

“Expression of Interest” for participating in Marie Skłodowska-Curie Doctoral Networks

1. Valid for the following MSCA-DN Call¹:

2021

2022

2. Interested host institution:

**DBFZ Deutsches Biomasseforschungszentrum
gemeinnützige GmbH**

Torgauer Straße 116

04347 Leipzig

Phone: +49 (0)341 2434-112

Fax: +49 (0)341 2434-133

E-mail: info@dbfz.de

Internet: www.dbfz.de

The DBFZ Deutsches Biomasseforschungszentrum gemeinnützige GmbH is a German federal research organisation with a thematic focus on the integrated use of biogenic resources for bioenergy and material production. It was founded in 2008 as a non-profit limited liability company in Leipzig.

Through applied R&D&I of technologies for the utilisation of biomass to produce energy and integrated materials, DBFZ is contributing to the achievement of a climate-neutral society, which, according to the **DBFZ's vision**, should become a reality by no later than 2050.

By networking closely with numerous partners from science, industry and society, the DBFZ plays a key role in the development of rural areas as well as regions in Germany affected by the coal phase-out. Its cooperation with international partners fosters the global transfer of knowledge and technologies.

DBFZ's mission is to conduct applied research and development and to investigate, develop and assess technologies for the integrated use of biogenic resources in energy and materials production. DBFZ findings pave the way for the innovation of sustainable products and services already on the market to ensure a rapid transition to a climate-neutral society. DBFZ advises and prepares scientifically based information for the federal government and contributes to the development in rural areas, which are the points of departure for the bioeconomy. In doing this, DBFZ research is guided by the United Nation's Sustainable Development Goals (SDG).

¹ MSCA Doctoral Networks are selected on the basis of annual calls for proposals. Forthcoming and open calls for proposals can be found on the [Funding & tender opportunities Portal](#) of the European Commission.

DBFZ actively supports the energy transition (“Energiewende”) in Germany and the European Green Deal. As a pioneer in the field of efficient integration of biomass as a valuable resource into the current and future energy system, and into the bioeconomic system of the future, DBFZ researchers develop technical innovations, processes, and products on a high scientific level.

Giving particular consideration to the future developments (environmental concerns and economic impact), research policy challenges and framework conditions in relation to the use of biomass as a base material and an energy source, DBFZ developed its own scientific approaches for the future of bioenergy based on the “Smart Bioenergy”², “SynBioPTx”³ and the “SmartBiomassHeat”⁴.

The DBFZ has continuously expanded its international position for more than ten years as part of 21 EU projects with more than 184 partners and as an active member and national team leader in prominent international research networks such as the International Energy Agency (IEA), the European Energy Research Alliance (EERA) and the European Technology and Innovation Platform Bioenergy (ETIP Bioenergy). Through its participation in more than 70 different national and international committees and associations, the DBFZ supports developments in the bioenergy sector worldwide.

Every year, the DBFZ cooperates with numerous partners from science, industry and society as part of more than 130 bioenergy and bioeconomy-related joint projects and market projects in 2019 with an volume of € 13 million in third-party funds.

The technical infrastructure of the DBFZ corresponds to the current state of the art. The DBFZ’s unique selling point is the ability to perform all development steps under one roof - from lab experiments to the development of complex processes. The scalability of the processes ranges from laboratory and technical scale, to pilot, demonstration plant and industrial scale.

Further information:

[DBFZ Scientific Assignment](#)

[DBFZ Research Focus Areas](#)

[DBFZ Research Infrastructure](#)

² “Smart Bioenergy” Approach involves the further development of modern biomass utilisation systems up to integrated systems that are optimally harmonised with various renewable energy sources and the utilisation of energy and raw materials within the bioeconomy.

³ “SynBioPTx” Approach focus on synergies from biomass and electricity-based processes.

⁴ “SmartBiomassHeat” Approach pursues the vision of a climate-neutral energy supply in connection with a sustainable bioeconomy.

3. Research focus areas

Nearly 150 people⁵ are employed at DBFZ in the scientific/technical area and currently working in the DBFZ within the following **five Research focus areas**:

Systemic Contribution of Biomass

The overarching research goal is to contribute to the UN's sustainability goals through the sustainable integration of renewable raw materials and biogenic residual and waste materials in the bioeconomy to produce energy and materials.

Anaerobic Processes

The overarching research goal is to contribute to a sustainable bioeconomy through the use of innovative technological approaches for biochemical conversions.

Biobased Products and Fuels

The overarching research goal is to use innovative technological approaches for biorefinery concepts as part of a sustainable bioeconomy.

SmartBiomassHeat

The overarching research goal is to study and develop climate-neutral solutions for heating, cooling and, where possible, coupled electricity that utilise increasingly challenging biogenic residues and waste materials with high system benefits and their implementation.

Catalytic Emission Control

The overall research goal is the development of long-term and high temperature stable catalysts that are, recyclable, cost-effective and contain no, or significantly lower amounts of noble metals.

In order to exploit useful synergies, the five research focus areas of the DBFZ are split organisationally across its four research departments: Bioenergy Systems, Biochemical Conversion, Thermo-Chemical Conversion, and Biorefineries.

Further information: [Organisational structure](#)

4. Contact person:

Research coordinator

Dr. rer. nat. Elena H. Angelova

Phone: +49 (0)341 2434-553

Mail: Elena.Angelova@dbfz.de

Applications

Alexandra Mohr-Schüppel

Phone: +49 (0)341 2434-112

E-Mail: bewerbung@dbfz.de

⁵ As of 13 January 2021.

5. Valid for the following Doctoral Networks:

- Standard Doctoral Networks
- Industrial Doctorates
- Joint Doctorates

6. Position of interest:

- Coordinator
- Beneficiary
- Partner Organisation

7. Sector

- academic
- non-academic

8. Topic, discipline:

- Life Sciences
- Natural Sciences
- Engineering Sciences
- Social Sciences and Humanities

9. Added value is expected in the following research areas:

Systemic Contribution of Biomass:

Resource mobilisation | Applied sustainability analysis | Integration of biomass into the energy system | Data structures, visualisation and knowledge transfer

Anaerobic processes:

Process monitoring and control | Process development and integration | Emission monitoring and reduction

Biobased Products and Fuels:

Development and application of bioenergy sources for transport and industry | Development of innovative and competitive biobased processes and products |

Development of Biorefinery concepts as part of closed material cycles | Reduction of emissions

SmartBiomassHeat:

Customised solid input materials | Technology and component development | Acceptance and integration of energy technologies and components

Catalytic emission control:

Research into climate-neutral emission reduction technologies | Complete emission reduction for residual and waste materials | Development of technology for integrated catalytic emission reduction | Development of modular components and flexibly scalable processes and parts