



Prof. Dr. Miriam Agler-Rosenbaum

[Bio Pilot Plant · Head of Department](#) +49 3641 532-1120 miriam.rosenbaum@leibniz-hki.de

Curriculum vitae

Main Research Areas

- Bioelectrochemical Systems
- Defined Microbial Mixed Cultures
- Droplet Microfluidics for Microbial Applications

Professional Career

Since 2017

Chair of Synthetic Biotechnology at Friedrich

2011-2017	Schiller University Jena and Head of Bio Pilot Plant, Leibniz Institute for Natural Product Research and Infection Biology, (HKI) Jena
2009-2011	Junior professor in the field of Microbiology of Defined Mixed Cultures, Institute of Applied Microbiology, RWTH Aachen University, Germany
2007-2008	Research Associate/Sub-Group Leader Department of Biological and Environmental Engineering, Cornell University, Ithaca, NY, USA
2004-2006	Post-Doc, Washington University in St. Louis, USA
1999-2004	PhD Studies, University of Greifswald, Germany Diploma Studies in Biochemistry University of Greifswald

Awards · Appointments · Scientific Activities

Since 2021	Ombudsperson at the HKI
2019	ERC Consolidator Grant “e-Microbe“
2017	f-Cell Award for innovative fuel cell technology for the BMBF-funded project TexKoMBZ
Since 2014	Representative of the International Society for Microbial Electrochemistry and Technology, ISMET
2004-2006	Fellowship of the Fond der Chemischen Industrie

Topics

[Bioprocess intensification](#)

[Microbial bioelectrochemistry](#)

[ToPIS](#)

[ESCAPE](#)

[Microverse](#)

[InfectoOptics-VersaDrop](#)

[e-MICROBe \(ERC\)](#)

Publications

Harnisch F, Deutzmann JS, Boto ST, Rosenbaum MA (2024) Microbial electrosynthesis: opportunities for microbial pure cultures. *Trends Biotechnol* S0167-7799(24), 00033. (Review)

[Details](#)



Schlembach I, Bardl B, Regestein L, Rosenbaum MA (2024) Nonengineered fungus provides a shortcut from cellulose to bulk *Erythro*-isocitric acid. *ACS Sustainable Chem Eng* 12(9),

3408-3418.

[Details](#)



Boto ST, Bardl B, Harnisch F, Rosenbaum MA (2023) Microbial electrosynthesis with *Clostridium ljungdahlii* benefits from hydrogen electron mediation and permits a greater variety of products. *Green Chem* 25(11), 4375-4386.

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Franco A, Chukwubuike A, Meiners C, Rosenbaum MA (2023) Exploring phenazine electron transfer interaction with elements of the respiratory pathways of *Pseudomonas putida* and *Pseudomonas aeruginosa*. *Bioelectrochemistry* 157, 108636.

[Details](#)



Munser AS, Trost M, Schröder S, Graf M, Rosenbaum MA, Tünnermann A (2023) Analysis of

very low bacterial counts in small sample volumes using angle-resolved light scattering. *Appl Opt* 62(2), 411-418.

[Details](#)



Pourmasoumi F, * Hengoju S, * Beck K, Stephan P, Klopffleisch L, Hoernke M, Rosenbaum MA, Kries H (2023) Analysing megasynthetase mutants at high throughput using droplet microfluidics. *Chembiochem* 24(24), e202300680.

[Details](#)



Yang Z, Qiao Y, Konakalla NC, Strøbech E, Harris P, Peschel G, Agler-Rosenbaum M, Weber T, Andreasson E, Ding L (2023) *Streptomyces* alleviate abiotic stress in plant by producing pteridic acids. *Nat Commun* 14(1), 7398.

[Details](#)



Abdollahi M, Al Sbei S, Rosenbaum MA, Harnisch F (2022) The oxygen dilemma: The challenge of the anode reaction for microbial electrosynthesis from CO₂. *Front Microbiol* 13, 947550. (Review)

[Details](#)



Finger M, Palacio-Barrera AM, Richter P, Schlembach I, Büchs J, Rosenbaum MA (2022) Tunable population dynamics in a synthetic filamentous coculture. *MicrobiologyOpen* 11(5), e1324.

[Details](#)



Finger M, Sentek F, Hartmann L, Palacio-Barrera AM, Schlembach I, Rosenbaum MA, Büchs J (2022) Insights into *Streptomyces coelicolor* A3(2) growth and pigment formation with high-throughput online monitoring. *Eng Life Sci* 23(1), e2100151.

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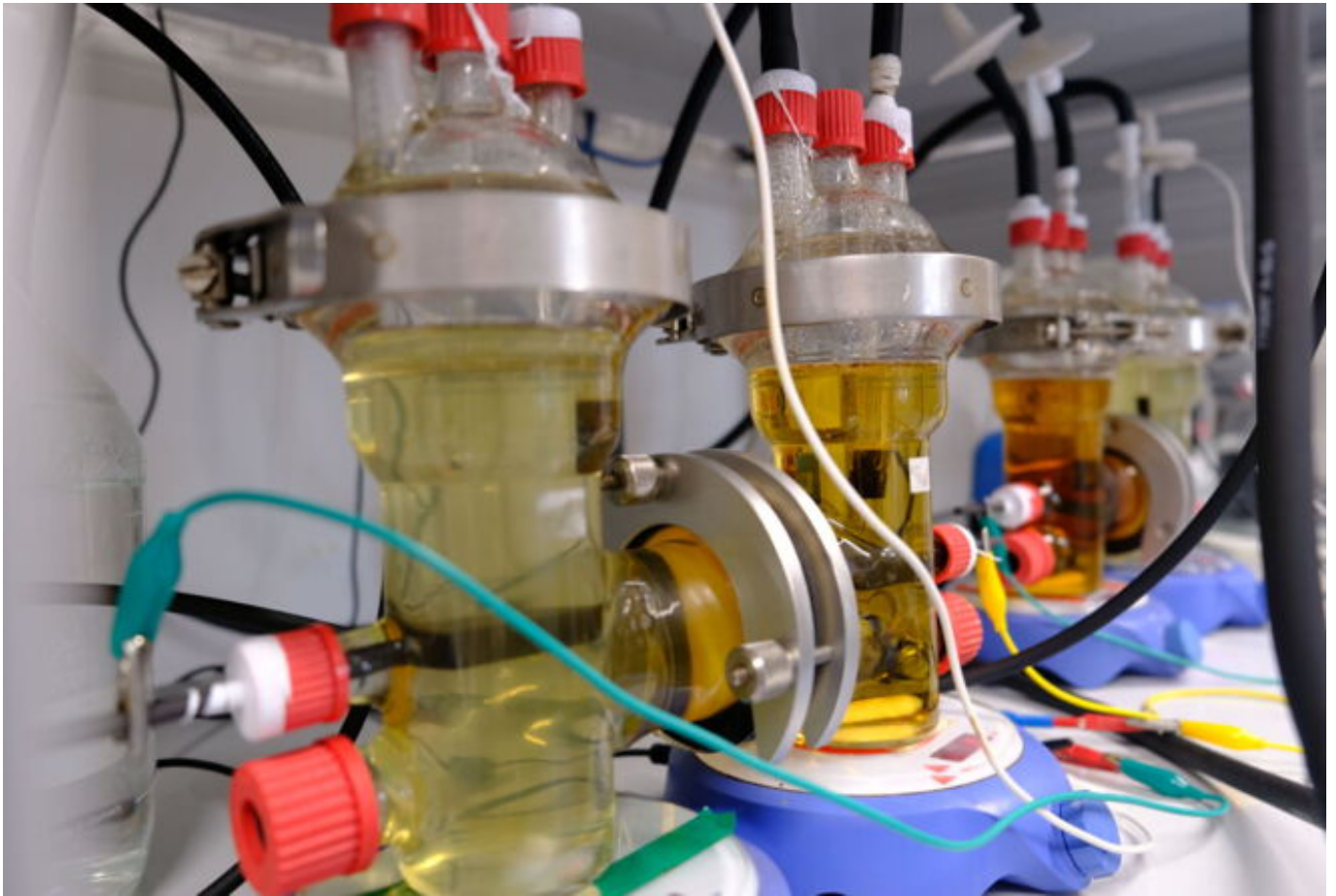
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Teachings

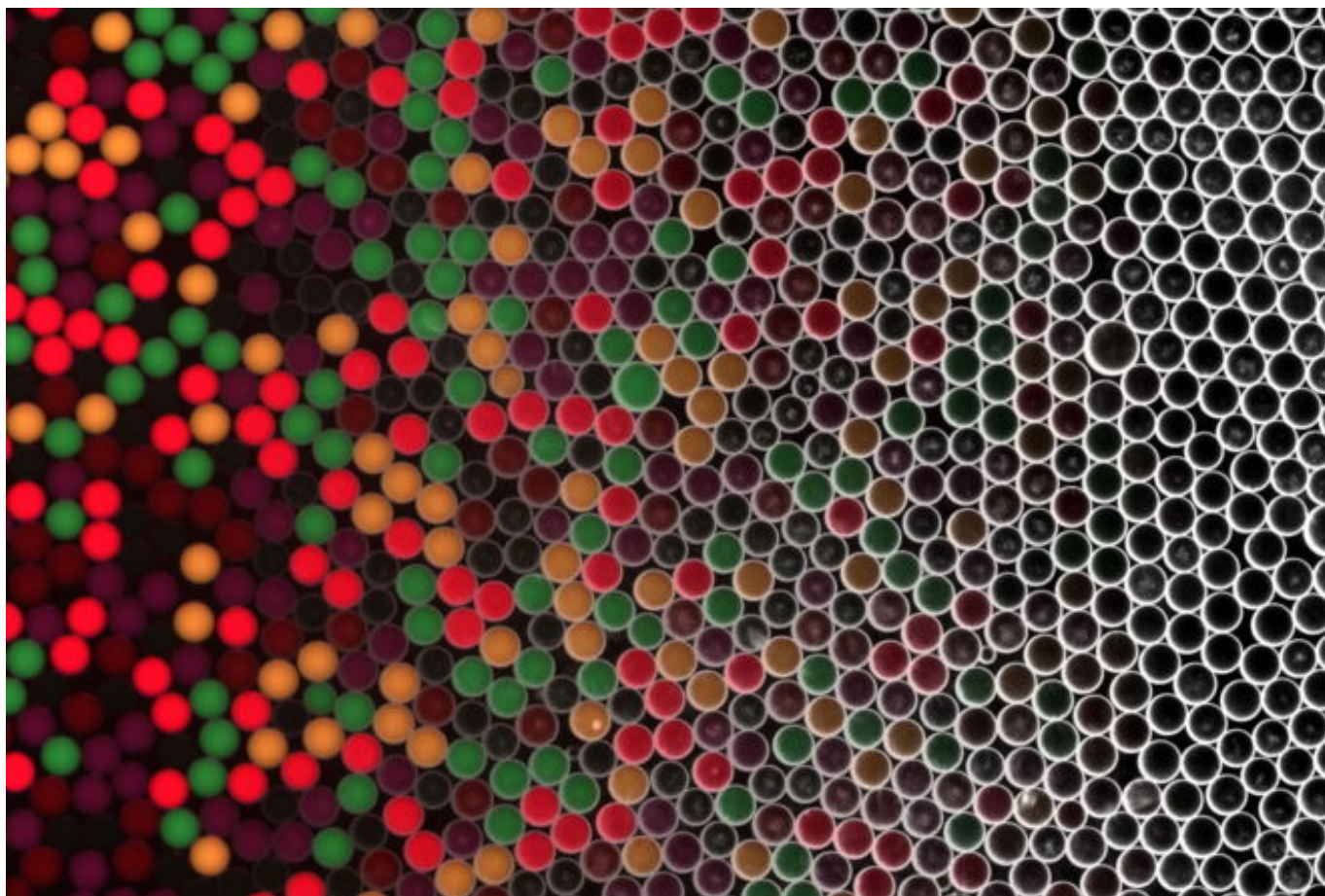
[Lecture Biotechnologie/Bioverfahrenstechnik \(BBC3.A13, MCBW7\) Prof. Dr. Miriam Agler-Rosenbaum](#) [Details](#)

[Lecture Biotechnologie - Mikrobielle Bioelektrochemie \(MMB010\) Prof. Dr. Miriam Agler-Rosenbaum](#) [Details](#)

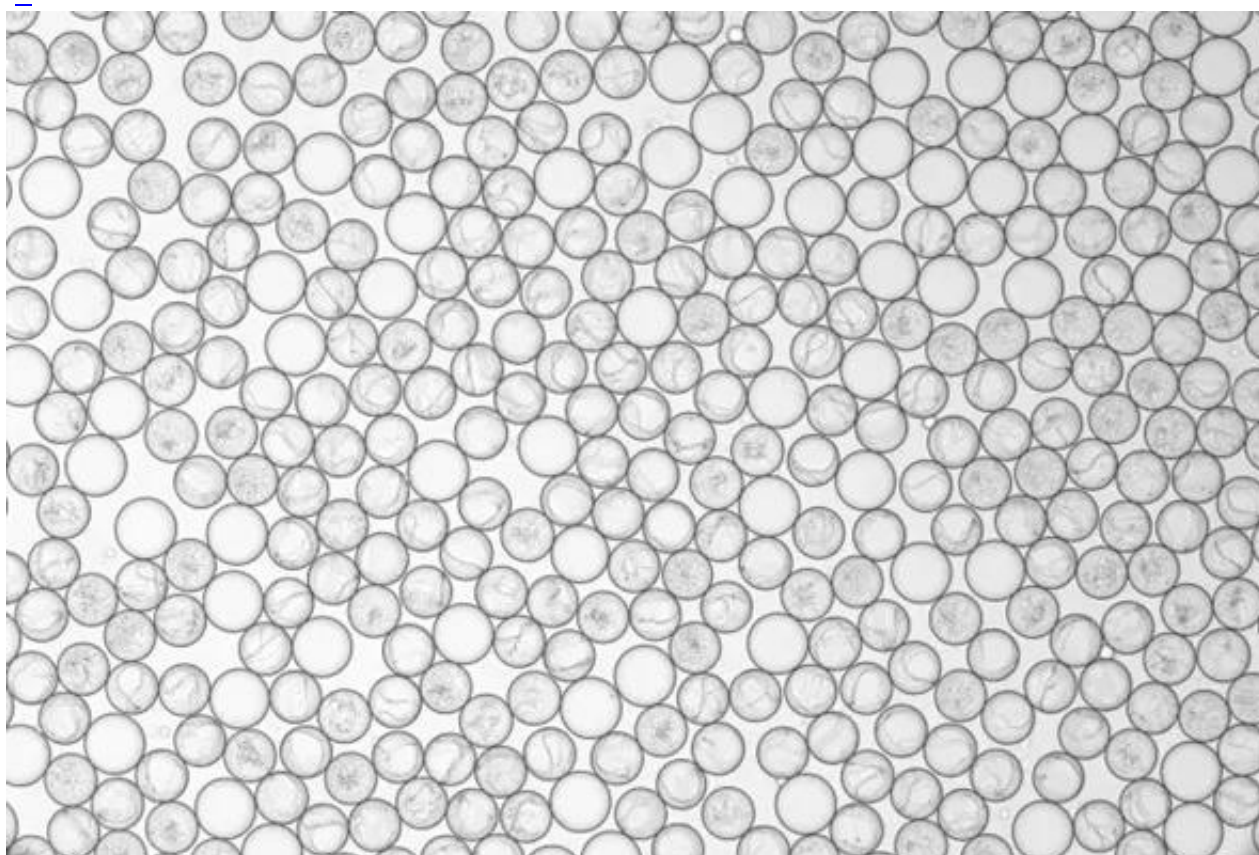
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