

List of publications: PD Dr. Andreas J. Vorholt

2020

- Strohmann, M., Vossen, J.T., **Vorholt, A.J.**, Leitner, W. (2020). Recycling of two molecular catalysts in the hydroformylation/aldol condensation tandem reaction using one multiphase system *Green Chemistry* 22(23), 8444-8451. <https://doi.org/10.1039/D0GC03392H>
- Terhorst, M., Plass, C., Hinzmann, A., Guntermann, A., Jolmes, T., Rösler, J., Panke, D., Gröger, H., Vogt, D., **Vorholt, A.J.**, Seidensticker, T. (2020). One-pot synthesis of aldoximes from alkenes *via* Rh-catalysed hydroformylation in an aqueous solvent system *Green Chemistry* 22(22), 7974-7982. <https://doi.org/10.1039/D0GC03141K>
- Terhorst, M., Heider, C., **Vorholt, A.J.**, Vogt, D., Seidensticker, T. (2020). Productivity leap in the homogeneous ruthenium-catalyzed alcohol amination through catalyst recycling avoiding volatile organic solvents *ACS Sustainable Chemistry & Engineering* 8(27), 9962-9967. <https://doi.org/10.1021/acssuschemeng.0c03413>
- Esteban, J., **Vorholt, A.J.**, Leitner, W. (2020). 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), 2097-2128. <https://doi.org/10.1039/C9GC04208C>
- Terhorst, M., Kampwerth, A., Marschand, A., Vogt, D., **Vorholt, A.J.**, Seidensticker, T. (2020). Facile catalyst recycling by thermomorphic behaviour avoiding organic solvents: a reactive ionic liquid in the homogeneous Pd-catalysed telomerisation of the renewable β -myrcene *Catalysis Science & Technology* 10(6), 1827-1834. <https://doi.org/10.1039/C9CY02569C>
- Vogelsang, D., Vondran J., Hares, K., Schäfer, K., Seidensticker, T., **Vorholt, A.J.** (2020). Palladium catalysed acid-free Carboxytelomerisation of 1,3-Butadiene with Alcohols accessing Pelargonic Acid Derivatives including Triglycerides under selectivity control *Advanced Synthesis & Catalysis* 362(3), 679-687. <https://doi.org/10.1002/adsc.201901383>

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- Strohmann, M., Bordet, A., **Vorholt, A.J.**, Leitner, W. (2019). Tailor-Made Biofuel 2-Butyltetrahydrofuran from the Continuous Flow Hydrogenation and Deoxygenation of Furfuralacetone *Green Chemistry* 21(23), 6299-6306. <https://doi.org/10.1039/c9gc02555c>
- Bianga, J., Künnemann, K.U. Gaide, T., **Vorholt, A.J.**, Seidensticker, T., Dreimann, M., Vogt, D. (2019). Thermomorphic Multiphase Systems - Switchable Solvent Mixtures for the Recovery of Homogeneous Catalysts in Batch and Flow Processes *Chemistry - A European Journal* 25(50), 11586-11608. <https://doi.org/10.1002/chem.201902154>
- Esteban, J., Warmeling, H., **Vorholt, A.J.** (2019). Utilization of deep eutectic solvents based on choline chloride in the biphasic hydroformylation of 1-decene with rhodium complexes *Catalysis Communications* 129, 105721. <https://doi.org/10.1016/j.catcom.2019.105721>
- Plass, C., Hinzmann, A., Terhorst, M., Brauer, W., Oike, K., Yavuzer, H., Asano, Y., **Vorholt, A.J.**, Betke, T., Gröger, H. (2019). Approaching Bulk Chemical Nitriles from Alkenes: A Hydrogen Cyanide-Free Approach through Combination of Hydroformylation and Biocatalysis *ACS Catalysis* 9, 5198-5203. <https://doi.org/10.1021/acscatal.8b05062>

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- Kuhlmann, R., Künnemann, K.U., Hinderink, L., Behr, A., **Vorholt, A.J.** (2019) CO₂ based synthesis of various formamides in miniplant scale: a two-step process design *ACS Sustainable Chemistry & Engineering* 7(5), 4924-4931. <https://doi.org/10.1021/acssuschemeng.8b05477>
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- Vogelsang, D., Vondran, J., **Vorholt, A.J.** (2018). One-step palladium catalysed synthetic route to unsaturated pelargonic C₉-amides directly from 1,3-butadiene *Journal of Catalysis* 365,24-28. <https://doi.org/10.1016/j.jcat.2018.06.004>
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- Hernandez, R., Dreimann, J.M., **Vorholt, A.J.**, Behr, A., Engell, S. (2018). An Iterative Real-time Optimization Scheme for the Optimal Operation of Chemical Processes under Uncertainty. Proof of Concept in a Miniplant *Industrial & Engineering Chemistry Research* 57(26), 8750-8770. <https://doi.org/10.1021/acs.iecr.8b00615>
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