



Veröffentlichungen

des Helmholtz-Zentrums für Umweltforschung – UFZ

Forschungsbereich Energie

Vorbemerkung

Das vorliegende Veröffentlichungsverzeichnis umfasst die im Jahre 2020 erschienenen Publikationen des Programmes "Erneuerbare Energien" im Forschungsbereich Energie, die von MitarbeiterInnen der Helmholtz-Zentrum für Umweltforschung GmbH - UFZ verfasst, mitverfasst oder herausgegeben wurden.

Redaktionsschluss für diese Publikationsliste war der 25.02.2021.

Im Unterschied zu externen AutorInnen sind UFZ-Angehörige bei allen Publikationen durch **fette Schrift** hervorgehoben.

Das anschließende alphabetische Register verzeichnet alle UFZ-AutorInnen mit den jeweiligen laufenden Nummern ihrer Publikationen.

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1. Alvarez Esquivel, D.Y., Guo, Y., Brown, R.K., Müller, S., Schröder, U., Harnisch, F. (2020):
Investigating community dynamics and performance during microbial electrochemical degradation of whey
ChemElectroChem **7** (4), 989 - 997
2. Askitosari, T.D., Berger, C., Tiso, T., Harnisch, F., Blank, L.M., Rosenbaum, M.A. (2020):
Coupling an electroactive *Pseudomonas putida* KT2440 with bioelectrochemical rhamnolipid production
Microorganisms **8** (12), art. 1959
3. **Babel, H., Krömer, J.O.** (2020):
Evolutionary engineering of *E. coli* MG1655 for tolerance against isoprenol
Biotechnol. Biofuels **13** , art. 183
4. Dalby, F.R., Hansen, M.J., Feilberg, A., Kümmel, S., Nikolausz, M. (2020):
Effect of tannic acid combined with fluoride and lignosulfonic acid on anaerobic digestion in the agricultural waste management chain
Bioresour. Technol. **307** , art. 123171
5. **David, C., Heuschkel, I., Bühler, K., Karande, R.** (2020):
Cultivation of productive biofilms in flow reactors and their characterization by CLSM
In: Guisan, J.M., Bolivar, J.M., López-Gallego, F., Rocha-Martín, J. (eds.)
Immobilization of Enzymes and Cells
Methods in Molecular Biology *2100*
Humana Press, p. 437 - 452
6. Formann, S., Hahn, A., Janke, L., Stinner, W., Sträuber, H., Logroño, W., Nikolausz, M. (2020):
Beyond sugar and ethanol production: Value generation opportunities through sugarcane residues
Front. Energy Res. **8** , art. 579577
7. **Fricke, C., Harms, H., Maskow, T.** (2020):
How to speed up the detection of aerobic microbial contaminations by using isothermal microcalorimetry
J. Therm. Anal. Calorim. **142** (5), 1933 - 1949
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Rapid culture-based detection of *Legionella pneumophila* using isothermal microcalorimetry with an improved evaluation method
Microb. Biotechnol. **13** (4), 1262 - 1272

9. Fruehauf, H.M., Enzmann, F., **Harnisch, F.**, Ulber, R., Holtmann, D. (2020):
Microbial electrosynthesis – An inventory on technology readiness level and performance of different process variants
Biotechnol. J. **15** (10), art. 2000066
10. Gonçalves, R.D., **Stollberg, R.**, **Weiss, H.**, Chang, H.K. (2020):
Using GRACE to quantify the depletion of terrestrial water storage in Northeastern Brazil: The Urucuia Aquifer System
Sci. Total Environ. **705** , art. 135845
11. Greinert, T., **Vogel, K.**, Mühlenweg, J.-K., Sadowski, G., **Maskow, T.**, Held, C. (2020):
Standard Gibbs energy of metabolic reactions: VI. Glyceraldehyde 3-phosphate dehydrogenase reaction
Fluid Phase Equilib. **517** , art. 112597
12. Greinert, T., **Vogel, K.**, Seifert, A.I., Siewert, R., Andreeva, I.V., Verevkin, S.P., **Maskow, T.**, Sadowski, G., Held, C. (2020):
Standard Gibbs energy of metabolic reactions: V. Enolase reaction
BBA-Proteins Proteomics **1868** (4), art. 140365
13. **Hegner, R.**, **Neubert, K.**, Kroner, C., Holtmann, D., **Harnisch, F.** (2020):
Coupled electrochemical and microbial catalysis for the production of polymer bricks
ChemSusChem **13** (19), 5295 - 5300
14. Kadier, A., Jain, P., **Lai, B.**, Kalil, M.S., Kondaveeti, S., Alabbosh, K.F.S., Abu-Reesh, I.M., Mohanakrishna, G. (2020):
Biorefinery perspectives of microbial electrolysis cells (MECs) for hydrogen and valuable chemicals production through wastewater treatment
Biofuel Res. J. **25** , 1128 - 1142
15. **Koch, C.**, **Kuchenbuch, A.**, Marosvölgyi, M., Weisshart, K., **Harnisch, F.** (2020):
Label-free four-dimensional visualization of anaerobically growing electroactive biofilms
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Determining incremental coulombic efficiency and physiological parameters of early stage *Geobacter* spp. enrichment biofilms
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18. **Korth, B., Kuchenbuch, A., Harnisch, F.** (2020):
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Economic process evaluation and environmental life-cycle assessment of bio-aromatics production
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Cytochrome c reductase is a key enzyme involved in the extracellular electron transfer pathway towards transition metal complexes in *Pseudomonas putida*
ChemSusChem **13** (19), 5308 - 5317

22. **Liu, B., Kleinsteuber, S., Centler, F., Harms, H., Sträuber, H.** (2020):
Competition between butyrate fermenters and chain-elongating bacteria limits the efficiency of medium-chain carboxylate production
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Three novel *Clostridia* isolates produce *n*-caproate and *iso*-butyrate from lactate: comparative genomics of chain-elongating bacteria
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Microbial resource management for ex situ biomethanation of hydrogen at alkaline pH
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25. Luo, J., Xue, W., **Shao, H.** (2020):
Thermo-economic comparison of coal-fired boiler-based and groundwater-heat-pump based heating and cooling solution – A case study on a greenhouse in Hubei, China
Energy Build. **223** , art. 110214

26. Mayr, J.C., **Rosa, L.F.M.,** Klinger, N., Grosch, J.-H., **Harnisch, F.,** Spiess, A.C. (2020):
Response-surface-optimized and scaled-up microbial electrosynthesis of chiral alcohols
ChemSusChem **13** (7), 1808 - 1816

27. **Mock, M., Schmid, A., Bühler, K.** (2020):
Directed reaction engineering boosts succinate formation of *Synechocystis* sp. PCC 6803_Δ*slI1625*
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28. **Nikolausz, M., Kretzschmar, J.** (2020):
Anaerobic digestion in the 21st century. Editorial
Bioengineering **7** , art. 157
29. **Popp, D., Centler, F.** (2020):
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30. **Rohwerder, T.** (2020):
New structural insights into bacterial sulfoacetaldehyde and taurine metabolism
Biochem. J. **477** (8), 1367 - 1371
31. **Rohwerder, T., Rohde, M.-T., Jehmlich, N., Purswani, J.** (2020):
Actinobacterial degradation of 2-hydroxyisobutyric acid proceeds via acetone and formyl-CoA by employing a thiamine-dependent lyase reaction
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33. Shao, H., Wang, Y., **Nagel, T., Kolditz, O., Yoshioka, K.** (2020):
Determination of permeability for hydrocarbon release due to excavation-induced stress redistribution in rock salt
Int. J. Rock Mech. Min. Sci. **136** , art. 104525
34. Till, P., **Toepel, J., Bühler, B., Mach, R.L., Mach-Aigner, A.R.** (2020):
Regulatory systems for gene expression control in cyanobacteria
Appl. Microbiol. Biotechnol. **104** (5), 1977 - 1991
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Error-controlled implicit time integration of elasto-visco-plastic constitutive models for rock salt
Int. J. Numer. Anal. Methods Geomech. **44** (8), 1109 - 1127
36. Zhu, B., Ye, Z., Wang, L., Kong, D., Xu, W., **Kolditz, O., Nagel, T., Chen, Y.** (2020):
Hydro-mechanical behavior of unsaturated soil surrounding a heated pipeline considering moisture evaporation and condensation
Comput. Geotech. **119** , art. 103377

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Monitoring stratification of anode biofilms in bioelectrochemical laminar flow reactors
using flow cytometry
Environ. Sci. Ecotechnol. **4**, art. 10062

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38. Fischer, A., Kuntze, K., Müller, L., **Richnow, H.-H., Nikolausz, M.** (2020):
Differentiation of methanogenic pathways in biogas plants using compound-specific stable isotope analysis
In: Liebetrau, J., Pfeiffer, D. (eds.)
Collection of methods for biogas. Methods to determine parameters for analysis purposes and parameters that describe processes in the biogas sector
Biomass energy use 7
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39. **Lai, B., Krömer, J.O.** (2020):
Steering redox metabolism in *Pseudomonas putida* with microbial electrochemical technologies
In: Tiquia-Arashiro, S. M., Pant, D. (eds.)
Microbial Electrochemical Technologies
CRC Press, Boca Raton, FL, p. 59 - 75
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Nucleic acid based molecular biology tests
In: Liebetrau, J., Pfeiffer, D. (eds.)
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41. **Lohse, M., Dusny, C., Kaesler, J., Lechtenfeld, O.J.** (2020):
MRMS powered single cell metabolomics – Quantification of picogram amounts of a biocatalytic product from few living cells
Bruker Application Note 05-2020, MRMS-70, 1877441
Bruker Daltonics, 6 pp.

UFZ-Autorenregister

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