### **Science for Future Initiative**

The German National Academy of Sciences and the Chinese Academy of Sciences (CAS) jointly launched the Science for Future Initiative in 2018 with the aim of highlighting the importance of basic research for society.

The inaugural conference took place in September 2019 under the title "All Starts with Basic Research" at the University of the Chinese Academy of Sciences (UCAS). The "Beijing Declaration on Basic Science" was signed by the two academy presidents during this conference. In this declaration, Leopoldina and CAS commit themselves to long-term scientific cooperation that transcends national and cultural borders and scientific disciplines, to the promotion of evidence-based dialogue in society and to fostering young researchers.

The second conference in the series "On the Path to Carbon Neutrality" will focus on the discussion of innovative approaches ranging from basic research to application, thus opening a discourse on strategies to achieve carbon neutrality.

# **German National Academy of Sciences Leopoldina**

The Leopoldina was founded in 1652 as a classical scholarly society and now has 1,600 members from almost all branches of science. As German National Academy of Sciences, the Leopoldina has two major objectives: representing the German scientific community internationally, and providing policymakers and the public with science-based advice.

## **Chinese Academy of Sciences (CAS)**

The Chinese Academy of Sciences is the linchpin of China's drive to explore and harness high technology and the natural sciences for the benefit of China and the world. Comprising a comprehensive research and development network, a merit-based learned society and a system of higher education, CAS brings together scientists and engineers from China and around the world to address both theoretical and applied problems using world-class scientific and management approaches.







Venue:

Science City Berlin Adlershof

Tuesday, 29 October 2024

**Bunsen-Saal** 

Volmer Strasse 2 | 12489 Berlin

Wednesday, 30 October 2024

Helmholtz-Zentrum Berlin für Materialien und Energie

Albert-Einstein-Straße 15 | 12489 Berlin



Scan for registration and more informatio

# On the Path to Carbon Neutrality

2<sup>nd</sup> Science for Future Conference

By the German National Academy of Sciences Leopoldina and the Chinese Academy of Sciences (CAS)

29 - 30 October 2024

Science City Berlin Adlershof

#### Contact:

#### Dr. Saskia Steiger

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www.leopoldina.org/sff-2024



# On the Path to Carbon Neutrality

## 2<sup>nd</sup> Science for Future Conference

By the German National Academy of Sciences Leopoldina and the Chinese Academy of Sciences (CAS)

In alignment with the Paris Agreement, China and Germany have set themselves the goal of achieving carbon neutrality in the coming decades. The conference will present and discuss innovative approaches from basic research and application to achieve this. It also serves as a platform for internationally renowned experts from various disciplines, younger scientists and the public to exchange knowledge, ideas and experiences regarding possible options and strategies to achieve carbon neutrality in both countries.

# **Organizing Committee**

#### **German National Academy of Sciences Leopoldina**

- Prof. Dr. Katharina Kohse-Höinghaus ML, Bielefeld University
- Prof. Dr. Harald Fuchs ML, University of Münster
- Prof. Dr. Rolf-Dieter Heuer ML. CERN
- Prof. Dr. Christoph M. Schmidt ML, RWI Leibniz Institute for Economic Research
- Prof. Dr. Ferdi Schüth ML. Max Planck Institute for Coal Research

#### Chinese Academy of Sciences (CAS)

- Prof. Dr. Tao Zhang, CAS Member, Dalian Institute of Chemical Physics, CAS
- Prof. Huiming Cheng, CAS Member, Shenzhen Institute of Advanced Technology, CAS
- **Prof. Buxing Han,** CAS Member, Institute of Chemistry, CAS
- Prof. Hang Su, Institute of Atmospheric Physics, CAS
- Prof. Yi Wang, Institutes of Science and Development, CAS
- Prof. Shuhong Yu, CAS Member, University of Science and Technology of China
- Prof. Dr. Suojiang Zhang, CAS Member, Institute of Process Engineering, CAS

ML = Member of the Leopoldina

# Sessions & Speakers

## Tuesday, 29 October 2024

12:00 - 13:00 | Registration and Light Lunch

#### 13:00 – 13:20 | Opening Remarks

Prof. (ETHZ) Dr. Gerald HAUG ML President of the German National Academy of Sciences Leopoldina

Prof. Dr. Jianguo HOU

President of the Chinese Academy of Sciences
(CAS)

#### Welcome

Prof. Dr. Otmar D. WIESTLER ML President of the Helmholtz Association

Prof. Dr. Christian F. DOELLER

Vice-President of the Max Planck Society

# 13:20 – 13:30 | Signing of the Berlin Declaration

#### 13:30 – 15:00 | Keynote Speeches

Prof. Dr. Chunli BAI CAS Member, Institute of Chemistry, CAS

Prof. Dr. Benjamin LIST ML

Max-Planck-Institut für Kohlenforschung

#### Moderation:

Prof. Dr. Tao ZHANG CAS Member, Dalian Institute of Chemical Physics, CAS

Prof. Dr. Ferdi SCHÜTH ML Max-Planck-Institut für Kohlenforschung

15:00 – 15:30 | Coffee Break

ML = Member of the Leopoldina

# 15:30 – 16:30 | Session Basic research – the core of innovation

Prof. Susan E. TRUMBORE Ph.D. ML Max Planck Institute for Biogeochemistry

Prof. Dr. Zhonglin WANG Foreign CAS Member, Beijing Institute of Nanoenergy and Nanosystems

#### Moderation:

Prof. Dr. Katharina KOHSE-HÖINGHAUS ML Bielefeld University

Prof. Dr. Buxing HAN
CAS Member, Institute of Chemistry CAS

#### 16:30 - 17:00 | Coffee Break

#### 17:00 - 18:15 | Impulse Session

The promise of carbon neutrality: Where do we stand with new and old technologies? What does it take to achieve carbon neutrality in China and Germany?

Prof. Dr. Bojie FU CAS Member, Research Center for Eco-Environmental Science, CAS

Prof. Dr. Veronika GRIMM University of Technology Nuremberg

Prof. Dr. Zhengtang GUO CAS Member, Institute of Geology and Geophysics, CAS

Prof. Dr. Ottmar EDENHOFER ML
Potsdam Institute for Climate Change Impact
(PIK)

#### Moderation:

Prof. Dr. Harald FUCHS ML University of Münster

Prof. Dr. Shuhong YU

CAS Member, University of Science and
Technology of China

#### 18:15 - 18:30 | Closing Remarks

Prof. (ETHZ) Dr. Gerald HAUG ML President of the German National Academy of Sciences Leopoldina

## Wednesday, 30 October 2024

#### 09:00 – 09:10 | Opening Remarks

Dr. Ruth NARMANN
Head of the International Relations
Department, German National Academy
of Sciences Leopoldina

#### 09:10 - 09:40 | Keynote Speech

Prof. Dr. Klaus VON KLITZING ML Max Planck Institute for Solid State Research

#### 09:40 - 11:10 | Research for the Future

Prof. Dr. Frauke WIESE Europa-Universität Flensburg

PD Dr. Saeed ARMIRLAYAER University of Münster

Dr. Isnaldi R. SOUZA FILHO Max Planck Institute for Sustainable Materials

Dr. Nadine MENGIS GEOMAR Helmholtz Centre for Ocean Research

Prof. Dr. Chenli LIU
Shenzhen Institute of Advanced Technology,
CAS

Prof. Dr. Xianfeng LI
Dalian Institute of Chemical Physics, CAS

Prof. Dr. Jingbi YOU Institute of Semiconductors, CAS

Dr. Yaxiang LU
Institute of Physics, CAS

#### Moderation:

Prof. Dr. Peter H. SEEBERGER

Max Planck Institute of Colloids and Interfaces

Prof. Dr. Shuli NIU Institute of Geographic Sciences and Natural Resources Research, CAS

#### 11:10 - 11:30 | Coffee Break

#### 11:30 – 13:00 | Session Innovation, translation, application – promising new technologies

Prof. Dr. Haisheng CHEN
Institute of Engineering Thermophysics

Prof. Dr. Hans-Martin HENNING
Fraunhofer Institute for Solar Energy Systems ISE

Prof. Dr. Wei WEI Shanghai Advanced Research Institute, CAS

Prof. Dr. Martin WINTER University of Muenster

#### Moderation:

Prof. Dr. Rolf-Dieter HEUER ML CERN

Prof. Dr. Huiming CHENG CAS Member, Shenzhen Institute of Advanced Technology, CAS

#### 13:00 - 14:00 | Lunch

#### 14:00 – 15:30 | Session Market conditions and policies – the necessity for global cooperation

Prof. Dr. Andreas LÖSCHEL Ruhr University Bochum

Prof. Dr. Weiqiang CHEN
Institute of Urban Environment, CAS

Prof. Dr. Karen PITTEL ifo – Center for Energy, Climate, and Resources

Prof. Dr. Pu WANG
Institutes of Science and Development, CAS

#### Moderation:

Prof. Dr. Christoph M. SCHMIDT ML
RWI – Leibniz Institute for Economic Research

Prof. Dr. Hang SU
Institute of Atmospheric Physics, CAS

#### 15:30 - 15:45 | Wrap-up and Outlook

Prof. Dr. Tao ZHANG

CAS Member, Dalian Institute of Chemical Physics

Prof. Dr. Katharina KOHSE-HÖINGHAUS ML University of Bielefeld