List of publications in peer-review journals

2019

1. F. J. Holzhäuser, J. B. Mensah, **R. Palkovits***, *Green Chem.* (**2019**) *DOI: 10.1039/c9gc03264a*: (Non-)Kolbe Electrolysis in Biomass Valorisation – A Discussion of Potential Applications
2. J. Meyers, J. B. Mensah, F. J. Holzhäuser, A. Omari, C. C. Blesken, T. Tiso, S. Palkovits, L. M. Blank, S. Pischinger, **R. Palkovits***, *Energy Environ. Sci.* (**2019**) 12, 2406-2411: Electrochemical conversion of a bio-derivable hydroxy-acid to a drop-in oxygenate diesel fuel
3. **R. Palkovits**, S. Palkovits*, *ACS Catal.* (**2019**) *doi: 10.1021/acscatal.9b01985*: Using artificial intelligence to forecast water oxidation catalysts
4. X. Wang, A. K. Beine, P. J.C. Hausoul, **R. Palkovits***, *ChemSusChem*. (**2019**) *doi: 10.1002/cssc.201902347*: $Mg(OH)_2$ facilitated liquid-phase conversion of lactic acid to 1,2-propanediol over Cu– an experimental and theoretical study
5. F. Zeng, C. Broicher, J. P. Hofmann, S. Palkovits, **R. Palkovits***, *ChemCatChem*. (**2019**) *doi: 10.1002/cctc.201901493:* Facile synthesis of sulfur-containing transition metal (Mn, Fe, Co, and Ni) (hydr)oxides for efficient oxygen evolution reaction
6. L. Negahdar, F. Zeng, C. Broicher, S. Palkovits, **R. Palkovits***, *ChemElectroChem.* (**2019**) *doi: 10.1002/celc.201901265*: Mechanistic Aspects of the Electrocatalytic Oxygen Evolution Reaction over Ni Co Oxides
7. B. Gomes, F. J. Holzhäuser, C. Lobo, P. Ferreira da Silva, E. Danieli, M. Carmo, L. Colnago, S. Palkovits, **R. Palkovits**, B. Blümich, *ACS Sustain. Chem. Eng.* (**2019**) *doi: 10.1021/acssuschemeng.9b02768*: Sustainable electro coupling of the biogenic valeric acid under in situ low-field NMR conditions
8. M. O. Haus, Y. Louven, **R. Palkovits**, *Green Chem.* (**2019**) *DOI: 10.1039/C9GC01488H*: Extending the Chemical Product Tree: A Green Value Chain for the Production of N-Vinyl-2-Pyrrolidones from Biogenic Acids
9. J. Simböck, A. Khetan, N. Pegios, R. Iskandar, A. Schwedt, J. M. A. Harmsen, T. E. Weirich, H. Pitsch, **R. Palkovits***, *Appl. Catal. A*, (**2019**) 117178: Deactivation Reactions on a Commercial Lean NOx-trap - Effect of Hydrocarbon Nature, Concentration and Operation Temperature
10. P. Hoang Ho, M. Jabłońska*, M. Nocuń, G. Fornasari, F. Ospitali, A. Vaccari, P. Benito, **R. Palkovits***, *ChemCatChem*. (**2019**) *DOI: 10.1002/cctc.201901394*: Effect of neodymium in Co(Cu)-Al mixed oxides on their physico-chemical properties and activity in N_2O decomposition
11. P. Hoang Ho, M. Jabłońska, **R. Palkovits**, E. Rodríguez-Castellón, F. Ospitali, G. Fornasari, A. Vaccari, P. Benito, *Chem Eng. J.,* **2019**, 379, 122259: N_2O catalytic decomposition on electrodeposited Rh-based open-cell metallic foams
12. C. Mebrahtu, S. Perathoner, G. Giorgianni, S. Chen, G. Centi, F. Krebs, **R. Palkovits**, S. Abate, *Catal. Sci. Technol.* **2019**, 9 (15), 4023-4035: Deactivation mechanism of hydrotalcite-derived Ni–AlO_x catalysts during low-temperature CO_2 methanation via Ni-hydroxide formation and the role of Fe in limiting this effect
13. L. Kipshagen, M. J. Lach, L. Vömel, M. A. Liauw, A. Klemmer, A. Schulz, C. Kropf, P. J. C. Hausoul*, **R. Palkovits***, *Green Chem.* (**2019**), doi.: GC-ART-04-2019-001163: Anionic surfactants based on intermediates of carbohydrate conversion

14. X. Wang, A. K. Beine, P. J. C. Hausoul, **R. Palkovits**, *ChemCatChem.* 11 (**2019**) 16, 4123-4129: Cu/C-catalyzed hydrogenolysis of sorbitol to glycols–on the influence of particle size and base
15. G. Tuci, A. Iemhoff, H. Ba, L. Luconi, A. Rossin, V. Papaefthimiou, **R. Palkovits**, J. Artz, C. Pham-Huu, G. Giambastiani, *Beilstein J. Nanotechnol.* (**2019**) 10, 1217-1227 accepted: Playing with Covalent Triazine Framework Tiles for Improved CO2 Adsorption Properties and Catalytic Performance
16. R. Sun, A. Kann, H. Hartmann, A. Besmehn, P. J. C. Hausoul*, **R. Palkovits***, *ChemSusChem.* (**2019**) doi.:10.1002/cssc.201900808: Direct synthesis of methyl formate from CO_2 using phosphine-based polymer-bound Ru catalysts
17. M. Jablonska, **R. Palkovits**, *Catal. Sci. Technol.* (**2019**) doi.:10.1039/C8CY02458H: Perovskite-based catalysts for nitrogen oxides diesel engine emission control
18. S. Palkovits, **R. Palkovits**, *Chem. Ing. Technik*, (**2019**) doi.: 1002/cite.201800205: The Role of Electrochemistry in Future Dynamic Bio-Refineries: A Focus on (Non-)Kolbe Electrolysis
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21. R. Sun, I. Delidovich, **R. Palkovits***, *ACS Catal.* (**2019**) 9, 1298-1318 (DOI: 10.1021/acscatal.8b04441): Dimethoxymethane as a Cleaner Synthetic Fuel: Synthetic Methods, Catalysts, and Reaction Mechanism
22. F. Zeng, X. Xi, H. Cao, Y. Pei, H. J. Heeres*, **R. Palkovits***, *Appl. Catal. B.* 246 (**2019**) 232-241 (doi:10.1016/j.apcatb.2019.01.063): Synthesis of mixed alcohols with enhanced C3+ alcohol production by CO hydrogenation over potassium promoted molybdenum sulfide
23. Y. Louven, K. Schute, **R. Palkovits***, *ChemCatChem.* (**2019**) 11, 439-442: Ruthenium Catalyzed Reductive Transformation of Itaconic Acid and Ammonia into 3- and 4-Methyl-pyrrolidone
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29. M. Jabłońska*, L. Buselli, M. Nocuń, **R. Palkovits***, *ChemCatChem.* 10 (**2018**) 1, 296–304: Ag-Doped Co-(Mg)-Al-Ox Mixed Metal Oxides as Potential Catalysts for N_2O Decomposition

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26. C. Gierlich, I. Delidovich, **R. Palkovits**, *Patent application pending* (**2018**) DE 10 2018 101 216.0: Adsorptive Trennung von Oxymethylenethern

Selected Invited Lectures: (more than 120 lectures at conferences, universities and companies)

1. **Keynote Lecture** on *"Solid Catalysts to Access Tailored Monomers from Biomass"* at 14th European Congress on Catalysis (**EuropaCat 2019)**, August **2019**, Aachen/Germany.
2. **Keynote Lecture** on *"Possible Contributions of Material Design and Chemo-Catalysis in Future Biorefineries"* at **CLIB** Networking Day, September **2019**, Düsseldorf, Germany
3. **Invited Lecture** on *"Catalyst design as key elements of an efficient use of renewable carbon resources"* at the **Royal Society Discussion Meeting** on science to enable the circular economy, June **2019**, London, UK
4. **Plenary Lecture** on *"Solid catalyst design for closed CO_2 cycles"* at **SeCat2019** (Spanish Catalysis Meeting), June **2019**, Cordoba, Spain
5. **Invited Lecture** on *"Heterogeneous Catalysis and electro-catalysis - crucial elements of an efficient & flexible use of renewable carbon resources"* at **Max-Planck-Institut für Kohlenforschung**, April **2019**, Mülheim an der Ruhr, Germany
6. **Public Lecture** on "*Chemie auf dem Weg zur Nachhaltigkeit"* at **Parlamentarischer Abend des Landtags NRW**, March **2019**, Düsseldort, Germany
7. **Invited Lecture** on "*Heterogeneous Catalysis and electro-catalysis - crucial elements of an efficient & flexible use of renewable carbon resources*" at **Max-Planck-Institute for Dynamics of Complex Technical Systems**, September **2018**, Magdeburg, Germany
8. **GDCh Lecture** on "*Material concepts for the valorization of renewable feedstocks*" at **University Augsburg**, January **2018**, Augsburg, Germany
9. **Invited Lecture** on *"Renewable Resources: Opportunities provided by the catalytic valorization of biomass, CO_2 & green electrons"* at **UFZ** (Zentrum für Umweltforschung), August **2018**, Leipzig, Germany
10. **Public Lecture** on "*Integrating Renewable Energy and Carbon Sources with Catalysis"* at the Outreach **Symposium of Royal Netherlands Academy of Arts and Sciences** on Fuelling the future: How catalysis may contribute to a more sustainable society, December **2017**, Utrecht, The Netherlands
11. **Keynote Lecture** on "*Catalyst concepts for an efficient valorisation of renewable carbon sources*" at 13th European Congress on Catalysis (**EuropaCat 2017**), August 2017, Firence, Italy
12. **Keynote Lecture on** "*Nanoporous polymers: promising materials for application in biorefineries*" at Netherlands Catalysis and Chemistry Conference (**NCCC 2016**), March 2016, Nordwijkerhout, The Netherlands
13. **Keynote Lecture** on "*Biomass as renewable feedstock: a challenge for catalysis & chemical engineering*" at Annual Meeting of Inorganic Chemistry and Chemical Technology Division, February **2016**, Frankfurt, Germany
14. **Keynote Lecture** on "*Future Biorefineries: A challenge for chemistry & engineering*" at the **1st Green and Sustainable Chemistry Conference**, April **2016**, Berlin, Germany
15. **Keynote Lecture** on "*Solvent selection: Challenges and opportunities for catalysis & process design*" at **Green Solvents Conference 2016**, October 2016, Kiel, Germany
16. **Plenary Lecture** on "*Chemocatalytic Valorization of Cellulose-Dream or Reality*" at 3rd Intern. Symposium on Green Chemistry (**ISGC 2015**), May 2015, La Rochelle, France
17. **Plenary Lecture** on "*Efficient carbohydrate valorization: Reaction pathways, catalysis, separation*" at **2nd EuCheMS**, October **2015**, Lisbon, Portugal
18. **Invited Lecture** on "*Chemical Energy Storage By Nature: Bridging Catalyst and Process Design*" at the **EU-US Frontiers of Engineering meeting**, November **2014**, Seattle, USA