List of publications Prof. Dr. Walter Leitner

(February 2025)

ORCID: 0000-0001-6100-9656; ResearchID: D-3031-2015

Over 400 contributions to peer-reviewed international journals and edited monographs, with a total number of >25 000 citations and h-index of 78

Co-Editor of the books *Chemical Synthesis Using Supercritical Fluids* (Wiley/VCH1999), *Multiphase Homogeneous Catalysis* (Wiley/VCH 2005) and *Handbook of Green Chemistry, Vol 4-6: Green Solvents* (Wiley/VCH, 2010)

More than 60 patents and patent applications

More than 100 invited lectures at international conferences and research institutions

2025

- Vossen, J. T.; **Leitner, W**.; Vorholt, A. J. (2025). Selective Construction of Linear Carbon Chains Using Synthesis Gas (CO/H2) for C1-Elongation via a Three-Step Reaction Cycle. *ACS Sustainable Chemistry & Engineering*. https://doi.org/10.1021/acssuschemeng.4c10677.
- Durin, G., Lee, M., Pogany, M. A., Kahl, C., Weyhermüller, T., **Leitner, W.**, & Kaeffer, N. (2025). Electrochemical aldehyde hydrogenation: probing the inner-sphere strategy with nickel-bipyridine complexes. *Chemical Communications, 61(3),* 520-523. https://doi.org/10.1039/d4cc04050c.
- Campalani, C., Durai, M., **Leitner, W.**, & Bordet, A. (2025). Photo-induced enhancement of hydrogenation activity for ruthenium nanoparticles immobilized on carbon dots. *Green Chemistry*. https://doi.org/10.1039/D4GC05468G.
- Zenner, J., Kang, L., Antil, N., Johny, J., DeBeer, S., **Leitner, W.**, & Bordet, A. (2025). Bimetallic Mn x Ru100–x Nanoparticles on Supported Ionic Liquid Phases (Mn x Ru100–x@ SILP) as Tunable Hydrogenation Catalysts. *ACS Catalysis, 15*, 3227-3235. https://doi.org/10.1021/acscatal.4c05494.
- Fang, W., Zhang, Y., Kang, L., DeBeer, S., **Leitner, W.**, Bordet, A., & Riisager, A. (2025). Molecularly modified aluminum phosphates as support materials for Ru nanoparticles in selective hydrogenation. *Journal of Catalysis, 442*, 115911. https://doi.org/10.1016/j.jcat.2024.115911.
- Thanheuser, N., Schlichter, L., **Leitner, W.**, Esteban, J., & Vorholt, A. J. (2025). 5-hydroxymethylfurfural (HMF) synthesis in a deep eutectic solvent-based biphasic system: closing the loop of solvent reuse, product isolation and green metrics. *RSC Sustainability.* https://doi.org/10.1039/D4SU00733F.
- LeClerc, H. O., Erythropel, H. C., Backhaus, A., Lee, D. S., Judd, D. R., Paulsen, M. M., Ishii, M., Long, A., Ratjen, L., Gonsalves Bertho, G., Deetman, C., Du, Y., Lane, M. K. M., Petrovic, P. V., Champlin, A. T., Bordet, A., Kaeffer, N., Kemper, G., Zimmerman, J. B., **Leitner, W.**, Anastas, P. T. (2025). The CO2 Tree: The Potential for Carbon Dioxide Utilization Pathways. *ACS Sustainable Chemistry & Engineering, 13(1*), 5-29. https://doi.org/10.1021/acssuschemeng.4c07582.

2024

- Zhang, Y. Y., Levin, N., Kang, L. Q., Müller, F., Zobel, M., DeBeer, S., **Leitner, W.**, Bordet, A. (2024). Design and Understanding of Adaptive Hydrogenation Catalysts Triggered by the H_2/CO_2-Formic Acid Equilibrium. *Journal of the American Chemical Society, 146 (*44*),* 30057-30067. doi:10.1021/jacs.4c06765.
- Zenner, J., Tran, K., Kang, L. Q., Kinzel, N. W., Werlé, C., DeBeer, S., Bordet, A., **Leitner, W.** (2024). Synthesis,

Characterization, and Catalytic Application of Colloidal and Supported Manganese Nanoparticles. *Chemistry-a European Journal, 30 (*25*)*. doi:10.1002/chem.202304228.

- Wessel, N., Medhekar, R. S., Sonnenberg, M., Stieber, H., **Leitner, W.**, Vorholt, A. J. (2024). Catalyst in Sight: The Use of Benchtop NMR Spectrometers to Maintain the Activity of Pd-PPh_3 Catalysts. *ACS Catalysis, 14 (*14*),* 10679-10688. doi:10.1021/acscatal.4c02606.
- Vossen, J. T., Patzina, F., **Leitner, W.**, Vorholt, A. J. (2024). Studying the Recycling and Deactivation of Rh/Biphephos Complexes in the Isomerization-Hydroformylation Tandem Reaction. *Acs Sustainable Chemistry & Engineering*. doi:10.1021/acssuschemeng.4c03970.
- Voelker, S., Groll, N., Bachmann, M. Mueller, L., Neumann, M., Kossioris, T., Muthyala, P., Lehrheuer, B., Hofmeister, M., Vorholt, A., Schmitz, K., Pischinger, S., **Leitner, W.**, Bardow, A. (2024). Towards carbon-neutral and clean propulsion in heavy-duty transportation with hydroformylated Fischer-Tropsch fuels. *Nature Energy, 9 (*10*),* 1220-1229. doi:10.1038/s41560-024-01581-z.
- Thanheuser, N., Groteguth, J. T., **Leitner, W.**, Esteban, J., Vorholt, A. J. (2024). Biphasic Production of 5-hydroxymethylfurfural (HMF) in a Recyclable Deep Eutectic Solvent-based System Catalyzed by $H_4SiW_{12}O_{40}$. *Chemsuschem*. doi:10.1002/cssc.202401485.
- Stahl, S., Wessel, N., Vorholt, A. J., **Leitner, W.** (2024). Liquid-phase hydrogenation of carbon monoxide to methanol using a recyclable manganese-based catalytic system. *Green Chemistry, 26 (*13*),* 7799-7805.

  doi:10.1039/d4gc01050g
- Solmi, M. V., Vossen, J. T., Schmitz, M., Vorholt, A. J., **Leitner, W.** (2024). Catalytic synthesis of carboxylic acids from oxygenated substrates using CO_2 and H_2 as C1 building blocks. *Green Chemistry, 26 (*12*),* 7302-7311. doi:10.1039/d4gc01732c.
- Schoofs, L., Weidener, D., **Leitner, W.**, Klose, H., Grande, P. M. (2024). Lignocellulose Treatment Using a Flow-Through Variant of OrganoCat Process. *Chemsuschem*. doi:10.1002/cssc.202401063.
- Nasse, K. E., Heinen, F. S., Pawlowsky, N., Schrimpf, M., Monflier, E., Tilloy, S., **Leitner, W.**, Vorholt, A. J. (2024). The role of cyclodextrins in the acceleration of the reaction rate in a biphasic hydroformylations. *Chemical Engineering Journal, 497,* 154114. doi:10.1016/j.cej.2024.154114.
- Mondal, T., **Leitner, W.**, Hölscher, M. (2024). Computational design of cooperatively acting molecular catalyst systems: carbene based tungsten- or molybdenum-catalysts with rhodium- or iridium-complexes for the ionic hydrogenation of N_2 to NH_3. *Dalton Transactions, 53 (*18*),* 7890-7898. doi:10.1039/d4dt00563e.
- **Leitner, W.** (2024). Carbon dioxide and hydrogen as building blocks for a sustainable interface of energy and chemistry. *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences, 382 (*2282*)*. doi:10.1098/rsta.2023.0266.
- Köhnke, K., Björnsson, R., **Leitner, W.**, Vorholt, A. J., Mechanistic Aspects of Rhodium-Catalyzed Isoprene Hydroformylation: A Computational Study, *Organometallics* **2024**. doi: 10.1021/acs.organomet.3c00414.
- Klos, N., Osterthun, O., Mengers, H. G., Lanzerath, P., von Westarp, W. G., Lim, G., Gausmann, M., Küsters-Spöring, J. D., Wiesenthal, J., Guntermann, N., Lauterbach, L., Jupke, A., **Leitner, W.**, Blank, L. M., Klankermayer, J., Rother, D. (2024). Concatenating Microbial, Enzymatic, and Organometallic Catalysis for Integrated Conversion of Renewable Carbon Sources. *Jacs Au*. doi:10.1021/jacsau.4c00511.
- Kick, A. C., Weyhermüller, T., Hölscher, M., Kaeffer, N., **Leitner, W.** (2024). Understanding Ligand Effects on Bielectronic Transitions: Chemo- and Electroreduction of Rhodium Bis(Diphosphine) Complexes to Low Oxidation States. *Angewandte Chemie-International Edition, 63 (*37*)*. doi:10.1002/anie.202408356.
- Fassbach, T. A., Ji, J. M., Vorholt, A. J., **Leitner, W.** (2024). Recycling of Homogeneous Catalysts-Basic Principles, Industrial Practice, and Guidelines for Experiments and Evaluation. *ACS Catalysis, 14 (*9*),* 7289-7298. doi:10.1021/acscatal.4c01006.

- Ehmann, K. R., Ji, J. M., Dinsing, K., Maier, C. R., Vorholt, A. J., **Leitner, W.** (2024). Introducing a Second Liquid Phase in the Carbon Dioxide Hydrogenation to Formic Acid: Impact on Catalytic Conversion in Ru-Catalyzed Systems. *ACS Sustainable Chemistry & Engineering, 12 (*42*),* 15569-15577. doi:10.1021/acssuschemeng.4c05493.
- Belleflamme, M., Hommes, J., Dervisoglu, R., Bartalucci, E., Wiegand, T., Beine, A. K., **Leitner, W.**, Vorholt, A. J. (2024). Catalytic Upgrading of Acetaldehyde to Acetoin Using a Supported N-Heterocyclic Carbene Catalyst. *Chemsuschem, 17 (*22*)*. doi:10.1002/cssc.202400647.
- Stahl, S., Vossen, J. T., Popp, S., **Leitner, W.**, & Vorholt, A. J. (2024). Methanolation of Olefins: Low-Pressure Synthesis of Alcohols by the Formal Addition of Methanol to Olefins. *Angewandte Chemie International Edition, e202418984*. https://doi.org/10.1002/anie.202418984.

2023

- Zhang, Y. Y., El Sayed, S., Kang, L. Q., Sanger, M., Wiegand, T., Jessop, P. G., Debeer, S., Bordet, A., **Leitner, W.**, Adaptive Catalysts for the Selective Hydrogenation of Bicyclic Heteroaromatics using Ruthenium Nanoparticles on a CO_2-Responsive Support, *Angewandte Chemie-International Edition* 62, (48) **2023**. doi: 10.1002/anie.202311427.
- Vossen, J. T., **Leitner, W.**, Vorholt, A. J., Exploring the Hurdles in Thermomorphic Multicomponent Systems in the Rhodium-Catalyzed Multiphase Hydroformylation, *ACS Sustainable Chemistry & Engineering* 11, (28) **2023**, 10462-10470. doi: 10.1021/ACSsuschemeng.3c01885.
- Vossen, J. T., Hülsken, N., Vorholt, A. J., **Leitner, W.**, Recycling of a thermoresponsive "catalyst pill": separation of a molecular catalyst in solid ethylenecarbonate in various reactions, *Green Chemistry* 25, (7) **2023**, 2872-2880. https://doi.org/10.1039/d2gc04822a.
- Sodreau, A., Zahedi, H. G., Dervisoglu, R., Kang, L. Q., Menten, J., Zenner, J., Terefenko, N., Debeer, S., Wiegand, T., Bordet, A., **Leitner, W.**, A Simple and Versatile Approach for the Low-Temperature Synthesis of Transition Metal Phosphide Nanoparticles from Metal Chloride Complexes and P(SiMe3)3, *Advanced Materials* 35, (49) **2023**. doi: 10.1002/adma.202306621.
- Singh, A., Kemper, G., Weyhermüller, T., Kaeffer, N., **Leitner, W.**, Activated Mn-MACHO Complexes Form Stable CO2 Adducts, *Chemistry-a European Journal* **2023**. https://doi.org/10.1002/chem.202303438.
- Nattermann, M., Wenk, S., Pfister, P., He, H., Lee, S. H., Szymanski, W., Guntermann, N., Zhu, F. Y., Nickel, L., Wallner, C., Zarzycki, J., Paczia, N., Gaissert, N., Franciò, G., **Leitner, W**., Gonzalez, R., Erb, T. J., Engineering a new-to-nature cascade for phosphate-dependent formate to formaldehyde conversion in vitro and in vivo, *Nature Communications* 14, (1) **2023**. https://doi.org/10.1038/s41467-023-38072-w.
- Mengers, H. G., Guntermann, N., von Westarp, W. G., Jupke, A., Klankermayer, J., Blank, L. M., **Leitner, W.**, Rother, D., Three Sides of the Same Coin: Combining Microbial, Enzymatic, and Organometallic Catalysis for Integrated Conversion of Renewable Carbon Sources, *Chemie Ingenieur Technik* 95, (4) **2023**, 485-490. https://doi.org/10.1002/cite.202200169.
- Marchenko, N., Lacroix, L. M., Ratel-Ramond, N., **Leitner, W.**, Bordet, A., Tricard, S., Bimetallic Fe Fe_xPt_{100-x} Nanoparticles Immobilized on Supported Ionic Liquid Phases as Hydrogenation and Hydrodeoxygenation Catalysts: Influence of the Metal Content on Activity and Selectivity, *ACS Applied Nano Materials* 6, (21) **2023**, 20231-20239. https://doi.org/10.1021/acsanm.3c03996.
- Levin, N., Goclik, L., Walschus, H., Antil, N., Bordet, A., **Leitner, W**., Decarboxylation and Tandem Reduction/Decarboxylation Pathways to Substituted Phenols from Aromatic Carboxylic Acids Using Bimetallic Nanoparticles on Supported Ionic Liquid Phases as Multifunctional Catalysts, *Journal of the American Chemical Society* 145, (41) **2023**, 22845-22854. https://doi.org/10.1021/jACS.3c09290.

- Kemper, G., Hölscher, M., **Leitner, W.**, Pd(II)-catalyzed carboxylation of aromatic C-H bonds with CO2, *Science Advances* 9, (5) **2023**. https://doi.org/10.1126/sciadv.adf2966.
- Jenthra, S., Mondal, T., Kemper, G., Lantzius-Beninga, M., Hölscher, M., **Leitner, W.**, Ligand-Controlled Palladium-Catalyzed Decarboxylative Heck Coupling for Regioselective Access to Branched Olefins, *ACS Catalysis* 13, (15) **2023**, 10085-10093. https://doi.org/10.1021/ACScatal.3c02224.
- Durin, G., Lee, M. Y., Pogany, M. A., Weyhermüller, T., Kaeffer, N., **Leitner, W.**, Hydride-Free Hydrogenation: Unraveling the Mechanism of Electrocatalytic Alkyne Semihydrogenation by Nickel-Bipyridine Complexes, *Journal of the American Chemical Society* 145, (31) **2023**, 17103-17111. https://doi.org/10.1021/jACS.3c03340.
- Durin, G., Kaeffer, N., **Leitner, W.**, Electrocatalytic hydrogenation of unsaturated organic compounds with molecular complexes: Mechanistic views, *Current Opinion in Electrochemistry* 41, **2023**. https://doi.org/10.1016/j.coelec.2023.101371.
- Cramer, H. H., Das, S., Wodrich, M. D., Corminboeuf, C., Werle, C., **Leitner, W.**, Theory-guided development of homogeneous catalysts for the reduction of CO2 to formate, formaldehyde, and methanol derivatives, *Chemical Science* 14, (11) **2023**, 2799-2807. https://doi.org/10.1039/d2sc06793e.
- Bordet, A., **Leitner, W.**, Adaptive Catalytic Systems for Chemical Energy Conversion, *Angewandte Chemie-International Edition* 62, (33) **2023**. https://doi.org/10.1002/anie.202301956.
- Anandaraj, S. J. L., Kang, L. Q., DeBeer, S., Bordet, A., **Leitner, W.**, Catalytic Hydrogenation of CO2 to Formate Using Ruthenium Nanoparticles Immobilized on Supported Ionic Liquid Phases, *Small* 19, (18) **2023**. https://doi.org/10.1002/smll.202206806.
- Antico, E., Leutzsch, M., Wessel, N., Weyhermüller, T., Werlé, C., **Leitner, W.**, Selective oxidation of silanes into silanols with water using [MnBr(CO)5] as a precatalyst, *Chemical Science* 14, (1) **2023**, 54-60. https://doi.org/10.1039/d2sc05959b.

2022

- Vossen, J. T., Vorholt, A. J., **Leitner, W.**, Catalyst Recycling in the Reactive Distillation of Primary Alcohols to Olefins Using a Phosphoric Acid Catalyst, *ACS Sustainable Chemistry & Engineering* 10, (18) **2022**, 5922-5931. https://doi.org/10.1021/ACSsuschemeng.2c00237.
- Ullmann, L., Guntermann, N., Kohl, P., Schröders, G., Müsgens, A., Franciò, G., **Leitner, W.**, Blank, L. M., Improved Itaconate Production with *cynodontis* via Co-Metabolism of CO2-Derived Formate, *Journal of Fungi* 8, (12) **2022**. https://doi.org/10.3390/jof8121277.
- Strohmann, M., Vorholt, A. J., **Leitner, W.**, Branched Tertiary Amines from Aldehydes and α-Olefins by Combined Multiphase Tandem Reactions, *Chemistry-a European Journal* 28, (58) **2022**. https://doi.org/10.1002/chem.202202081
- Sisodiya-Amrute, S., Van Stappen, C., Rengshausen, S., Han, C. H., Sodreau, A., Weidenthaler, C., Tricard, S., DeBeer, S., Chaudret, B., Bordet, A., **Leitner, W.**, Bimetallic MxRu100−x nanoparticles (M = Fe, Co) on supported ionic liquid phases (MxRu100−x@SILP) as hydrogenation catalysts: Influence of M and M:Ru ratio on activity and selectivity, *Journal of Catalysis* 407, **2022**, 141-148. https://doi.org/10.1016/j.jcat.2022.01.030.
- Schrimpf, M., Graefe, P. A., Kaczyna, A. E., Vorholt, A. J., **Leitner, W.**, Measuring Droplet Sizes Generated by 3D-Printed Stirrers in a Lean Gas-Liquid-Liquid System Using Borescopy, *Industrial & Engineering Chemistry Research* 61, (7) **2022**, 2701-2713. https://doi.org/10.1021/ACS.iecr.1c03707.

- Schrimpf, M., Graefe, P. A., Holl, A., Vorholt, A. J., **Leitner, W.**, Effect of Liquid-Liquid Interfacial Area on Biphasic Catalysis Exemplified by Hydroformylation, *ACS Catalysis* 12, (13) **2022**, 7850-7861. https://doi.org/10.1021/ACScatal.2c01972.
- Rösler, T., Betting, J., Püschel, S., Vorholt, A. J., **Leitner, W.**, Solvent design for catalyst recycling of rhodium/amine catalysts *via sc*CO2 extraction in the reductive hydroformylation of alpha olefins, *Green Chemistry* 24, (17) **2022**, 6578-6588. https://doi.org/10.1039/d2gc01252a.
- Püschel, S., Sadowski, J., Rösler, T., Ehmann, K. R., Vorholt, A. J., **Leitner, W.**, Auto-Tandem Catalytic Reductive Hydroformylation in a CO2-Switchable Solvent System, *ACS Sustainable Chemistry & Engineering* 10, (11) **2022**, 3749-3756. https://doi.org/10.1021/ACSsuschemeng.2c00419.
- Püschel, S., Hammami, E., Rösler, T., Ehmann, K. R., Vorholt, A. J., **Leitner, W.**, Auto-tandem catalytic reductive hydroformylation with continuous multiphase catalyst recycling, *Catalysis Science & Technology* 12, (3) **2022**, 728-736. https://doi.org/10.1039/d1cy02000e.
- October, J., Köhnke, K., Thanheuser, N., Vorholt, A. J., **Leitner, W.**, Reppe-Carbonylation of Alkenes with Carboxylic Acids: A Catalytic and Mechanistic Study, *European Journal of Organic Chemistry* 2022, (43) **2022**. https://doi.org/10.1002/ejoc.202201018.
- Machat, M. R., Marbach, J., Schumacher, H., Raju, S., Lansing, M., Over, L. C., Adler, L., Langanke, J., Wolf, A., **Leitner, W.**, Gürtler, C., Turning CO/CO2-containing industrial process gas into valuable building blocks for the polyurethane industry, *Reaction Chemistry & Engineering* 7, (3) **2022**, 580-589. https://doi.org/10.1039/d1re00508a.
- Lin, S. H., Hetaba, W., Chaudret, B., **Leitner, W.**, Bordet, A., Copper-Decorated Iron Carbide Nanoparticles Heated by Magnetic Induction as Adaptive Multifunctional Catalysts for the Selective Hydrodeoxygenation of Aldehydes, *Advanced Energy Materials* 12, (42) **2022**. https://doi.org/10.1002/aenm.202201783.
- **Leitner, W.**, *If sustainability is the goal green chemistry will show the way!* - happy birthday to Paul Anastas, *Green Chemistry* 24, (9) **2022**, 3374-3375. https://doi.org/10.1039/d2gc90035a.
- Lee, M. Y., Kahl, C., Kaeffer, N., **Leitner, W.**, Electrocatalytic Semihydrogenation of Alkynes with $[Ni(bpy)3]^{2+}$, *JACS Au* 2, (3) **2022**, 573-578. https://doi.org/10.1021/jACSau.1c00574.
- Kuss, D. A., Hölscher, M., **Leitner, W.**, Combined Computational and Experimental Investigation on the Mechanism of CO2 Hydrogenation to Methanol with Mn-PNP-Pincer Catalysts, *ACS Catalysis* 12, (24) **2022**, 15310-15322. https://doi.org/10.1021/ACScatal.2c04806.
- Köhnke, K., Wessel, N., Esteban, J., Jin, J., Vorholt, A. J., **Leitner, W.**, *Operando* monitoring of mechanisms and deactivation of molecular catalysts, *Green Chemistry* 24, (5) **2022**, 1951-1972. https://doi.org/10.1039/d1gc04383h.
- Kliemann, M. N., Teeuwen, S., Weike, C., Franciò, G., **Leitner, W.**, Rhodium-Catalyzed Asymmetric Hydrohydrazonemethylation of Styrenes: Access to Chiral Hydrazones, Hydrazides, Hydrazines and Amines, *Advanced Synthesis & Catalysis* 364, (23) **2022**, 4006-4012. https://doi.org/10.1002/adsc.202200804.
- Kalsi, D., Anandaraj, S. J. L., Durai, M., Weidenthaler, C., Emondts, M., Nolan, S. P., Bordet, A., **Leitner, W.**, One-Pot Multicomponent Synthesis of Allyl and Alkylamines Using a Catalytic System Composed of Ruthenium Nanoparticles on Copper N-Heterocyclic Carbene-Modified Silica, *ACS Catalysis* 12, (24) **2022**, 14902-14910. https://doi.org/10.1021/ACScatal.2c04044.
- Kaeffer, N., **Leitner, W.**, Electrocatalysis with Molecular Transition-Metal Complexes for Reductive Organic Synthesis, *JACS Au* 2, (6) **2022**, 1266-1289. https://doi.org/10.1021/jACSau.2c00031.
- Kacem, S., Qiao, Y. X., Wirtz, C., Theyssen, N., Bordet, A., **Leitner, W.**, Supercritical carbon dioxide as reaction medium for selective hydrogenation of fluorinated arenes, *Green Chemistry* 24, (22) **2022**. https://doi.org/10.1039/d2gc02623f.

- Jürling-Will, P., Botz, T., Franciò, G., **Leitner, W.**, A "Power-to-X" Route to Acetic Acid via Palladium-Catalyzed Isomerization of Methyl Formate, *Chemsuschem* 15, (16) **2022**. https://doi.org/10.1002/cssc.202201006.
- Jeske, K., Rösler, T., Belleflamme, M., Rodenas, T., Fischer, N., Claeys, M., **Leitner, W.**, Vorholt, A. J., Prieto, G., Direct Conversion of Syngas to Higher Alcohols via Tandem Integration of Fischer-Tropsch Synthesis and Reductive Hydroformylation, *Angewandte Chemie-International Edition* 61, (31) **2022**. https://doi.org/10.1002/anie.202201004.
- Hölscher, M., Kemper, G., Jenthra, S., Bolm, C., **Leitner, W.**, Factors Governing the Catalytic Insertion of CO2 into Arenes - A DFT Case Study for Pd and Pt Phosphane Sulfonamido Complexes, *Chemistry-a European Journal* 28, (23) **2022**. https://doi.org/10.1002/chem.202104375.
- Hoffmann, M., Hermesmann, M., Leven, M., **Leitner, W.**, Müller, T. E., Semi-Crystalline Polyoxymethylene-*co*-Polyoxyalkylene Multi-Block Telechels as Building Blocks for Polyurethane Applications, *Polymers* 14, (5) **2022**. https://doi.org/10.3390/polym14050882.
- Han, C. H., Zenner, J., Johny, J., Kaeffer, N., Bordet, A., **Leitner, W.**, Electrocatalytic hydrogenation of alkenes with Pd/carbon nanotubes at an oil-water interface, *Nature Catalysis* 5, (12) **2022**, 1110-1119. https://doi.org/10.1038/s41929-022-00882-4.
- Guntermann, N., Franciò, G., **Leitner, W.**, Hydrogenation of CO2 to formic acid in biphasic systems using aqueous solutions of amino acids as the product phase, *Green Chemistry* 24, (20) **2022**, 8069-8075. https://doi.org/10.1039/d2gc02598a.
- Goclik, L., Walschus, H., Bordet, A., **Leitner, W.**, Selective hydrodeoxygenation of acetophenone derivatives using a Fe25Ru75@SILP catalyst: a practical approach to the synthesis of alkyl phenols and anilines, *Green Chemistry* 24, (7) **2022**, 2937-2945. https://doi.org/10.1039/d1gc04189d.
- Ehmann, K. R., Nisters, A., Vorholt, A. J., **Leitner, W.**, Carbon Dioxide Hydrogenation to Formic Acid with Self-Separating Product and Recyclable Catalyst Phase, *Chemcatchem* 14, (19) **2022**. https://doi.org/10.1002/cctc.202200892.
- Diehl, T., Lanzerath, P., Franciò, G., **Leitner, W.**, A Self-Separating Multiphasic System for Catalytic Hydrogenation of CO2 and CO2-Derivatives to Methanol, *Chemsuschem* 15, (22) **2022**. https://doi.org/10.1002/cssc.202201250.

2021

- Zenner, J., Moos, G., Luska, K. L., Bordet, A., **Leitner, W.**, Rh NPs Immobilized on Phosphonium- based Supported Ionic Liquid Phases (Rh@SILPs) as Hydrogenation Catalysts, *Chimia* 75, (9) **2021**, 724-732. https://doi.org/10.2533/chimia.2021.724.
- Weidener, D., **Leitner, W.**, de María, P. D., Klose, H., Grande, P. M., Lignocellulose Fractionation Using Recyclable Phosphoric Acid: Lignin, Cellulose, and Furfural Production, *Chemsuschem* 14, (3) **2021**, 909-916. https://doi.org/10.1002/cssc.202002383.
- Weidener, D., Klose, H., von Westarp, W. G., Jupke, A., **Leitner, W.**, de María, P. D., Grande, P. M., Selective lignin fractionation using CO2-expanded 2-methyltetrahydrofuran (2-MTHF), *Green Chemistry* 23, (17) **2021**, 6330-6336. https://doi.org/10.1039/d1gc01651b.
- Rösler, T., Ehmann, K. R., Köhnke, K., Leutzsch, M., Wessel, N., Vorholt, A. J., **Leitner, W.**, Reductive hydroformylation with a selective and highly active rhodium amine system, *Journal of Catalysis* 400, **2021**, 234-243. https://doi.org/10.1016/j.jcat.2021.06.001.

- Rengshausen, S., Van Stappen, C., Levin, N., Tricard, S., Luska, K. L., DeBeer, S., Chaudret, B., Bordet, A., **Leitner, W.**, Organometallic Synthesis of Bimetallic Cobalt-Rhodium Nanoparticles in Supported Ionic Liquid Phases (Co_xRh_{100-x}@SILP) as Catalysts for the Selective Hydrogenation of Multifunctional Aromatic Substrates, *Small* 17, (5) **2021**. https://doi.org/10.1002/smll.202006683.
- Qiao, Y. X., Theyssen, N., Spliethoff, B., Folke, J., Weidenthaler, C., Schmidt, W., Prieto, G., Ochoa-Hernández, C., Bill, E., Ye, S. F., Ruland, H., Schüth, F., **Leitner, W.**, Synthetic ferripyrophyllite: preparation, characterization and catalytic application, *Dalton Transactions* 50, (3) **2021**. https://doi.org/10.1039/d0dt03125a.
- Puschel, S., Störtte, S., Topphoff, J., Vorholt, A. J., **Leitner, W.**, Green Process Design for Reductive Hydroformylation of Renewable Olefin Cuts for Drop-In Diesel Fuels, *Chemsuschem* 14, (23) **2021**, 5226-5234. https://doi.org/10.1002/cssc.202100929.
- **Leitner, W.**, Schmitz, M., Concluding remarks: Carbon dioxide utilization: where are we now? horizontal ellipsis and where are we going?, *Faraday Discussions* 230, (0) **2021**, 413-426. https://doi.org/10.1039/d1fd00038a.
- Kuss, D. A., Hölscher, M., **Leitner, W.**, Hydrogenation of CO2 to Methanol with Mn-PNP-Pincer Complexes in the Presence of Lewis Acids: the Formate Resting State Unleashed, *Chemcatchem* 13, (14) **2021**, 3319-3323. https://doi.org/10.1002/cctc.202100649.
- Kreissl, H., Jin, J., Lin, S. H., Schuette, D., Störtte, S., Levin, N., Chaudret, B., Vorholt, A. J., Bordet, A., **Leitner, W.**, Commercial Cu2Cr2O5 Decorated with Iron Carbide Nanoparticles as a Multifunctional Catalyst for Magnetically Induced Continuous-Flow Hydrogenation of Aromatic Ketones, *Angewandte Chemie-International Edition* 60, (51) **2021**, 26639-26646. https://doi.org/10.1002/anie.202107916.
- Kinzel, N. W., Werlé, C., **Leitner, W.**, Transition Metal Complexes as Catalysts for the Electroconversion of CO2: An Organometallic Perspective, *Angewandte Chemie-International Edition* 60, (21) **2021**, 11628-11686. https://doi.org/10.1002/anie.202006988.
- Kinzel, N. W., Demirbas, D., Bill, E., Weyhermüller, T., Werlé, C., Kaeffer, N., **Leitner, W.**, Systematic Variation of 3d Metal Centers in a Redox-Innocent Ligand Environment: Structures, Electrochemical Properties, and Carbon Dioxide Activation, *Inorganic Chemistry* 60, (24) **2021**, 19062-19078. https://doi.org/10.1021/ACS.inorgchem.1c02909.
- Kaithal, A., Werlé, C., **Leitner, W.**, Alcohol-Assisted Hydrogenation of Carbon Monoxide to Methanol Using Molecular Manganese Catalysts, *JACS Au* 1, (2) **2021**, 130-136. https://doi.org/10.1021/jACSau.0c00091.
- Kaithal, A., Hölscher, M., **Leitner, W.**, Carbon monoxide and hydrogen (syngas) as a C1-building block for selective catalytic methylation, *Chemical Science* 12, (3) **2021**, 976-982. https://doi.org/10.1039/d0sc05404f.
- Kaithal, A., Chatterjee, B., Werlé, C., **Leitner, W.**, Acceptorless Dehydrogenation of Methanol to Carbon Monoxide and Hydrogen using Molecular Catalysts, *Angewandte Chemie-International Edition* 60, (51) **2021**, 26500-26505. https://doi.org/10.1002/anie.202110910.
- Guntermann, N., Mengers, H. G., Franciò, G., Blank, L. M., **Leitner, W.**, Bio-energy conversion with carbon capture and utilization (BECCU): integrated biomass fermentation and chemo-catalytic CO2 hydrogenation for bioethanol and formic acid co-production, *Green Chemistry* 23, (24) **2021**, 9860-9864. https://doi.org/10.1039/d1gc02915k.
- Cramer, H. H., Ye, S. F., Neese, F., Werlé, C., **Leitner, W.**, Cobalt-Catalyzed Hydrosilylation of Carbon Dioxide to the Formic Acid, Formaldehyde, and Methanol Level-How to Control the Catalytic Network?, *JACS Au* 1, (11) **2021**, 2058-2069. https://doi.org/10.1021/jACSau.1c00350.
- Bordet, A., **Leitner, W.**, Metal Nanoparticles Immobilized on Molecularly Modified Surfaces: Versatile Catalytic Systems for Controlled Hydrogenation and Hydrogenolysis, *Accounts of Chemical Research* 54, (9) **2021**, 2144-2157. https://doi.org/10.1021/ACS.accounts.1c00013.

- Bordet, A., El Sayed, S., Sanger, M., Boniface, K. J., Kalsi, D., Luska, K. L., Jessop, P. G., **Leitner, W.**, Selectivity control in hydrogenation through adaptive catalysis using ruthenium nanoparticles on a CO2-responsive support, *Nature Chemistry* 13, (9) **2021**, 916-+. https://doi.org/10.1038/s41557-021-00735-w.
- Bardow, A., Bizzarri, C., Cao, X. E., Cowan, A. J., Cummings, C., Hernandez, V. D., Doan, H., Dowson, G., Ghosh, S., Gil, V., Gugujonovic, K., Kamali, A. R., König, M., **Leitner, W.**, Luo, J. S., Madhav, D., Maneiro, M., Manyar, H., McCord, S., Moore, E., North, M., Pant, D., Perry, S., Poon, J., Rossi, L., Esquius, J. R., Schreiber, M., Shozi, M., Sick, V., Styring, P., Tanveer, W., Thomas, O., Whiston, K., Yu, E., Emerging technologies: general discussion, *Faraday Discussions* 230, (0) **2021**, 388-412. https://doi.org/10.1039/d1fd90048j.
- Armstrong, K., Bardow, A., Cao, X. E., Cassiola, F., Fischer, N., Hills, C., Kamali, A. R., Kerr, J., Khan, S., **Leitner, W.**, Madhav, D., Manyar, H., McCord, S., Pant, D., Park, A. H. A., Poon, J., Ramirez, A., Sick, V., Styring, P., Tanzer, S. E., Tripathi, N., Whiston, K., Accelerated mineralisation: general discussion, *Faraday Discussions* 230, (0) **2021**, 213-226. https://doi.org/10.1039/d1fd90046c.
- Armstrong, K., Barbarino, S., Cao, X. E., Cassiola, F., Catlow, R. A., Claeys, M., Conway, M., Cowan, A. J., de Leeuw, N. H., Dowson, G. R. M., Fischer, N., Ghaderian, A., Ghosh, S., Kamali, A. R., Khan, S., Kyrimis, S., Lawes, N., **Leitner, W.**, Maneiro, M., Manyar, H., Marquart, W., McCord, S., Moore, E., North, M., Olsbye, U., Pant, D., Poon, J., Quesne, M. G., Ranocchiari, M., Rossi, L., Esquius, J. R., Shozi, M., Sick, V., Styring, P., Tan, J. N., Tanzer, S. E., Thomas, O., Whiston, K., Wolf, M., Thermal catalytic conversion: general discussion, *Faraday Discussions* 230, (0) **2021**, 124-151. https://doi.org/10.1039/d1fd90045e.
- Armstrong, K., Bachmann, M., Bardow, A., Cao, X. E., Cassiola, F., Cummings, C., Dowson, G., Kamali, A. R., Leitner, W., Manyar, H., McCord, S., North, M., Pant, D., Park, A. H. A., Pérez-Fortes, M., Platt, E., Poon, J., Ramírez, A., Sick, V., Styring, P., Tanzer, S. E., Tanveer, W., Thomas, O., Whiston, K., Life cycle and upscaling: general discussion, *Faraday Discussions* 230, (0) **2021**, 308-330. https://doi.org/10.1039/d1fd90047a.
- Antico, E., Schlichter, P., Werlé, C., Leitner, W., Reduction of Carboxylic Acids to Alcohols via Manganese(I) Catalyzed Hydrosilylation, *JACS Au* 1, (6) **2021**, 742-749. https://doi.org/10.1021/jACSau.1c00140.

2020

- Zimmerman, J. B., Anastas, P. T., Erythropel, H. C., **Leitner, W.**, Designing for a green chemistry future, *Science* 367, (6476) **2020**, 397-400. https://doi.org/10.1126/science.aay3060.
- Weidener, D., Holtz, A., Klose, H., Jupke, A., **Leitner, W.**, Grande, P. M., Lignin Precipitation and Fractionation from OrganoCat Pulping to Obtain Lignin with Different Sizes and Chemical Composition, *Molecules* 25, (15) **2020**. https://doi.org/10.3390/molecules25153330.
- Weidener, D., Dama, M., Dietrich, S. K., Ohrem, B., Pauly, M., **Leitner, W.**, de María, P. D., Grande, P. M., Klose, H., Multiscale analysis of lignocellulose recalcitrance towards OrganoCat pretreatment and fractionation, *Biotechnology for Biofuels* 13, (1) **2020**. https://doi.org/10.1186/s13068-020-01796-8.
- Voit, G., Jenthra, S., Hölscher, M., Weyhermüller, T., **Leitner, W.**, Reversible Insertion of Carbon Dioxide at Phosphine Sulfonamido Pd^{II}-Aryl Complexes, *Organometallics* 39, (24) **2020**, 4465-4473. https://doi.org/10.1021/ACS.organomet.0c00560.
- Strohmann, M., Vossen, J. T., Vorholt, A. J., **Leitner, W.**, Recycling of two molecular catalysts in the hydroformylation/aldol condensation tandem reaction using one multiphase system, *Green Chemistry* 22, (23) **2020**, 8444-8451. https://doi.org/10.1039/d0gc03392h.
- Pandey, P., Daw, P., Reshi, N. U. D., Ehmann, K. R., Hölscher, M., **Leitner, W.**, Bera, J. K., A Proton-Responsive Annulated Mesoionic Carbene (MIC) Scaffold on Ir Complex for Proton/Hydride Shuttle: An Experimental and Computational Investigation on Reductive Amination of Aldehyde, *Organometallics* 39, (21) **2020**, 3849-3863. https://doi.org/10.1021/ACS.organomet.0c00568.

- Moos, G., Emondts, M., Bordet, A., **Leitner, W.**, Selective Hydrogenation and Hydrodeoxygenation of Aromatic Ketones to Cyclohexane Derivatives Using a Rh@SILP Catalyst, *Angewandte Chemie-International Edition* 59, (29) **2020**, 11977-11983. https://doi.org/10.1002/anie.201916385.
- Mo, A., Pesce, J., Augustine, A. D., Bodmer, J. L., Breen, J., **Leitner, W.**, Hall, B. F., Understanding vaccine-elicited protective immunity against pre-erythrocytic stage malaria in endemic regions, *Vaccine* 38, (48) **2020**, 7569-7577. https://doi.org/10.1016/j.vaccine.2020.09.071.
- Kaithal, A., van Bonn, P., Hölscher, M., **Leitner, W.**, Manganese(I)-Catalyzed β-Methylation of Alcohols using Methanol as C1 Source, *Angewandte Chemie-International Edition* 59, (1) **2020**, 215-220. https://doi.org/10.1002/anie.201909035.
- Kaithal, A., Schmitz, M., Hölscher, M., **Leitner, W.**, On the Mechanism of the Ruthenium-catalyzed β-methylation of Alcohols with Methanol, *Chemcatchem* 12, (3) **2020**, 781-787. https://doi.org/10.1002/cctc.201901871.
- Kaithal, A., Kalsi, D., Krishnakumar, V., Pattanaik, S., Bordet, A., **Leitner, W.**, Gunanathan, C., Ruthenium-Catalyzed Selective *Hydroboronolysis* of Ethers, *ACS Catalysis* 10, (24) **2020**, 14390-14397. https://doi.org/10.1021/ACScatal.0c04269.
- Kacem, S., Emondts, M., Bordet, A., **Leitner, W.**, Selective hydrogenation of fluorinated arenes using rhodium nanoparticles on molecularly modified silica, *Catalysis Science & Technology* 10, (23) **2020**, 8120-8126. https://doi.org/10.1039/d0cy01716g.
- Hussong, C., Langanke, J., **Leitner, W.**, Carbon2Polymer: A CO2-based Route to Polyurethanes via Oxidative Carbonylation of TDA with Methyl Formate, *Chemie Ingenieur Technik* 92, (10) **2020**, 1482-1488. https://doi.org/10.1002/cite.202000031.
- Hussong, C., Langanke, J., **Leitner, W.**, A green route to polyurethanes: oxidative carbonylation of industrially relevant aromatic diamines by CO2-based methyl formate, *Green Chemistry* 22, (23) **2020**. https://doi.org/10.1039/d0gc02412k.
- Holtz, A., Weidener, D., **Leitner, W.**, Klose, H., Grande, P. M., Jupke, A., Process development for separation of lignin from OrganoCat lignocellulose fractionation using antisolvent precipitation, *Separation and Purification Technology* 236, **2020**. https://doi.org/10.1016/j.seppur.2019.116295.
- Goclik, L., Offner-Marko, L., Bordet, A., **Leitner, W.**, Selective hydrodeoxygenation of hydroxyacetophenones to ethyl-substituted phenol derivatives using a FeRu@SILP catalyst, *Chemical Communications* 56, (66) **2020**, 9509-9512. https://doi.org/10.1039/d0cc03695a.
- Estes, D. P., Leutzsch, M., Schubert, L., Bordet, A., **Leitner, W.**, Effect of Ligand Electronics on the Reversible Catalytic Hydrogenation of CO2 to Formic Acid Using Ruthenium Polyhydride Complexes: A Thermodynamic and Kinetic Study, *ACS Catalysis* 10, (5) **2020**, 2990-2998. https://doi.org/10.1021/ACScatal.0c00404.
- Esteban, J., Vorholt, A. J., **Leitner, W.**, An overview of the biphasic dehydration of sugars to 5-hydroxymethylfurfural and furfural: a rational selection of solvents using COSMO-RS and selection guides, *Green Chemistry* 22, (7) **2020**, 2097-2128. https://doi.org/10.1039/c9gc04208c.
- Erken, C., Hindemith, C., Weyhermüller, T., Hölscher, M., Werlé, C., **Leitner, W.**, Hydroamination of Aromatic Alkynes to Imines Catalyzed by Pd(II)-Anthraphos Complexes, *ACS Omega* 5, (15) **2020**, 8912-8918. https://doi.org/10.1021/ACSomega.0c00562.
- El Sayed, S., Bordet, A., Weidenthaler, C., Hetaba, W., Luska, K. L., **Leitner, W.**, Selective Hydrogenation of Benzofurans Using Ruthenium Nanoparticles in Lewis Acid-Modified Ruthenium-Supported Ionic Liquid Phases, *ACS Catalysis* 10, (3) **2020**, 2124-2130. https://doi.org/10.1021/ACScatal.9b05124.
- Eichel, R. A., **Leitner, W.**, Wagemann, K., Why we deal with Power-to-X, *Chemie Ingenieur Technik* 92, (1-2) **2020**, 3-3. https://doi.org/10.1002/cite.202070102.

- Cramer, H. H., Chatterjee, B., Weyhermüller, T., Werlé, C., **Leitner, W.**, Controlling the Product Platform of Carbon Dioxide Reduction: Adaptive Catalytic Hydrosilylation of CO2 Using a Molecular Cobalt(II) Triazine Complex, *Angewandte Chemie-International Edition* 59, (36) **2020**, 15674-15681. https://doi.org/10.1002/anie.202004463.
- Chatterjee, B., Kalsi, D., Kaithal, A., Bordet, A., **Leitner, W.**, Gunanathan, C., One-pot dual catalysis for the hydrogenation of heteroarenes and arenes, *Catalysis Science & Technology* 10, (15) **2020**, 5163-5170. https://doi.org/10.1039/d0cy00928h.
- Bordet, A., Moos, G., Welsh, C., Licence, P., Luska, K. L., **Leitner, W.**, Molecular Control of the Catalytic Properties of Rhodium Nanoparticles in Supported Ionic Liquid Phase (SILP) Systems, *ACS Catalysis* 10, (23) **2020**, 13904-13912. https://doi.org/10.1021/ACScatal.0c03559.
- Beck-Sickinger, A. G., Carell, T., Dehnen, S., **Leitner, W.**, Schreiner, P. R., Wennemers, H., From Scientists to Scientists-Moving *Angewandte* into the Future, *Angewandte Chemie-International Edition* 59, (31) **2020**, 12548-12549. https://doi.org/10.1002/anie.202008469.

2019

- Strohmann, M., Bordet, A., Vorholt, A. J., **Leitner, W.**, Tailor-made biofuel 2-butyltetrahydrofuran from the continuous flow hydrogenation and deoxygenation of furfuralacetone, *Green Chemistry* 21, (23) **2019**, 6299-6306. https://doi.org/10.1039/c9gc02555c.
- Scott, M., Westhues, C. G., Kaiser, T., Baums, J. C., Jupke, A., Francio, G., **Leitner, W.**, Methylformate from CO2: an integrated process combining catalytic hydrogenation and reactive distillation, *Green Chemistry* 21, (23) **2019**, 6307-6317. https://doi.org/10.1039/c9gc03006a.
- Schrimpf, M., Esteban, J., Rösler, T., Vorholt, A. J., **Leitner, W.**, Intensified reactors for gas-liquid-liquid multiphase catalysis: From chemistry to engineering, *Chemical Engineering Journal* 372, **2019**, 917-939. https://doi.org/10.1016/j.cej.2019.03.133.
- Schmitz, M., Solmi, M. V., **Leitner, W.** Catalytic Processes Combining CO2 and Alkenes into Value-Added Chemicals, Vol. 63 Eds.: Dixneuf, P. H. and Soule, J. F.), **2019**, pp. 17-38.
- Rösler, T., Fassbach, T. A., Schrimpf, M., Vorholt, A. J., **Leitner, W.**, Toward Water-Based Recycling Techniques: Methodologies for Homogeneous Catalyst Recycling in Liquid/Liquid Multiphase Media and Their Implementation in Continuous Processes, *Industrial & Engineering Chemistry Research* 58, (7) **2019**, 2421-2436. https://doi.org/10.1021/ACS.iecr.8b04295.
- Rohner, S. S., Kinzel, N. W., Werlé, C., **Leitner, W.**, Systematic ligand variation to modulate the electrochemical properties of iron and manganese complexes, *Dalton Transactions* 48, (35) **2019**, 13205-13211. https://doi.org/10.1039/c9dt01343a.
- Rengshausen, S., Etscheidt, F., Grosskurth, J., Luska, K. L., Bordet, A., **Leitner, W.**, Catalytic Hydrogenolysis of Substituted Diaryl Ethers by Using Ruthenium Nanoparticles on an Acidic Supported Ionic Liquid Phase (Ru@SILP-SO3H), *Synlett* 30, (4) **2019**, 405-412. https://doi.org/10.1055/s-0037-1611678.
- Martínez-Ferraté, O., Chatterjee, B., Werlé, C., **Leitner, W.**, Hydrosilylation of carbonyl and carboxyl groups catalysed by Mn(i) complexes bearing triazole ligands, *Catalysis Science & Technology* 9, (22) **2019**, 6370-6378. https://doi.org/10.1039/c9cy01738k.
- Liu, H. F., Zhu, L. L., Wallraf, A. M., Räuber, C., Grande, P. M., Anders, N., Gertler, C., Werner, B., Klankermayer, J., **Leitner, W.**, Schwaneberg, U., Depolymerization of Laccase-Oxidized Lignin in Aqueous Alkaline Solution at 37 °C, *ACS Sustainable Chemistry & Engineering* 7, (13) **2019**, 11150-11156. https://doi.org/10.1021/ACSsuschemeng.9b00204.

- Kaithal, A., Schmitz, M., Hoelscher, M., **Leitner, W.**, Ruthenium(II)-Catalyzed *β*-Methylation of Alcohols using Methanol as C1 Source, *Chemcatchem* 11, (21) **2019**, 5287-5291. https://doi.org/10.1002/cctc.201900788.
- Kaithal, A., Gracia, L. L., Camp, C., Quadrelli, E. A., **Leitner, W.**, Direct Synthesis of Cycloalkanes from Diols and Secondary Alcohols or Ketones Using a Homogeneous Manganese Catalyst, *Journal of the American Chemical Society* 141, (44) **2019**, 17487-17492. https://doi.org/10.1021/jACS.9b08832.
- Jens, C. M., Scott, M., Liebergesell, B., Westhues, C. G., Schäfer, P., Franciò, G., Leonhard, K., **Leitner, W.**, Bardow, A., Rh-Catalyzed Hydrogenation of CO2 to Formic Acid in DMSO-based Reaction Media: Solved and Unsolved Challenges for Process Development, *Advanced Synthesis & Catalysis* 361, (2) **2019**, 307-316. https://doi.org/10.1002/adsc.201801098.
- Grande, P. M., Weidener, D., Sabine, D., Dama, M., Bellof, M., Maas, R., Pauly, M., **Leitner, W.**, Holger, K., de María, P. D., OrganoCat Fractionation of Empty Fruit Bunches from Palm Trees into Lignin, Sugars, and Cellulose-Enriched Pulp, *ACS Omega* 4, (11) **2019**, 14451-14457. https://doi.org/10.1021/ACSomega.9b01371.
- Fassach, T. A., Vorholt, A. J., **Leitner, W.**, The Telomerization of 1,3-Dienes - A Reaction Grows Up, *Chemcatchem* 11, (4) **2019**, 1153-1166. https://doi.org/10.1002/cctc.201801821.

2018

- Weidener, D., Klose, H., **Leitner, W.**, Schurr, U., Usadel, B., de María, P. D., Grande, P. M., One-Step Lignocellulose Fractionation by using 2,5-Furandicarboxylic Acid as a Biogenic and Recyclable Catalyst, *Chemsuschem* 11, (13) **2018**, 2051-2056. https://doi.org/10.1002/cssc.201800653.
- Schmitz, M., Erken, C., Ohligschläger, A., Schnoor, J. K., Westhues, N. F., Klankermayer, J., **Leitner, W.**, Liauw, M. A., Homogeneously Catalyzed Synthesis of (Higher) Alcohols (C1-C4) from the Combination ofCO2/CO/H2, *Chemie Ingenieur Technik* 90, (10) **2018**, 1476-1488. https://doi.org/10.1002/cite.201800053.
- Regestein, L., Klement, T., Grande, P., Kreyenschulte, D., Heyman, B., Massmann, T., Eggert, A., Sengpiel, R., Wang, Y. M., Wierckx, N., Blank, L. M., Spiess, A., **Leitner, W.**, Bolm, C., Wessling, M., Jupke, A., Rosenbaum, M., Büchs, J., From beech wood to itaconic acid: case study on biorefinery process integration, *Biotechnology for Biofuels* 11, **2018**. https://doi.org/10.1186/s13068-018-1273-y.
- Puerta-Oteo, R., Hölscher, M., Jiménez, M. V., **Leitner, W.**, Passarelli, V., Pérez-Torrente, J. J., Experimental and Theoretical Mechanistic Investigation on the Catalytic CO2 Hydrogenation to Formate by a Carboxylate-Functionalized Bis(*N*-heterocyclic carbene) Zwitterionic Iridium(I) Compound, *Organometallics* 37, (5) **2018**, 684-696. https://doi.org/10.1021/ACS.organomet.7b00509.
- Pienkoss, F., Ochoa-Hernández, C., Theyssen, N., **Leitner, W.**, Kaolin: A Natural Low-Cost Material as Catalyst for Isomerization of Glucose to Fructose, *ACS Sustainable Chemistry & Engineering* 6, (7) **2018**, 8782-8789. https://doi.org/10.1021/ACSsuschemeng.8b01151.
- Offner-Marko, L., Bordet, A., Moos, G., Tricard, S., Rengshausen, S., Chaudret, B., Luska, K. L., **Leitner, W.**, Bimetallic Nanoparticles in Supported Ionic Liquid Phases as Multifunctional Catalysts for the Selective Hydrodeoxygenation of Aromatic Substrates, *Angewandte Chemie-International Edition* 57, (39) **2018**, 12721-12726. https://doi.org/10.1002/anie.201806638.
- Martínez-Ferraté, O., Werlé, C., Franciò, G., **Leitner, W.,** Aminotriazole Mn(I) Complexes as Effective Catalysts for Transfer Hydrogenation of Ketones, *Chemcatchem* 10, (20) **2018**, 4514-4518. https://doi.org/10.1002/cctc.201800953.
- **Leitner, W.**, Franciò, G., Scott, M., Westhues, C., Langanke, J., Lansing, M., Hussong, C., Erdkamp, E., Carbon2Polymer-Chemical Utilization of CO2 in the Production of Isocyanates, *Chemie Ingenieur Technik*

90, (10) **2018**, 1504-1512. https://doi.org/10.1002/cite.201800040.

- Kaithal, A., Hölscher, M., **Leitner, W.**, Catalytic Hydrogenation of Cyclic Carbonates using Manganese Complexes, *Angewandte Chemie-International Edition* 57, (41) **2018**, 13449-13453. https://doi.org/10.1002/anie.201808676.
- Hoffmann, M., Bizzarri, C., **Leitner, W.**, Müller, T. E., Reaction pathways at the initial steps of trioxane polymerisation, *Catalysis Science & Technology* 8, (21) **2018**, 5594-5603. https://doi.org/10.1039/c8cy01691g.
- Geier, D., Schrnitz, P., Walkowiak, J., **Leitner, W.**, Franciò, G., Continuous Flow Asymmetric Hydrogenation with Supported Ionic Liquid Phase Catalysts Using Modified CO2 as the Mobile Phase: from Model Substrate to an Active Pharmaceutical Ingredient, *ACS Catalysis* 8, (4) **2018**, 3297-3303. https://doi.org/10.1021/ACScatal.8b00216.
- Erken, C., Kaithal, A., Sen, S., Weyhermüller, T., Hölscher, M., Werlé, C., **Leitner, W.**, Manganese-catalyzed hydroboration of carbon dioxide and other challenging carbonyl groups, *Nature Communications* 9, **2018**. https://doi.org/10.1038/s41467-018-06831-9.
- Dutta, I., Yadav, S., Sarbajna, A., De, S., Hölscher, M., **Leitner, W.**, Bera, J. K., Double Dehydrogenation of Primary Amines to Nitriles by a Ruthenium Complex Featuring Pyrazole Functionality, *Journal of the American Chemical Society* 140, (28) **2018**, 8662-8666. https://doi.org/10.1021/jACS.8b05009.
- Druml, G., Achleitner, G., **Leitner, W.**, Fickert, L., New single-ended earthfault distance estimation for the 110-kV- and 20-kV-compensated network, *Elektrotechnik und Informationstechnik* 135, (8) **2018**, 567-575. https://doi.org/10.1007/s00502-018-0663-y.
- Deutz, S., Bongartz, D., Heuser, B., Kätelhön, A., Langenhorst, L. S., Omari, A., Walters, M., Klankermayer, J., **Leitner, W.**, Mitsos, A., Pischinger, S., Bardow, A., Cleaner production of cleaner fuels: wind-to-wheel - environmental assessment of CO2-based oxymethylene ether as a drop-in fuel, *Energy & Environmental Science* 11, (2) **2018**, 331-343. https://doi.org/10.1039/c7ee01657c.
- Artz, J., Müller, T. E., Thenert, K., Kleinekorte, J., Meys, R., Sternberg, A., Bardow, A., **Leitner, W.**, Sustainable Conversion of Carbon Dioxide: An Integrated Review of Catalysis and Life Cycle Assessment, *Chemical Reviews* 118, (2) **2018**, 434-504. https://doi.org/10.1021/ACS.chemrev.7b00435.
- Al Nabulsi, A., Cozzula, D., Hagen, T., **Leitner, W.**, Müller, T. E., Isocyanurate formation during rigid polyurethane foam assembly: a mechanistic study based on *in situ* IR and NMR spectroscopy, *Polymer Chemistry* 9, (39) **2018**, 4891-4899. https://doi.org/10.1039/c8py00637g.

2017

- Stiefel, S., Di Marino, D., Eggert, A., Kühnrich, I. R., Schmidt, M., Grande, P. M., **Leitner, W.**, Jupke, A., Wessling, M., Liquid/liquid extraction of biomass-derived lignin from lignocellulosic pretreatments, *Green Chemistry* 19, (1) **2017**, 93-97. https://doi.org/10.1039/c6gc02270g.
- Scott, M., Molinos, B. B., Westhues, C., Franciò, G., **Leitner, W.**, Aqueous Biphasic Systems for the Synthesis of Formates by Catalytic CO2 Hydrogenation: Integrated Reaction and Catalyst Separation for CO2-Scrubbing Solutions, *Chemsuschem* 10, (6) **2017**, 1085-1093. https://doi.org/10.1002/cssc.201601814.
- Schmitz, C., Holthusen, K., **Leitner, W.**, Franciò, G., Bidentate Phosphine-Phosphoramidite Ligands of the BettiPhos Family for Rh-Catalyzed Asymmetric Hydrogenation, *European Journal of Organic Chemistry* 2017, (28) **2017**, 4111-4116. https://doi.org/10.1002/ejoc.201700663.
- Rubulotta, G., Luska, K. L., Urbina-Blanco, C. A., Eifert, T., Palkovits, R., Quadrelli, E. A., Thieuleux, C., **Leitner, W.**, Highly Selective Hydrogenation of R-(+)-Limonene to (+)-*p*-1-Menthene in Batch and Continuous Flow Reactors, *ACS Sustainable Chemistry & Engineering* 5, (5) **2017**, 3762-3767. https://doi.org/10.1021/ACSsuschemeng.6b02381.

- Qiao, Y. X., Theyssen, N., Eifert, T., Liauw, M. A., Franciò, G., Schenk, K., **Leitner, W.**, Reetz, M. T., Concerning the Role of Supercritical Carbon Dioxide in S_N1 Reactions, *Chemistry-a European Journal* 23, (16) **2017**, 3898-3902. https://doi.org/10.1002/chem.201604151.
- Qiao, Y., Said, N., Rauser, M., Yan, K., Qin, F., Theyssen, N., **Leitner, W.**, Preparation of SBA-15 supported Pt/Pd bimetallic catalysts using supercritical fluid reactive deposition: how do solvent effects during material synthesis affect catalytic properties?, *Green Chemistry* 19, (4) **2017**, 977-986. https://doi.org/10.1039/c6gc02490d.
- Piscopo, C. G., Gallou, F., **Leitner, W.**, Franciò, G., Diastereoselective Synthesis of an Industrially Relevant 4-Aminopentanoic Acid by Asymmetric Catalytic Hydrogenation in a Biphasic System Using Aqueous Sodium Hydroxide as Substrate Phase, *Synthesis-Stuttgart* 49, (2) **2017**, 353-357. https://doi.org/10.1055/s-0036-1588910.
- Picart, P., Liu, H. F., Grande, P. M., Anders, N., Zhu, L. L., Klankermayer, J., **Leitner, W.**, de María, P. D., Schwaneberg, U., Schallmey, A., Multi-step biocatalytic depolymerization of lignin, *Applied Microbiology and Biotechnology* 101, (15) **2017**, 6277-6287. https://doi.org/10.1007/s00253-017-8360-z.
- **Leitner, W.**, Quadrelli, E. A., Schlögl, R., Harvesting renewable energy with chemistry, *Green Chemistry* 19, (10) **2017**, 2307-2308. https://doi.org/10.1039/c7gc90045g.
- **Leitner, W.**, Klankermayer, J., Pischinger, S., Pitsch, H., Kohse-Höinghaus, K., Advanced Biofuels and Beyond: Chemistry Solutions for Propulsion and Production, *Angewandte Chemie-International Edition* 56, (20) **2017**, 5412-5452. https://doi.org/10.1002/anie.201607257.
- Keim, W., **Leitner, W.**, Gunther Wilke (1925-2016) Obituary, *Angewandte Chemie-International Edition* 56, (11) **2017**, 2837-2838. https://doi.org/10.1002/anie.201700122.
- Jessop, P., **Leitner, W.**, *Green Chemistry* in 2017, *Green Chemistry* 19, (1) **2017**, 15-17. https://doi.org/10.1039/c6gc90126c.
- Hölscher, M., **Leitner, W.**, Catalytic NH3 Synthesis using N2/H2 at Molecular Transition Metal Complexes: Concepts for Lead Structure Determination using Computational Chemistry, *Chemistry-a European Journal* 23, (50) **2017**, 11992-12003. https://doi.org/10.1002/chem.201604612.
- Ghattas, G., Bizzarri, C., Hölscher, M., Langanke, J., Gürtler, C., **Leitner, W.**, Subhani, M. A., Interaction of formaldehyde with a water-tolerant frustrated Lewis pair, *Chemical Communications* 53, (22) **2017**, 3205-3208. https://doi.org/10.1039/c6cc08044h.
- Gámez, J. A., Hölscher, M., **Leitner, W.**, On the Applicability of Density Functional Theory to Manganese-Based Complexes with Catalytic Activity toward Water Oxidation, *Journal of Computational Chemistry* 38, (20) **2017**, 1747-1751. https://doi.org/10.1002/jcc.24819.
- Damm, T., Pattathil, S., Günl, M., Jablonowski, N. D., O'Neill, M., Grün, K. S., Grande, P. M., **Leitner, W.**, Schurr, U., Usadel, B., Klose, H., Insights into cell wall structure of *Sida hermaphrodita* and its influence on recalcitrance, *Carbohydrate Polymers* 168, **2017**, 94-102. https://doi.org/10.1016/j.carbpol.2017.03.062.
- Damm, T., Grande, P. M., Jablonowski, N. D., Thiele, B., Disko, U., Mann, U., Schurr, U., **Leitner, W.**, Usadel, B., de María, P. D., Klose, H., OrganoCat pretreatment of perennial plants: Synergies between a biogenic fractionation and valuable feedstocks, *Bioresource Technology* 244, **2017**, 889-896. https://doi.org/10.1016/j.biortech.2017.08.027.
- Barwinski, B., Migowski, P., Gallou, F., Franciò, G., **Leitner, W.**, Continuous-Flow Hydrogenation of 4-Phenylpyridine to 4-Phenylpiperidine with Integrated Product Isolation Using a CO2 Switchable System, *Journal of Flow Chemistry* 7, (2) **2017**, 41-45. https://doi.org/10.1556/1846.2017.00003.

2016

- Thenert, K., Beydoun, K., Wiesenthal, J., **Leitner, W.**, Klankermayer, J., Ruthenium-Catalyzed Synthesis of Dialkoxymethane Ethers Utilizing Carbon Dioxide and Molecular Hydrogen, *Angewandte Chemie-International Edition* 55, (40) **2016**, 12266-12269. https://doi.org/10.1002/anie.201606427.
- Subhani, M. A., Köhler, B., Gürtler, C., **Leitner, W.**, Müller, T. E., Light-mediated curing of CO2-based unsaturated polyethercarbonates *via* thiol-ene click chemistry, *Polymer Chemistry* 7, (24) **2016**, 4121-4126. https://doi.org/10.1039/c6py00458j.
- Subhani, M. A., Köhler, B., Gürtler, C., **Leitner, W.**, Müller, T. E., Transparent Films from CO2-Based Polyunsaturated Poly(ether carbonate)s: A Novel Synthesis Strategy and Fast Curing, *Angewandte Chemie-International Edition* 55, (18) **2016**, 5591-5596. https://doi.org/10.1002/anie.201509249.
- Subhani, M. A., Gürtler, C., **Leitner, W.**, Müller, T. E., Nanoparticulate TiO2-Supported Double Metal Cyanide Catalyst for the Copolymerization of CO2 with Propylene Oxide, *European Journal of Inorganic Chemistry* (13-14) **2016**, 1944-1949. https://doi.org/10.1002/ejic.201501187.
- Schmitz, C., Holthusen, K., **Leitner, W.**, Franciò, G., Highly Regio- and Enantioselective Hydroformylation of Vinyl Esters Using Bidentate Phosphine,P-Chiral Phosphorodiamidite Ligands, *ACS Catalysis* 6, (3) **2016**, 1584-1589. https://doi.org/10.1021/ACScatal.5b02846.
- Rohmann, K., Kothe, J., Haenel, M. W., Englert, U., Hölscher, M., **Leitner, W.**, Hydrogenation of CO2 to Formic Acid with a Highly Active Ruthenium Acriphos Complex in DMSO and DMSO/Water, *Angewandte Chemie-International Edition* 55, (31) **2016**, 8966-8969. https://doi.org/10.1002/anie.201603878.
- Rohmann, K., Hölscher, M., **Leitner, W.**, Can Contemporary Density Functional Theory Predict Energy Spans in Molecular Catalysis Accurately Enough To Be Applicable for *in Silico* Catalyst Design? A Computational/Experimental Case Study for the Ruthenium-Catalyzed Hydrogenation of Olefins, *Journal of the American Chemical Society* 138, (1) **2016**, 433-443. https://doi.org/10.1021/jACS.5b11997.
- Pohl, M., Danieli, E., Leven, M., **Leitner, W.**, Blümich, B., Müller, T. E., Dynamics of Polyether Polyols and Polyether Carbonate Polyols, *Macromolecules* 49, (23) **2016**, 8995-9003. https://doi.org/10.1021/ACS.macromol.6b01601.
- Oczipka, P., Müller, D., **Leitner, W.**, Franciò, G., Enantiodivergent asymmetric catalysis with the *tropos* BIPHEP ligand and a proline derivative as chiral selector, *Chemical Science* 7, (1) **2016**, 678-683. https://doi.org/10.1039/c5sc03465e.
- Moha, V., **Leitner, W.**, Hölscher, M., NH3 Synthesis in the N2/H2 Reaction System using Cooperative Molecular Tungsten/Rhodium Catalysis in Ionic Hydrogenation: ADFT Study, *Chemistry-a European Journal* 22, (8) **2016**, 2624-2628. https://doi.org/10.1002/chem.201504660.
- Moha, V., Cozzula, D., Hölscher, M., **Leitner, W.**, Müller, T. E., A DFT Study on the Co-polymerization of CO2 and Ethylene: Feasibility Analysis for the Direct Synthesis of Polyethylene Esters, *Chemsuschem* 9, (13) **2016**, 1614-1622. https://doi.org/10.1002/cssc.201501615.
- Meuresch, M., Westhues, S., **Leitner, W.**, Klankermayer, J., Tailor-Made Ruthenium-Triphos Catalysts for the Selective Homogeneous Hydrogenation of Lactams, *Angewandte Chemie-International Edition* 55, (4) **2016**, 1392-1395. https://doi.org/10.1002/anie.201509650.
- Luska, K. L., Migowski, P., El Sayed, S., **Leitner, W.**, Bifunctional Ruthenium Nanoparticle-SILP Catalysts (RuNPs@SILP) for the Hydrodeoxygenation of Eucalyptol under Batch and Continuous Flow Conditions, *ACS Sustainable Chemistry & Engineering* 4, (11) **2016**, 6186-6192. https://doi.org/10.1021/ACSsuschemeng.6b01779.
- Luska, K. L., Bordet, A., Tricard, S., Sinev, I., Grünert, W., Chaudret, B., **Leitner, W.**, Enhancing the Catalytic Properties of Ruthenium Nanoparticle-SILP Catalysts by Dilution with Iron, *ACS Catalysis* 6, (6) **2016**, 3719-3726. https://doi.org/10.1021/ACScatal.6b00796.

- Klankermayer, J., Wesselbaum, S., Beydoun, K., **Leitner, W.**, Selective Catalytic Synthesis Using the Combination of Carbon Dioxide and Hydrogen: Catalytic Chess at the Interface of Energy and Chemistry, *Angewandte Chemie-International Edition* 55, (26) **2016**, 7296-7343. https://doi.org/10.1002/anie.201507458.
- Klankermayer, J., **Leitner, W.**, Harnessing renewable energy with CO2 for the chemical value chain: challenges and opportunities for catalysis, *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences* 374, (2061) **2016**. https://doi.org/10.1098/rsta.2015.0315.
- Holthusen, K., **Leitner, W.**, Franciò, G., Synthesis of α-Amidoketones from Vinyl Esters via a Catalytic/Thermal Cascade Reaction, *Journal of Organic Chemistry* 81, (11) **2016**, 4823-4828. https://doi.org/10.1021/ACS.joc.5b02851.
- Geiser, E., Przybilla, S. K., Engel, M., Kleineberg, W., Büttner, L., Sarikaya, E., Den Hartog, T., Klankermayer, J., **Leitner, W.**, Bölker, M., Blank, L. M., Wierckx, N., Genetic and biochemical insights into the itaconate pathway of *Ustilago maydis* enable enhanced production, *Metabolic Engineering* 38, **2016**, 427-435. https://doi.org/10.1016/j.ymben.2016.10.006.
- Castro-Osma, J. A., North, M., Offermans, W. K., **Leitner, W.**, Müller, T. E., Unprecedented Carbonato Intermediates in Cyclic Carbonate Synthesis Catalysed by Bimetallic Aluminium(Salen) Complexes, *Chemsuschem* 9, (8) **2016**, 791-794. https://doi.org/10.1002/cssc.201501664.
- Bizzarri, C., Vogt, H., Baráath, G., Gürtler, C., **Leitner, W.**, Müller, T. E., Oligomeric poly(acetalcarbonates) obtained by repolymerisation of paraformaldehyde, *Green Chemistry* 18, (19) **2016**, 5160-5168. https://doi.org/10.1039/c6gc00863a.
- Beydoun, K., Thenert, K., Streng, E. S., Brosinski, S., **Leitner, W.**, Klankermayer, J., Selective Synthesis of Trimethylamine by Catalytic *N*-Methylation of Ammonia and Ammonium Chloride by utilizing Carbon Dioxide and Molecular Hydrogen, *Chemcatchem* 8, (1) **2016**, 135-138. https://doi.org/10.1002/cctc.201501116.
- Anastas, P., Han, B. X., **Leitner, W.**, Poliakoff, M., "Happy silver anniversary": Green Chemistry at 25, *Green Chemistry* 18, (1) **2016**, 12-13. https://doi.org/10.1039/c5gc90067k.
- Amara, Z., Poliakoff, M., Duque, R., Geier, D., Francio, G., Gordon, C. M., Meadows, R. E., Woodward, R., **Leitner, W.**, Enabling the Scale-Up of a Key Asymmetric Hydrogenation Step in the Synthesis of an API Using Continuous Flow Solid-Supported Catalysis, *Organic Process Research & Development* 20, (7) **2016**, 1321-1327. https://doi.org/10.1021/ACS.oprd.6b00143.

2015

- Zhang, Z. Y., Franciò, G., **Leitner, W.**, Continuous-Flow Asymmetric Hydrogenation of an Enol Ester by using Supercritical Carbon Dioxide: Ionic Liquids versus Supported Ionic Liquids as the Catalyst Matrix, *Chemcatchem* 7, (13) **2015**, 1961-1965. https://doi.org/10.1002/cctc.201500295.
- Wesselbaum, S., Moha, V., Meuresch, M., Brosinski, S., Thenert, K. M., Kothe, J., Stein, T. V., Englert, U., Hölscher, M., Klankermayer, J., **Leitner, W.**, Hydrogenation of carbon dioxide to methanol using a homogeneous ruthenium-Triphos catalyst: from mechanistic investigations to multiphase catalysis, *Chemical Science* 6, (1) **2015**, 693-704. https://doi.org/10.1039/c4sc02087a.
- vom Stein, T., den Hartog, T., Buendia, J., Stoychev, S., Mottweiler, J., Bolm, C., Klankermayer, J., **Leitner, W.**, Ruthenium-Catalyzed C-C Bond Cleavage in Lignin Model Substrates, *Angewandte Chemie-International Edition* 54, (20) **2015**, 5859-5863. https://doi.org/10.1002/anie.201410620.
- Tomkins, P., Gebauer-Henke, E., **Leitner, W.**, Müller, T. E., Concurrent Hydrogenation of Aromatic and Nitro Groups over Carbon-Supported Ruthenium Catalysts, *ACS Catalysis* 5, (1) **2015**, 203-209. https://doi.org/10.1021/cs501122h.

- Schmitz, C., **Leitner, W.**, Franciò, G., Pinene-Derived Monodentate Phosphoramidites for Asymmetric Hydrogenation, *European Journal of Organic Chemistry* 2015, (13) **2015**, 2889-2901. https://doi.org/10.1002/ejoc.201500120.
- Schmitz, C., **Leitner, W.**, Franciò, G., Ni-Catalyzed Asymmetric Cycloisomerization of Dienes by Using TADDOL Phosphoramidites, *Chemistry-a European Journal* 21, (30) **2015**, 10696-10702. https://doi.org/10.1002/chem.201500352.
- Schmitz, C., **Leitner, W.**, Franciò, G., Synthesis of P-Stereogenic Phosphoramidite and Phosphorodiamidite Ligands and Their Application in Asymmetric Catalysis, *European Journal of Organic Chemistry* 2015, (28) **2015**, 6205-6230. https://doi.org/10.1002/ejoc.201500767.
- Poliakoff, M., **Leitner, W.**, Streng, E. S., The Twelve Principles of CO2 CHEMISTRY, *Faraday Discussions* 183, **2015**, 9-17. https://doi.org/10.1039/c5fd90078f.
- Offermans, W. K., Bizzarri, C., **Leitner, W.**, Müller, T. E., Surprisingly facile CO2 insertion into cobalt alkoxide bonds: A theoretical investigation, *Beilstein Journal of Organic Chemistry* 11, **2015**. https://doi.org/10.3762/bjoc.11.144.
- Müller, T. E., **Leitner, W.**, CO2 Chemistry, *Beilstein Journal of Organic Chemistry* 11, **2015**, 675-677. https://doi.org/10.3762/bjoc.11.76.
- Luska, K. L., Migowski, P., **Leitner, W.**, Ionic liquid-stabilized nanoparticles as catalysts for the conversion of biomass, *Green Chemistry* 17, (6) **2015**, 3195-3206. https://doi.org/10.1039/c5gc00231a.
- Luska, K. L., Migowski, P., El Sayed, S., **Leitner, W.**, Synergistic Interaction within Bifunctional Ruthenium Nanoparticle/SILP Catalysts for the Selective Hydrodeoxygenation of Phenols, *Angewandte Chemie-International Edition* 54, (52) **2015**, 15750-15755. https://doi.org/10.1002/anie.201508513.
- **Leitner, W.**, The subject of 'fracking' in *Green Chemistry*, *Green Chemistry* 17, (5) **2015**, 2609-2609. https://doi.org/10.1039/c5gc90020d.
- **Leitner, W.**, News from the *Green Chemistry* editors, *Green Chemistry* 17, (1) **2015**, 21-23. https://doi.org/10.1039/c4gc90054e.
- Klankermayer, J., **Leitner, W.**, Love at second sight for CO2 and H2 in organic synthesis, *Science* 350, (6261) **2015**, 629-630. https://doi.org/10.1126/science.aac7997.
- Hölscher, M., **Leitner, W.**, Reduction of Metal Coordinated N2 to NH₃ with H2 by Heterolytic Hydrogen Cleavage induced by External Lewis Bases - a DFT Study, *Zeitschrift für Anorganische und Allgemeine Chemie* 641, (1) **2015**, 72-77. https://doi.org/10.1002/zaac.201400337.
- Hammerer, T., **Leitner, W.**, Franciò, G., Synthesis of Phospholane-Phosphoramidite Ligands and their Application in Asymmetric Catalysis, *Chemcatchem* 7, (10) **2015**, 1583-1592. https://doi.org/10.1002/cctc.201500070.
- Grande, P. M., Viell, J., Theyssen, N., Marquardt, W., de María, P. D., **Leitner, W.**, Fractionation of lignocellulosic biomass using the OrganoCat process, *Green Chemistry* 17, (6) **2015**, 3533-3539. https://doi.org/10.1039/c4gc02534b.
- Franciò, G., Hintermair, U., **Leitner, W.**, Unlocking the potential of supported liquid phase catalysts with supercritical fluids: low temperature continuous flow catalysis with integrated product separation, *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences* 373, (2057) **2015**. https://doi.org/10.1098/rsta.2015.0005.
- Elmas, S., Subhani, M. A., **Leitner, W.**, Müller, T. E., Anion effect controlling the selectivity in the zinc-catalysed copolymerisation of CO2 and cyclohexene oxide, *Beilstein Journal of Organic Chemistry* 11, **2015**, 42-49. https://doi.org/10.3762/bjoc.11.7.

- de Maria, P. D., Grande, P. M., **Leitner, W.**, Current Trends in Pretreatment and Fractionation of Lignocellulose as Reflected in Industrial Patent Activities, *Chemie Ingenieur Technik* 87, (12) **2015**, 1686-1695. https://doi.org/10.1002/cite.201500122.
- Conifer, C., Gunanathan, C., Rinesch, T., Hölscher, M., **Leitner, W.**, Solvent-Free Hydrosilylation of Terminal Alkynes by Reaction with a Nonclassical Ruthenium Hydride Pincer, *European Journal of Inorganic Chemistry* (2) **2015**, 333-339. https://doi.org/10.1002/ejic.201403016.

2014

- Yan, Q. Q., Miazek, K., Grande, P. M., de María, P. D., **Leitner, W.**, Modigell, M., Mechanical Pretreatment in a Screw Press Affecting Chemical Pulping of Lignocellulosic Biomass, *Energy & Fuels* 28, (11) **2014**, 6981-6987. https://doi.org/10.1021/ef501706w.
- vom Stein, T., Meuresch, M., Limper, D., Schmitz, M., Hölscher, M., Coetzee, J., Cole-Hamilton, D. J., Klankermayer, J., **Leitner, W.**, Highly Versatile Catalytic Hydrogenation of Carboxylic and Carbonic Acid Derivatives using a Ru-Triphos Complex: Molecular Control over Selectivity and Substrate Scope, *Journal of the American Chemical Society* 136, (38) **2014**, 13217-13225. https://doi.org/10.1021/ja506023f.
- Stoychev, S. D., Conifer, C. M., Uhe, A., Hölscher, M., **Leitner, W.**, A DFT study of ruthenium pincer carboxylate complexes as potential catalysts for the direct carboxylation of arenes with CO2 - meridional versus facial coordination, *Dalton Transactions* 43, (29) **2014**, 11180-11189. https://doi.org/10.1039/c4dt00294f.
- Soomro, S. S., Cozzula, D., **Leitner, W.**, Vogt, H., Müller, T. E., The microstructure and melt properties of CO-ethylene copolymers with remarkably low CO content, *Polymer Chemistry* 5, (12) **2014**, 3831-3837. https://doi.org/10.1039/c3py01637d.
- Luska, K. L., Julis, J., Stavitski, E., Zakharov, D. N., Adams, A., **Leitner, W.**, Bifunctional nanoparticle-SILP catalysts (NPs@SILP) for the selective deoxygenation of biomass substrates, *Chemical Science* 5, (12) **2014**, 4895-4905. https://doi.org/10.1039/c4sc02033b.
- Langanke, J., Wolf, A., Hofmann, J., Böhm, K., Subhani, M. A., Müller, T. E., **Leitner, W.**, Gürtler, C., Carbon dioxide (CO2) as sustainable feedstock for polyurethane production, *Green Chemistry* 16, (4) **2014**, 1865-1870. https://doi.org/10.1039/c3gc41788c.
- Hölscher, M., **Leitner, W.**, Low Activation Barriers in N2 Reduction with H2 at Ruthenium Pincer Complexes Induced by Ligand Cooperativity: A Computational Study, *European Journal of Inorganic Chemistry* (35) **2014**, 6126-6133. https://doi.org/10.1002/ejic.201402706.
- Gebauer-Henke, E., Tomkins, P., **Leitner, W.**, Müller, T. E., Nitro Promoters for Selectivity Control in the Core Hydrogenation of Toluidines: Controlling Adsorption on Catalyst Surfaces, *Chemcatchem* 6, (10) **2014**, 2910-2917. https://doi.org/10.1002/cctc.201402493.
- Elmas, S., Subhani, M. A., Harrer, M., **Leitner, W.**, Sundermeyer, J., Müller, T. E., Highly active Cr(III) catalysts for the reaction of CO2 with epoxides, *Catalysis Science & Technology* 4, (6) **2014**, 1652-1657. https://doi.org/10.1039/c3cy01087b.
- Clark, J., Sheldon, R., Raston, C., Poliakoff, M., **Leitner, W.**, 15 years of *Green Chemistry*, *Green Chemistry* 16, (1) **2014**, 18-23. https://doi.org/10.1039/c3gc90047a.
- Beydoun, K., Ghattas, G., Thenert, K., Klankermayer, J., **Leitner, W.**, Ruthenium-Catalyzed Reductive Methylation of Imines Using Carbon Dioxide and Molecular Hydrogen, *Angewandte Chemie-International Edition* 53, (41) **2014**, 11010-11014. https://doi.org/10.1002/anie.201403711.

2013

- Yalfani, M. S., Lolli, G., Wolf, A., Mleczko, L., Müller, T. E., **Leitner, W.**, Methyl formate as a carbonylating agent for the catalytic conversion of phenol to methyl phenyl carbonate, *Green Chemistry* 15, (5) **2013**, 1146-1149. https://doi.org/10.1039/c3gc36877g.
- vom Stein, T., Weigand, T., Merkens, C., Klankermayer, J., **Leitner, W.**, Trimethylenemethane-Ruthenium(II)-Triphos Complexes as Highly Active Catalysts for Catalytic CO Bond Cleavage Reactions of Lignin Model Compounds, *Chemcatchem* 5, (2) **2013**, 439-441. https://doi.org/10.1002/cctc.201200215.
- Uhe, A., Hölscher, M., **Leitner, W.**, Analysis of Potential Molecular Catalysts for the Hydroamination of Ethylene with Ammonia: A DFT Study with Ir(PCP) and Ir(PSiP) Complexes, *Chemistry-a European Journal* 19, (3) **2013**, 1020-1027. https://doi.org/10.1002/chem.201202185.
- Theuerkauf, J., Franciò, G., **Leitner, W.**, Continuous-Flow Asymmetric Hydrogenation of the β-Keto Ester Methyl Propionylacetate in Ionic Liquid-Supercritical Carbon Dioxide Biphasic Systems, *Advanced Synthesis & Catalysis* 355, (1) **2013**, 209-219. https://doi.org/10.1002/adsc.201200724.
- Schmitkamp, M., **Leitner, W.**, Franciò, G., NOBIN-based phosphoramidite and phosphorodiamidite ligands and their use in asymmetric nickel-catalysed hydrovinylation, *Catalysis Science & Technology* 3, (3) **2013**, 589-594. https://doi.org/10.1039/c2cy20657a.
- Schleker, P. P. M., Honeker, R., Klankermayer, J., **Leitner, W.**, Catalytic Dehydrogenative Amide and Ester Formation with Rhenium-Triphos Complexes, *Chemcatchem* 5, (7) **2013**, 1762-1764. https://doi.org/10.1002/cctc.201200942.
- Qiao, Y. X., Hua, L., Chen, J. Z., Theyssen, N., **Leitner, W.**, Hou, Z. S., The cooperative role of zwitterions and phosphotungstate anion in epoxidation reaction, *Journal of Molecular Catalysis a-Chemical* 380, **2013**, 43-48. https://doi.org/10.1016/j.molcata.2013.09.020.
- Ostapowicz, T. G., Schmitz, M., Krystof, M., Klankermayer, J., **Leitner, W.**, Carbon Dioxide as a C₁ Building Block for the Formation of Carboxylic Acids by Formal Catalytic Hydrocarboxylation, *Angewandte Chemie-International Edition* 52, (46) **2013**, 12119-12123. https://doi.org/10.1002/anie.201304529.
- Ostapowicz, T. G., Merkens, C., Hölscher, M., Klankermayer, J., **Leitner, W.**, Bifunctional Ruthenium(II) Hydride Complexes with Pendant Strong Lewis Acid Moieties: Structure, Dynamics, and Cooperativity, *Journal of the American Chemical Society* 135, (6) **2013**, 2104-2107. https://doi.org/10.1021/ja3119477.
- Maugeri, Z., **Leitner, W.**, de María, P. D., Chymotrypsin-Catalyzed Peptide Synthesis in Deep Eutectic Solvents, *European Journal of Organic Chemistry* 2013, (20) **2013**, 4223-4228. https://doi.org/10.1002/ejoc.201300448.
- **Leitner, W.**, Ruthven, S., News from the *Green Chemistry* Editors, *Green Chemistry* 15, (1) **2013**, 15-16. https://doi.org/10.1039/c2gc90049a.
- Langanke, J., Greiner, L., **Leitner, W.**, Substrate dependent synergetic and antagonistic interaction of ammonium halide and polyoxometalate catalysts in the synthesis of cyclic carbonates from oleochemical epoxides and CO2, *Green Chemistry* 15, (5) **2013**, 1173-1182. https://doi.org/10.1039/c3gc36710j.
- Langanke, J., Arfsten, N., Buskens, P., Habets, R., Klankermayer, J., **Leitner, W.**, Improving the scratch resistance of sol-gel metal oxide coatings cured at 250 A°C through use of thermogenerated amines, *Journal of Sol-Gel Science and Technology* 67, (2) **2013**, 282-287. https://doi.org/10.1007/s10971-013-3077-7.
- Konrad, T. M., Schmitz, P., **Leitner, W.**, Franciò, G., Highly Enantioselective Rh-Catalysed Hydrogenation of 1-Alkyl Vinyl Esters Using Phosphine-Phosphoramidite Ligands, *Chemistry-a European Journal* 19, (40) **2013**, 13299-13303. https://doi.org/10.1002/chem.201303066.

- Kayser, H., Rodríguez-Ropero, F., **Leitner, W.**, Fioroni, M., de María, P. D., Mechanistic comparison of saccharide depolymerization catalyzed by dicarboxylic acids and glycosidases, *RSC Advances* 3, (24) **2013**, 9273-9278. https://doi.org/10.1039/c3ra41307a.
- Hölscher, M., Uhe, A., **Leitner, W.**, Rhodium catalyzed hydroamination of C2H4 with NH3 with pincer derived PE(CH2CH2X)P ligands - Fighting the energy span, *Journal of Organometallic Chemistry* 748, **2013**, 13-20. https://doi.org/10.1016/j.jorganchem.2013.03.004.
- Hintermair, U., Franciò, G., **Leitner, W.**, A Fully Integrated Continuous-Flow System for Asymmetric Catalysis: Enantioselective Hydrogenation with Supported Ionic Liquid Phase Catalysts Using Supercritical CO2 as the Mobile Phase, *Chemistry-a European Journal* 19, (14) **2013**, 4538-4547. https://doi.org/10.1002/chem.201204159.
- Hardy, S., de Wispelaere, I. M., **Leitner, W.**, Liauw, M. A., Comprehensive monitoring of a biphasic switchable solvent synthesis, *Analyst* 138, (3) **2013**, 819-824. https://doi.org/10.1039/c2an36044f.
- Gunanathan, C., Capelli, S. C., Englert, U., Hölscher, M., **Leitner, W.**, Structures and Dynamics of the Mixed Dihydrogen/Hydride Complexes [Ru(PCP)(H)$(H_2)_n$] (n = 1, 2) and [Ru(PNP)$(H)_2(H_2)$], *European Journal of Inorganic Chemistry* 2013, (29) **2013**, 5075-5080. https://doi.org/10.1002/ejic.201301016.
- Elmas, S., Subhani, M. A., Vogt, H., **Leitner, W.**, Müller, T. E., Facile insertion of CO2 into metal-phenoxide bonds, *Green Chemistry* 15, (5) **2013**, 1356-1360. https://doi.org/10.1039/c3gc40147b.
- Coetzee, J., Dodds, D. L., Klankermayer, J., Brosinski, S., **Leitner, W.**, Slawin, A. M. Z., Cole-Hamilton, D. J., Homogeneous Catalytic Hydrogenation of Amides to Amines, *Chemistry-a European Journal* 19, (33) **2013**, 11039-11050. https://doi.org/10.1002/chem.201204270.
- Beydoun, K., vom Stein, T., Klankermayer, J., **Leitner, W.**, Ruthenium-Catalyzed Direct Methylation of Primary and Secondary Aromatic Amines Using Carbon Dioxide and Molecular Hydrogen *Angewandte Chemie-International Edition* 52, (36) **2013**, 9554-9557. https://doi.org/10.1002/anie.201304656

2012

- Zhao, B., Greiner, L., **Leitner, W.**, Cellulose solubilitiesin carboxylate-based ionic liquids, *RSC Advances* 2, (6) **2012**, 2476-2479. https://doi.org/10.1039/c2ra01224c.
- Wesselbaum, S., vom Stein, T., Klankermayer, J., **Leitner, W.**, Hydrogenation of Carbon Dioxide to Methanol by Using a Homogeneous Ruthenium-Phosphine Catalyst, *Angewandte Chemie-International Edition* 51, (30) **2012**, 7499-7502. https://doi.org/10.1002/anie.201202320.
- Wesselbaum, S., Hintermair, U., **Leitner, W.**, Continuous-Flow Hydrogenation of Carbon Dioxide to Pure Formic Acid using an Integrated scCO2 Process with Immobilized Catalyst and Base, *Angewandte Chemie-International Edition* 51, (34) **2012**, 8585-8588. https://doi.org/10.1002/anie.201203185.
- Uhe, A., Hölscher, M., **Leitner, W.**, Carboxylation of Arene C-H Bonds with CO2: A DFT-Based Approach to Catalyst Design, *Chemistry-a European Journal* 18, (1) **2012**, 170-177. https://doi.org/10.1002/chem.201102785.
- Qiao, Y. X., Li, H., Hua, L., Orzechowski, L., Yan, K., Feng, B., Pan, Z. Y., Theyssen, N., **Leitner, W.**, Hou, Z. S., Peroxometalates Immobilized on Magnetically Recoverable Catalysts for Epoxidation, *Chempluschem* 77, (12) **2012**, 1128-1138. https://doi.org/10.1002/cplu.201200246.
- Prechtl, M. H. G., Wobser, K., Theyssen, N., Ben-David, Y., Milstein, D., **Leitner, W.**, Direct coupling of alcohols to form esters and amides with evolution of H2 using *in situ* formed ruthenium catalysts, *Catalysis Science & Technology* 2, (10) **2012**, 2039-2042. https://doi.org/10.1039/c2cy20429k.

- Poliakoff, M., **Leitner, W.**, Ruthven, S., News from the Green Chemistry Editors, *Green Chemistry* 14, (1) **2012**, 15-16. https://doi.org/10.1039/c1gc90053f.
- Ostapowicz, T. G., Hölscher, M., **Leitner, W.**, Catalytic Hydrocarboxylation of Olefins with CO2 and H2-a DFT Computational Analysis, *European Journal of Inorganic Chemistry* (34) **2012**, 5632-5641. https://doi.org/10.1002/ejic.201200965.
- Natalia, D., Greiner, L., **Leitner, W.**, Ansorge-Schumacher, M. B., Stability, activity, and selectivity of benzaldehyde lyase in supercritical fluids, *Journal of Supercritical Fluids* 62, **2012**, 173-177. https://doi.org/10.1016/j.supflu.2011.11.025.
- Maugeri, Z., **Leitner, W.**, de María, P. D., Practical separation of alcohol-ester mixtures using Deep-Eutectic-Solvents, *Tetrahedron Letters* 53, (51) **2012**, 6968-6971. https://doi.org/10.1016/j.tetlet.2012.10.044.
- Markewitz, P., Kuckshinrichs, W., **Leitner, W.**, Linssen, J., Zapp, P., Bongartz, R., Schreiber, A., Müller, T. E., Worldwide innovations in the development of carbon capture technologies and the utilization of CO2, *Energy & Environmental Science* 5, (6) **2012**, 7281-7305. https://doi.org/10.1039/c2ee03403d.
- Kayser, H., Müller, C. R., García-González, C. A., Smirnova, I., **Leitner, W.**, de María, P. D., Dried chitosan-gels as organocatalysts for the production of biomass-derived platform chemicals, *Applied Catalysis a-General* 445, **2012**, 180-186. https://doi.org/10.1016/j.apcata.2012.08.014.
- Julis, J., **Leitner, W.**, Synthesis of 1-Octanol and 1,1-Dioctyl Ether from Biomass-Derived Platform Chemicals, *Angewandte Chemie-International Edition* 51, (34) **2012**, 8615-8619. https://doi.org/10.1002/anie.201203669.
- Hölscher, M., **Leitner, W.**, Heterolytic Outer-Sphere Cleavage of H2 for the Reduction of N2 in the Coordination Sphere of Transition Metals - A DFT Study, *Angewandte Chemie-International Edition* 51, (33) **2012**, 8225-8229. https://doi.org/10.1002/anie.201202025.
- Hölscher, M., Gürtler, C., Keim, W., Müller, T. E., Peters, M., **Leitner, W.**, Carbon Dioxide as a Carbon Resource - Recent Trends and Perspectives, *Zeitschrift Fur Naturforschung Section B-a Journal of Chemical Sciences* 67, (10) **2012**, 961-975. https://doi.org/10.5560/znb.2012-0219.
- Hammerer, T., Weisgerber, L., Schenk, S., Stelzer, O., Englert, U., **Leitner, W.**, Franciò, G., Synthesis of Binol-based diphosphinites bearing chiral phospholane units and their application in asymmetric catalysis, *Tetrahedron-Asymmetry* 23, (1) **2012**, 53-59. https://doi.org/10.1016/j.tetasy.2011.12.011.
- Hammerer, T., Dämbkes, A., Braun, W., Salzer, A., Franciò, G., **Leitner, W.**, Synthesis of Josiphos-Type Bisphospholane Ligands, *Synthesis-Stuttgart* 44, (17) **2012**, 2793-2797. https://doi.org/10.1055/s-0032-1316755.
- Gunanathan, C., Hölscher, M., Pan, F. F., **Leitner, W.**, Ruthenium Catalyzed Hydroboration of Terminal Alkynes to *Z* Vinylboronates, *Journal of the American Chemical Society* 134, (35) **2012**, 14349-14352. https://doi.org/10.1021/ja307233p.
- Gebauer-Henke, E., **Leitner, W.**, Prokofieva, A., Vogt, H., Müller, T. E., Controlling selectivity in the reaction network of aldoxime hydrogenation to primary amines, *Catalysis Science & Technology* 2, (12) **2012**, 2539-2548. https://doi.org/10.1039/c2cy20356a.
- Dienes, Y., **Leitner, W.**, Müller, M. G. J., Offermans, W. K., Reier, T., Reinholdt, A., Weirich, T. E., Müller, T. E., Hybrid sol-gel double metal cyanide catalysts for the copolymerisation of styrene oxide and CO2, *Green Chemistry* 14, (4) **2012**, 1168-1177. https://doi.org/10.1039/c2gc16485j.
- Ciobanu, M., Cojocaru, B., Teodorescu, C., Vasiliu, F., Coman, S. M., **Leitner, W.**, Parvulescu, V. I., Heterogeneous amination of bromobenzene over titania-supported gold catalysts, *Journal of Catalysis* 296, **2012**, 43-54. https://doi.org/10.1016/j.jcat.2012.09.002.

- Bergouignan, A., Gozansky, W. S., Barry, D. W., **Leitner, W.**, MacLean, P. S., Hill, J. O., Draznin, B., Melanson, E. L., Increasing Dietary Fat Elicits Similar Changes in Fat Oxidation and Markers of Muscle Oxidative Capacity in Lean and Obese Humans, *Plos One* 7, (1) **2012**. https://doi.org/10.1371/journal.pone.0030164.

2011

- Zhao, B., Greiner, L., **Leitner, W.**, Esterification of carboxylate-based ionic liquids with alkyl halides, *Chemical Communications* 47, (10) **2011**, 2973-2975. https://doi.org/10.1039/c0cc04798h.
- vom Stein, T., Grande, P. M., **Leitner, W.**, de María, P. D., Iron-Catalyzed Furfural Production in Biobased Biphasic Systems: From Pure Sugars to Direct Use of Crude Xylose Effluents as Feedstock, *Chemsuschem* 4, (11) **2011**, 1592-1594. https://doi.org/10.1002/cssc.201100259.
- vom Stein, T., Grande, P. M., Kayser, H., Sibilla, F., **Leitner, W.**, de María, P. D., From biomass to feedstock: one-step fractionation of lignocellulose components by the selective organic acid-catalyzed depolymerization of hemicellulose in a biphasic system, *Green Chemistry* 13, (7) **2011**, 1772-1777. https://doi.org/10.1039/c1gc00002k.
- Poliakoff, M., **Leitner, W.**, Ruthven, S., News from the *Green Chemistry* Editors, *Green Chemistry* 13, (1) **2011**, 13-15. https://doi.org/10.1039/c0gc90041a.
- Peters, M., Köhler, B., Kuckshinrichs, W., **Leitner, W.**, Markewitz, P., Müller, T. E., Chemical Technologies for Exploiting and Recycling Carbon Dioxide into the Value Chain, *Chemsuschem* 4, (9) **2011**, 1216-1240. https://doi.org/10.1002/cssc.201000447.
- Ostapowicz, T. G., Hölscher, M., **Leitner, W.**, CO2 Insertion into Metal-Carbon Bonds: A Computational Study of Rh-I-Pincer Complexes, *Chemistry-a European Journal* 17, (37) **2011**, 10329-10338. https://doi.org/10.1002/chem.201101463.
- **Leitner, W.**, The echoes of green chemistry, *Green Chemistry* 13, (6) **2011**, 1379-1379. https://doi.org/10.1039/c1gc90017j.
- Kohlmann, C., Leuchs, S., Greiner, L., **Leitner, W.**, Continuous biocatalytic synthesis of *R*-2-octanol with integrated product separation, *Green Chemistry* 13, (6) **2011**, 1430-1436. https://doi.org/10.1039/c0gc00790k.
- Jess, A., **Leitner, W.**, Wasserscheid, P., Bessere Losungen dank "Advanced Fluids", *Chemie Ingenieur Technik* 83, (9) **2011**, 1319-1319. https://doi.org/10.1002/cite.201190070.
- Hintermair, U., Roosen, C., Kaever, M., Kronenberg, H., Thelen, R., Aey, S., **Leitner, W.**, Greiner, L., A Versatile Lab to Pilot Scale Continuous Reaction System for Supercritical Fluid Processing, *Organic Process Research & Development* 15, (6) **2011**, 1275-1280. https://doi.org/10.1021/op200053w.
- Hintermair, U., Franciò, G., **Leitner, W.**, Continuous flow organometallic catalysis: new wind in old sails, *Chemical Communications* 47, (13) **2011**, 3691-3701. https://doi.org/10.1039/c0cc04958a.
- Hintermair, U., Englert, U., **Leitner, W.**, Distinct Reactivity of Mono- and Bis-NHC Silver Complexes: Carbene Donors versus Carbene-Halide Exchange Reagents, *Organometallics* 30, (14) **2011**, 3726-3731. https://doi.org/10.1021/om101056y.
- Gunanathan, C., Hölscher, M., **Leitner, W.**, Reduction of Nitriles to Amines with H2 Catalyzed by Nonclassical Ruthenium Hydrides - Water-Promoted Selectivity for Primary Amines and Mechanistic Investigations, *European Journal of Inorganic Chemistry* (22) **2011**, 3381-3386. https://doi.org/10.1002/ejic.201100392.
- Geilen, F. M. A., vom Stein, T., Engendahl, B., Winterle, S., Liauw, M. A., Klankermayer, J., **Leitner, W.**, Highly Selective Decarbonylation of 5-(Hydroxymethyl)furfural in the Presence of Compressed Carbon Dioxide, *Angewandte Chemie-International Edition* 50, (30) **2011**, 6831-6834. https://doi.org/10.1002/anie.201007582.

- Geilen, F. M. A., Engendahl, B., Hölscher, M., Klankermayer, J., **Leitner, W.**, Selective Homogeneous Hydrogenation of Biogenic Carboxylic Acids with Ru(TriPhos)H^+: A Mechanistic Study, *Journal of the American Chemical Society* 133, (36) **2011**, 14349-14358. https://doi.org/10.1021/ja2034377.
- Doro, F., Winnertz, P., **Leitner, W.**, Prokofieva, A., Müller, T. E., Adapting a Wacker-type catalyst system to the palladium-catalyzed oxidative carbonylation of aliphatic polyols, *Green Chemistry* 13, (2) **2011**, 292-295. https://doi.org/10.1039/c0gc00817f.
- Campos-Carrasco, A., Estorach, C. T., Bastero, A., Reguero, M., Masdeu-Bultó, A. M., Franciò, G., **Leitner, W.**, D'Amora, A., Milani, B., Cationic Palladium(II) Complexes for CO/Vinyl Arene Copolymerization in the Presence of Carbon Dioxide, *Organometallics* 30, (24) **2011**, 6572-6586. https://doi.org/10.1021/om200642s.

2010

- vom Stein, T., Grande, P., Sibilla, F., Commandeur, U., Fischer, R., **Leitner, W.**, de María, P. D., Salt-assisted organic-acid-catalyzed depolymerization of cellulose, *Green Chemistry* 12, (10) **2010**, 1844-1849. https://doi.org/10.1039/c0gc00262c.
- Uhe, A., Hölscher, M., **Leitner, W.**, A Computational Study of Rhodium Pincer Complexes with Classical and Nonclassical Hydride Centres as Catalysts for the Hydroamination of Ethylene with Ammonia, *Chemistry-a European Journal* 16, (30) **2010**, 9203-9214. https://doi.org/10.1002/chem.201000669.
- Pullmann, T., Engendahl, B., Zhang, Z. Y., Hölscher, M., Zanotti-Gerosa, A., Dyke, A., Franciò, G., **Leitner, W.**, Quinaphos and Dihydro-Quinaphos Phosphine-Phosphoramidite Ligands for Asymmetric Hydrogenation, *Chemistry-a European Journal* 16, (25) **2010**, 7517-7526. https://doi.org/10.1002/chem.201000063.
- Lapkin, A. A., Peters, M., Greiner, L., Chemat, S., Leonhard, K., Liauw, M. A., **Leitner, W.**, Screening of new solvents for artemisinin extraction process using *ab initio* methodology, *Green Chemistry* 12, (2) **2010**, 241-251. https://doi.org/10.1039/b922001a.
- Koch, T. J., Desset, S. L., **Leitner, W.**, Catalytic supercritical fluid extraction: selective hydroformylation of olefin mixtures using scCO2 solubility for differentiation, *Green Chemistry* 12, (10) **2010**, 1719-1721. https://doi.org/10.1039/c0gc00299b.
- Karmee, S. K., Greiner, L., Kraynov, A., Müller, T. E., Niemeijer, B., **Leitner, W.**, Nanoparticle catalysed oxidation of sulfides to sulfones by *in situ* generated H2O2 in supercritical carbon dioxide/water biphasic medium, *Chemical Communications* 46, (36) **2010**, 6705-6707. https://doi.org/10.1039/c0cc01443e.
- Julis, J., Hölscher, M., **Leitner, W.**, Selective hydrogenation of biomass derived substrates using ionic liquid-stabilized ruthenium nanoparticles, *Green Chemistry* 12, (9) **2010**, 1634-1639. https://doi.org/10.1039/c004751a.
- Hölscher, M., **Leitner, W.**, Lewis Acid Assisted Stabilization of Side-On Bonded N2 in Ru(NCN)-Pincer Complexes-Computational Catalyst Design Directed at NH3 Synthesis from N2 and H2, *Chemistry-a European Journal* 16, (48) **2010**, 14266-14271. https://doi.org/10.1002/chem.201002010.
- Hintermair, U., Höfener, T., Pullmann, T., Franciò, G., **Leitner, W.**, Continuous Enantioselective Hydrogenation with a Molecular Catalyst in Supported Ionic Liquid Phase under Supercritical CO2 Flow, *Chemcatchem* 2, (2) **2010**, 150-154. https://doi.org/10.1002/cctc.200900261.
- Harwardt, T., Franciò, G., **Leitner, W.**, Continuous-flow homogeneous catalysis using the temperature-controlled solvent properties of supercritical carbon dioxide, *Chemical Communications* 46, (36) **2010**, 6669-6671. https://doi.org/10.1039/c0cc02251a.

- Hart, R., Pollet, P., Hahne, D. J., John, E., Llopis-Mestre, V., Blasucci, V., Huttenhower, H., **Leitner, W.**, Eckert, C. A., Liotta, C. L., Benign coupling of reactions and separations with reversible ionic liquids, *Tetrahedron* 66, (5) **2010**, 1082-1090. https://doi.org/10.1016/j.tet.2009.11.014.
- Geilen, F. M. A., Engendahl, B., Harwardt, A., Marquardt, W., Klankermayer, J., **Leitner, W.**, Selective and Flexible Transformation of Biomass-Derived Platform Chemicals by a Multifunctional Catalytic System, *Angewandte Chemie-International Edition* 49, (32) **2010**, 5510-5514. https://doi.org/10.1002/anie.201002060.
- Chen, D. J., Sundararaju, B., Krause, R., Klankermayer, J., Dixneuf, P. H., **Leitner, W.**, Asymmetric Induction by Chiral Borate Anions in Enantioselective Hydrogenation using a Racemic Rh-Binap Catalyst, *Chemcatchem* 2, (1) **2010**, 55-57. https://doi.org/10.1002/cctc.200900229.

2009

- Roosen, C., Muller, J. L., Kaever, M., Kronenberg, H., Thelen, R., Aey, S., Harwardt, T., **Leitner, W.**, Greiner, L., Reactor concept for continuous reactions and extractions in supercritical fluids at minimum flow rates, *Journal of Supercritical Fluids* 48, (1) **2009**, 33-35. https://doi.org/10.1016/j.supflu.2008.09.017.
- Peters, M., Müller, T., **Leitner, W.**, CO2:From waste to value, *TCE* (813) **2009**, 46-47.
- **Leitner, W.**, Green Solvents-Progress in science and application, *Green Chemistry* 11, (5) **2009**, 603-603. https://doi.org/10.1039/b907013n.
- Lassauque, N., Franciò, G., **Leitner, W.**, Nickel-Catalyzed Asymmetric Hydrovinylation Using Lewis Acid Activation, *European Journal of Organic Chemistry* 2009, (19) **2009**, 3199-3202. https://doi.org/10.1002/ejoc.200900248.
- Lassauque, N., Franciò, G., **Leitner, W.**, Room Temperature Highly Enantioselective Nickel-Catalyzed Hydrovinylation, *Advanced Synthesis & Catalysis* 351, (18) **2009**, 3133-3138. https://doi.org/10.1002/adsc.200900559.
- Kohlmann, C., Greiner, L., **Leitner, W.**, Wandrey, C., Lüutz, S., Ionic Liquids as Performance Additives for Electroenzymatic Syntheses, *Chemistry-a European Journal* 15, (43) **2009**, 11692-11700. https://doi.org/10.1002/chem.200901046.
- Karmee, S. K., Roosen, C., Kohlmann, C., Lütz, S., Greiner, L., **Leitner, W.**, Chemo-enzymatic cascade oxidation in supercritical carbon dioxide/water biphasic media, *Green Chemistry* 11, (7) **2009**, 1052-1055. https://doi.org/10.1039/b820606f.
- Eggenstein, M., Thomas, A., Theuerkauf, J., Francio, G., **Leitner, W.**, Highly Efficient and Versatile Phosphine-Phosphoramidite Ligands for Asymmetric Hydrogenation, *Advanced Synthesis & Catalysis* 351, (5) **2009**, 725-732. https://doi.org/10.1002/adsc.200800653.
- Cimpeanu, V., Kocevar, M., Parvulescu, V. I., **Leitner, W.**, Preparation of Rhodium Nanoparticles in Carbon Dioxide Induced Ionic Liquids and their Application to Selective Hydrogenation, *Angewandte Chemie-International Edition* 48, (6) **2009**, 1085-1088. https://doi.org/10.1002/anie.200803773.
- Barta, K., Hölscher, M., Franciò, G., **Leitner, W.**, Modular Synthesis of Novel Chiral Phosphorous Triamides Based on (*S*)*N*-(Pyrrolidin-2-ylmethyl)aniline and Their Application in Asymmetric Catalysis, *European Journal of Organic Chemistry* 2009, (24) **2009**, 4102-4116. https://doi.org/10.1002/ejoc.200900477.
- Barta, K., Eggenstein, M., Hölscher, M., Franciò, G., **Leitner, W.**, 1,1′-Binaphthyl-2,2′-diamine-Based Chiral Phosphorous Triamides: Synthesis and Application in Asymmetric Catalysis, *European Journal of Organic Chemistry* 2009, (35) **2009**, 6198-6204. https://doi.org/10.1002/ejoc.200900918.

2008

- Zayed, F., Greiner, L., Schulz, P. S., Lapkin, A., **Leitner, W.**, Continuous catalytic Friedel-Crafts acylation in the biphasic medium of an ionic liquid and supercritical carbon dioxide, *Chemical Communications* (1) **2008**, 79-81. https://doi.org/10.1039/b712865g.
- Stobrawe, A., Makarczyk, P., Maillet, C., Muller, J. L., **Leitner, W.**, Solid-phase organic synthesis in the presence of compressed carbon dioxide, *Angewandte Chemie-International Edition* 47, (35) **2008**, 6674-6677. https://doi.org/10.1002/anie.200801653.
- Scurto, A. M., Newton, E., Weikel, R. R., Draucker, L., Hallett, J., Liotta, C. L., **Leitner, W.**, Eckert, C. A., Melting point depression of ionic liquids with CO2: Phase equilibria, *Industrial & Engineering Chemistry Research* 47, (3) **2008**, 493-501. https://doi.org/10.1021/ie070312b.
- Richmond, J. P., Banwell, M., Bellus, D., Muñiz, K., Narasaka, K., Okamoto, Y., Okuda, J., Schlosser, M., Shinkai, I., Tatsuta, K., van Koten, G., You, X. Z., Aggarwal, V. K., Aida, T., Alper, H., Bai, C. L., Bhattacharyya, K., Blaser, H. U., Pugin, B., Spindler, F., Brown, J. M., Buchwald, S. L., Chan, A. S. C., Chatani, N., Denmark, S. E., Diederich, F., Doyle, M. P., Fu, G., Fujishima, A., Hanessian, S., Hashimoto, S., Hayashi, M., Hiyama, T., Hofmann, P., Hou, Z. M., Imamoto, T., Izawa, K., Jacobsen, E., Katsuki, T., Kim, S., Kobayashi, S., Komatsu, K., Kumobayashi, H., Kündig, E. P., Lee, E., **Leitner, W.**, Ley, S. V., Lipshutz, B., Lu, Y. X., Maruoka, K., Murahashi, S., Murai, S., Nicolaou, K. C., Nishiyama, H., Ohkuma, T., Ohta, T., Oshima, K., Otera, J., Pfaltz, A., Reetz, M. T., Ricci, A., Sawamoto, M., Scalone, M., Sharpless, K. B., Sheldon, R., Snieckus, V., Sodeoka, M., Tokunaga, M., Tomioka, K., Umezawa, Y., Uozumi, Y., Wong, C. H., Wong, H. N. C., Yamamoto, Y., Zhu, D. B., A tribute to Professor Ryoji Noyori on the occasion of his 70th birthday, *Advanced Synthesis & Catalysis* 350, (13) **2008**, 1925-1941. https://doi.org/10.1002/adsc.200800293
- Prechtl, M. H. G., Hölscher, M., Ben-David, Y., Theyssen, N., Milstein, D., **Leitner, W.**, Ruthenium dihydrogen complex for C-H activation:: Catalytic H/D exchange under mild conditions, *European Journal of Inorganic Chemistry* (22) **2008**, 3493-3500. https://doi.org/10.1002/ejic.200800359.
- Poliakoff, M., **Leitner, W.**, Ruthven, S., Celebrating the tenth year of the *Green Chemistry* journal, *Green Chemistry* 10, (1) **2008**, 11-12. https://doi.org/10.1039/b718487p.
- Peters, M., Zavrel, M., Kahlen, J., Schmidt, T., Ansorge-Schurnacher, M., **Leitner, W.**, Büchs, J., Greiner, L., Spiess, A. C., Systematic Approach to Solvent Selection for Biphasic Systems with a Combination of COSMO-RS and a Dynamic Modeling Tool, *Engineering in Life Sciences* 8, (5) **2008**, 546-552. https://doi.org/10.1002/elsc.200800037.
- **Leitner, W.**, Poliakoff, M., Supercritical fluids in green chemistry, *Green Chemistry* 10, (7) **2008**, 730-730. https://doi.org/10.1039/b809498p.
- **Leitner, W.**, Inspired by nature: green solvents in science and application, *Green Chemistry* 10, (10) **2008**, 1023-1023. https://doi.org/10.1039/b815697m.
- Langanke, J., **Leitner, W.** Regulated Systems for Catalyst Immobilisation Based on Supercritical Carbon Dioxide, Vol. 23 Eds.: **Leitner, W.** and Hölscher, M.), **2008**, pp. 91-108.
- Koch, W., Beller, M., **Leitner, W.**, Metzger, J. O., Saling, P., Dream reactions - sustainable synthesis methods in chemistry, *Nachrichten Aus Der Chemie* 56, (4) **2008**, 480-484.
- Hou, Z., Theyssen, N., Brinkmann, A., Klementiev, K. V., Grünert, W., Bühl, M., Schmidt, W., Spliethoff, B., Tesche, B., Weidenthaler, C., **Leitner, W.**, Supported palladium nanoparticles on hybrid mesoporous silica: Structure/activity-relationship in the aerobic alcohol oxidation using supercritical carbon dioxide, *Journal of Catalysis* 258, (2) **2008**, 315-323. https://doi.org/10.1016/j.jcat.2008.07.002.
- Chen, D. J., Schmitkamp, M., Franciò, G., Klankermayer, J., **Leitner, W.**, Enantioselective hydrogenation with racemic and enantiopure binap in the presence of a chiral ionic liquid, *Angewandte Chemie-International Edition* 47, (38) **2008**, 7339-7341. https://doi.org/10.1002/anie.200801995.

- Böing, C., Hahne, J., Franciò, G., **Leitner, W.**, Stereoselective nickel-catalyzed cycloisomerization of 1,6-dienes, *Advanced Synthesis & Catalysis* 350, (7-8) **2008**, 1073-1080. https://doi.org/10.1002/adsc.200800104.
- Barta, K., Franciò, G., **Leitner, W.**, Lloyd-Jones, G. C., Shepperson, I. R., A new class of 3'-sulfonyl BINAPHOS ligands:: Modulation of activity and selectivity in asymmetric palladium-catalysed hydrophosphorylation of styrene, *Advanced Synthesis & Catalysis* 350, (13) **2008**, 2013-2023. https://doi.org/10.1002/adsc.200800366.
- **Leitner, W.**, Hölscher, M. (Eds.), Regulated Systems for Multiphase Catalysis, Topics in Catalysis Vol. 23, **2008**, pp. 1-208. https://doi.org/10.1007/978-3-540-71076-9.

2007

- Schmitkamp, M., Chen, D., **Leitner, W.**, Klankermayer, J., Franciò, G., Enantioselective catalysis with *tropos* ligands in chiral ionic liquids, *Chemical Communications* (39) **2007**, 4012-4014. https://doi.org/10.1039/b712068k.
- Roosen, C., Ansorge-Schumacher, M., Mang, T., **Leitner, W.**, Greiner, L., Gaining pH-control in water/carbon dioxide biphasic systems, *Green Chemistry* 9, (5) **2007**, 455-458. https://doi.org/10.1039/b613345b.
- Prechtl, M. H. G., Hölscher, M., Ben-David, Y., Theyssen, N., Loschen, R., Milstein, D., **Leitner, W.**, H/D exchange at aromatic and heteroaromatic hydrocarbons using D2O as the deuterium source and ruthenium dihydrogen complexes as the catalyst, *Angewandte Chemie-International Edition* 46, (13) **2007**, 2269-2272. https://doi.org/10.1002/anie.200603677.
- Prechtl, M. H. G., Ben-David, Y., Giunta, D., Busch, S., Taniguchi, Y., Wisniewski, W., Görls, H., Mynott, R. J., Theyssen, N., Milstein, D., **Leitner, W.**, Synthesis and characterisation of nonclassical ruthenium hydride complexes containing chelating bidentate and tridentate phosphine ligands, *Chemistry-a European Journal* 13, (5) **2007**, 1539-1546. https://doi.org/10.1002/chem.200600897.
- Peters, M., Eckstein, M. F., Hartjen, G., Spiess, A. C., **Leitner, W.**, Greiner, L., Exploring conversion of biphasic catalytic reactions: Analytical solution and parameter study, *Industrial & Engineering Chemistry Research* 46, (22) **2007**, 7073-7078. https://doi.org/10.1021/ie070402g.
- Muller, J. L., Rickers, A., **Leitner, W.**, Raney cobalt: An effective and recyclable catalyst for the Pauson-Khand reaction, *Advanced Synthesis & Catalysis* 349, (3) **2007**, 287-291. https://doi.org/10.1002/adsc.200600453.
- Muller, J. L., Klankermayer, J., **Leitner, W.**, Poly(ethylene glycol) stabilized Co nanoparticles as highly active and selective catalysts for the Pauson-Khand reaction, *Chemical Communications* (19) **2007**, 1939-1941. https://doi.org/10.1039/b702330h.
- Minnich, C. B., Buskens, P., Steffens, H. C., Bäuerlein, P. S., Butvina, L. N., Küpper, L., **Leitner, W.**, Liauw, M. A., Greiner, L., Highly flexible fibre-optic ATR-IR probe for inline reaction monitoring, *Organic Process Research & Development* 11, (1) **2007**, 94-97. https://doi.org/10.1021/op0601767.
- **Leitner, W.**, Green solvents for processes, *Green Chemistry* 9, (9) **2007**, 923-923. https://doi.org/10.1039/b712156n.
- Hou, Z. S., Theyssen, N., **Leitner, W.**, Palladium nanoparticles stabilised on PEG-modified silica as catalysts for the aerobic alcohol oxidation in supercritical carbon dioxide, *Green Chemistry* 9, (2) **2007**, 127-132. https://doi.org/10.1039/b606740a.
- Hölscher, M., Prechtl, M. H. G., **Leitner, W.**, Can $[M(H)_2(H_2)(PXP)]$ Pincer Complexes (M=Fe, Ru, Os; X=N, O, S) serve as catalyst lead structures for NH3 synthesis from N2 and H2?, *Chemistry-a European Journal* 13, (23) **2007**, 6636-6643. https://doi.org/10.1002/chem.200700289.

- Ganchegui, B., **Leitner, W.**, Oxybromination of phenol and aniline derivatives in H2O/scCO2 biphasic media, *Green Chemistry* 9, (1) **2007**, 26-29. https://doi.org/10.1039/b609992k.
- Diez-Holz, C. J., Böing, C., Franciò, G., Hölscher, M., **Leitner, W.**, Phosphoramidite quinaphos-type ligands for highly selective Ni-catalysed asymmetric C-C bond forming reactions, *European Journal of Organic Chemistry* 2007, (18) **2007**, 2995-3002. https://doi.org/10.1002/ejoc.200700249.
- Casiraghi, L., Greiner, L., **Leitner, W.**, Eggert, T., Jaeger, K. E., Enzyme stability under supercritical conditions, *Journal of Biotechnology* 131, (2) **2007**, S115-S116. https://doi.org/10.1016/j.jbiotec.2007.07.201.
- Burgemeister, K., Franciò, G., Gego, V. H., Greiner, L., Hugl, H., **Leitner, W.**, Inverted supercritical carbon dioxide/aqueous biphasic media for rhodium-catalyzed hydrogenation reactions, *Chemistry-a European Journal* 13, (10) **2007**, 2798-2804. https://doi.org/10.1002/chem.200601717.

2006

- Almássy, A., Barta, K., Franciò, G., Sebesta, R., **Leitner, W.**, Toma, S., 5 Ferrocenophane based ligands for stereoselective Rh-catalyzed hydrogenation and Cu-catalyzed Michael addition, *Tetrahedron-Asymmetry* 18, (16) **2007**, 1893-1898. https://doi.org/10.1016/j.tetasy.2007.08.011.
- Theyssen, N., Hou, Z. S., **Leitner, W.**, Selective oxidation of alkanes with molecular oxygen and acetaldehyde in compressed (supercritical) carbon dioxide as reaction medium, *Chemistry-a European Journal* 12, (12) **2006**, 3401-3409. https://doi.org/10.1002/chem.200501385.
- Scurto, A. M., **Leitner, W.**, Expanding the useful range of ionic liquids: melting point depression of organic salts with carbon dioxide for biphasic catalytic reactions, *Chemical Communications* (35) **2006**, 3681-3683. https://doi.org/10.1039/b606130c.
- Maayan, G., Ganchegui, B., **Leitner, W.**, Neumann, R., Selective aerobic oxidation in supercritical carbon dioxide catalyzed by the H5PV2Mo10O40 polyoxometalate, *Chemical Communications* (21) **2006**, 2230-2232. https://doi.org/10.1039/b603148j.
- **Leitner, W.**, Reflections on "green chemistry" in 2005, *Green Chemistry* 8, (2) **2006**, 125-125. https://doi.org/10.1039/b600591h.
- Hölscher, M., **Leitner, W.**, DFT investigation of the potential of [H-M{$(NHCH_2CH_2)_3X$}] catalysts (M = Mo, Ru, Os; X = N, P) for the reduction of N2 to NH3 by H2, *European Journal of Inorganic Chemistry* (21) **2006**, 4407-4417. https://doi.org/10.1002/ejic.200600548.
- Giménez-Pedrós, M., Tortosa-Estorach, C., Bastero, A., Masdeu-Bultó, A. M., Solinas, M., **Leitner, W.**, Alternating CO/*tert*-butylstyrene copolymerisation using soluble cationic palladium complexes in supercritical carbon dioxide, *Green Chemistry* 8, (10) **2006**, 875-877. https://doi.org/10.1039/B607610f.
- Gausepohl, R., Buskens, P., Kleinen, J., Bruckmann, A., Lehmann, C. W., Klankermayer, J., **Leitner, W.**, Highly enantioselective Aza-Baylis-Hillman reaction in a chiral reaction medium, *Angewandte Chemie-International Edition* 45, (22) **2006**, 3689-3692. https://doi.org/10.1002/anie.200600327.
- Eckstein, M. F., Lembrecht, J., Schumacher, J., Eberhard, W., Spiess, A. C., Peters, M., Roosen, C., Greiner, L., **Leitner, W.**, Kragl, U., Maximise equilibrium conversion in biphasic catalysed reactions: How to obtain reliable data for equilibrium constants?, *Advanced Synthesis & Catalysis* 348, (12-13) **2006**, 1597-1604. https://doi.org/10.1002/adsc.200606145.
- Bastero, A., Franciò, G., **Leitner, W.**, Mecking, S., Catalytic ethylene polymerisation in carbon dioxide as a reaction medium with soluble nickel(II) catalysts, *Chemistry-a European Journal* 12, (23) **2006**, 6110-6116. https://doi.org/10.1002/chem.200600499.

- Baker, R. T., Kobayashi, S., **Leitner, W.**, Divide et Impera - Multiphase, green solvent and immobilization strategies for molecular catalysis, *Advanced Synthesis & Catalysis* 348, (12-13) **2006**, 1337-1340. https://doi.org/10.1002/adsc.200600344.

2005

- Solinas, M., Jiang, J. Y., Stelzer, O., **Leitner, W.**, A cartridge system for organometallic catalysis: Sequential catalysis and separation using supercritical carbon dioxide to switch phases, *Angewandte Chemie-International Edition* 44, (15) **2005**, 2291-2295. https://doi.org/10.1002/anie.200461768.
- Shulyupin, M. O., Franciò, G., Beletskaya, I. P., **Leitner, W.**, Regio- and enantioselective catalytic hydrophosphorylation of vinylarenes, *Advanced Synthesis & Catalysis* 347, (5) **2005**, 667-672. https://doi.org/10.1002/adsc.200404390.
- Shulyupin, M. O., Francio, G., Beletskaya, I. P., **Leitner, W.**, Regio- and enantioselective catalytic hydrophosphorylation of vinylarenes, *Advanced Synthesis & Catalysis* 347, (6) **2005**, 731-731.
- **Leitner, W.**, Seddon, K. R., Wasserscheid, P., Green Solvents for Synthesis meeting Bruchsal, Germany, October 2004, *Green Chemistry* 7, (5) **2005**, 253-253. https://doi.org/10.1039/b505452b.
- **Leitner, W.**, Seddon, K. R., Wasserscheid, P., This special issue of *Green Chemistry* resulting from the Bruchsal conference is dedicated to the memory of Prof. Dr. Birgit Driessen-Hölscher, *Green Chemistry* 7, (5) **2005**, 253-253.
- **Leitner, W.**, Scurto, A. M., Theyssen, N., Gordon, C. M., Jessop, P. G., Cole-Hamilton, D. J., Kunene, T. E., Webb, P. B., Burgemeister, K., Licence, P., Poliakoff, M., Catalysis using Supercritical Solvents, **2005**, p. 606-749
- **Leitner, W.**, Minhas, H., Green Chemistry 2005: new look, new people, new chances, *Green Chemistry* 7, (1) **2005**, 7-7. https://doi.org/10.1039/b418779m.
- Hou, Z., Theyssen, N., Brinkmann, A., **Leitner, W.**, Biphasic aerobic oxidation of alcohols catalyzed by poly(ethylene glycol)-stabilized palladium nanoparticles in supercritical carbon dioxide, *Angewandte Chemie-International Edition* 44, (9) **2005**, 1346-1349. https://doi.org/10.1002/anie.200461493.
- Hölscher, M., **Leitner, W.**, Holthausen, M. C., Frenking, G., Chemo- and periselectivity in the addition of OsO2(CH2)2 to ethylene:: A theoretical study, *Chemistry-a European Journal* 11, (16) **2005**, 4700-4708. https://doi.org/10.1002/chem.200500217.
- Cornils, B., Herrmann, W. A., Horváth, I. T., **Leitner, W.**, Mecking, S., Olivier-Bourbigou, H., Vogt, D., Multiphase Homogeneous Catalysis Volume 1 Introduction, **2005**, p. 3-23. https://doi.org/10.1002/9783527619597.ch1
- Buskens, P., Klankermayer, J., **Leitner, W.**, Bifunctional activation and racemization in the catalytic asymmetric aza-Baylis-Hillman reaction, *Journal of the American Chemical Society* 127, (48) **2005**, 16762-16763. https://doi.org/10.1021/ja0550024.
- Burk, S., Franciò, G., **Leitner, W.**, Ruthenium-catalysed asymmetric hydrogenation of ketones using QUINAPHOS as the ligand, *Chemical Communications* (27) **2005**, 3460-3462. https://doi.org/10.1039/b505195a.
- Burgemeister, K., Franciò, G., Hugl, H., **Leitner, W.**, Enantioselective hydrogenation of polar substrates in inverted supercritical CO2/aqueous biphasic media, *Chemical Communications* (48) **2005**, 6026-6028. https://doi.org/10.1039/b512110h.
- Böing, C., Franciò, G., **Leitner, W.**, Nickel catalysed asymmetric cycloisomerisation of diethyl diallylmalonate, *Chemical Communications* (11) **2005**, 1456-1458. https://doi.org/10.1039/b417333c.

- Böing, C., Franciò, G., **Leitner, W.**, Cationic nickel complexes with weakly coordinating counterions and their application in the asymmetric cycloisomerisation of 1,6-dienes, *Advanced Synthesis & Catalysis* 347, (11-13) **2005**, 1537-1541. https://doi.org/10.1002/adsc.200505176.

2004

- Solinas, M., Pfaltz, A., Cozzi, P. G., **Leitner, W.**, Enantioselective hydrogenation of imines in ionic liquid/carbon dioxide media, *Journal of the American Chemical Society* 126, (49) **2004**, 16142-16147. https://doi.org/10.1021/ja046129g.
- **Leitner, W.**, Focus on education in Green Chemistry, *Green Chemistry* 6, (8) **2004**, 351-351. https://doi.org/10.1039/b412202j.
- **Leitner, W.**, Recent advances in catalyst immobilization using supercritical carbon dioxide, *Pure and Applied Chemistry* 76, (3) **2004**, 635-644. https://doi.org/10.1351/pac200476030635.
- Hölscher, M., Franciò, G., **Leitner, W.**, Origin of enantioselectivity in asymmetric hydrovinylations catalyzed by phosphoramidite nickel catalysts:: An experimentally supported density functional study, *Organometallics* 23, (23) **2004**, 5606-5617. https://doi.org/10.1021/om040107l.
- Gordon, C. M., **Leitner, W.**, Supercritical fluids as replacements for conventional organic solvents, *Chimica Oggi-Chemistry Today* 22, (9) **2004**, 39-41.
- Gärtner, J., Popkin, S., **Leitner, W.**, Wahl, S., Åkerstedt, T., Folkard, S., Analyzing irregular working hours:: Lessons learned in the development of RAS 1.0 -: The representation and analysis software, *Chronobiology International* 21, (6) **2004**, 1025-1035. https://doi.org/10.1081/cbi-200037163.
- Buskens, P., Giunta, D., **Leitner, W.**, Activation and deactivation of a carbene containing non-classical ruthenium hydride complex in catalytic processes involving C-H bond cleavage, *Inorganica Chimica Acta* 357, (6) **2004**, 1969-1974. https://doi.org/10.1016/j.ica.2004.01.018.
- Barbour, L. A., Shao, J. H., Qiao, L. P., **Leitner, W.**, Anderson, M., Friedman, J. E., Draznin, B., Human placental growth hormone increases expression of the p85 regulatory unit of phosphatidylinositol 3-kinase and triggers severe insulin resistance in skeletal muscle, *Endocrinology* 145, (3) **2004**, 1144-1150. https://doi.org/10.1210/en.2003-1297.

2003

- Reetz, M. T., Wiesenhöfer, W., Franciò, G., **Leitner, W.**, Continuous flow enzymatic kinetic resolution and enantiomer separation using ionic liquid/supercritical carbon dioxide media, *Advanced Synthesis & Catalysis* 345, (11) **2003**, 1221-1228. https://doi.org/10.1002/adsc.200303109.
- **Leitner, W.**, Seddon, K. R., Wasserscheid, P., Green solvents for catalysis - Forword, *Green Chemistry* 5, (2) **2003**, G28-G28. https://doi.org/10.1039/b302757k.
- **Leitner, W.**, The better solution? Chemical synthesis in supercritical carbon dioxide, *Chemie in Unserer Zeit* 37, (1) **2003**, 32-38. https://doi.org/10.1002/ciuz.200390002.
- **Leitner, W.**, Catalysis - A greener solution, *Nature* 423, (6943) **2003**, 930-931. https://doi.org/10.1038/423930a.
- **Leitner, W.**, Slogan or opportunity?, *Nachrichten aus der Chemie* 51, (12) **2003**, 1223-1223. https://doi.org/10.1002/nadc.20030511202.
- Giunta, D., Hölscher, M., Lehmann, C. W., Mynott, R., Wirtz, C., **Leitner, W.**, Room temperature activation of aromatic C-H bonds by non-classical ruthenium hydride complexes containing carbene ligands, *Advanced*

Synthesis & Catalysis 345, (9-10) **2003**, 1139-1145. https://doi.org/10.1002/adsc.200303091.

- Ballivet-Tkatchenko, D., Picquet, M., Solinas, M., Franciò, G., Wasserscheid, P., **Leitner, W.**, Acrylate dimerisation under ionic liquid-supercritical carbon dioxide conditions, *Green Chemistry* 5, (2) **2003**, 232-235. https://doi.org/10.1039/b300073g.

2002

- Theyssen, N., **Leitner, W.**, Selective oxidation of cyclooctane to cyclootanone with molecular oxygen in the presence of compressed carbon dioxide, *Chemical Communications* (5) **2002**, 410-411. https://doi.org/10.1039/b111212k.
- Reetz, M. T., Wiesenhöfer, W., Franciò, G., **Leitner, W.**, Biocatalysis in ionic liquids: batchwise and continuous flow processes using supercritical carbon dioxide as the mobile phase, *Chemical Communications* (9) **2002**, 992-993. https://doi.org/10.1039/b202322a.
- Pandey, S., Kane, M. A., Baker, G. A., Bright, F. V., Fürstner, A., Seidel, G., **Leitner, W.**, The photophysics of 6-(1-pyrenyl)hexyl-11(1-pyrenyl)undecanoate dissolved in organic liquids and supercritical carbon dioxide:: Impact on olefin metathesis, *Journal of Physical Chemistry B* 106, (7) **2002**, 1820-1832. https://doi.org/10.1021/jp011497h.
- McCarthy, M., Stemmer, H., **Leitner, W.**, Catalysis in inverted supercritical CO2/aqueous biphasic media, *Green Chemistry* 4, (5) **2002**, 501-504. https://doi.org/10.1039/b204972b.
- **Leitner, W.**, Supercritical carbon dioxide as a green reaction medium for catalysis, *Accounts of Chemical Research* 35, (9) **2002**, 746-756. https://doi.org/10.1021/ar010070q.
- Lange, S., **Leitner, W.**, Mechanistic aspects of hydrogen addition during enantioselective rhodium-catalysed reduction of C=C double bonds with formic acid/triethylamine or molecular hydrogen, *Journal of the Chemical Society-Dalton Transactions* (5) **2002**, 752-758. https://doi.org/10.1039/b108774f.
- Franciò, G., Faraone, F., **Leitner, W.**, Highly enantioselective nickel-catalyzed hydrovinylation with chiral phosphoramidite ligands, *Journal of the American Chemical Society* 124, (5) **2002**, 736-737. https://doi.org/10.1021/ja012099v.
- Bolm, C., Palazzi, C., Franciò, G., **Leitner, W.**, Baeyer-Villiger oxidation in compressed CO2, *Chemical Communications* (15) **2002**, 1588-1589. https://doi.org/10.1039/b202727e.

2001

- Wittmann, K., Wisniewski, W., Mynott, R., **Leitner, W.**, Kranemann, C. L., Rische, T., Eilbracht, P., Kluwer, S., Ernsting, J. M., Elsevier, C. L., Supercritical carbon dioxide as solvent and temporary protecting group for rhodium-catalyzed hydroaminomethylation, *Chemistry-a European Journal* 7, (21) **2001**, 4584-4589. https://doi.org/10.1002/1521-3765(20011105)
- **Leitner, W.**, Catalytic solutions, *Chemical & Engineering News* 79, (13) **2001**, 261-261.
- **Leitner, W.**, "Third way" for catalyst immobilization: Catalysis and extraction using supercritical solutions, *Abstracts of Papers of the American Chemical Society* 221, **2001**, U639-U639.
- Hori, H., Six, C., **Leitner, W.**, Preparation of poly(phenylacetylene) using supercritical or liquid carbon dioxide, *Kobunshi Ronbunshu* 58, (10) **2001**, 489-494. https://doi.org/10.1295/koron.58.489.
- Hori, H., Six, C., **Leitner, W.**, Microstructure and morphology of polyphenylacetylene prepared in compressed carbon dioxide, *Applied Organometallic Chemistry* 15, (2) **2001**, 145-147. https://doi.org/10.1002/1099-0739(200102)

- Fürstner, A., Ackermann, L., Beck, K., Hori, H., Koch, D., Langemann, K., Liebl, M., Six, C., **Leitner, W.**, Olefin metathesis in supercritical carbon dioxide, *Journal of the American Chemical Society* 123, (37) **2001**, 9000-9006. https://doi.org/10.1021/ja010952k.
- Franciò, G., Wittmann, K., **Leitner, W.**, Highly efficient enantioselective catalysis in supercritical carbon dioxide using the perfluoroalkyl-substituted ligand (R,S)-3-H2F6-BINAPHOS, *Journal of Organometallic Chemistry* 621, (1-2) **2001**, 130-142. https://doi.org/10.1016/s0022-328x(00)00778-6.
- Fornika, R., Six, C., Görls, H., Kessler, M., Krüger, C., **Leitner, W.**, Synthesis and structural features of complexes (P P)2Rh hfacac containing hexafluoroacetyl-acetonate as a noncoordinating anion, *Canadian Journal of Chemistry* 79, (5-6) **2001**, 642-648. https://doi.org/10.1139/cjc-79-5-6-642.
- Bösmann, A., Franciò, G., Janssen, E., Solinas, M., **Leitner, W.**, Wasserscheid, P., Activation, tuning, and immobilization of homogeneous catalysts in an tonic liquid/compressed CO2 continuous-flow system, *Angewandte Chemie-International Edition* 40, (14) **2001**, 2697-2699. https://doi.org/10.1002/1521-3773(20010716)40:14<2697::Aid-anie2697>3.0.Co;2-w.

2000

- Six, C., Beck, K., Wegner, A., **Leitner, W.**, Ligand effects in novel ruthenium-based ROMP catalysts bearing bidentate phosphines, *Organometallics* 19, (22) **2000**, 4639-4642. https://doi.org/10.1021/om000200j.
- Loeker, F., **Leitner, W.**, Steel-promoted oxidation of olefins in supercritical carbon dioxide using dioxygen in the presence of aldehydes, *Chemistry-a European Journal* 6, (11) **2000**, 2011-2015. https://doi.org/10.1002/1521-3765(20000602).
- **Leitner, W.**, Designed to dissolve, *Nature* 405, (6783) **2000**, 129-130. https://doi.org/10.1038/35012181.
- **Leitner, W.**, Homogeneous catalysts for application in supercritical carbon dioxide as a 'green' solvent, *Comptes Rendus De L Academie Des Sciences Serie Ii Fascicule C-Chimie* 3, (7) **2000**, 595-600. https://doi.org/10.1016/s1387-1609(00)01159-2.
- **Leitner, W.**, Carbon dioxide as an environmentally benign reaction medium for chemical synthesis, *Applied Organometallic Chemistry* 14, (12) **2000**, 809-814.
- Lange, S., Brinkmann, A., Trautner, P., Woelk, K., Bargon, J., **Leitner, W.**, Mechanistic aspects of dihydrogen activation and transfer during asymmetric hydrogenation in supercritical carbon dioxide, *Chirality* 12, (5-6) **2000**, 450-457. https://doi.org/10.1002/(sici)1520-636x(2000).
- Franciò, G., Faraone, F., **Leitner, W.**, Asymmetric catalysis with chiral phosphane/phosphoramidite ligands derived from quinoline (QUINAPHOS), *Angewandte Chemie-International Edition* 39, (8) **2000**, 1428-+. https://doi.org/10.1002/(sici)1521-3773(20000417).

1999

- Wegner, A., **Leitner, W.**, Nickel-catalysed enantioselective hydrovinylation of styrenes in liquid or supercritical carbon dioxide, *Chemical Communications* (16) **1999**, 1583-1584. https://doi.org/10.1039/a904799i.
- Six, C., Gabor, B., Görls, H., Mynott, R., Philipps, P., **Leitner, W.**, Inter- and intramolecular thermal activation of sp3 C-H bonds with ruthenium bisallyl complexes, *Organometallics* 18, (17) **1999**, 3316-3326. https://doi.org/10.1021/om990229r.
- **Leitner, W.**, Bühl, M., Fornika, R., Six, C., Baumann, W., Dinjus, E., Kessler, M., Krüger, C., Rufinska, A., 103Rh chemical shifts in complexes bearing chelating bidentate phosphine ligands, *Organometallics* 18, (7) **1999**, 1196-1206. https://doi.org/10.1021/om980980k.

- **Leitner, W.** Reactions in supercritical carbon dioxide (scCO2), Vol. 206 (Ed. Knochel, P.), **1999**, pp. 107-132.
- **Leitner, W.**, Green chemistry - Frontiers in benign chemical syntheses and processes, *Science* 284, (5421) **1999**, 1780-1781.
- **Leitner, W.**, Green chemistry - Theory and practice, *Science* 284, (5421) **1999**, 1780-1781.
- **Leitner, W.**, Enantioselective catalysis in supercritical carbon dioxide, *Abstracts of Papers of the American Chemical Society* 218, **1999**, U800-U800.
- Kainz, S., Brinkmann, A., **Leitner, W.**, Pfaltz, A., Iridium-catalyzed enantioselective hydrogenation of imines in supercritical carbon dioxide, *Journal of the American Chemical Society* 121, (27) **1999**, 6421-6429. https://doi.org/10.1021/ja984309i.
- Hori, H., Six, C., **Leitner, W.**, Rhodium-catalyzed phenylacetylene polymerization in compressed carbon dioxide, *Macromolecules* 32, (10) **1999**, 3178-3182. https://doi.org/10.1021/ma981723u.
- Franciò, G., **Leitner, W.**, Highly regio- and enantio-selective rhodium-catalysed asymmetric hydroformylation without organic solvents, *Chemical Communications* (17) **1999**, 1663-1664. https://doi.org/10.1039/a904281d.
- Busch, S., **Leitner, W.**, Convenient preparation of mononuclear and dinuclear ruthenium hydride complexes for catalytic application, *Chemical Communications* (22) **1999**, 2305-2306. https://doi.org/10.1039/a906580f.
- Bruckmann, J., Krüger, C., Lehmann, C. W., **Leitner, W.**, Rust, J., Six, C., Ethylenebis(phosphonic acid), *Acta Crystallographica Section C-Crystal Structure Communications* 55, **1999**, 695-696. https://doi.org/10.1107/s0108270198016448.

1998

- Lange, S., Wittmann, K., Gabor, B., Mynott, R., **Leitner, W.**, Chiral discrimination at the η3-allyl units of rhodium(I) η3-cyclooctenyl complexes containing chiral bidentate phosphanes, *Tetrahedron-Asymmetry* 9, (3) **1998**, 475-482. https://doi.org/10.1016/s0957-4166(97)00628-9.
- Kruger, C., Kessler, M., Six, C., Leitner, W., A cyclic sulfate with a seven-membered ring: 1,3,2-dioxathiepane 2,2-dioxide, *Acta Crystallographica Section C-Crystal Structure Communications* 54, **1998**, 389-390. https://doi.org/10.1107/s010827019701634x.
- Koch, D., **Leitner, W.**, Rhodium-catalyzed hydroformylation in supercritical carbon dioxide, *Journal of the American Chemical Society* 120, (51) **1998**, 13398-13404. https://doi.org/10.1021/ja980729w.
- Kling, R., Sinou, D., Pozzi, G., Choplin, A., Quignard, F., Busch, S., Kainz, S., Koch, D., **Leitner, W.**, Palladium(O)-catalyzed substitution of allylic substrates in perfluorinated solvents, *Tetrahedron Letters* 39, (51) **1998**, 9439-9442. https://doi.org/10.1016/s0040-4039(98)02188-1.
- Kainz, S., Luo, Z. Y., Curran, D. P., **Leitner, W.**, Synthesis of perfluoroalkyl-substituted aryl bromides and their purification over fluorous reverse phase silica, *Synthesis-Stuttgart* (10) **1998**, 1425-1427.
- Kainz, S., **Leitner, W.**, Catalytic asymmetric hydroformylation in the presence of compressed carbon dioxide, *Catalysis Letters* 55, (3-4) **1998**, 223-225. https://doi.org/10.1023/a:1019035012829.
- Blackmond, D. G., **Leitner, W.**, Fine chemicals catalysis - Part II - Preface, *Topics in Catalysis* 5, (1-4) **1998**.

1997

- **Leitner, W.**, Six, C., Inter- and intramolecular thermal activation of aliphatic C-H bonds mediated by complexes containing the fragments {Cy2P(CH2)(n)PCy2}M (n=1-4, M=Rh, Ru), *Chemische Berichte-Recueil* 130, (5) **1997**, 555-558. https://doi.org/10.1002/cber.19971300504.
- Kainz, S., Koch, D., Baumann, W., **Leitner, W.**, Perfluoroalkyl-substituted arylphosphanes as ligands for homogeneous catalysis in supercritical carbon dioxide, *Angewandte Chemie-International Edition in English* 36, (15) **1997**, 1628-1630. https://doi.org/10.1002/anie.199716281.
- Hutschka, F., Dedieu, A., Eichberger, M., Fornika, R., **Leitner, W.**, Mechanistic aspects of the rhodium-catalyzed hydrogenation of CO2 to formic acid - A theoretical and kinetic study, *Journal of the American Chemical Society* 119, (19) **1997**, 4432-4443. https://doi.org/10.1021/ja961579x.
- Furstner, A., Koch, D., Langemann, K., **Leitner, W.**, Six, C., Olefin metathesis in compressed carbon dioxide, *Angewandte Chemie-International Edition in English* 36, (22) **1997**, 2466-2469. https://doi.org/10.1002/anie.199724661.
- Bogdanovic, B., **Leitner, W.**, Six, C., Wilczok, U., Wittmann, K., ''Grignard-analogous'' rhodium phosphane complexes, *Angewandte Chemie-International Edition in English* 36, (5) **1997**, 502-504. https://doi.org/10.1002/anie.199705021.
- Blackmond, D. G., **Leitner, W.**, Fine chemicals catalysis, part I - Preface, *Topics in Catalysis* 4, (3-4) **1997**.
- Angermund, K., Baumann, W., Dinjus, E., Fornika, R., Gorls, H., Kessler, M., Kruger, C., **Leitner, W.**, Lutz, F., Complexes (P-2)Rh(hfacac) as model compounds for the fragment (P-2)Rh and as highly active catalysts for CO2 hydrogenation: The accessible molecular surface (AMS) model as an approach to quantifying the intrinsic steric properties of chelating ligands in homogeneous catalysis, *Chemistry-a European Journal* 3, (5) **1997**, 755-764. https://doi.org/10.1002/chem.19970030516.

1996

- **Leitner, W.**, The coordination chemistry of carbon dioxide and its relevance for catalysis: A critical survey, *Coordination Chemistry Reviews* 153, **1996**, 257-284. https://doi.org/10.1016/0010-8545(95)01226-5.
- **Leitner, W.**, The coordination chemistry of carbon dioxide and its relevance for catalysis: A critical study (vol 153, pg 257, 1996), *Coordination Chemistry Reviews* 155, **1996**, 247-247. https://doi.org/10.1016/s0010-8545(96)01317-3.
- Graf, E., **Leitner, W.**, Activation of carbon dioxide .6. Ligand effects in the catalytic hydrogenation of carbon dioxide to formic acid using in situ catalysts formed from {(cod)Rh(mu-Cl)}(2) and monodentate and bidentate phosphorus ligands, *Chemische Berichte* 129, (1) **1996**, 91-96. https://doi.org/10.1002/cber.19961290118.
- Gassner, F., Dinjus, E., Gorls, H., **Leitner, W.**, CO2 activation .7. Formation of the catalytically active intermediate in the hydrogenation of carbon dioxide to formic acid using the {(COD)Rh(mu-H)}(4) /Ph(2)P(CH2)(4)PPh(2) catalyst: First direct observation of hydride migration from rhodium to coordinated 1,5-cyclooctadiene, *Organometallics* 15, (8) **1996**, 2078-2082. https://doi.org/10.1021/om950913f.
- Fornika, R., Dinjus, E., Gorls, H., **Leitner, W.**, Structure and reactivity of dimeric rhodium(I) formate complexes: X-ray crystal structure analysis of {(cod)Rh(mu-kappa O-2,O'-HCO2)}(2) and phosphane-induced hydride transfer to give an eta(3)-cyclooctenyl complex, *Journal of Organometallic Chemistry* 511, (1-2) **1996**, 145-155. https://doi.org/10.1016/0022-328x(95)05969-v.

1995

- **Leitner, W.**, Carbon Dioxide as a Raw Material: The Synthesis of Formic Acid and Its Derivatives from CO2, *Angewandte Chemie-International Edition* 34, (20) **1995**, 2207-2221. https://doi.org/10.1002/anie.199522071.
- Hutschka, F., Dedieu, A., **Leitner, W.**, σ Metathesis as a Critical Step for the Transition Metal Catalyzed Formation of Formic Acid from CO2 and H2? An Ab Initio Investigation, *Angewandte Chemie-International Edition in English* 34, (16) **1995**, 1742-1745. https://doi.org/10.1002/anie.199517421.
- Fornika, R., Gorls, H., Seemann, B., **Leitner, W.**, Complexes [(P2)Rh(hfacac)](P2= bidentate chelating phosphane, hfacac = hexafluoroacetylacetonate) as catalysts for CO2 hydrogenation: correlations between solid state structures, 103Rh NMR shifts and catalytic activities, *Journal of the Chemical Society-Chemical Communications* (14) **1995**, 1479-1481. https://doi.org/10.1039/c39950001479.
- Dinjus, E**., Leitner, W.**, New insights into the palladium-catalysed synthesis of δ-lactones from 1,3-dienes and carbon dioxide, *Applied Organometallic Chemistry* 9, (1) **1995**, 43-50. https://doi.org/10.1002/aoc.590090108.

1994

- **Leitner, W.**, Dinjus, E., Gaßner, F., Activation of carbon dioxide: IV. Rhodium-catalysed hydrogenation of carbon dioxide to formic acid, *Journal of Organometallic Chemistry* 475, (1-2) **1994**, 257-266. https://doi.org/10.1016/0022-328x(94)84030-x.
- **Leitner, W.**, The Photochemical Activation of Carbon Dioxide Using a Nickel Complex, *Angewandte Chemie-International Edition in English* 33, (2) **1994**, 173-174. https://doi.org/10.1002/anie.199401731.
- Dinjus, E., **Leitner, W.**, Transition Metal Catalysed Activation of Carbon Dioxide Carbon Dioxide Chemistry: *Environmental Issues,* **1994,** 82-92. https://doi.org/10.1016/B978-1-85573-799-0.50014-5
- **Leitner, W.**, Molekulare Erkennung in Bestform, *Nachrichten Aus Chemie Technik Und Laboratorium* 42, (7-8) **1994**, 714-717. https://doi.org/10.1002/nadc.19940420711.

1993

- **Leitner, W.**, Brown, J. M., Brunner, H., Mechanistic aspects of the rhodium-catalyzed enantioselective transfer hydrogenation of .alpha.,.beta.-unsaturated carboxylic acids using formic acid/triethylamine (5:2) as the hydrogen source, *Journal of the American Chemical Society* 115, (1) **1993**, 152-159. https://doi.org/10.1021/ja00054a021.
- Gassner, F., **Leitner, W.**, Hydrogenation of carbon dioxide to formic acid using water-soluble rhodium catalysts, *Journal of the Chemical Society-Chemical Communications* (19) **1993**, 1465-1466. https://doi.org/10.1039/c39930001465.
- Burgermeister, T., Kastner, F., **Leitner, W.**, (PP)2[RhH] and (PP)2[Rh][O2CH] Complexes as Models for the Catalytically Active Intermediates in the Rh-Catalyzed Hydrogenation of CO2 to HCOOH, *Angewandte Chemie-International Edition in English* 32, (5) **1993**, 739-741. https://doi.org/10.1002/anie.199307391.

1992-1988

- **Leitner, W.** (1992). Aktivierung von CO2: Rhodiumkatalysierte Bildung von Ameisensäure aus Kohlendioxid und Wasserstoff GIT Labor Fachzeitschrift 36, 912-913.
- Graf, E., **Leitner, W.**, Direct formation of formic acid from carbon dioxide and dihydrogen using the [{Rh(cod)Cl}2]–Ph2P(CH2)4PPh2 catalyst system, *Journal of the Chemical Society-Chemical Communications* (8) **1992**, 623-624. https://doi.org/10.1039/c39920000623.
- Brown, J. M., Brunner, H., Leitner, W., Rose, M., Enantioselective catalytic transfer hydrogenation of α,β-unsaturated carboxylic acids with formates catalyzed by novel ruthenium phosphine complexes, *Tetrahedron-Asymmetry* 2, (5) **1991**, 331-334. https://doi.org/10.1016/s0957-4166(00)82111-4.
- Brunner, H., **Leitner, W.**, Asymmetrische Katalysen LII. Rhodiumkatalysierte enantioselektive Transferhydrierung von C=C-Doppelbindungen mit dem System HCO2H/NEt3 als Wasserstoffquelle, *Journal of Organometallic Chemistry* 387, (2) **1990**, 209-217. https://doi.org/10.1016/0022-328x(90)80025-u.
- Brunner, H., Graf, E., **Leitner, W.**, Wutz, K., Enantioselective Catalysis, Part 48: Highly Enantioselective Catalytic Transfer-Hydrogenation of Itaconic Acid with Formates, *Synthesis-Stuttgart* (10) **1989**, 743-745. . https://doi.org/10.1055/s-1989-27379.
- Brunner, H., **Leitner, W.**, Enantioselective Catalytic Transfer-Hydrogenation of α,β-Unsaturated Carboxylic Acids with Triethylammonium Formate, *Angewandte Chemie-International Edition* 27, (9) **1988**, 1180-1181. https://doi.org/10.1002/anie.198811801.