

## PUBLICATION & FUNDING SUMMARY

### Publications

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- 1. Directed Ortho-Lithiation of Phenylcarbamic Acid 1,1-Dimethylethyl Ester (*N*-Boc-aniline). Revisions and Improvements.**  
Stanetty, P.; Koller, H.; Mihovilovic, M.D. *J. Org. Chem.* **1992**, *57*, 6833-6837.
- 2. Hilfe zur Selbsthilfe**  
Stanetty, P.; Mihovilovic, M.D. *Chemie* **1995**, *9*, 12-14.  
reprinted in: *Der Pflanzenarzt* **1995**, *11-12*, 3-5.
- 3. Potentielle Squalenepoxidasehemmer: Konformativ fixierte Butenafin-Analoga mit Spiranstruktur.**  
Stanetty, P.; Kasemann, O.; Mihovilovic, M.D. *Sci. Pharm.* **1996**, *64*, 669-677.
- 4. Half Lives of Organolithium Reagents in Common Ethereal Solvents**  
Stanetty, P.; Mihovilovic, M.D. *J. Org. Chem.* **1997**, *62*, 1514-1515.
- 5. Reactivity of 2-Cyano-1,4,5,6-tetrahydro-pyridine-1-carboxylic Acid Esters Towards Various Nucleophiles: Regio- and Diastereoselectivity of the Attack**  
Stanetty, P.; Mihovilovic, M.D. *Monatsh. Chem.* **1997**, *128*, 1061-1072.
- 6. Synthesis of Perhydroquinolinones Bearing an Angular Methyl Group via Lewis Acid Catalyzed Hetero-Diels-Alder Cyclization**  
Stanetty, P.; Mihovilovic, M.D. *Chem. Lett.* **1997**, *9*, 849-850.
- 7. A Novel Hetero-Diels-Alder Approach towards Perhydro Quinolinones Bearing an Angular Methyl Group**  
Stanetty, P.; Mihovilovic, M.D.; Mereiter, K.; Völlenkle, H.; Renz, F. *Tetrahedron* **1998**, *54*, 875-894.
- 8. Synthesis of 1,2-Dialkyl-perhydro-quinolin-6-ones: A One Pot Birch Reduction as Key Step**  
Stanetty, P.; Kasemann, O.; Schmid, M.; Mihovilovic, M.D.; "Electronic Conference on Heterocyclic Chemistry '98", H.S. Rzepa and O. Kappe, (Eds), Imperial College Press, **1998**, ISBN 981-02-3594-1.  
See also: <http://www.ch.ic.ac.uk/ectoc/echet98/>.
- 9. A Novel Approach to the Synthesis of the Taxol Side Chain: Adapting *S. Cerevisiae* as Enantioselective Reagent for the Reduction of  $\alpha$ -Keto- $\beta$ -lactams**  
Mihovilovic, M.D.; Kayser, M.M.; Rodriguez, S.; Stewart, J.D.; "Electronic Conference on Heterocyclic Chemistry '98", H.S. Rzepa and O. Kappe, (Eds), Imperial College Press, **1998**, ISBN 981-02-3594-1.  
See also: <http://www.ch.ic.ac.uk/ectoc/echet98/>.

- 10. A Synthetic Approach to Methyl Thieno[2,3-*d*][1,2,3]thiadiazole-carboxylates via Diazotation**  
Stanetty P.; Mihovilovic, M.D. *Monatsh. Chem.* **1999**, *130*, 573-580.
- 11. Modifying the 5-Position of Thieno[2,3-*d*][1,2,3]thiadiazole-6-carboxylate Derivatives**  
Stanetty, P.; Jaksits, M.; Mihovilovic, M.D. *J. Prakt. Chem.* **1999**, *341*, 391-394.
- 12. An Improved Synthetic Approach to Thieno[2,3-*d*][1,2,3]thiadiazole-carboxylates via Diazotation of Aminothiophene Derivatives**  
Stanetty, P.; Mihovilovic, M.D.; Görner, E. *J. Heterocycl. Chem.* **1999**, *36*, 761-765.
- 13. Asymmetric Oxidations at Sulfur Catalyzed by Engineered Strains that Overexpress Cyclohexanone Monooxygenase**  
Chen, G.; Kayser, M.M.; Mihovilovic, M.D.; Mrstik, M.E.; Martinez, C.A.; Stewart, J.D. *New J. Chem.* **1999**, *23*, 827-832.
- 14. Baker's Yeast-Mediated Reductions of  $\alpha$ -Keto Esters and an  $\alpha$ -Keto- $\beta$ -Lactam. Two Routes to the Paclitaxel Side Chain**  
Kayser, M.M.; Mihovilovic, M.D.; Kearns, J.; Feicht, A.; Stewart, J.D. *J. Org. Chem.* **1999**, *64*, 6603-6608.
- 15. A Synthetic Approach to Perhydro-3-isoquinolinones Bearing an Angular Methyl Group via Organo-Cuprate Addition**  
Stanetty, P.; Bahardoust, M.H.; Mihovilovic, M.D.; Mereiter K. *Monatsh. Chem.* **1999**, *130*, 1257-1268.
- 16. Synthesis of 1,2,3-Thiadiazoles via the Hurd-Mori Reaction. Reviewing Mechanistic and Synthetic Aspects**  
Stanetty, P.; Turner, M.; Mihovilovic, M.D. in: *Targets in Heterocyclic Systems*, Attanasi, O.A.; Spinelli D. Eds. Società Chimica Italiana, Rome, **1999**, Vol. 3, p. 265-299.
- 17. A Novel Synthetic Approach towards the AB-Ring System of 9-Azasteroids**  
Stanetty, P.; Kremslehner, M.; Mihovilovic, M.D. *Tetrahedron Lett.* **2000**, *41*, 1717-1719.
- 18. An Efficient and Simple Procedure for the Preparation of  $\alpha$ -Keto- $\beta$ -lactams**  
Mihovilovic, M.D.; Feicht, A.; Kayser, M.M. *J. Prakt. Chem.* **2000**, *342*, 585-590.
- 19. Synthesis of 1,4,2-Benzodithiazine Carboxylates via Ring Expansion Reaction of 1,3-Benzodithioles**  
Stanetty, P.; Hattinger, G.; Mihovilovic, M.D.; Mereiter, K. *J. Heterocycl. Chem.* **2000**, *37*, 955-958.
- 20. Baeyer-Villiger Oxidations of Representative Heterocyclic Ketones by Whole Cells of Engineered *Escherichia coli* Expressing Cyclohexanone Monooxygenase.**  
Mihovilovic, M.D.; Müller, B.; Kayser, M.M.; Stewart, J.D.; Fröhlich, J.; Stanetty, P.; Spreitzer, H. *J. Mol. Catal. B: Enzym.* **2001**, *11*, 349-353.

- 21. Asymmetric Baeyer-Villiger Oxidations of 4-Mono and 4,4-Disubstituted Cyclohexanones by Whole Cells of Engineered *Escherichia coli*.**  
Mihovilovic, M.D.; Chen, G.; Wang, S.; Kyte, B.; Rochon, F.; Kayser, M.M.; Stewart, J.D. *J. Org. Chem.* **2001**, *66*, 733-738.
- 22. Proton, Carbon, and Nitrogen NMR Spectroscopic Characterization of Some Bi- and Trihetaryl Compounds**  
Hametner, C.; Hattinger, G.; Röhring, J.; Fröhlich, J.; Stanetty, P.; Mihovilovic, M.D.; *Magn. Reson. Chem.* **2001**, *39*, 417-419.
- 23. Application of Dry-State Adsorption Conditions (DSAC) Pauson-Khand Cyclization for the Synthesis of Cyclopenta[c]pyrroles**  
Mihovilovic, M.D., Adelwöhrer, C.; Stanetty, P. *Arkivoc* **2001**, *2*, 1071-1076.
- 24. Synthesis of Thieno[2,3-*d*]thiazole-6-carboxylic Acid Derivatives as Potential Inducers of Systemic Resistance in Plants**  
Stanetty, P.; Dvorak, T.; Mihovilovic, M.D. *Arkivoc* **2001**, *2*, 1128-1135.
- 25. Microbial Baeyer-Villiger Oxidation of Bicyclo[4.3.0]ketones by Two Recombinant *E.coli* Strains – A Novel Access to Indole Alkaloids**  
Mihovilovic, M.D.; Müller, B.; Kayser, M.M.; Stanetty, P. *Synlett* **2002**, 700-702.
- 26. Whole-Cell Mediated Baeyer-Villiger Oxidation of Functionalized Bicyclo[3.3.0]ketones by Recombinant *E.coli***  
Mihovilovic, M.D.; Müller, B.; Kayser, M.M.; Stewart, J.D.; Stanetty, P. *Synlett* **2002**, 703-706.
- 27. Baker's Yeast-Catalyzed Synthesis of Optically Pure 4-*t*-Butyl-3-Hydroxy  $\beta$ -Lactam *cis* (3*R*,4*S*) and *trans* (3*R*,4*R*) Diastereomers**  
Kayser, M.M.; Yang, Y.; Mihovilovic, M.D.; Feicht, A.; Rochon, F.D. *Can. J. Chem.* **2002**, *80*, 796-800.
- 28. Monooxygenase Mediated Baeyer-Villiger Oxidations**  
Mihovilovic, M.D.; Müller, B.; Stanetty, P. *Eur. J. Org. Chem.* **2002**, 3711-3730.
- 29. First Enantiodivergent Baeyer-Villiger Oxidation by Recombinant Whole-Cells Expressing Two Monooxygenases from *Brevibacterium***  
Mihovilovic, M.D.; Rudroff, F.; Müller, B.; Stanetty, P. *Bioorg. Med. Chem. Lett.* **2003**, *13*, 1479-1482.
- 30. An Enantiodivergent Trend in Microbial Baeyer-Villiger Oxidations of Functionalized Pentalenones by Recombinant Whole-Cells Expressing Monooxygenases from *Acinetobacter* and *Pseudomonas***  
Mihovilovic, M.D.; Müller, B.; Schulze, A.; Stanetty, P.; Kayser, M.M. *Eur. J. Org. Chem.* **2003**, 2243-2249.
- 31. Synthesis of Pyridinyl-pyrimidines via Pd-catalyzed Cross-coupling Reactions. A Comparison of Classical Thermal and Microwave Assisted Reaction Conditions.**  
Stanetty, P.; Schnürch, M.; Mihovilovic, M.D. *Synlett* **2003**, 1861-1863.

- 32. Synthesis and Enantioselective Baeyer-Villiger Oxidation of Prochiral Perhydro-Pyranones with Recombinant *E.coli* Producing Cyclohexanone Monooxygenase**  
Mihovilovic, M.D.; Rudroff, F.; Kandioller, W.; Grötzl, B.; Stanetty, P.; Spreitzer, H. *Synlett* **2003**, 1973-1976.
- 33. Regiodivergent Baeyer-Villiger Oxidation of Fused Ketone Substrates by Recombinant Whole-Cells Expressing Two Monooxygenases from *Brevibacterium***  
Mihovilovic, M.D.; Kapitan, P. *Tetrahedron Lett.* **2004**, *45*, 2751-2754.
- 34. Synthesis of Carbo- and Heterocyclic Aldehydes Bearing an Adjacent Donor Group - Ozonolysis versus OsO<sub>4</sub>/KIO<sub>4</sub> Oxidation**  
Mihovilovic, M.D.; Spina, M.; Müller, B.; Stanetty, S. *Monatsh. Chem.* **2004**, *135*, 899-909.
- 35. Enantioselective Baeyer-Villiger Oxidations**  
Mihovilovic, M.D.; Rudroff, F.; Grötzl, B. *Curr. Org. Chem.* **2004**, *8*, 1057-1069.
- 36. Microwave-Mediated Intramolecular Diels-Alder Cyclization of 1,2-Biodihydroxylated Benzoic Acid Derivatives**  
Mihovilovic, M.D.; Leisch, H.G.; Mereiter, K. *Tetrahedron Lett.* **2004**, *45*, 7087-7090.
- 37. Biooxidation of Ketones with a Cyclobutanone Structural Motif by Recombinant Whole-Cells Expressing 4-Hydroxy-acetophenone Monooxygenase**  
Mihovilovic, M.D.; Kapitan, P.; Rydz, J.; Ogink, F.; Rudroff, F.; Fraaije, M.W. *J. Mol. Catal. B: Enzym.* **2005**, *32*, 135-140.
- 38. Synthesis and Yeast Mediated Bioreduction of  $\alpha$ -Keto- $\beta$ -lactams Bearing a Functionalized and Rigid Side Chain**  
Mihovilovic, M.D.; Spina, M.; Stanetty, P. *Arkivoc* **2005**, (v), 33-44.
- 39. Synthesis of 9-Azasteroid Partial Structures via the Birch Reduction as Key Step**  
Stanetty, P.; Kasemann, O.; Mereiter, K.; Mihovilovic, M.D. *Arkivoc* **2005**, (v), 83-95.
- 40. Investigations of the Halogen Dance Reaction on *N*-substituted 2-Thiazolamines**  
Stanetty, P.; Schnürch, M.; Mereiter, K.; Mihovilovic, M.D. *J. Org. Chem.* **2005**, *70*, 567-574.
- 41. Microbial Baeyer-Villiger Oxidation of Prochiral Polysubstituted Cyclohexanones by Recombinant Whole-Cells Expressing Two Bacterial Monooxygenases**  
Mihovilovic, M.D.; Rudroff, F.; Grötzl, B.; Stanetty, P. *Eur. J. Org. Chem.* **2005**, 809-816.
- 42. Synthesis of Pyrrolo[2,3-*d*][1,2,3]thiadiazole-6-carboxylates via the Hurd-Mori Reaction. Investigating the Effect of the *N*-Protecting Group on the Cyclization.**  
Stanetty, P.; Turner, M.; Mihovilovic, M.D. *Molecules* **2005**, *10*, 367-376.

- 43. Family Clustering of Baeyer-Villiger Monooxygenases Based on Protein Sequence and Stereopreference**  
Mihovilovic, M.D.; Rudroff, F.; Grötzl, B.; Kapitan, P.; Snajdrova, R.; Rydz, J.; Mach, R. *Angew. Chem.* **2005**, *117*, 3675-3679; *Angew. Chem. Int. Ed.* **2005**, *44*, 3609-3613.
- 44. First Halogen Dance Reaction on Oxazoles. Synthesis of 4,5-Disubstituted 2-Phenyloxazoles**  
Stanetty, P.; Spina, M.; Mihovilovic, M.D. *Synlett* **2005**, 1433-1434.
- 45. Novel and Efficient Access to Phenylamino-pyrimidine Type Protein Kinase C Inhibitors Utilizing a Negishi Cross-Coupling Strategy**  
Stanetty, P.; Hattinger, G.; Schnürch, M.; Mihovilovic, M.D. *J. Org. Chem.* **2005**, *70*, 5215-5220.
- 46. Diastereoselective Synthesis of cis-2,6-Disubstituted 4-Perhydropyranones Using Elevated Pressure Hydrogenation**  
Mihovilovic, M.D.; Spreitzer, H. *Monatsh. Chem.* **2005**, *136*, 1197-1203.
- 47. Baeyer-Villiger Oxidation of Bridged Endo-Tricyclic Ketones with Engineered E.coli Expressing Monooxygenases of Bacterial Origin.**  
Mihovilovic, M.D.; Snajdrova, R.; Winninger, A.; Rudroff, F. *Synlett* **2005**, 2751-2754.
- 48. Enzyme Mediated Baeyer-Villiger Oxidations**  
Mihovilovic, M.D. *Curr. Org. Chem.* **2006**, *10*, 1265-1287.
- 49. Microbial Baeyer-Villiger Oxidation of 4,4-Disubstituted Cyclohexanones and Cyclohexenones by Recombinant Whole-Cells Expressing Eight Monooxygenases of Bacterial Origin**  
Mihovilovic, M.D.; Snajdrova, R.; Grötzl, B. *J. Mol. Catal. B: Enzym.* **2006**, *39*, 135-140.
- 50. Facile Synthesis and Ring-Opening Cross Metathesis of Carbo- and Heterocyclic Bicyclo[3.2.1]oct-6-en-3-ones Using Gaseous Olefinic Reaction Partners**  
Mihovilovic, M.D.; Grötzl, B.; Kandioller, W.; Snajdrova, R.; Muskotal, A.; Bianchi, D.A.; Stanetty, P. *Adv. Synth. Catal.* **2006**, *348*, 463-470.
- 51. Synthesis of Analogues of the Phenylamino-pyrimidine Type Protein Kinase C Inhibitor CGP 60474 Utilizing a Negishi Cross-Coupling Strategy**  
Stanetty, P.; Röhring, J.; Schnürch, M.; Mihovilovic, M.D. *Tetrahedron* **2006**, *62*, 2380-2387.
- 52. Establishing the NHBoc Functionality as ortho-Metallating Group for Furan**  
Stanetty, P.; Kolodziejczyk, K.; Roiban, G.-D.; Mihovilovic, M.D. *Synlett* **2006**, 789-791.
- 53. Optimizing Fermentation Conditions for Recombinant E.coli Expressing Cyclopentanone Monooxygenase**  
Rudroff, F.; Alphand, V.; Furstoss, R.; Mihovilovic, M.D. *Org. Process Res. Develop.* **2006**, *10*, 599-604.

- 54. Microbial Baeyer-Villiger Oxidation – Stereopreference and Substrate Acceptance of Cyclohexanone Monooxygenase Mutants**  
Mihovilovic, M.D.; Rudroff, F.; Winninger, A.; Schneider, T.; Schulz, F.; Reetz, M.T. *Org. Lett.* **2006**, *8*, 1221-1224.
- 55. Halogenated Bithiazoles via Pd-Catalyzed Cross-Coupling Reactions**  
Stanetty, P.; Schnürch, M.; Mihovilovic, M.D. *J. Org. Chem.* **2006**, *71*, 3754-3761.
- 56. Synthesis of Novel Sterically Demanding Carbo- and Heterocyclic  $\beta$ -Ketoesters**  
Mihovilovic, M.D.; Fischer, T.C.M.; Stanetty, P. *Molecules* **2006**, *11*, 357-364.
- 57. Microbial Baeyer-Villiger Oxidation of Ketones by Cyclohexanone and Cyclopentanone Monooxygenase – A Computational Rational for Biocatalyst Performance**  
Mihovilovic, M.D.; Müller, B.; Spina, M.; Durrani, A.I.; Stanetty, P.; Dazinger, G.; Kirchner, K. *Monatsh. Chem.* **2006**, *137*, 785-794.
- 58. Cross Coupling Reactions on Azoles with Two and More Heteroatoms**  
Schnürch, M.; Flasik, R.; Khan, A.F.; Spina, M.; Mihovilovic, M.D.; Stanetty, P. *Eur. J. Org. Chem.* **2006**, 3283-3307.
- 59. Accessing Tetrahydrofuran Based Natural Products by Microbial Baeyer-Villiger Biooxidation**  
Mihovilovic, M.D.; Bianchi, D.A.; Rudroff, F. *Chem. Commun.* **2006**, 3214-3216.
- 60. Synthesis of Enantiomerically Pure Bicyclo[4.2.0]octanes by Cu-Catalyzed [2+2] Photocycloaddition and Enantiotopos Differentiating Ring Opening**  
Braun, I.; Rudroff, F.; Mihovilovic, M.D.; Bach T. *Angew. Chem.* **2006**, *118*, 5667-5670; *Angew. Chem. Int. Ed.* **2006**, *45*, 5541-5543.
- 61. Resolution of Fused Bicyclic Ketones by a Recombinant Biocatalyst Expressing the Baeyer-Villiger Monooxygenase Gene Rv3049c from *Mycobacterium tuberculosis* H37Rv**  
Snajdrova, R.; Grogan, G.; Mihovilovic, M.D. *Bioorg. Med. Chem. Lett.* **2006**, *16*, 4813-4817.
- 62. A Facile and Green Synthetic Route to Boronic Acid Esters Utilizing Mechanochemistry**  
Schnürch, M.; Holzweber, M.; Mihovilovic, M.D.; Stanetty, P. *Green Chem.* **2007**, *9*, 139-145.
- 63. Multi-component Metal-assisted Reactions Involving Carbon Monoxide – Towards a Molecular Playground in Heterocycle Synthesis**  
Mihovilovic, M.D.; Stanetty, P. *Angew. Chem.* **2007**, *119*, 3684-3688; *Angew. Chem. Int. Ed.* **2007**, *46*, 3612-3615.
- 64. Enantioselective Kinetic Resolution of 3-Phenyl-2-ketones Using Baeyer-Villiger Monooxygenases**  
Kirschner, A.; Geitner, K.; Rehdorf, J.; Schmidt, M.; Mihovilovic, M.D.; Bornscheuer, U.T. *Tetrahedron Asym.* **2007**, *18*, 892-895.

- 65. Microbial Baeyer-Villiger Oxidation of Terpenones by Recombinant Whole-Cell Biocatalysts – Formation of Enantiocomplementary Regioisomeric Lactones**  
Cernuchova, P.; Mihovilovic, M.D. *Org. Biomol. Chem.* **2007**, *5*, 1715-1719.
- 66. Altering the Substrate Specificity and Enantioselectivity of Phenylacetone Monooxygenase by Structure-inspired Enzyme Redesign**  
Pazmino, D.E.T.; Snajdrova, R.; Rial, D.V.; Janssen, D.B.; Mihovilovic, M.D.; Fraaije, M.W. *Adv. Synth. Catal.* **2007**, *349*, 1361-1368.
- 67. Comparing the Stereoselective Biooxidation of Cyclobutanones by Recombinant Strains Expressing Bacterial Baeyer-Villiger Monooxygenases**  
Rudroff, F.; Rydz, J.; Ogink, F.; Fink, M.; Mihovilovic, M.D. *Adv. Synth. Catal.* **2007**, *349*, 1436-1444.
- 68. Halogen-Dance Reactions – A Review**  
Schnürch, M.; Spina, M.; Khan, A.F.; Mihovilovic, M.D.; Stanetty, P. *Chem. Soc. Rev.* **2007**, *36*, 1046-1057.
- 69. Stereoselective Hybrid Catalysts –New Opportunities**  
Mihovilovic, M.D. *J. Chem. Technol. Biotechnol.* **2007**, *82*, 1067-1071.
- 70. Ring Opening and Rearrangement Reactions of Tricyclo[4.2.1.0<sup>2,5</sup>]nonan-9-one**  
Braun, I.; Rudroff, F.; Mihovilovic, M.D.; Bach, T. *Synthesis* **2007**, 3896-3906.
- 71. Biooxidation of Bridged Cycloketones Using Baeyer-Villiger Monooxygenases of Various Bacterial Origin**  
Snajdrova, R.; Braun, I.; Bach, T.; Mereiter, K.; Mihovilovic, M.D. *J. Org. Chem.* **2007**, *72*, 9597-9603.
- 72. Biocatalyst Assessment of Recombinant Whole-Cells Expressing the Baeyer-Villiger Monooxygenase from *Xanthobacter* sp. ZL5**  
Rial, D.V.; Cernuchova, P.; van Beilen, J.B.; Mihovilovic, M.D. *J. Mol. Catal. B: Enzymatic* **2008**, *50*, 61-68.
- 73. Stereoselective Desymmetrizations by Recombinant Whole-Cells Expressing the Baeyer-Villiger Monooxygenase from *Xanthobacter* sp. ZL5: A New Biocatalyst Accepting Structurally Demanding Substrates**  
Rial, D.V.; Bianchi, D.A.; Kapitanova, P.; Lengar, A.; van Beilen, J.B.; Mihovilovic, M.D. *Eur. J. Org. Chem.* **2008**, 1203-1213.
- 74. Regiodivergent Baeyer-Villiger Oxidation of Fused Ketones by Recombinant Whole-Cell Biocatalysts**  
Mihovilovic, M.D.; Kapitan, P.; Kapitanova, P. *ChemSusChem* **2008**, *1*, 143-148.
- 75. Self-sufficient Baeyer-Villiger Monooxygenases – Effective Coenzyme Regeneration for Biooxygenations by Fusion Engineering**  
Pazmino, D.E.T.; Snajdrova, R.; Baas, B.-J.; Ghobrial, M.; Mihovilovic, M.D.; Fraaije, M.W. *Angew. Chem.* **2008**, *120*, 2307-2310; *Angew. Chem. Int. Ed.* **2008**, *47*, 2275-2278.

- 76. Recombinant Whole-Cell Mediated Baeyer-Villiger Oxidation of Perhydropyrane-Type Ketones**  
Mihovilovic, M.D.; Grötzl, B.; Kandioller, W.; Muskotal, A.; Snajdrova, R.; Rudroff, F.; Spreitzer, H. *Chem. Biodiv.* **2008**, *5*, 490-498.
- 77. Baeyer-Villiger Monooxygenases in Asymmetric Synthesis and Beyond**  
Rial, D.V.; Mihovilovic, M.D. *Chim. Oggi* **2008**, *26-Supplement*, 19-22.
- 78. A Comparative Study on Stille Cross-Coupling Reactions of 2-Phenylthiazoles and 2-Phenylloxazoles**  
Hämmerle, J.; Spina, M.; Schnürch, M.; Mihovilovic, M.D.; Stanetty, P. *Synthesis* **2008**, 3099-3107.
- 79. Halogen Dance and Sequential Cross-Coupling on 2-Anilinothiazoles**  
Khan, A.F.; Schnürch, M.; Mihovilovic, M.D.; Stanetty, P. *Lett. Org. Chem.* **2009**, *6*, 171-174.
- 80. Synthesis of Novel 4-(2-Amino-5-thiazolyl)-pyrimidine-2-amines as Potential Protein Kinase Inhibitors**  
Susnik, M.P.; Schnürch, M.; Mihovilovic, M.D.; Mereiter, K.; Stanetty, P. *Monatsh. Chem.* **2009**, *140*, 423-430.
- 81. Polyarylated Thiazoles via a Combined Halogen Dance – Cross-Coupling Strategy**  
Schnürch, M.; Khan, A.F.; Stanetty, P.; Mihovilovic, M.D. *Eur. J. Org. Chem.* **2009**, 3228-3236.
- 82. Kinetic Resolution of Aliphatic Acyclic  $\beta$ -Hydroxyketones by Recombinant Whole-cell Baeyer-Villiger Monooxygenases – Formation of Enantiocomplementary Regioisomeric Esters**  
Rehdorf, J.; Lengar, A.; Bornscheuer, U.T.; Mihovilovic, M.D. *Bioorg. Med. Chem. Lett.* **2009**, *19*, 3739-3743.
- 83. New Benzo- and Thieno-fused Spirolactams**  
Stanetty, P.; Sigl, B.; Schnürch, M.; Mihovilovic, M.D. *Acta Chim. Slov.* **2009**, *56*, 513-520.
- 84. Efficient Biooxidations Catalyzed by a new Generation of Self-Sufficient Baeyer-Villiger Monooxygenases**  
Pazmino, D.E.T.; Riebel, A.; de Lange, J.; Rudroff, F.; Mihovilovic, M.D.; Fraaije, M.W. *ChemBioChem* **2009**, *10*, 2595-2598.
- 85. Synthesis of potential fungicides based on N-(3-furanyl)pyrrolecarboxamides and N-(3-furanyl)pyrazolecarboxamides**  
Kolodziejczyk, K.; Roiban, G.D.; Schnürch, M.; Mihovilovic, M.D.; Stanetty, P. *Monatsh. Chem.* **2009**, *140*, 1329-1359.
- 86. A Systematic Study on Suzuki-Miyaura Cross-Coupling Reactions on Thiazole Boronic Esters in 4- and 5-Position**  
Schnürch, M.; Hämmerle, J.; Mihovilovic, M.D.; Stanetty, P. *Synthesis* **2010**, 837-843.



- 87. Encapsulation of Recombinant *E. coli* Expressing Cyclopentanone Monooxygenase in Polyelectrolyte Complex Capsules for Baeyer-Villiger Biooxidation of 8-Oxabicyclo[3.2.1]oct-6-en-3-one**  
Hucik, M.; Bucko, M.; Gemeiner, P.; Stefuca, V.; Vikartovska, A.; Mihovilovic, M.D.; Rudroff, F.; Iqbal, N.; Chorvat, D. jr.; Lacik, I. *Biotechnol. Lett.* **2010**, *32*, 675-680.
- 88. Selective and Facile Pd-Catalyzed Amination of 2-Fluoro-4-iodopyridine in the 4-Position under Microwave Conditions**  
Koley, M.; Schnürch, M.; Mihovilovic, M.D. *Synlett* **2010**, 1505-1510.
- 89. Intramolecular Diels-Alder Cyclization of Biodihydroxylated Benzoic Acid Derivatives Towards Novel Heterocyclic Scaffolds**  
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In: *Synthesis and Modification of Heterocycles by Metal-Catalyzed Cross-coupling Reactions / Topics in Heterocyclic Chemistry No 45*; Patonay, T.; Konya, K. (Eds), Springer Switzerland, **2016**, ISBN: 978-3-319-32605-5, pp 1-60.
- 9. Synthesis of Six out of Eight Carvo-Lactone Stereoisomers via a Novel Concurrent Redox Cascade Starting from (R)-and (S)-Carvones**  
Jodlbauer, J.; Iqbal, N.; Stewart, J.D.; Macheroux, P.; **Mihovilovic, M.D.**; Rudroff, F.  
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## Patents and Patent Applications

- 1. Substituted Pyridines and Pyrimidines**  
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*Austrian Pat. Appl. AT 509.266 A1; Kl. C07D; status: granted.*  
*US Pat. Appl. 13/519,690; status: granted*  
*PCT Pat. Appl. WO 2011/079343; status: disclosed.*
- 2. Thiazole Amines as Cell Differentiation Accelerators**  
Mihovilovic, M.D.; Schnürch, M.; Waldner, B.; Hilber, K.  
*Austrian Pat. Appl. AT 510456; status: granted.*  
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- 3. Heiz-/Kühl-Vorrichtung (Heating/Cooling Device) – Utility Patent**  
Schnürch, M.; Untersteiner, F.; Hasewend, E.; Mihovilovic, M.D.  
*Austrian Pat. Appl. GM 797/2010, AT 11797 U1; status: granted.*
- 4. Heiz-/Kühl-Vorrichtung (Heating/Cooling Device)**  
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*Austrian Pat. Appl. A 1007/2011; status: granted.*
- 5. Triazine Derivatives as Differentiation Accelerators**  
Mihovilovic, M.D.; Schnürch, M.; Hilber, K., König, X.; Linder, T.  
*Austrian Pat. Appl. AT 511441; status: granted.*  
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*US Pat. Appl. 14/346,328, US Pat. No. 9,611,457; status: granted (2017)*
- 6. Process for the Production of Furan Derivatives**  
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- 9. Process for the selective oxidation of 5-Hydroxymethylfurfural**  
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- 10. Preparation of Leoligin Derivatives as Smooth Muscle Cell Proliferation Inhibitors**  
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*Austrian Pat. Appl. AT 2015/050160; status: pending*  
*PCT Int. Appl. WO 2015/196228 A1 20151230; status: disclosed*

- 11. Agents for the Treatment of Schizophrenia, Tic Disorders, Attention Deficit Hyperactivity Disorder, Obsessive Compulsive Disorder and other Related Neuropsychiatric Disorders, as well as Migrane and Myofascial Pain via GABA<sub>A</sub> Receptor Subtype-Selective Ligands**  
Chiou, L.-C.; Cook, J.; Ernst, M.; Fan, P.-C.; Knutson, D.; Meirelles, M.A.; Mihovilovic, M.D.; Sighart, W.; Varagic, Z.; Verma, R.; Wimmer, L.; Witzigmann, C.  
*US Provisional Pat. Appls. 62/170,552 & 62/307,836; PCT/US2016/035761; status: pending*  
*EPO 16804541.7 / EP#3325479; status: granted (2.12.2020)*
- 12. Halide- and Metal-free Continuous Flow Production of Ionic Liquids**  
Bica, K.; Schön, M.; Gärtner, P.; Mihovilovic, M.D.;  
*Austrian Pat. Appl. (no pending); status: pending*
- 13. Ligands Selective to Alpha 6 Subunit-containing GABA<sub>A</sub> Receptors and their Methods of Use**  
Chiou, L.-C.; Cook, J.; Ernst, M.; Fan, P.-C.; Knutson, D.; Meirelles, M.A.; Mihovilovic, M.D.; Sighart, W.; Varagic, Z.; Verma, R.; Wimmer, L.; Witzigmann, C.; Siebert, D.C.B.; Savic, M.M.  
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## Popular Science Articles

### 1. Hilfe zur Selbsthilfe

Stanetty, P.; Mihovilovic, M.D. *Chemie* **1995**, *9*, 12-14.  
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### 2. Das Herz in der Petrischale

Mihovilovic, M.D. *Lab & More* **2013**, *7*, 10-14.  
reprinted (in English) in: *Lab & More Orient* **2014**, 20-23.

## Editorials

### 1. 4<sup>th</sup> Young Investigator Workshop

Schnürch, M.; Mihovilovic, M.D. *Monatsh. Chem.* **2013**, *144*, 445.  
DOI: 10.1007/s00706-013-0959-x.

### 2. Medicinal and Bioorganic Chemistry: an Austrian Perspective of the Chemistry-Biology Interface

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### 4. Heterocyclic chemistry in a Blue Danube context

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DOI: 10.1007/s00706-018-2180-4.

## Summer Schools & Training Courses

### 1. XXIX Summer School in Chemistry

Key Lecturer

*Enzyme and Metal Assisted Reactions in Bioactive Compound Synthesis*  
February 16-20, **2009**, Sao Carlos, Brazil.

### 2. INNOLEC Lectureship

Minisymposium in Chemistry

*Special Methods in Modern Organic Synthesis*

March 6, **2015**, Masaryk University Brno, Czech Republic.