometric Amounts of TADDOL-Titanates**

Tetrahedron **48**, 5719-5730 (1992) [Tetrahedron Symposia-in-Print No. **47** on

"Organotitanium Reagents in Organic Chemistry" ]

Dieter Seebach, Dietmar A. Plattner, Albert K. Beck, Yan Ming Wang, Daniel Hunziker, Walter Petter

**On the Mechanisms of Enantioselective Reactions Using  $\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-1,3-dioxolane-4,5-dimethanol (TADDOL)-Derived Titanates: Differences between  $C_2$ - and  $C_1$ -Symmetrical TADDOLs – Facts, Implications and Generalizations**

Helv. Chim. Acta **75**, 2171 - 2209 (1992)

Dieter Seebach, Michiya Hayakawa, Jun-ichi Sakaki, W. Bernd Schweizer

**Derivatives of  $\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-2,2-dimethyl-1,3-dioxolan-4,5-dimethanol (TADDOL) Containing Nitrogen, Sulfur, and Phosphorus Atoms. New Ligands and Auxiliaries for Enantioselective Reactions**

Tetrahedron **49**, 1711 - 1724 (1993) [Tetrahedron Symposia-in-Print No. **49** on "Synthesis of Optically Active Compounds - Prospects for the 21st Century"]

Jun-ichi Sakaki, W. Bernd Schweizer, Dieter Seebach

**Catalytic Enantioselective Hydrosilylation of Aromatic Ketones Using Rhodium Complexes of TADDOL-Derived Cyclic Phosphonites and Phosphites**

Helv. Chim. Acta **76**, 2654 - 2665 (1993)

\* Eusebio Juaristi, Albert K. Beck, Jesper Hansen, Thomas Matt, Triptikumar Mukhopadhyay, Małgorzata Simson, Dieter Seebach

**Enantioselective Aldol and Michael Additions of Achiral Enolates in the Presence of Chiral Lithium Amides and Amines**

Synthesis **1993**, 1271 - 1290

Dieter Seebach, Albert K. Beck, Beat Schmidt, Yan Ming Wang

**Enantio- and Diastereoselective Titanium-TADDOLate Catalyzed Addition of Diethyl and bis(3-Buten-1-yl) Zinc to Aldehydes. A Full Account with Preparative Details**

Tetrahedron **50**, 4363 - 4384 (1994) [Tetrahedron-Symposia-in-Print No. **54** on "Catalytic Asymmetric Addition Reactions"]

Beat Weber, Dieter Seebach

**Highly Enantioselective Addition of Primary Alkyl Grignard Reagents to Carbocyclic and Heterocyclic Arylketones in the Presence of Magnesium TADDOLate. Preparative and Mechanistic Aspects**

Tetrahedron **50**, 6117 - 6128 (1994) [*Tetrahedron Symposia-in-Print No. 55* on "Mechanistic Aspects of Polar Organometallic Chemistry"]

Beat Weber, Dieter Seebach

**Ti-TADDOLate-Catalyzed, Highly Enantioselective Addition of Alkyl- and Aryl-Titanium Derivatives to Aldehydes**

Tetrahedron **50**, 7473 - 7484 (1994)

Dieter Seebach, P. Beat Rheiner, Albert K. Beck, Florian N. M. Kühnle, Bernhard Jaun

**Preparation and Cationic Rearrangements of *ortho*- and *para*-Methoxy-TADDOLs**

Polish J. Chem. **68**, 2397 - 2413 (1994)

Yoshio N. Ito, Xavier Ariza, Albert K. Beck, Andrej Boháć, Camille Ganter, Robert E. Gawley, Florian N. M. Kühnle, Juraj Tuleja, Yan Ming Wang, Dieter Seebach

**Preparation and Structural Analysis of Several New  $\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-1,3-dioxolane-4,5-dimethanols (TADDOL's) and TADDOL Analogs, Their Evaluation as Titanium Ligands in the Enantioselective Addition of Methyltitanium and Diethylzinc Reagents to Benzaldehyde, and Refinement of the Mechanistic Hypothesis**

Helv. Chim. Acta **77**, 2071 - 2110 (1994)

Harald Schäfer, Dieter Seebach

**Enantioselective Conjugate Addition of Primary Dialkylzinc Reagents to 2-Aryl- and 2-Heteroaryl-nitroolefins Mediated by Titanium-TADDOLates. Preparation of Enantioenriched 2-Aryl-alkylamines**

Tetrahedron **51**, 2305 - 2324 (1995)

Dieter Seebach, Robert Dahinden, Roger E. Marti, Albert K. Beck, Dietmar A. Plattner,  
Florian N. M. Kühnle

**On the Ti-TADDOLate Catalyzed Diels-Alder Additon of 3-Butenoyl-1,3-oxazolidin-2-one to Cyclopentadiene**

**General Features of Ti-BINOLate and Ti-TADDOLate Mediated Reactions**

J. Org. Chem. **60**, 1788 - 1799 (1995)

\* Robert Dahinden, Albert K. Beck, Dieter Seebach

**2,2-Dimethyl- $\alpha,\alpha,\alpha',\alpha'$ -tetraphenyl-1,3-dioxolane-4,5-dimethanolatotitanium**

**Diisopropoxide**

Encyclopedia of Reagents for Organic Synthesis, Ed.-in-Chief, L. A. Paquette, Vol. **3**

J. Wiley and Sons, Chichester (GB) 1995, 2167 - 2170

Dieter Seebach, Edmée Devaquet, Alexander Ernst, Michiya Hayakawa, Florian N.M. Kühnle, W. Bernd Schweizer, Beat Weber

**Preparation of the PdCl<sub>2</sub> Complex of TADDOP, the Bis(diphenylphosphinite) of TADDOL: Use in Enantioselective 1,3-Diphenylallylations of Nucleophiles and Discussion of the Mechanism**

Helv. Chem. Acta **78**, 1636 - 1650 (1995)

Dieter Seebach, Georg Jaeschke, Yan Ming Wang

**Hoch enantioselektive Oeffnung cyclischer meso-Anhydride zu Isopropylhalbestern mit Diisopropoxytitan-TADDOLaten**

Angew. Chem. **107**, 2605 - 2606 (1995)

Angew. Chem. Int. Ed. Engl. **34**, 2395 - 2396 (1995)

Linda Behrendt, Dieter Seebach

**Enantioselective Alkylation of Aldehydes by Titanate-Catalyzed Addition of Dialkylzinc Reagents: Preparation of (S)-4-Methyl-1-phenylpentanol**

Synthetic Methods of Organometallic and Inorganic Chemistry (Herrmann/Brauer), Vol. **1**, W.A. Herrmann, A. Salzer (Eds.): Literature, Laboratory Techniques and Common Starting Materials, G. Thieme Verlag Stuttgart, 1996, 103 - 104

Diego J. Ramón, Gabriela Guillena, Dieter Seebach

**Nonreductive Enantioselective Ring Opening of *N*-(Methylsulfonyl)dicarboximides with  
Diisopropoxytitanium  $\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-1,3-dioxolane-4,5-dimethanolate**

Helv. Chim. Acta **79**, 875 - 894 (1996)

Dieter Seebach, Albert K. Beck, Robert Dahinden, Matthias Hoffmann, Florian N.M. Kühnle

**Reduction of Ketones with LiAlH<sub>4</sub> Complexes of  $\alpha,\alpha,\alpha',\alpha'$ -Tetraaryl-  
1,3-dioxolane-4,5-dimethanols (TADDOLs)**

**A combination of Enantioselective Reduction and Clathrate Formation  
with a Discussion of LAH Reagents Bearing C<sub>2</sub>-Symmetrical Ligands**

Croatica Chem. Acta **69** 459 - 484 (1996)

\* Albert K. Beck, Robert Dahinden, Florian N. M. Kühnle

**Tatrate-Derived Ligands for the Enantioselective LiAlH<sub>4</sub> Reduction of Ketones: A  
Comparison of TADDOLates and BINOLates**

ACS Symposium Series **641**, 52 - 69 (1996)

Dieter Seebach, Roger E. Marti, Tobias Hintermann

**Polymer- and Dendrimer-Bound Ti-TADDOLates in Catalytic (and Stoichiometric)  
Enantioselective Reactions: Are Pentacoordinate Cationic Ti Complexes the  
Catalytically Active Species?**

Helv. Chim. Acta **79**, 1710 - 1740 (1996)

Dieter Seebach, Georg Jaeschke, Konstanze Gottwald, Keiji Matsuda, Roberto Formisano,  
David A. Chaplin

**Resolution of Racemic Carboxylic Acid Derivatives by Ti-TADDOLate Mediated  
Esterification Reactions - A General Method for the Preparation of Enantiopure  
Compounds**

Tetrahedron **53**, 7539 - 7556 (1997)

\* Dieter Seebach, Albert K. Beck

**Catalytic Enantioselective Reactions from Research to Application. Diarylmethanol-Containing Auxiliaries as a Study Case**

Spring Meeting of the New Swiss Chemical Society on the Occasion of '100 Years of Progress with *Lonza*, April 10 and 11, 1997, Visp, Switzerland  
Organized by: NSCS-Section Industrial Chemistry  
*Chimia* **51**, 293 - 297 (1997)

Dieter Seebach, Albert K. Beck, Michiya Hayakawa, Georg Jaeschke, Florian N.M. Kühnle, Ivo Nägeli, Anthony B. Pinkerton, Beat P. Rheiner, Rudolf O. Duthaler, Petra M. Rothe, Wolfgang Weigand, Ralf Wünsch, Stefan Dick, Reinhard Nesper, Michael Wörle, Volker Gramlich

**TADDOLs on their way to late transition metal complexes - synthesis and crystal structure of *N*- and *S*-containing TADDOL-derived compounds**

Bull. Soc. Chim. Fr. **134**, 315 - 331 (1997)

P. Beat Rheiner, Holger Sellner, Dieter Seebach

**Dendritic Styryl TADDOLs as Novel Polymer Cross-Linkers - First Application in an Enantioselective Et<sub>2</sub>Zn Addition Mediated by a Polymer-Incorporated Titanate**

Helv. Chim. Acta **80**, 2027 - 2032 (1997)

Hans-Georg Kuball, Bernhard Weiß, Albert K. Beck, Dieter Seebach

**TADDOLs with Unprecedented Helical Twisting Power in Liquid Crystals**

Helv. Chim. Acta **80**, 2507 - 2514 (1997)

Dieter Seebach, Georg Jaeschke, Arkadius Pichota, Laurent Audergon

**Enantioselective 1,4-Addition of Aliphatic *Grignard* Reagents to Enones Catalyzed by Readily Available Copper(I) Thiolates Derived from TADDOL**

Helv. Chim. Acta **80**, 2515 - 2519 (1997)

P. Beat Rheiner, Dieter Seebach

**High-Molecular-Weight and Polymer-Bound Dendritic TADDOLs for Membrane Reactors and Heterogeneous Enantioselective Lewis Acid Catalysis**

Polym. Mater. Sci. Eng. **77**, 130 - 131 (1997)

Paul J. Comina, Albert K. Beck, Dieter Seebach

**A Simple Batch Reactor for Efficient Multiple Use of Polymer-Bound TADDOLs in the Nucleophilic Addition of Dialkyl Zinc Reagents to Aldehydes**

Org. Process Res. Dev. **2**, 18 - 26 (1998)

Georg Jaeschke, Dieter Seebach

**Highly Enantioselective Ring Opening of Cyclic Meso-Anhydrides to Isopropyl Hemiesters with Ti-TADDOLates: An Alternative to Hydrolytic Enzymes?**

J. Org. Chem. **63**, 1190 - 1197 (1998)

Dieter Seebach, Konstanze Gottwald, Georg Jaeschke, Laurent Auderon, Arkadius Pichota  
**Ti-TADDOLates and Related Complexes in Asymmetric Synthesis: Ring-Opening and Cu-Catalyzed Conjugate Additions of Grignard Reagents**

in "Selective Reactions of Metal-Activated Molecules", Proceedings of the Third Symposium held in Würzburg, September 17-19, 1997, Eds. H. Werner und P. Schreier, Vieweg & Sohn Verlagsgesellschaft, Braunschweig/Wiesbaden, 1998, 61 - 64

Gerhard Bringmann, Matthias Breuning, Stefan Busemann, Jürgen Hinrichs, Thomas Pabst, Ralf Stowasser, Stefan Tasler, Andreas Wuzik, Wolfdieter A. Schenk, Jörg Kümmel, Dieter Seebach, Georg Jaeschke

**Metal-Assisted Synthesis and Application of Axially Chiral Biaryl Systems**

in "Selective Reactions of Metal-Activated Molecules", Proceedings of the Third Symposium held in Würzburg, September 17-19, 1997, Eds. H. Werner und P. Schreier, Vieweg & Sohn Verlagsgesellschaft, Braunschweig/Wiesbaden, 1998, 141 - 145

Konstanze Gottwald, Dieter Seebach

**Ring Opening with Kinetic Resolution of Azlactones by Ti-TADDOLates**

Tetrahedron **55**, 723 – 738 (1999)

Dieter Seebach, Arkadius Pichota, Albert K. Beck, Anthony B. Pinkerton, Thomas Litz,  
Jaana Karjalainen, Volker Gramlich

**Preparation of TADDOL Derivatives for New Applications**

Organic Letters **1**, 55 - 58 (1999)

Albert K. Beck, Peter Gysi, Luigi La Vecchia, Dieter Seebach

**(4*R*,5*R*)-2,2-Dimethyl- $\alpha,\alpha,\alpha',\alpha'$ -Tetra(naphth-2-yl)-1,3-Dioxolane-4,5-Dimethanol from Dimethyl Tartrate and 2-Naphthyl-Magnesium Bromide**

Organic Syntheses **76**, 12 - 22 (1999)

Dieter K. Heldmann, Dieter Seebach

**Catalytic Enantioselective Hydrosilylation of Ketones with Rhodium-Phosphite Complexes Containin a TADDOLate and an Oxazoline Unit**

Helv. Chim. Acta **82**, 1096 - 1110 (1999)

Holger Sellner, Dieter Seebach

**Dendritisch quervernetzende chirale Liganden - hohe Standfestigkeit eines polystyrolgebundenen Ti-TADDOLat-Katalysators unter Diffusionskontrolle**

Angew. Chem. **111**, 2039 - 2041 (1999)

Angew. Chem. Int. Ed. Engl. **38**, 1918 - 1920 (1999)

P. Beat Rheiner, Dieter Seebach

**Dendritic TADDOLs: Synthesis, Characterization and Use in the Catalytic Enantioselective Addition of Et<sub>2</sub>Zn to Benzaldehyde**

Chem. Eur. J. **5**, 3221 - 3236 (1999)

Dieter Seebach, Ilya M. Lyapkalo, Robert Dahinden

**Dichloro[TADDOLato(2-)-O,O']titanium/Dichlorobis[1-methylethoxy]titanium-Mediated, Highly Diastereo- and Enantioselective Additions of Silyl Enol Ethers to Nitro Olefins and [3+2] Cycloadditions of Primary Adducts to Acetylenes**

Helv. Chim. Acta **82**, 1829 - 1842 (1999)

Arkadius Pichota, Paul S. Pregosin, Massimiliano Valentini, Michael Wörle, Dieter Seebach

**Röntgenstrukturanalyse, Diffusionsmessungen und NOESY NMR-Untersuchungen  
chiraler, vierkerniger Cu<sup>2+</sup>-Katalysatoren aus einzähnigen Thiol-Derivaten von  
TADDOL**

Angew. Chem. **112**, 157 - 160 (2000)

Angew. Chem. Int. Ed. **39**, 153 - 156 (2000)

Alexander Heckel, Dieter Seebach

**Verankerung von TADDOL auf porösem Kieselgel mit hoher Beladung und erste  
Anwendungen in der enantioselektiven Katalyse**

Angew. Chem. **112**, 165 - 167 (2000)

Angew. Chem. Int. Ed. **39**, 163 - 165 (2000)

Dieter Seebach

**TADDOLs – from Enantioselective Catalysis to Dendritic Cross Linkers to Cholesteric  
Liquid Crystals**

Chimia **54**, 60 - 62 (2000)

Holger Sellner, Claude Faber, P. Beat Rheiner, Dieter Seebach

**Immobilization of BINOL by Cross-Linking Copolymerization of Styryl Derivatives  
with Styrene, and Applications in Enantioselective Ti and Al Lewis Acid Mediated  
Additions of Et<sub>2</sub>Zn and Me<sub>3</sub>SiCN to Aldehydes and of Diphenyl Nitrone to Enol Ethers**  
Chem. Eur. J. **6**, 3692 - 3705 (2000)

Ana Cuenca, Mercedes Medio-Simón, Gregorio Asensio Aguilar, Daniel Weibel, Albert K. Beck, Dieter Seebach

**Highly Enantioselective Protonation of the 3,4-Dihydro-2-methylnaphthalen-1(2H)-one  
Li-Enolate by TADDOLs**

Helv. Chim. Acta **83**, 3153 - 3162 (2000)

Dieter Seebach, Albert K. Beck, Alexander Heckel

**TADDOLe, ihre Derivate und Analoga - vielseitige chirale Hilfsstoffe**

Angew. Chemie **113**, 96 - 142 (2001)

Angew. Chem. Int. Ed. **40**, 92 - 138 (2001)

Masao Aoki, Dieter Seebach

**Preparation of TADOOH, a Hydroperoxide from TADDOL, and Use in Highly Enantioface- and Enantiomer-Differentiating Oxidations**

Helv. Chim. Acta Vol. 84, **2001**, 208 - 221

Alexander Heckel, Dieter Seebach

**Preparation and Characterization of TADDOLs Immobilized on Hydrophobic Controlled-Pore-Glass Silica Gel and Their Use in Enantioselective Heterogeneous Catalysis**

Chem. Eur. J. **2002**, 8, 559 – 572

Holger Sellner, P. Beat Rheiner, Dieter Seebach

**Preparation of Polystyrene Beads with Dendritically Embedded TADDOL and Use in Enantioselective Lewis Acid Catalysis**

Helv. Chim. Acta **85**, 352 - 387 (2002)

Waldemar Adam, Konrad J. Roschmann, Chantu R. Saha-Möller, Dieter Seebach

**cis-Stilbene and ( $1\alpha,2\beta,3\alpha$ )-(2-Ethenyl-3-methoxycyclopropyl)benzene as Mechanistic Probes in the Mn<sup>III</sup>(salen)-Catalyzed Epoxidation: Influence of the Oxygen Source and the Counterion on the Diastereoselectivity of the Competitive Concerted and Radical-Type Oxygen Transfer**

J. Am. Chem. Soc. **124**, 5068-5073 (2002)

Waldemar Adam, Paul L. Alsters, Ronny Neumann, Chantu R. Saha Möller, Dieter Seebach, Rui Zhang

**Highly Efficient Catalytic Asymmetric Epoxidation of Allylic Alcohols by an Oxovanadium-Substituted Polyoxometalate with a Regenerative TADDOL-Derived Hydroperoxide**

Org. Lett. **5**, 725 - 728 (2003)

Waldemar Adam, Albert K. Beck, Thomas Pichota, Chantu R. Saha-Möller, Dieter Seebach, N. Vogl, Rui Zhang

**Control of enantioselectivity through a hydrogen-bonded template in the vanadium(V)-catalyzed epoxidation of allylic alcohols by optically active hydroperoxydes**

Tetrahedron: Asym. **14**, 1355 - 1361 (2003)

Waldemar Adam, Paul L. Alsters, Ronny Neumann, Chantu R. Saha-Möller, Dieter Seebach, Albert K. Beck, Rui Zhang

**Chiral Hydroperoxides as Oxygen Source in the Catalytic Stereoselective Epoxidation of Allylic Alcohols by Sandwich-Type Polyoxometalates: Control of Enantioselectivity through a Metal-Coordinated Template**

J. Org. Chem. **68**, 8222-8231 (2003)

Yuri N. Belokon, Syuzanna Harutynyan, Evgeni V. Vorontsov, Alexander S. Peregudov, Viktor N. Chrustalev, Konstantin A. Kochetkov, Dmitry Pripadchev, Ashot S. Sagyan, Albert K. Beck, Dieter Seebach

**Nucleophilic addition to an achiral dehydroalanine Schiff Base Ni(II) complex as a route to amino acids. A case of stereodetermining asymmetric protonation in the presence of TADDOL**

ARKIVOC **2004** (iii), 132-150

(<http://www.arkat-usa.org/ark/journal/2004/Makosza/MM-853G/853G.htm>

<http://www.arkat-usa.org/ark/journal/2004/Makosza/MM-853G/853G.pdf>)

\*Dieter Seebach, Albert K. Beck

**The *gem*-Diaryl Effect in Enantioselective Synthesis**

The TAKASAGO times, No. 157, 34 – 40 (2006)

Arkadius Pichota, Volker Gramlich, Albert K. Beck, Dieter Seebach

**Preparation and Characterization of New  $C_2$ - and  $C_1$ -Symmetric Nitrogen, Oxygen, Phosphorous and Sulfur Derivatives and Analogs of TADDOL. - Part I: Compounds Containing One or Two Sulfur-Containing Substituents and Use in Cu-Catalyzed Enantioselective Conjugate Additions to Cyclic Enones.**

Helv. Chim. Acta **95**, 1239 - 1272 (2012)

Arkadius Pichota, Volker Gramlich, Hans-Ulrich Bichsel, Thomas Styner, Thomas Knöpfel,  
Ralf Wünsch, Tobias Hintermann, W. Bernd Schweizer, Albert K. Beck, Dieter Seebach

**Preparation and Characterization of New C2- and C1-Symmetric Nitrogen, Oxygen,  
Phosphorous, and Sulfur Derivatives and Analogs of TADDOL. - Part II: TADDAMIN-  
Derived and Phosphorous-Containing Compounds**

Helv. Chim. Acta **95**, 1273 - 1302 (2012)

Dieter Seebach, Albert K. Beck, Hans-Ulrich Bichsel, Arkadius Pichota, Christof Sparr, Ralf  
Wünsch, W. Bernd Schweizer

**Preparation and Characterization of New C2- and C1-Symmetric Nitrogen, Oxygen,  
Phosphorous, and Sulfur Derivatives and Analogs of TADDOL. - Part III: Some New  
Chiral Brønsted Acids for Organocatalysis and pKa Values in MeO-(CH<sub>2</sub>)<sub>2</sub>-OH/H<sub>2</sub>O –  
A Survey**

Helv. Chim. Acta **95**, 1303 - 1324 (2012)

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