

„Energy and environment - My idea for tomorrow“

Call for applications for doctoral students of all disciplines

How do we want to live tomorrow? How can energy consumption and environmental protection be reconciled? Do you know the answers to these questions?

The challenges of energy system transformation still exist. At the societal, technical and regulatory level, there are still many open questions in the transport, heating and electricity sectors. We are looking for young researchers who, with their vision, contribute to a more sustainable future in the context of their doctorate.

Are you developing resource-conserving storage systems that create flexibility in the future energy system? Or are you working on environmentally friendly materials for energy generation and transport? Perhaps you also have an idea which motivates people to reduce their personal CO₂ footprint, e.g. by researching human behaviour and creating incentive systems? Do you know how to make tomorrow's agriculture more sustainable and climate-friendly? Are you concerned with sector coupling and the view towards a holistic energy system for Germany, embedded in Europe? Do you know the solution of how a practicable charging management of electric vehicles, or the mobility of the future should look like? Have you developed the app of the future which conveniently displays energy requirements for consumers and energy suppliers alike? Or do you know how an entire neighbourhood can become smart and energy self-sufficient...

Send us an excerpt from your doctorate - regardless of the stage it has reached. If you are unsure whether the topic of your thesis is appropriate in terms of content, just give us a call or write a short e-mail. The call for proposals is deliberately broad in scope in order to address doctoral students from all disciplines. We are looking forward to your ideas on the new energy world!

Target group

The call for ideas is aimed at **doctoral students of all faculties**, institutes and universities.

Awards

You research - we award! We will exclusively invite the best applicants to the "**Energy Campus**" **symposium**. During the event, you will have the opportunity to learn first-hand about the latest research and development trends, make valuable contacts and present your submission in the form of a poster.

The three most innovative ideas will be awarded EUR 2,000 (1st place), EUR 1,000 (2nd place) and EUR 500 (3rd place) and, after consultation with the authors, they will be published in the print edition of the specialized magazine *Energiewirtschaftliche Tagesfragen "et"*. You can also present your contributions to a selected audience of high-ranking decision-makers from business, industry, research and politics and representatives of associations and NGOs.

We invite all participants to our foundation events (on- and offline) and to the exclusive LinkedIn alumni group. In this way you become part of a community and can exchange ideas with other doctoral students and potential employer companies from your field of interest.

Contact person

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Symposium "Energy Campus" of the Energy & Climate Protection Foundation

Friday, 12th of November 2020

Online via Microsoft Teams

Agenda (held in German)

9:00	Welcome Prof. h.c. Dr.-Ing. Joachim Knebel President of the Jury and Head of Division 3 'Mechanical and Electrical Engineering' at the Karlsruhe Institute of Technology (KIT)
9:15	„hydrogen and electrical engineering - a dream team?!“ Prof. Dr. Tabea Arndt Head of the Institute of Technical Physics at the Karlsruhe Institute of Technology (KIT) Key note with subsequent question and discussion round
9:45	Coffee break
9:50	„EnBW H2 ready – From vision to implementation“ Rike Betten Head of Top-Projekt Hydrogen EnBW Energie Baden-Württemberg AG Key note with subsequent question and discussion round
10:20	Coffee break
10:25	Presentation of the submissions Pitches of selected contributions (can be held in English)
11:35	Coffee break
11:40	Award ceremony Prizes for the most innovative contributions
12:00	Ending of the event

Information for applicants

Your submission consists of three pdf files:

- Cover page: Title of the submission, contact details (your name, institute, field of study, address, e-mail and daytime phone number where we can reach you)
- Summary of your doctorate (this part will be passed on to the jury): with title, but anonymous, i.e. without your name and the name of your institute. Language: English or German, length: maximum five DIN A 4 pages. The work may contain graphics or pictures. Literature/sources do not have to be indicated, but should be traceable in case of queries.
- Poster or short presentation (2-3 slides) with an overview of your submitted work. You can submit this file as soon as you are admitted to the symposium.

The deadline for submissions is Thursday, 14th of October 2021 at 00:00 a.m.

Please send your submissions by e-mail to the Energy & Climate Protection Foundation:
kontakt@energie-klimaschutz.de.

You will find out whether your submission has been admitted to the competition by the 15th of October 2021. Participation is free of charge.

The **"Energy Campus" symposium** and the announcement of the winners will take place on **Friday, 12th November 2021 in Stuttgart**. The works are evaluated by a high-ranking jury from industry and research. Criteria for the award are originality of your approach, relevance for energy system transformation and climate protection, scientific quality and presentation.

The submissions and the work results contained therein remain your intellectual property. Of course, we will take your publication blocks into account. Papers accepted for the symposium will only be published on the Energy & Climate Protection Foundation's website after prior approval by the submitting parties.

By participating in the final symposium, you agree that any photographs or film recordings made in connection with the event may be published without any claim to remuneration.

JURY

Prof. h.c. Dr.-Ing. Joachim Knebel - President of the Jury



Professor h.c. Dr.-Ing. Joachim Knebel (born in 1962, mechanical engineer) is head of Division 3 'Mechanical and Electrical Engineering' at the Karlsruhe Institute of Technology (KIT) and is thus responsible for the two KIT Faculties of Mechanical Engineering (MACH) and Electrical

Engineering and Information Technology (ETIT), the three Helmholtz programs 'Materials and Technologies for the Energy Transition', 'Nuclear Fusion', and 'Nuclear Waste Management and Safety', and a total of 34 scientific institutes.

Within the Helmholtz Association of German Research Institutes, he is, among other things, the contact person for the initiative "Energy System 2050", which investigates the integration of essential technology elements into the energy system and develops solutions to successfully integrate the renewable energies, some of which fluctuate strongly, into the German and European energy supply. He represents the KIT on the board of directors for the Research Association for Renewable Energies (FVEE) and the national Copernicus project "New Energy Network Structures for the Energy System Transformation (ENSURE)".

Joachim Knebel is founding director of the international initiative "Affordable Energy for Humanity (AE4H)", which is committed to affordable access to energy for all people.

Prof. Dr.-Ing. Kai Hufendiek –



As head of the Institute of Energy Economics and Rational Energy Use (IER), Kai Hufendiek has been teaching and researching at the University of Stuttgart since 2014. In addition to the holistic analysis and evaluation of energy systems and individual energy technologies with regard to their economic, technological, social and ecological effects, his research focuses on methods for the design and operational optimization of operation and market integration of centralized and decentralized energy systems and energy efficiency in industry and commerce. In addition, he is the coordinating director of the STRise research network, which brings together the interdisciplinary systems analysis expertise of the University of Stuttgart (IER and ZIRIUS), the German

Aerospace Center (DLR) and the Center for Solar Energy and Hydrogen Research Baden-Württemberg (ZSW) at the Stuttgart site.

studying mechanical and process engineering in Stuttgart and Manchester, he received his doctorate from the Faculty of Energy Technology at the University of Stuttgart.

Afterwards he gained industrial experience in various management positions at a large energy supply company, especially in development tasks in energy trading and sales. He was also responsible for the implementation of various research projects in the field of intelligent energy systems and electromobility.

Prof. Dr. Axel Groß



Prof. Dr. Axel Groß (born 1961) studied physics in Göttingen and Santa Barbara/ USA. After completing his doctorate at the Technical University (TU) of Munich, he worked from 1993 to 1998 as a research associate at the Fritz Haber Institute of the Max Planck Society in Berlin on the dynamics of molecule-surface interaction. In 1996 he spent six weeks researching at the Naval Research Lab in Washington D.C. / USA.

In 1998 Groß took up a C3 professorship for theoretical physics/surface physics at the Physics Department of the TU Munich (until 2004). In 1999 he habilitated at the TU Berlin with the topic "Ab initio Dynamics Calculations of Reactions on Surfaces" and received the teaching

qualification for the subject Theoretical Physics. In 2004, Groß took over a C4 professorship and the management of the Institute for Theoretical Chemistry at the University of Ulm. After a further research stay at the Chemistry Department in Santa Barbara, he became Vice Dean of the Faculty of Natural Sciences at the University of Ulm from 2006 to 2008, then Dean of Studies in Chemistry until 2009 and Dean of the Faculty of Natural Sciences from 2009 to 2012.

From 2012 to 2014, Groß was spokesman for the Surface Physics Association of the German Physical Society. From 2012 to 2015 he was Vice President for Research at the University of Ulm.

In 2011 he was one of the founding directors of the Helmholtz Institute Ulm for Electrochemical Energy Storage (HIU) and a member of its board of directors until 2015. Since 2016 he has been a member of the German Research Foundation's Expert Forum on Chemistry. Since 2019 he has been one of the three spokespersons of the Cluster of Excellence "Energy Storage beyond Lithium", which was jointly established by the University of Ulm and the Karlsruhe Institute of Technology.

Prof. Dr. Wolfram Münch



Wolfram Münch (born 1962) studied physics, astronomy and mathematics in Heidelberg and Cambridge (GB) and received his doctorate from the University of Cambridge in 1990. From 1990 to 2001 he held various positions in the "Research and Technology" department of Daimler AG.

From 1991 to 2001, Münch worked part-time at the Max Planck Institute for Solid State Research in Stuttgart in the field of ion conduction mechanisms in solids. In 2000 he habilitated and was appointed associate professor at the University of Ulm in 2009. Since 2001, Prof. Dr. Wolfram Münch has been head of the Research and Development unit of EnBW Energie Baden-Württemberg AG and is a member of the board of the Stiftung Energieforschung Baden-

Württemberg.

SPEAKERS

Prof. Dr. Tabea Arndt,
Institute for Technical Physics (ITEP) at the Karlsruhe Institute of Technology

Tabea Arndt completed her doctorate in physics at the University of Karlsruhe and initially worked as a research assistant in the Research & Development department of Vacuumschmelze GmbH & Co. KG, Hanau on the topic of "composite (supra)conductors". After various carve-outs, she worked as a research assistant until 2008, also in the area of research & development for "high-temperature superconductors" at Bruker BioSpin, Alzenau. She was then Programme Manager "Superconducting Components and Applications" at Siemens Corporate Technology', Erlangen. Until 2019, she was responsible for the field of "Electromagnetic Systems" as Principal Key Expert, also at Siemens. Since October 2019, she has held the professorship "Superconducting Magnet Technology" at the Institute of Technical Physics (ITEP) at the Karlsruhe Institute of Technology with the research topics "Superconducting Magnets", "High Current Components for Hydrogen and Fusion" and "Rotating Machines".



Rike Betten,

Head of Top Group Project Hydrogen, EnBW Energie Baden-Württemberg AG



Rike Betten comes from Heidelberg, Germany, where she graduated in Mathematics with a minor in Physics at the University of Heidelberg and the University of Leeds, England in 2005. She then worked at Oliver Wyman as an Associate (Project Manager) in the Strategic Business Consulting, Manufacturing, Transportation and Energy Division from 2006 to 2011. Her next professional stop was EnBW AG, where she held various roles and responsibilities in the Sales, Marketing and Operations Division for Strategy, Portfolio Management, Marketing, Piloting & Small Series and Operations and Service Electromobility of the Operations Business Unit. Most recently worked there as Head of Strategy &

Innovation. Her other area of responsibility is Stakeholder Management SMO. Since April 2021, she has been Head of the Top Group Project Hydrogen.

Please note our information on data protection:

In the past, you have been interested in our events and newsletters and have asked to be added to our mailing list. Originally, the address data either originates from public sources or you have provided us with it at an earlier time. We process the data you provide solely for the purpose of sending out invitations to events or information about the work of our foundation (such as newsletters, reports, references to online activities, etc.) in accordance with Art. 6 Para. 1 of the Basic Data Protection Regulation.

Your data will not be passed on to third parties. If you no longer wish to receive notifications or invitations from us, please let us know by post to the address below or by e-mail to kontakt@energie-klimaschutz.de. We will then delete your data immediately.

Furthermore, you have a right to information about the data we have stored about you, a right to correction, a right to data portability and the right to have your data deleted at any time and without giving reasons. If you are of the opinion that we are not processing your data in accordance with data protection regulations, you have a right of appeal to the supervisory authority. The body responsible for processing your data is Stiftung Energie & Klimaschutz, Durlacher Allee 93, 76131 Karlsruhe.
