

The Leibniz Institute for Agricultural Engineering and Bioeconomy is a pioneer and a driver of bioeconomy research. We create the scientific foundation to transform agricultural, food, industrial and energy systems into a comprehensive bio-based circular economy. We develop and integrate techniques, processes and management strategies, effectively converging technologies to intelligently crosslink highly diverse bioeconomic production systems and to control them in a knowledge-based, adaptive and largely automated manner. We conduct research in dialogue with society - knowledge-motivated and application-inspired.

As part of the project "**Advanced Biomass-Treatment for Value-Added Refinement (BioAdvan)**" funded by the Leibniz Collaborative Excellence programme, the following position is to be filled as soon as possible

Postdoc (m/f/d) (100 %)
for the research field

„Effects of plasma-ultrasound treatment on biomass conversion, methane production and process stability during anaerobic digestion of biogenic residues“

The objective of the collaborative project is the value-added treatment of residual biomass by novel and advanced technologies to better exploit the environmental and economic potential of biogenic resources. The successful applicant will investigate the effects of plasma treatment on feedstock and digestate characteristics, process stability and methane yields as well as on the taxonomic microbial diversity, essential functional traits including the distribution of antimicrobial resistance genes and mobile genetic elements. The position is assigned to the research groups "Bioengineering" and "System microbiology" at ATB. The successful applicant will work in close cooperation with the external partners Leibniz Institute for Plasma Science and Technology (INP) and the University of Rostock.

Your responsibilities

- Organising, executing and evaluating lab-scale anaerobic digestion experiments in batch and continuous mode
- Sampling of feedstocks and digestates, their chemical analyses and data processing (incl. statistics)
- Detection of the microbial diversity by amplicon and metagenome sequencing using the Oxford Nanopore Technology platform
- Bioinformatic evaluation of amplicon and metagenome datasets, determination of ecological values based on statistical methods (e.g. PCoA, NMDS, TITAN) and construction of microbial networks
- Presentation of project results at scientific conferences and stakeholder meetings, writing project reports and scientific publications

Your qualifications

- PhD in the field of bioengineering or microbial ecology or related subjects with specialisation on anaerobic digestion
- Knowledge and experience in design of experimental set-ups and conducting anaerobic digestion experiments
- Knowledge and experience in microbiological analyses including extraction of nucleic acids, PCR techniques, modern sequencing technologies and bioinformatics and statistics
- Knowledge in programming (e.g. with R, Python, Pearl) and mathematical modelling with special focus on the field of microbial ecology is desirable
- High interest in interdisciplinary cooperation at the interface of physics, bioengineering and microbial ecology
- Experience in scientific publishing
- Very good written and spoken English skills, German skills are an advantage
- Ability to work in a team and willingness to cooperate, reliability, flexibility, personal commitment and ability to work independently
- European Driving license class B is an advantage

We offer

- An attractive, interdisciplinary working environment in a team of experienced and young scientists and technicians
- Excellent infrastructure for carrying out scientific work

- Access to national and international networks for your scientific career
- Family-friendly working conditions that promote the compatibility of work and family life
- Company-owned electric bicycles and business cars for work trips
- Participation on the VBB company ticket
- Our institute is located on the edge of a picturesque park-like landscape and is easy to reach by public transport or by bike

The position is full-time (100 %) and limited to December 31st, 2025. Remuneration depends on your qualifications and professional experience up to EG 13 TV-L. For further information please contact **Dr. Christiane Herrmann** (E-Mail: cherrmann@atb-potsdam.de) and **Dr. Susanne Theuerl** (E-Mail: stheuerl@atb-potsdam.de) and visit our website www.atb-potsdam.de.

If you like to participate in our interdisciplinary research, please apply by **January 15th, 2023** using ATB's online application form for the job advertisement, code **2022-1-5**, at <https://www.atb-potsdam.de/en/career/vacancies>.

Equality of opportunity is part of our personnel policy. Disabled applicants with adequate qualification will be preferentially considered.

By submitting an application, you agree that your job application documents will be stored for a period of six months, even in the case of an unsuccessful application. Further information on the processing, storage and protection of your personal data can be found at <https://www.atb-potsdam.de/en/services/data-protection-declaration-for-the-application-process>.

Published on December 19th, 2022