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Civil and Environmental Engineering

Bio

ACADEMIC APPOINTMENTS

- Research Engineer, Civil and Environmental Engineering

Publications

PUBLICATIONS

- **Microbial electromethanogenesis powered by curtailed renewable electricity** *CELL REPORTS PHYSICAL SCIENCE*
Deutzmann, J., Kracke, F., Spormann, A.
2023; 4 (8)
- **Microbial Electrosynthesis of Acetate Powered by Intermittent Electricity.** *Environmental science & technology*
Deutzmann, J. S., Kracke, F., Gu, W., Spormann, A. M.
2022
- **Intracellular nitrate storage by diatoms can be an important nitrogen pool in freshwater and marine ecosystems** *COMMUNICATIONS EARTH & ENVIRONMENT*
Stief, P., Schauburger, C., Lund, M. B., Greve, A., Abed, R. M., Al-Najjar, M. A., Attard, K., Bonaglia, S., Deutzmann, J. S., Franco-Cisterna, B., Garcia-Robledo, E., Holtappels, M., John, et al
2022; 3 (1)
- **Growth rate-dependent coordination of catabolism and anabolism in the archaeon *Methanococcus maripaludis* under phosphate limitation.** *The ISME journal*
Gu, W., Muller, A. L., Deutzmann, J. S., Williamson, J. R., Spormann, A. M.
2022
- **Developing reactors for electrifying bio-methanation: a perspective from bio-electrochemistry** *SUSTAINABLE ENERGY & FUELS*
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2022
- **In situ electrochemical H₂ production for efficient and stable power-to-gas electromethanogenesis (vol 22, pg 6194, 2020)** *GREEN CHEMISTRY*
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2021
- **An alternative resource allocation strategy in the chemolithoautotrophic archaeon *Methanococcus maripaludis*.** *Proceedings of the National Academy of Sciences of the United States of America*
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- **Efficient Hydrogen Delivery for Microbial Electrosynthesis via 3D-Printed Cathodes.** *Frontiers in microbiology*
Kracke, F., Deutzmann, J. S., Jayatilake, B. S., Pang, S. H., Chandrasekaran, S., Baker, S. E., Spormann, A. M.
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- **Low-Cost Clamp-On Photometers (ClampOD) and Tube Photometers (TubeOD) for Online Cell Density Determination.** *Frontiers in microbiology*
Deutzmann, J. S., Callander, G., Gu, W., Muller, A. L., McCully, A. L., Ahn, J. K., Kracke, F., Spormann, A. M.
1800; 12: 790576
- **In situ electrochemical H₂ production for efficient and stable power-to-gas electromethanogenesis** *GREEN CHEMISTRY*
Kracke, F., Deutzmann, J. S., Gu, W., Spormann, A. M.
2020; 22 (18): 6194–6203
- **Cultivating electroactive microbes - from field to bench.** *Nanotechnology*
Yee, M. O., Deutzmann, J. S., Spormann, A., Rotaru, A.
2020
- **Microbial Battery Powered Enzymatic Electrosynthesis for Carbon Capture and Generation of Hydrogen and Formate from Dilute Organics** *ACS ENERGY LETTERS*
Dubrawski, K. L., Shao, X., Milton, R. D., Deutzmann, J. S., Spormann, A. M., Criddle, C. S.
2019; 4 (12): 2929–36
- **Methanococcus maripaludis Employs Three Functional Heterodisulfide Reductase Complexes for Flavin-Based Electron Bifurcation Using Hydrogen and Formate.** *Biochemistry*
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- **Mediator-free enzymatic electrosynthesis of formate by the Methanococcus maripaludis heterodisulfide reductase supercomplex.** *Bioresource technology*
Lienemann, M. n., Deutzmann, J. S., Milton, R. D., Sahin, M. n., Spormann, A. M.
2018; 254: 278–83
- **Enhanced microbial electrosynthesis by using defined co-cultures** *ISME JOURNAL*
Deutzmann, J. S., Spormann, A. M.
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- **Methane release from sediment seeps to the atmosphere is counteracted by highly active Methylococcaceae in the water column of deep oligotrophic Lake Constance.** *FEMS microbiology ecology*
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- **Extracellular Enzymes Facilitate Electron Uptake in Biocorrosion and Bioelectrosynthesis** *MBIO*
Deutzmann, J. S., Sahin, M., Spormann, A. M.
2015; 6 (2)
- **Anaerobic methane oxidation coupled to denitrification is the dominant methane sink in a deep lake** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Deutzmann, J. S., Stief, P., Brandes, J., Schink, B.
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Lohner, S. T., Deutzmann, J. S., Logan, B. E., Leigh, J., Spormann, A. M.
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Rahalkar, M., Bahulikar, R. A., Deutzmann, J. S., Kroth, P. G., Schink, B.
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- **Anaerobic Oxidation of Methane in Sediments of Lake Constance, an Oligotrophic Freshwater Lake** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*
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Deutzmann, J. S., Woerner, S., Schink, B.
2011; 77 (8): 2573-2581
- **Abundance and Activity of Methanotrophic Bacteria in Littoral and Profundal Sediments of Lake Constance (Germany)** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*
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2009; 75 (1): 119-126