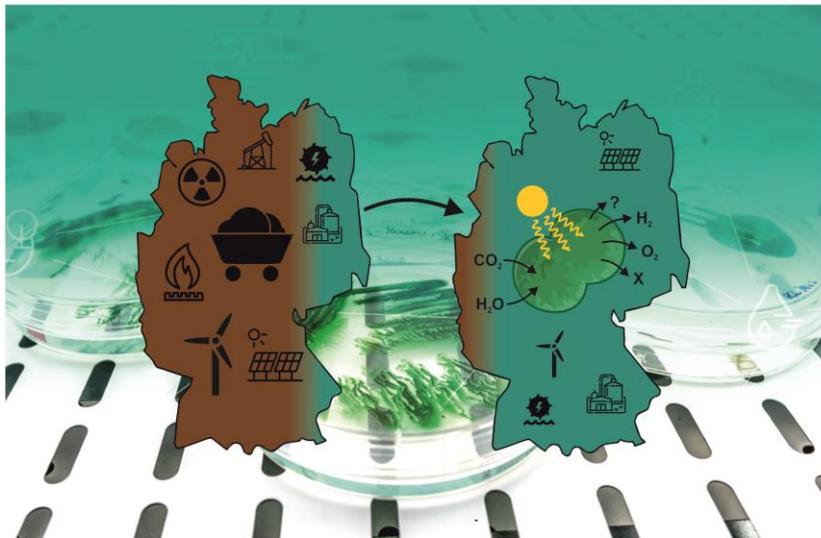


## MIKAT Workshop on Photobiotechnology III: Products, Perspectives and Technologies



13<sup>th</sup> & 14<sup>th</sup> of December 2021

Helmholtz-Centre for Environmental Research  
Leipzig, Germany

Location: Leipziger KUBUS  
Helmholtz Centre for Environmental Research – UFZ  
Permoserstrasse 15  
04318 Leipzig

Host: MIKAT & Department of Solar Materials

For further information please contact:  
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Dear colleagues,

With great pleasure we invite you to this year's MIKAT workshop **“MIKAT Workshop on Photobiotechnology III: Products, Perspectives and Technologies”**, which will take place **in person, in Leipzig** on the **13<sup>th</sup> & 14<sup>th</sup> of December 2021**.

With the effects of climate change becoming more and more visible all over the world, the need for a carbon-neutral (photo-)bioeconomy is as urgent as never. Photobiotechnology has the potential to provide not only carbon-neutral energy carriers, but also a variety of fine and bulk chemicals or even food supplements. In fact, significant progress has been made over the past years in terms of products, genetic engineering and cultivation technology. However, scientists are often ‘only’ experts in one of the above mentioned fields and lack inside knowledge of key numbers and recent advances from the respective other fields for the integration and transfer of knowledge.

This 3<sup>rd</sup> issue of the MIKAT workshop wants to bring together university and industrial researcher working on the broad topic of photobiotechnology to share their latest research, key numbers and visions for a sustainable (photo-)bioeconomy.

The MIKAT – Center for Biocatalysis is an expert cluster and aims at connecting institutes, SMEs, industry, and universities. We hope that our selected speakers initiate discussions, generate new ideas and fund new projects. We also want to invite all participants to present their own projects in the form of a poster or a small booth.

Like in the years before, we are able to host this workshop free of charge. Regarding the corona-situation, we are confident that this workshop can take place as planned under 3G (vaccinated, recovered or tested) conditions and with a hygiene concept.

If you are interested please use this [link](#) to register.

We are looking forward to welcoming you in Leipzig!

Prof. Dr. rer. nat. Andreas Schmid  
Dr. rer. nat. Fabian Brandenburg

## Monday, December 13<sup>th</sup>, 2021

12:00-12:30	Registration & Lunch
12:30-12:40	Fabian Brandenburg (UFZ) <i>"Welcome and hygiene concept"</i>
12:40-13:10	Andreas Schmid (UFZ) <b>tba</b> #MIKAT #photobiotech
<b>Products</b>	
13:10-13:40	Maike Lorenz (Culture Collection of Algae, Goettingen) <i>"The Nagoya Protocol: Implications for Algal Resource Centers and Biotechnology"</i>
13:40-14:00	<i>Coffee break</i>
14:00-14:30	Claudia Grewe (Anhalt University of Applied Sciences) <b>tba</b> #cosmoceuticals
14:30-15:00	Karl Forchhammer (Eberhard Karls University Tübingen) <i>"Polyhydroxybutyrate Metabolism in Cyanobacteria: Identifying Bottlenecks for Metabolic Engineering"</i>
15:00-15:30	Andreas Kremling (Technical University Munich) <i>"PHA production with a defined mixed culture - process development and optimization"</i>
15:30-16:00	<i>Coffee break</i>
16:00-16:30	Kirstin Gutekunst (University of Kassel) <i>"Photosynthetic hydrogen production and pools of reducing equivalents"</i>
16:30-17:00	Samuel Grimm (UFZ) <i>"Continuous production of hydrogen from water by tapping photosynthesis in technical ecosystems"</i>
17:00-17:15	<i>Bio break</i>
17:15-17:45	Timo Niedermeyer (University of Halle-Wittenberg) <i>"Hunting down the Eagle Killer: A novel cyanobacterial neurotoxin causes Vacuolar Myelinopathy"</i>
17:45-open end	Poster Session/Dinner/Drinks

## Tuesday, December 14<sup>th</sup>, 2021

<b>Technologies</b>	
9:00-9:30	Carolin Schott (TU Dresden), Malcolm Cämmerer (UFZ) <i>"Innovative real-time monitoring of microalgae cultivation processes by ion mobility spectrometry"</i>
9:30-10:00	Amelie Kenkel (UFZ), Mahir Bozan (UFZ) <i>"Into the wild- operating capillary biofilm reactors under real-world conditions"</i>
10:00-10:30	<i>Coffee break</i>
10:30-11:00	Gisela Detrell (Institute of Space Systems, Stuttgart) <i>"Space bioreactors"</i>
11:00-11:30	Jörg Ullmann (Rpquette Klötze GmbH) <b>tba</b> #kloetze #bioreactor #large_scale
11:30-12:30	<i>Lunch UFZ</i>
<b>Perspectives</b>	
12:30-13:00	Julie Zedler (Friedrich Schiller University Jena) <i>"Establishing a guide for protein targeting in cyanobacteria"</i>
13:00-13:30	Franz Opel (UFZ) <i>"Modular genetic engineering of cyanobacteria: expression of distinct heterologous genes from individual synthetic shuttle vectors"</i>
13:30-14:00	<i>Coffee break</i>
14:00-14:30	Rene Wijffels (Wageningen University & Research, AlgaePARC) <b>tba</b> #bioreactor #upscaling #economic_feasibility
14:30-15:00	Jens Krömer (UFZ) <i>"Genome scale metabolic reconstruction of Synechocystis to evaluate H2 production in Leipzig"</i>
15:00-16:00	Andreas Schmid and Fabian Brandenburg (UFZ) <i>Discussion and Conclusion</i>

Please note: Talks 25 min, Discussion 5 min, titles marked tba are descriptive titles

