CALL FOR ABSTRACTS AND POSTERS

DOC2026

9TH DOCTORAL COLLOQUIUM
BIOENERGY & BIOBASED PRODUCTS

9TH DOCTORAL COLLOQUIUM BIOENERGY AND BIOBASED PRODUCTS

23-24 SEPTEMBER 2026, LEIPZIG (GERMANY)

Discover the transformative power of bioenergy and biobased products in shaping our sustainable future!

From 23-24 September 2026 the 9th Doctoral Colloquium BIOENERGY AND BIOBASED PRODUCTS (DOC2026) will be hosted in Leipzig by the DBFZ – Deutsches Biomasseforschungszentrum gGmbH.

With this CALL FOR ABSTRACTS AND POSTERS we ask for contributions to create an exciting programme of this Doctoral Colloquium. We invite all interested young scientists to submit an abstract on their PhD work to be presented either as a poster or an oral presentation.

BACKGROUND

Since its inception in 2018, the Doctoral Colloquium on Bioenergy and Biobased Products has developed into most valuable international platform for emerging scientists, covering the entire value chain of bioenergy and biobased products. In response to evolving political, economic, and scientific developments, the colloquium has continuously expanded its thematic scope—most recently in 2025 by incorporating research on biotechnology. It will continue to broaden its focus on innovative solutions and interdisciplinary approaches within these dynamic fields.

Biomass is the only renewable carbon source and a key basis for sustainable energy carriers, materials and products. As a limited resource, its efficient and sustainable use requires innovative concepts such as cascading use, sector coupling and integrated systems. Research on bioenergy, biobased products and system integration highlights the potential of biomass to support the transformation of sectors such as the chemical, pharmaceutical and construction industries. Despite the high scientific level and diversity of existing research, many questions remain open. Strengthening exchange and networking within the research community is therefore essential to foster synergies, scientific excellence and innovation.

Since its foundation, the Doctoral Colloquium BIOENERGY and BIOBASED PRODUCTS has served as a qualification and networking platform for early-career researchers. Doctoral researchers from universities and research institutions present and discuss their latest results and ongoing work. Doctoral researchers from universities and research institutions present and discuss their latest findings and ongoing work, receiving valuable feedback from experienced researchers.

The 9th Doctoral Colloquium BIOENERGY and BIOBASED PRODUCTS will take place on 23-24 September 2026 in Leipzig and is organised under the scientific coordination of Prof Dr Michal Nelles and Dr Elena Angelova (DBFZ). Contributions for oral and poster presentations are curated by the Programme Committee and supported by a Scientific Advisory Board comprising 50 scientists from 39 institutions in Germany, Austria, Switzerland, Italy and Norway. Further details are available on the colloquium website www.doc-bioenergy.de.

TARGET GROUP

The Doctoral Colloquium BIOENERGY and BIOBASED PRODUCTS offers you as a young student pursuing your PhD in this field an opportunity to present your work and enter into a professional discussion and exchange. You are welcome at all stages of your dissertation and work. You have the chance to present your scientific approach, methods and results in form of an oral presentation or a poster. As a knowledge and decision-maker of tomorrow you can share knowledge, discuss research gaps and meet colleagues and experienced supervisors.

TOPICS AND THEMES INCLUDE, BUT ARE NOT LIMITED TO

The Doctoral Colloquium BIOENERGY and BIOBASED PRODUCTS addresses all components of the biomass conversion chain, from the feedstock via conversion technologies up to the resulting products and services. It also addresses overarching aspects e.g. of economics, environment or social questions and includes work on system analysis and system integration. Work on biological principles and knowledge round off the topic. Contributions can be made in the following five main research areas:

SUSTAINABLE RESOURCE BASE

- **Sustainable biomass feedstocks**

How can sustainable biomass feedstocks (e.g. crops on marginal land, waste and residues, advanced feedstocks such as aquatic plants, etc.) be utilised for energy production? How can be determined, which feedstocks will and should be used in the future from the perspective of sustainable resource use? How can the potential of sustainable biomass feedstocks be assessed to meet the growing demand for biobased products? Which conflicts and competitions can be expected in the use of biomass feedstocks in the future, and how can they be addressed to achieve the targets of the SDGs?

- **Waste as feedstock**

What are the options for using waste as a sustainable feedstock for bioenergy and biobased products? How can the potential for sustainable feedstocks supply from waste be determined? How can their utilisation be made more efficient and sustainable? Which of them are innovative and promising?

- **Pre-treatment**

What kind of pre-treatment is required? What kind of pre-treatment technologies are innovative? How can the efficiency of pre-treatment technologies be improved?

- **Environmental impacts**

What are the environmental impacts of feedstocks for bioenergy and biobased products along the product value chain? How are environmental impacts assessed in sustainability certification? How can the indicators for assessing environmental impacts be improved for credible and reliable biomass certification? Which steps are important to reduce the environmental impacts of bioenergy and biobased products feedstocks?

BIOENERGY SYSTEM ANALYSIS (INCL. TECHNICAL INTEGRATION)

- **Biomass production and provision**

Biomass production and provision forms an important part of the utilisation pathway for bioenergy and biobased products. How can processes be optimised? How can this be integrated with sustainable agricultural practices, like organic farming, increasing biodiversity, etc.?

- **Bioenergy integration in energy and bioeconomy systems**

Bioenergy needs to be put in context with other renewable energy technologies. What are suitable integration parameters? How can bioenergy best meet the need for flexibility (short and long term)? What role should bioenergy play with respect to a highly interconnected energy system and power-to-fuels (PtX) technologies? What is the role and impact of cascadic utilisation pathways and combinations of material and energy use? What options exist within the new era of a sustainable bioeconomy?

- **Bioenergy & biobased products & climate**

Bioenergy and biobased products need to meet strong climate goals. How can the efficiency and performance be improved? What are the contributions to net-zero energy systems, carbon neutrality or SDG? What options exist for negative carbon emissions and biogenic carbon removal (BECCS - bioenergy carbon capture and storage)?

- **Bioenergy & biobased products & sustainability**

Technologies and pathways for bioenergy and the production of biobased products need to meet high sustainability requirements. Which parameters should count? How can sustainability performance and economy be improved or optimised? What role do participatory elements (social sustainability) play in this regard?

THERMOCHEMICAL CONVERSION

- **System integration**

How to improve the flexibility of thermochemical processes? How can a value-optimised utilisation of biomass in a flexible infrastructure be achieved? What are the possible contributions of biomass-based hybrid-systems? How can digital tools support the efficient integration?

- **Solid conversion products**

What are the advancements in the field of valorisation for solid products from thermochemical conversion? How to control solid phase reactions and product properties for different material applications? Pollutants: How can emission control processes be further developed and optimised? How can pollutants be further minimised through incentives and emission targets as well as real world measurements?

- **Feedstock composition**

In which way does feedstock composition affect process operation and product properties? How can the fuel properties be influenced by conditioning?

- **Intermediates**

What upgrading steps are required to convert intermediates from thermochemical conversions into final products?

BIOCHEMICAL CONVERSION & BIOTECHNOLOGY

- **New processes & products**

Are there promising integrated (material-energetic) processes or process routes for the production of new biobased products? Is it necessary to adapt existing or to establish new framework conditions for such processes?

- **Microbial processes**

How can existing microbial processes be improved/optimised? How to control these microbial processes?

- **Optimisation & efficiency**

How to optimise the biogas process and/or biogas plants? How to measure and increase the efficiency of biogas plants? What are efficient downstream processes for product separation or purification? What are technical weaknesses of biogas plants and how to overcome them? What is the role of process monitoring and measurement technology?

- **Monitoring & control**

Are there new procedures for robust monitoring and control of biogas plants? How can suitable process models support monitoring and control applications? Are there new (soft) sensor concepts for precise online measurement of reliable process indicators of biogas plants?

- **Climate neutrality, integrating CO_2 and / or Corg**

How can emissions at biogas plants be measured and prevented? How can anaerobic digestion contribute to a climate-neutral future?

BIOREFINERIES, BIOECONOMY & BIOFUELS

- **Overall value chains**

What are promising value chains in the bioeconomy? How can they be implemented?

- **Biorefineries as multiproduct plants for biobased products and bioenergy sources**

SOCIAL SCIENCE PERSPECTIVES ON BIOENERGY AND BIOBASED PRODUCTS

- **Acceptance for bioenergy and biobased products**

How do political events, like the war in Ukraine or Iran, influence acceptance? How does the type of biomass feedstock (e.g. waste and residues, energy crops, forest biomass) influence acceptance? In what ways do information framing, media narratives, and labelling schemes affect awareness, understanding, and acceptance of bioenergy and biobased products in everyday consumption practices?

- **Marketing for bioenergy and biobased products**

How can storytelling help in influencing purchasing decisions for bioenergy and biobased products in different market segments? How can marketing approaches for bioenergy and biobased products be tailored to address specific concerns about land use, food–fuel competition, and local environmental impacts?

- **Business models for biomass and biobased products**

Which business models are most promising for creating economically viable and socially accepted biomass value chains? How can cascading use, circular economy principles, and by-product valorization be embedded in business models to increase resource efficiency and societal value creation from biomass? How do regulatory frameworks, subsidies, carbon pricing, and sustainability standards shape the emergence, scalability, and resilience of innovative business models in the bioeconomy?

- **Justice and distributive aspects of bioenergy and biobased products**

How are the economic, social, and environmental costs and benefits of bioenergy and biobased product systems distributed across different regions, social groups, and generations, and what inequalities arise from these distributions? How can policies and governance arrangements be designed to ensure that bioenergy expansion contributes to climate and energy goals while also advancing e.g. distributive, and procedural justice?

ORGANISATIONAL

The event language is English. Each Session has four presentation slots, split into 15 minutes of presentation and 10 minutes of discussion time each. All accepted posters are, in addition to the exhibition, to be presented during a Poster Speed Presentation (3 minutes each). The best poster and the two best oral presentations will be awarded during the closing ceremony of the colloquium. Furthermore, networking opportunities, such as a get-in-touch session, are planned. A Keynote Speech on a groundbreaking topic will round off the programme. Details of the programme are available on our website.

The Programme Committee will carefully review and curate all submitted abstracts for both oral and poster presentations.

AWARDS

We are grateful for the support of FNR and the BMLEH, which enables us to offer prestigious awards to outstanding presenters. This year, we will be awarding prizes for the best oral presentations (2 x 450 EUR) and the best poster (300 EUR). We encourage you to take this opportunity to showcase your research at its best - let this be an extra motivation to excel in your presentation!

SUBMISSION

Submit an abstract of your research work for either an oral presentation or a poster by 4 May 2026.

EVENT LOCATION

The 9th Doctoral Colloquium BIOENERGY AND BIOBASED PRODUCTS (DOC2026) takes place in the conference area of the DBFZ main buidling, located in Leipzig, Torgauer Straße 116.

CONTACT

Please don't hesitate to contact us!
DOC2026 - Organisational Team
See for more information: www.doc-bioenergy.de

SCIENTIFIC DIRECTION

Prof Dr Michael Nelles
Phone: +49 (0)341 2434-112

SCIENTIFIC COORDINATION

Dr Elena Angelova
Phone: +49 (0)341 2434-553

ORGANISATIONAL CONTACT

Katja Lucke
Phone: +49 (0)341 2434-1103
e-mail: veranstaltungen@dbfz.de