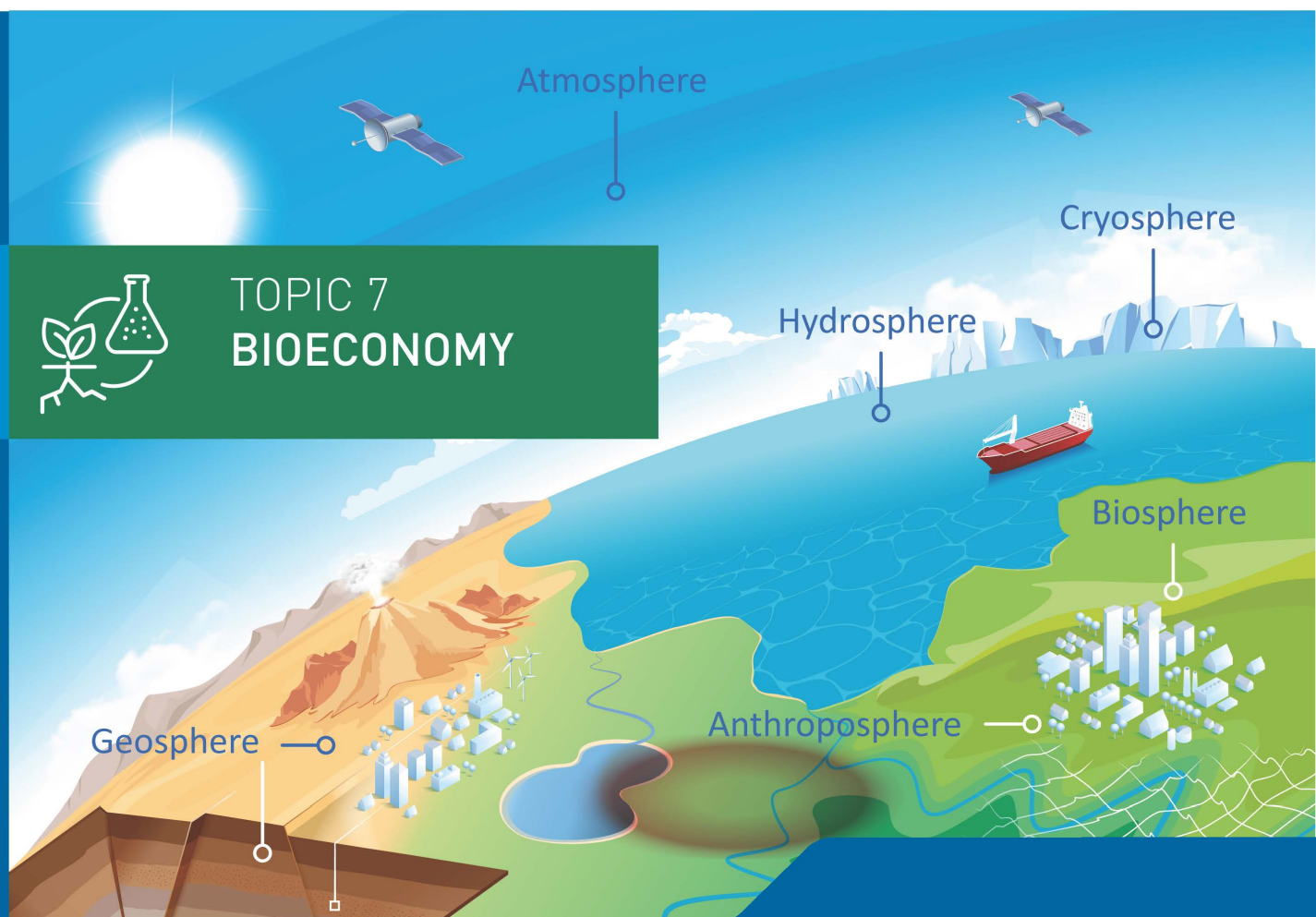




Publications

Helmholtz Centre for Environmental Research – UFZ

Topic 7: Towards a Sustainable Bioeconomy - Resources, Utilization, Engineering and AgroEcosystems

Preface

This list includes all publications of the year 2023 assigned to program topic 7 “Towards a Sustainable Bioeconomy - Resources, Utilization, Engineering and AgroEcosystems” of the Helmholtz research program "Changing Earth – Sustaining our Future" within the research field Earth and Environment which were authored, co-authored or edited by staff members of the Helmholtz Centre for Environmental Research - UFZ.

If a publication belongs to more than one program topic, both primary and secondary assignments are indicated.

The editorial deadline for this publication list was 31 January 2024.

In contrast to external authors, UFZ staff names are highlighted in **bold type** in all publications.

The concluding index lists all UFZ authors in alphabetical order with the sequential numbers of their publications.

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Publications in ISI/Scopus listed journals/series

1. **Abdulkadir, N., Saraiva, J.P., Schattenberg, F., Brizola Toscan, R., Borim Correa, F., Harms, H., Müller, S., Nunes da Rocha, U.** (2023):
Combining flow cytometry and metagenomics improves recovery of metagenome-assembled genomes in a cell culture from activated sludge
Microorganisms **11** (1), art. 175
2. **Abu Quba, A.A., Goebel, M.-O., Karagulyan, M., Miltner, A., Kästner, M., Bachmann, J., Schaumann, G.E., Diehl, D.** (2023):
Changes in cell surface properties of *Pseudomonas fluorescens* by adaptation to NaCl induced hypertonic stress
FEMS Microbes **4** , xtac028
3. **Abu Quba, A.A., Goebel, M.-O., Karagulyan, M., Miltner, A., Kästner, M., Bachmann, J., Schaumann, G.E., Diehl, D.** (2023):
Hypertonic stress induced changes of *Pseudomonas fluorescens* adhesion towards soil minerals studied by AFM
Sci. Rep. **13** , art. 17146
4. **Ahmad, N., Younas, F., Ahmad, H.R., Sarfraz, M., Ayub, M.A., Maqsood, M.A., Rasul, F., Sardar, M.F., Mehmood, T., Ajarem, J.S., Maoda, S.N., Li, X., Cui, Z.** (2023):
Soybean (*Glycine max*) cropland suitability analysis in subtropical desert climate through GIS-based multicriteria analysis and Sentinel-2 multispectral imaging
Land **12** (11), art. 2034
5. **Ali, M.H., Khan, M.I., Naveed, M., Tanvir, M.A.** (2023):
Microbe-assisted rhizoremediation of hydrocarbons and growth promotion of chickpea plants in petroleum hydrocarbons-contaminated soil
Sustainability **15** (7), art. 6081
6. **Álvarez-Barragán, J., Cravo-Laureau, C., Xiong, B., Wick, L.Y., Duran, R.** (2023):
Marine fungi select and transport aerobic and anaerobic bacterial populations from polycyclic aromatic hydrocarbon-contaminated sediments
mBio **14** (2), e02761-22
7. **Arend, M., Ütkür, K., Hawer, H., Mayer, K., Ranjan, N., Adrian, L., Brinkmann, U., Schaffrath, R.** (2023):
Yeast gene *KTI13* (alias *DPH8*) operates in the initiation step of diphthamide synthesis on elongation factor 2
Microb. Cell **10** (9), 195 - 203

8. **Aslam, S., Jing, Y., Nowak, K.M.** (2023):
Fate of glyphosate and its degradation products AMPA, glycine and sarcosine in an agricultural soil: Implications for environmental risk assessment
J. Hazard. Mater. **447** , art. 130847

9. Aumeier, B.M., **Georgi, A., Saeidi, N.,** Sigmund, G. (2023):
Is sorption technology fit for the removal of persistent and mobile organic contaminants from water?
Sci. Total Environ. **880** , art. 163343

10. **Avila Santos, A.P., Kabiru Nata'ala, M., Kasmanas, J.C.,** Bartholomäus, A., Keller-Costa, T., **Jurburg, S.D., Tal, T.,** Camarinha-Silva, A., **Saraiva, J.P.,** de Carvalho, A.C.P.L.F., Stadler, P.F., **Sipoli Sanches, D., Nunes da Rocha, U.** (2023):
The AnimalAssociatedMetagenomeDB reveals a bias towards livestock and developed countries and blind spots in functional-potential studies of animal-associated microbiomes
Animal Microbiome **5** , art. 48
Main topic T7; Secondary topic T9

11. **Balda, M., Mackenzie, K., Wosidlo, S.,** Uhlig, H., Möllmer, J., **Kopinke, F.-D., Schüürmann, G., Georgi, A.** (2023):
Bottom-up synthesis of de-functionalized and dispersible carbon spheres as colloidal adsorbent
Int. J. Mol. Sci. **24** (4), art. 3831
Main topic T7; Secondary topic T9

12. **Baleeiro, F.C.F., Raab, J., Kleinsteuber, S.,** Neumann, A., **Sträuber, H.** (2023):
Mixotrophic chain elongation with syngas and lactate as electron donors
Microb. Biotechnol. **16** (2), 322 - 336

13. **Baleeiro, F.C.F.,** Varchmin, L., **Kleinsteinuber, S., Sträuber, H.,** Neumann, A. (2023):
Formate-induced CO tolerance and methanogenesis inhibition in fermentation of syngas and plant biomass for carboxylate production
Biotechnol. Biofuels Bioprod. **16** , art. 26

14. Barrero-Canosa, J., Wang, L., Oyugi, A., **Klaes, S.,** Fischer, P., **Adrian, L.,** Szewzyk, U., Cooper, M. (2023):
Characterization of phage vB_EcoS-EE09 infecting *E. coli* DSM613 isolated from wastewater treatment plant effluent and comparative Proteomics of the infected and non-infected host
Microorganisms **11** (11), art. 2688

15. Bates, K.A., **Friesen, J.**, Loyau, A., Butler, H., Vredenburg, V.T., **Laufer, J.**, **Chatzinotas, A.**, Schmeller, D.S. (2023):
Environmental and anthropogenic factors shape the skin bacterial communities of a semi-arid amphibian species
Microb. Ecol. **86** (2), 1393 - 1404
16. **Becker, D.**, **Popp, D.**, **Bonk, F.**, **Kleinsteuber, S.**, **Harms, H.**, **Centler, F.** (2023):
Metagenomic analysis of anaerobic microbial communities degrading short-chain fatty acids as sole carbon sources
Microorganisms **11** (2), art. 420
17. Bernat, P., Jasińska, A., Niedziałkowska, K., Słaba, M., Różalska, S., Paraszekiewicz, K., Sas-Paszt, L., **Heipieper, H.J.** (2023):
Adaptation of the metolachlor-degrading fungus *Trichoderma harzianum* to the simultaneous presence of low-density polyethylene (LDPE) microplastics
Ecotox. Environ. Safe. **267** , art. 115656
18. Biedermann, P., Engelmann, S., **Klähn, S.**, Seiffert-Störiko, A., Sieben, C., Sander, J., Kruck, D. (2023):
Journal Club
Biospektrum **29** (4), 382 - 385
19. **Bonatelli, M.L.**, **Rohwerder, T.**, **Popp, D.**, **Liu, Y.**, **Akay, C.**, **Schultz, C.**, **Liao, K.-P.**, **Ding, C.**, **Reemtsma, T.**, **Adrian, L.**, **Kleinsteuber, S.** (2023):
Recently evolved combination of unique sulfatase and amidase genes enables bacterial degradation of the wastewater micropollutant acesulfame worldwide
Front. Microbiol. **14** , art. 1223838
Main topic T7; Secondary topic T9
20. Borer, B., **Magnúsdóttir, S.** (2023):
The media composition as a crucial element in high-throughput metabolic network reconstruction
Interface Focus **13** (2), art. 20220070
21. Boto, S.T., Bardl, B., **Harnisch, F.**, Rosenbaum, M.A. (2023):
Microbial electrosynthesis with *Clostridium ljungdahlii* benefits from hydrogen electron mediation and permits a greater variety of products
Green Chem. **25** (11), 4375 - 4386
22. **Bozan, M.**, **Schmidt, M.**, **Musat, N.**, **Schmid, A.**, **Adrian, L.**, **Bühler, K.** (2023):
Spatial organization and proteome of a dual-species cyanobacterial biofilm alter among N₂-fixing and non-fixing conditions
mSystems **8** (3), art. 00302-23

23. Bredum, S.K., Strathe, A.V., Jacobsen, J., Christoffersen, B.Ø., **Gehre, M., Kümmel, S., Junghans, P., Marcussen, C.** (2023):
Quantifying energy expenditure in Göttingen Minipigs with the ¹³C-bicarbonate method under basal and drug-treated conditions
Clin. Nutr. ESPEN **58** , 388 - 396

24. **Breulmann, M., Kallies, R., Bernhard, K., Gasch, A., Müller, R.A., Harms, H., Chatzinotas, A., van Afferden, M.** (2023):
A long-term passive sampling approach for wastewater-based monitoring of SARS-CoV-2 in Leipzig, Germany
Sci. Total Environ. **887** , art. 164143

25. Buivydaite, Ž., Aryal, L., **Borim Corrêa, F.**, Chen, T., Langlois, V., Elberg, C.L., Netherway, T., Wang, R., Zhao, T., Acharya, B., Emerson, J.B., Hillary, L., Khadka, R.B., Mason-Jones, K., Sapkota, R., Sutela, S., Trubl, G., White III, R.A., Winding, A., Carreira, C. (2023):
Meeting report: The first soil viral workshop 2022
Virus Res. **331** , art. 199121

26. **Cárdenas Espinosa, M.J., Schmidgall, T., Pohl, J., Wagner, G., Wynands, B., Wierckx, N., Heipieper, H.J., Eberlein, C.** (2023):
Assessment of new and genome-reduced *Pseudomonas* strains regarding their robustness as *chassis* in biotechnological applications
Microorganisms **11** (4), art. 837

27. Çelik, G., Stolte, S., **Müller, S., Schattenberg, F.**, Markiewicz, M. (2023):
Environmental persistence assessment of heterocyclic polycyclic aromatic hydrocarbons – Ultimate and primary biodegradability using adapted and non-adapted microbial communities
J. Hazard. Mater. **460** , art. 132370

28. **Chafra, F., Borim Correa, F., Oni, F., Konu Karakayalı, Ö., Stadler, P.F., Nunes da Rocha, U.** (2023):
StandEnA: a customizable workflow for standardized annotation and generating a presence–absence matrix of proteins
Bioinform. Adv. **3** (1), vbad069

29. **Chávez Morejón, M., Franz, A., Karande, R., Harnisch, F.** (2023):
Integrated electrosynthesis and biosynthesis for the production of adipic acid from lignin-derived phenols
Green Chem. **25** (12), 4662 - 4666

30. **Chávez Morejón, M.**, Kurig, N., Tschauder, Y.S., **Harnisch, F.**, Palkovits, R. (2023):
Electrochemical cellobiose valorization: Anodic oxidation to cellobionic acid and
cathodic reduction to cellobitol
ChemistrySelect **8** (27), e202301823

31. Chicaiza-Ortiz, C., Camacho, C., Chicaiza-Ortiz, Á., Beihaan, Z., Jiangyue, D., **Logroño, W.**, Zhang, J. (2023):
The effectiveness of iron-based additives in enhancing methane and hydrogen production:
a systematic review
12th International Conference on Renewable Power Generation (RPG 2023), Shanghai, China, 14-15 October 2023
IET Conference Proceedings 2023
Institution of Engineering and Technology (IET), London,

32. Christgen, B., Spurr, M., Milner, E.M., **Izadi, P.**, McCann, C., Yu, E., Curtis, T., Scott, K., Head, I.M. (2023):
Does pre-enrichment of anodes with acetate to select for *Geobacter* spp. enhance
performance of microbial fuel cells when switched to more complex substrates?
Front. Microbiol. **14** , art. 1199286

33. Cui, L., Xin, Y., Yang, K., Li, H., Tan, F., Zhang, Y., Li, X., Zhu, Z., Yang, J.,
Kao, S.-J., Ren, B., Zhu, Y.-G., Musat, F., **Musat, N.** (2023):
Live tracking metabolic networks and physiological responses within microbial
assemblages at single-cell level
PNAS Nexus **2** (3), pgad006

34. **Dai, S., Harnisch, F., Bin-Hudari, M.S., Keller, N.-S., Vogt, C., Korth, B.** (2023):
Improving the performance of bioelectrochemical sulfate removal by applying flow mode
Microb. Biotechnol. **16** (3), 595 - 604

35. **Davoudpour, Y., Kümmel, S., Musat, N., Richnow, H.H., Schmidt, M.** (2023):
Tracking deuterium uptake in hydroponically grown maize roots using correlative helium
ion microscopy and Raman micro-spectroscopy
Plant Methods **19** , art. 71

36. de Carvalho, I., Apaza-Castillo, G.A., Paz, I.C.P., Guimarães, A.M., Quecine, M.C., **Bonatelli, M.L.** (2023):
Draft genome sequence of the plant growth promoter and biocontrol agent *Bacillus velezensis* strain BIB0110
Microbiol. Resour. Announc. **12** (6), e00231-23

37. **Dzofou Ngoumelah, D., Harnisch, F., Sulheim, S., Heggeset, T.M.B., Aune, I.H., Wentzel, A., Kretzschmar, J.** (2023):
A unified and simple medium for growing model methanogens
Front. Microbiol. **13** , art. 1046260

38. **Dzofou Ngoumelah, D., Kuchenbuch, A., Harnisch, F.,** Kretzschmar, J. (2023):
Combining *Geobacter* spp. dominated biofilms and anaerobic digestion effluents—The effect of effluent composition and electrode potential on biofilm activity and stability
Environ. Sci. Technol. **57** (6), 2584 - 2594

39. Eisenhauer, N., Angst, G., Asato, A.E.B., Beugnon, R., Bönisch, E., Cesarz, S., Dietrich, P., **Jurburg, S.D., Madaj, A.-M.,** Reuben, R.C., Ristok, C., Sünemann, M., Yi, H., Guerra, C.A., Hines, J. (2023):
The heterogeneity–diversity–system performance nexus
Natl. Sci. Rev. **10** (7), nwad109
Main topic T5; Secondary topic T7

40. **Escher, B.I., Altenburger, R.,** Blüher, M., Colbourne, J.K., Ebinghaus, R., Fantke, P., **Hein, M., Köck, W.,** Kümmerer, K., **Leipold, S.,** Li, X., Scheringer, M., **Scholz, S.,** Schlöter, M., Schweizer, P.-J., **Tal, T.,** Tetko, I., Traidl-Hoffmann, C., **Wick, L.Y.,** Fenner, K. (2023):
Modernizing persistence–bioaccumulation–toxicity (PBT) assessment with high throughput animal-free methods
Arch. Toxicol. **97** (5), 1267 - 1283
Main topic T9; Secondary topics T5, T7

41. **Friesen, J., Sanne, M., Khurelbaatar, G., van Afferden, M.** (2023):
"OCTOPUS" principle reduces wastewater management costs through network optimization and clustering
One Earth **6** (9), 1227 - 1234

42. **Garmasukis, R.,** Hackl, C., Charvat, A., Mayr, S.G., Abel, B. (2023):
Rapid prototyping of microfluidic chips enabling controlled biotechnology applications in microspace
Curr. Opin. Biotechnol. **81** , art. 102948

43. **Garmasukis, R.,** Hackl, C., **Dusny, C.,** Elsner, C., Charvat, A., **Schmid, A.,** Abel, B. (2023):
Cryo-printed microfluidics enable rapid prototyping for optical-cell analysis
Microfluid. Nanofluid. **27** , art. 5

44. Gawel, A., **Sühnholz, S., Georgi, A., Kopinke, F.-D., Mackenzie, K.** (2023):
Fe-zeolites for the adsorption and oxidative degradation of nitroaromatic compounds in water
J. Hazard. Mater. **459** , art. 132125

45. **Georgi, A., Köhler, R., Wosidlo, S., Mackenzie, K., Schierz, A.,** Schlosser, A., Stanger, H.-J. (2023):
Fe-zeolite as on-site regenerable adsorber for chlorohydrocarbons in groundwater – from laboratory to pilot test
Chem. Ing. Tech. **95** (12), 1999 - 2007
46. Glidden, C.K., **Karakoç, C.,** Duan, C., Jiang, Y., Beechler, B., Jabbar, A., Jolles, A.E. (2023):
Distinct life history strategies underpin clear patterns of succession in microparasite communities infecting a wild mammalian host
Mol. Ecol. **32** (13), 3733 - 3746
47. **Grosch Schroeder, B., İstanbullu, H.B., Schmidt, M., Logroño, W., Harms, H., Nikolausz, M.** (2023):
Effect of alkaline and mechanical pretreatment of wheat straw on methanogenic enrichment cultures from *Pachnoda marginata* larva gut
Fermentation **9** (1), art. 60
48. Gu, L., Xiao, X., Lee, S.Y., **Lai, B.,** Solem, C. (2023):
Superior anodic electro-fermentation by enhancing capacity for extracellular electron transfer
Bioresour. Technol. **389** , art. 129813
49. **Guo, Y., Rosa, L.F.M.,** Shan, Y., **Harnisch, F., Müller, S.** (2023):
Labor division of electroactive and carbon degrading microorganisms in bioelectrochemical laminar flow reactors
J. Environ. Chem. Eng. **11** (5), art. 111074
50. Gurmani, S.F., Ahmad, N., Shamsher, T., **Mehmood, T.,** Khalid, W., Maqsood, A., Iqbal, T., Shah, M.A. (2023):
Diurnal variation in the atmospheric electric field with respect to aerosol and meteorological parameters at Islamabad, Pakistan
J. Earth Syst. Sci. **132** (3), art. 134
51. **Haenelt, S., Richnow, H.-H.,** Müller, J.A., **Musat, N.** (2023):
Antibiotic resistance indicator genes in biofilm and planktonic microbial communities after wastewater discharge
Front. Microbiol. **14** , art. 1252870
52. **Haenelt, S., Wang, G., Kasmanas, J.C., Musat, F., Richnow, H.H., Nunes da Rocha, U., Müller, J.A., Musat, N.** (2023):
The fate of sulfonamide resistance genes and anthropogenic pollution marker *intI1* after discharge of wastewater into a pristine river stream
Front. Microbiol. **14** , art. 1058350

53. Hänel, M., **Khurelbaatar, G.**, Jespersen, E., Upadhyay, A., Acosta, A., Khalil, N., Brix, H., Arias, C.A. (2023):
Application potential of wastewater fertigated Short Rotation Coppice systems in a selected region (Aligarh, UP, India)
Recycling **8** (5), art. 75
54. Hartmann, S.C., Keppler, F., Greule, M., Lauer, R., **Horst, A.** (2023):
Triple-element stable isotope analysis of chloromethane emitted by royal fern and degraded by club moss
J. Geophys. Res.-Biogeosci. **128** (5), e2022JG007256
55. Hassan, M.A., Faheem, M., **Mehmood, T.**, Yin, Y., Liu, J. (2023):
Assessment of meteorological and air quality drivers of elevated ambient ozone in Beijing via machine learning approach
Environ. Sci. Pollut. Res. **30** (47), 104086 - 104099
56. Hassan, M.A., **Mehmood, T.**, Liu, J., Luo, X., Li, X., Tanveer, M., Faheem, M., Shakoore, A., Dar, A.A., Abid, M. (2023):
A review of particulate pollution over Himalaya region: Characteristics and salient factors contributing ambient PM pollution
Atmos. Environ. **294** , art. 119472
57. **Hellmold, N., Eberwein, M.**, Phan, M.H.T., **Kümmel, S.**, Einsle, O., **Deobald, D., Adrian, L.** (2023):
Dehalococcoides mccartyi strain CBDB1 takes up protons from the cytoplasm to reductively dehalogenate organohalides indicating a new modus of proton motive force generation
Front. Microbiol. **14** , art. 1305108
58. Hennecke, D., Kruse, M., Bräutigam, J., Meisterjahn, B., Klein, J., Claßen, D., Trapp, S., **Kästner, M.**, Libonati Brock, A., Schäffer, A. (2023):
Silylation: a reproducible method for characterization of non-extractable residues (NER) of organic chemicals in the assessment of persistence
Environmental Science-Advances **2** (3), 424 - 432
59. Hirschberg, S., Ghazaani, F., Ben Amor, G., Pydde, M., Nagel, A., Germani, S., Monica, L., Schlör, A., Bauer, H., Hornung, J., Voetz, M., Dwai, Y., **Scheer, B.**, Ringel, F., Kamal-Eddin, O., Harms, C., Fünner, J., **Adrian, L.**, Pruß, A., Schulze-Forster, K., Hanack, K., Kamhieh-Milz, J. (2023):
An efficient and scalable method for the production of immunogenic SARS-CoV-2 virus-like particles (VLP) from a mammalian suspension cell line
Vaccines **11** (9), art. 1469

60. Hoffstadt, K., Cheenakula, D., **Nikolausz, M.**, Krafft, S., **Harms, H.**, Kuperjans, I. (2023):
Design and construction of a new reactor for flexible biomethanation of hydrogen
Fermentation **9** (8), art. 774

61. Höflich, K., Hobler, G., Allen, F.I., Wirtz, T., Rius, G., McElwee-White, L., Krasheninnikov, A.V., **Schmidt, M.**, Utke, I., Klingner, N., Osenberg, M., Córdoba, R., Djurabekova, F., Manke, I., Moll, P.J.W., Manoccio, M., De Teresa, J.M., Bischoff, L., Michler, J., De Castro, O., Delobbe, A., Dunne, P., Dobrovolskiy, O.V., Frese, N., Götzhäuser, A., Mazarov, P., Koelle, D., Möller, W., Pérez-Murano, F., Philipp, P., Vollnhals, F., Hlawacek, G. (2023):
Roadmap for focused ion beam technologies
Appl. Phys. Rev. **10** (4), art. 041311

62. **Holzer, F., Kraus, M., Roland, U.** (2023):
Regenerierung von Trockenmitteln für Wasserstoff durch dielektrische Erwärmung mit Radiowellen. Regeneration of desiccants for hydrogen by dielectric heating with radio waves
Chem. Ing. Tech. **95** (11), 1834 - 1843

63. Höppner, J., Krohn, S., van den Munckhof, E.H.A., **Kallies, R.**, Herber, A., Zeller, K., Tünnemann, J., Matz-Soja, M., **Chatzinotas, A.**, Böhm, S., Hoffmeister, A., Berg, T., Engelmann, C. (2023):
Changes of the bacterial composition in duodenal fluid from patients with liver cirrhosis and molecular bacterascites
Sci. Rep. **13** , art. 23001

64. **Izadi, P., Kas, A., Haus, P., Harnisch, F.** (2023):
On the stability of electrochemical CO₂ reduction reaction to formate at indium electrodes at biocompatible conditions
Electrochim. Acta **462** , art. 142733

65. **Jurburg, S.D.**, Hom, E.F.Y., **Chatzinotas, A.** (2023):
Beyond pathogenesis: Detecting the full spectrum of ecological interactions in the virosphere
PLoS Biol. **21** (5), e3002109

66. **Kallies, R., Hu, D., Abdulkadir, N.**, Schlöter, M., **Nunes da Rocha, U.** (2023):
Identification of huge phages from wastewater metagenomes
Viruses **15** (12), art. 2330

67. Kang, B.R., Kim, J.J., Hong, J.-K., **Schlosser, D.**, Lee, T.K. (2023):
Continuous operation of fungal wheel reactor based on solid-state fermentation for the removal of pharmaceutical and personal care products
J. Environ. Manage. **331** , art. 117316

68. **Kas, A., Izadi, P., Harnisch, F. (2023):**
High salt electrolyte solutions challenge the electrochemical CO₂ reduction reaction to formate at indium and tin cathodes
ChemElectroChem **10** (23), e202300311

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Front cover: High salt electrolyte solutions challenge the electrochemical CO₂ reduction reaction to formate at indium and tin cathodes (ChemElectroChem 23/2023)
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70. **Kas, A., Izadi, P., Harnisch, F. (2023):**
Cover profile: High salt electrolyte solutions challenge the electrochemical CO₂ reduction reaction to formate at indium and tin cathodes
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71. **Kenkel, A., Karande, R., Bühler, K. (2023):**
Evaluating scaling of capillary photo-biofilm reactors for high cell density cultivation of mixed trophies artificial microbial consortia
Eng. Life Sci. **23** (9), e2300014

72. **Keyikoğlu, R., Khataee, A., Orooji, Y. (2023):**
Degradation of emerging pollutants on bifunctional ZnFeV LDH@graphite felt cathode through prominent catalytic activity in heterogeneous electrocatalytic processes
J. Environ. Manage. **342**, art. 118090

73. **Keyikoğlu, R., Khataee, A., Yoon, Y. (2023):**
Enhanced generation of reactive radicals and electrocatalytic oxidation of levofloxacin using a trimetallic CuFeV layered double hydroxide-containing electrode
Chemosphere **340**, art. 139817

74. **Khan, N., Muge, E., Mulaa, F.J., Wamalwa, B., von Bergen, M., Jehmlich, N., Wick, L.Y. (2023):**
Mycelial nutrient transfer promotes bacterial co-metabolic organochlorine pesticide degradation in nutrient-deprived environments
ISME J. **17** (4), 570 - 578
Main topic T7; Secondary topic T9

75. **Klaes, S., Madan, S., Deobald, D., Cooper, M., Adrian, L. (2023):**
GroEL-proteotyping of bacterial communities using tandem mass spectrometry
Int. J. Mol. Sci. **24** (21), art. 15692

76. **Knappe, J., van Afferden, M., Friesen, J. (2023):**
GR2L: A robust dual-layer green roof water balance model to assess multifunctionality aspects under climate variability
Front. Clim. **5**, art. 1115595

77. **Knecht, C.A., Hinkel, M., Mäusezahl, I.,** Kaster, A.-K., **Nivala, J., Müller, J.A.** (2023): Identification of antibiotic resistance gene hosts in treatment wetlands using a single-cell based high-throughput approach
Water **15** (13), art. 2432
78. Kołodyńska, D., Burdzy, K., **Hunger, S., Aurich, A.,** Ju, Y. (2023): Green extractants in assisting recovery of REEs: A case study
Molecules **28** (3), art. 965
79. **Korth, B.,** Pereira, J., Sleutels, T., **Harnisch, F.,** ter Heijne, A. (2023): Comparing theoretical and practical biomass yields calls for revisiting thermodynamic growth models for electroactive microorganisms
Water Res. **242** , art. 120279
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