ICEEE

International Conference on Energy, Ecology and Environment

Berlin, Germany

Aug 29-Sep 2, 2025



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Welcome to ICEEE 2025

On behalf of the Organizing Committee, it is my great pleasure to welcome you to the International Conference on Energy, Ecology, and Environment (ICEEE) 2025. Hosted by Technische Universitat Berlin, ICEEE 2025 will serve as a leading international platform to explore the latest advancements in the diverse fields of energy and environmental systems, paving the way for a greener future. The conference will span a broad range of topics, showcasing both numerical and experimental findings, alongside groundbreaking technologies in the realms of Engineering, Ecology, Environmental, and Energy Sciences.

Supported by the International Society for Energy and Environmental Science (ISEES)—a prominent organization in advancing energy and environmental excellence—ICEEE invites young scientists to join the society and contribute to its growth.

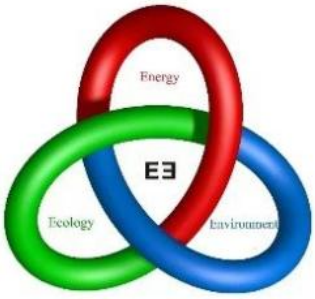
We look forward to your participation in these pivotal conferences, helping to shape a sustainable future for all.

Conference Chair

Prof. Bin Chen

Prof. Klaus Hubacek

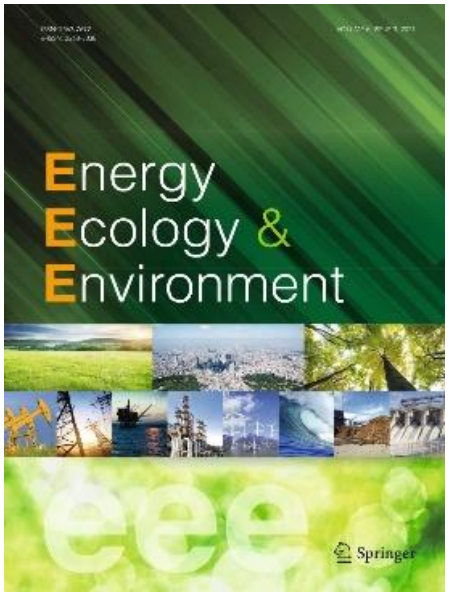
Organizers











Impact Factor: 3.6 **CiteScore: 9.3**

The scientific committee will recommend high quality papers, which are presented at the conference, for further consideration of publication in the prestigious journals, including Energy Ecology and Environment, Applied Energy.

http://www.springer.com/energy/journal/40974

Committees for ICEEE 2025

Honorary Chair

Prof. Zhifeng Yang

Conference Chair

Prof. Bin Chen

Prof. Klaus Hubacek

Organizing Committee

B.B. Dong, Sweden	C.Y. Wang, China	C. P. Ma, China
H. L. Li, Sweden	J. Yang, China	K.X. Zhou, Germany
H.Q. Li, Germany	H.T. Yu, Germany	H. W. Zhou, China
L. Zeng, China	L. Wang, Norway	L.Y. Wang, China
M. Q. Huang, China	Q. Sun, China	T. R. Yang, China
W. Wang, China	Y.K. Hu, UK	Z. Yang, Germany

Scientific Committee

B. Chen (Chair)

A.M. Elseman, Egypt	A.H. Tang, China	A. Kharrazi, Austria	A.L. Facci, Italy
A.A. Calvo, Spain	A. Sharif, Malaysia	B.B.Kanbur, Denmark	B. Şimşek, Turkey
B. Yuan, China	B. Dong, Sweden	B. Pant, Korea	B. Xu, China
B. Biswas, US	B. Zhang, China	B.D. Fath, US	C. Ma, China
C. Li, China	D. Moran, Norway	D. Assante, Italy	D. Zhao, Finland
D. Johnson, Canada	D.K. Ashish, India	F. Qi, China	F. Zhou, China
G. He, US	J.A. Blanco, Spain	P.Y. Liew, Malaysia	V. Mulone, Italy
G. Besagni, Italy	J. Pan, China	P.P. Franzese, Italy	J. Sheng, Australia
N.A. RASHIDI, Malaysia	K.Hubacek, Netherlands	O.T.Iorhemen, Canada	W.A.Pengue, Argentina
G. Falcucci, Italy	P. Vassallo, Italy	P. Bartocci, Italy	W. Huai, China
G. Wu, China	K. Feng, US	P. Wang, China	W. Mo, US
G.Quijano, Mexico	L. Sun, US	Q. Sun, China	W. Song, China
G. Zang, US	L.F. Fraceto, Brazil	Q. Wang, China	W. Yang, China
G. Chen, China	L. Zeng, China	Q. Huang, China	W. Wang, China
H. Li, Sweden	L. Wang, Norway	R. Cucciniello, Italy	W. Lu, China
H. Liu, China	L. Zhang, China	R. Chen, China	X. Ren, China
H. Qian, China	L.S. Llanca, Chile	R. Costanza, UK	X. Liao, China
H. Zhou, China	M.A. Rosen, Canada	R. Cong, China	X. Sun, China
H. Zhao, China	M. Bianchi, Spain	S. Chen, China	X. Cao, US

H. Lu, China
H. Yue, China
H. Kim, Korea
I. Öztürk, Turkey
J.J. Yan, Sweden
J. Yang, China
J. Leng, China
J. Li, China
J. Liu, China
J. Zuo, Australia
M. Huang, China
M. Li, US
M. Yang, China
M. Odlare, Sweden
M.J. Parnian, Canada
M. Arıcı, Turkey
N. Couto, Portugal
N. Zhang, China
V.K. Krastev, Italy
Z. Xu, China
S. Cheng, China
S.A. Edrisi, India
S. Xu, China
S. Boldyryev, Croatia
S. Xia, China
Mathimani, India
T. Chon, Korea
T. Hayat, Pakistan
T. Yang, China
U.P. Okoye, Mexico
Y. Xie, China
Y. Wei, China
Y. Li, China
Y. Park, Korea
Y. Hu, UK
Y. Zhang, China
Y. Yang, China
Z. Zhang, China
Z. Chen, China
Z. Wu, China

Keynote Speakers for ICEEE 2025



Prof. Peter Sachsenmeier

Title: The changing concept of the smart city

Bio: Prof. Peter Sachsenmeier is an international strategist, expert for complex technology management, an industrial innovator, and a visionary. Having started his career the University of Oxford, he has also worked for the UN and several for its agencies, such as the World Bank, UNESCO, WHO and UNEP. Professor Peter Sachsenmeier combines deep technologies and management knowledge associated with the digital transformation of all industries. In 2006, he was elected a fellow of the prestigious German National Academy of Science and Technology, acatech. He is a well-known Industry 4.0 expert and a co-founder (in 2018) of the China-based International Intelligent Manufacturing Alliance. He is also a promotor of Chinese research collaboration with the ASEAN nations. In 2022, he was elected a Fellow of the Asia-Pacific Artificial Intelligence Association. Currently, he is a Professor at the University of Oxford China Center, looking into the "Next Extensions of Manufacturing, especially with regard to Synthetic Biology". He is also the Editor-in-chief of the new academic journal, *GreenTech.*



Prof. Klaus Hubacek

Title: A global value chain perspective to global carbon inequality

Bio: Klaus Hubacek is a Professor in Science, Technology and Society at the University of Groningen, the Netherlands. He is chair of Integrated Research on Energy, Environment and Society (IREES) and chair of the board of Energy and Sustainability Research Institute Groningen (ESRIG). Klaus is currently also a visiting professor in geographical sciences at the University of Maryland, College Park. Previously he worked or held visiting positions at the University of Leeds, UK, the Chinese Academy of Sciences, Beijing Normal University, China, the University of Cambridge, UK, and the International Institute for Applied Systems Analysis (IIASA), Austria. His research focus is on conceptualizing and modeling the interactions between human and environmental systems. Klaus has been recently involved in building an integrated climate assessment model funded by Horizon 2020 and on forecasting carbon emissions funded by NASA. Klaus has published over 200 research articles in peer-reviewed journals on topics such as climate change adaptation and mitigation, participatory modeling, management of ecosystems services, land use change and governance. He is recognized as a highly cited researcher with multiple papers in the top 1% by citations. Klaus conducted studies for a number of national agencies in Austria, the Czech Republic, China, Japan, Spain, the UK, and the U.S., and international institutions such as the World Bank and the Interamerican Development Bank (IADB). Klaus was a lead author of the most recent 6th assessment report of the UN's Intergovernmental Panel on Climate Change (IPCC) leading chapters on Behavior and Consumption-based Emissions.



Prof. Matthias Finkbeiner

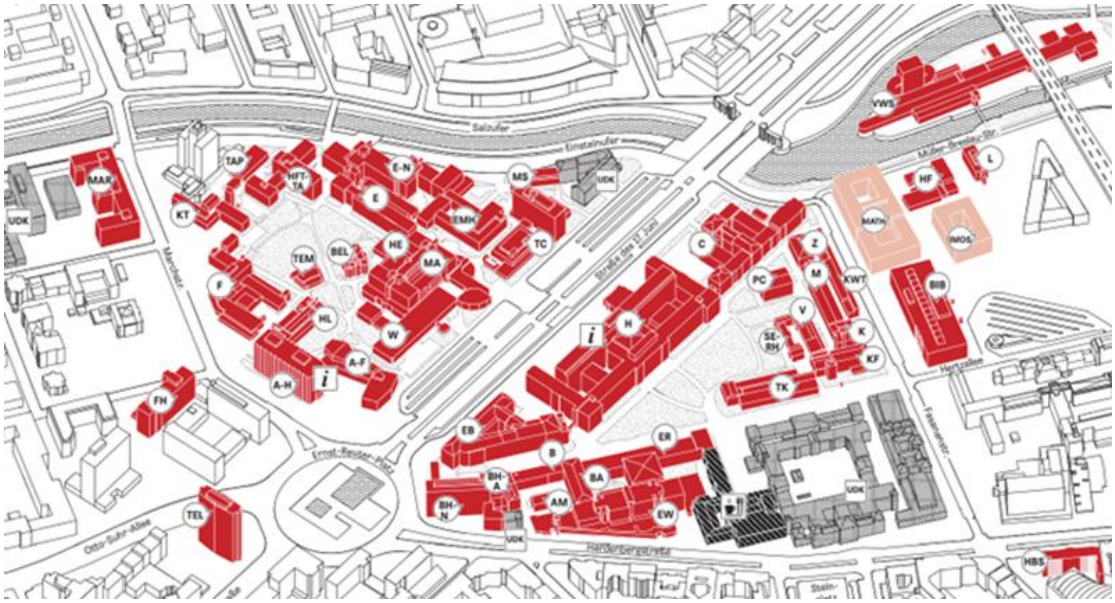
Title: Decarbonization, Carbon neutrality, Net zero – Challenges and Solutions from a Life Cycle Assessment Perspective

Bio: Professor Matthias Finkbeiner is currently the Director of the Institute for Environmental Technology at Technische Universität Berlin and Head of the Department of Sustainable Engineering. He also serves as a Guest Professor at the Chinese Academy of Agricultural Sciences. Professor Finkbeiner is a world-leading scientist in the field of Life Cycle Assessment (LCA) and currently serves as Editor-in-Chief of the internationally recognized journal International Journal of Life Cycle Assessment. He was Chair of the ISO Technical Committee on Life Cycle Assessment (ISO TC207/SC5) for nine years and is a member of the International Life Cycle Board (ILCB) of the UNEP Life Cycle Initiative. In addition, he serves on the Advisory Board of the German Institute for Construction and Environment (IBU e.V.), a leading organization for Environmental Product Declarations (EPDs) in the European construction sector, and previously served on the Advisory Board of Germany's "Blue Angel" eco-label.

Practical Guide

The meeting venue is located at Technische Universitat Berlin, Building HStraße des 17.Juni 135





Speaker’s Guide

1. Authors should give a 15-minitues presentation.

2. Question and answer for each presentation would last 5 minutes.

3. The recommended aspect ratio of the projector screen is 16:9.

4. There is no template for the presentation.

Program at a Glance

August 30, 2025		
Registration Room: H0110, TU Berlin, Straße des 17. Juni 135, 10623 Berlin		
08:00-09:20	Registration	
Conference Room: H0110, TU Berlin, Straße des 17. Juni 135, 10623 Berlin		
09:30-09:45	Opening of ICEEE 2025 Welcome from ICEEE 2025 Conference Chair and Organizer Prof. Bin Chen Dr. Kuangxin Zhou	
09:45-10:25	Keynote: The changing concept of the smart city Prof. Peter Sachsenmeier	
10:25-11:00	Coffee break (H3013, TU Berlin)	
11:00-11:40	Keynote: A global value chain perspective to global carbon inequality Prof. Klaus Hubacek	
11:40-12:20	Keynote: Decarbonization, Carbon neutrality, Net zero – Challenges and Solutions from a Life Cycle Assessment Perspective Prof. Matthias Finkbeiner	
12:20-14:00	Lunch (H3013, TU Berlin)	
Publishing Workshop		
14:00-14:30	Transcending Divides with Nature Cities Wei Chen Associate Editor, Nature Cities	
14:30-15:00	Panel Discussion	
15:00-15:30	Coffee break (H3013, TU Berlin)	
Parallel session of ICEEE 2025		
Time	Energy and Energy Economics Session Room: H3002, TU Berlin	Ecology and Environment Session Room: H3004, TU Berlin
15:30-15:50	3	21
15:50-16:10	6	2
16:10-16:30	7	48
16:30-16:50	30	37
16:50-17:10	49	38
August 31, 2025		
Parallel session of ICEEE 2025		
Time	Energy and Energy Economics Session Room: H3002, TU Berlin	Ecology and Environment Session Room: H3004, TU Berlin
09:00-09:20	34	22
09:20-09:40	36	46
09:40-10:00	19	47
10:00-10:30	Coffee break (H3013, TU Berlin)	
10:30-10:50	11	24
10:50-11:10	25	33

11:10-11:30	28	27
11:30-11:50	45	26
11:50-13:30	Lunch (H3013, TU Berlin)	
13:30-13:50	23	17
13:50-14:10	54	18
14:10-14:30	55	51
14:30-14:50	56	57
14:50-15:10	58	
18:00-20:00	Banquet (Capt'n Schillow, Am Charlottenburger Tor, Str. des 17. Juni 113, 10623 Berlin)	

Oral Presentations (30 Aug)

Session Room: H3002, TU Berlin Session Title: Energy and Energy Economics			
Chair: Yigang Wei			
Time	Paper ID	Author	Paper Title
15:30-15:50	3	Mei Song and Chen Chen	Resilience evaluation of China's natural gas system under import disruption shocks
15:50-16:10	6	Xin Sun	EU tariff on Chinese electric vehicle escalates ownership costs in vulnerable markets
16:10-16:30	7	Huijuan Dong	Sub-technology Market Share Strongly Affects Critical Material Constraints in Power System Transitions
16:30-16:50	30	Weize Song, Zheng Li, Boda Sun and Kaipeng Ren	Policy Incentives of CCUS development under China's Carbon Neutrality Goal
16:50-17:10	49	Yigang Wei, Hui Zhang and Mingxin Wu	Advancing Green Aviation: Strategic Patent Landscapes and Technology Trends Globally
Session Room: H3004, TU Berlin Session Title: Ecology and Environment			
Chair: Beibei Liu			
Time	Paper ID	Author	Paper Title
15:30-15:50	21	Yufan Shi, Miaomiao Liu and Dianyu Zhu	Projected Reductions in Staple Crop Production and Nutritional Quality under Climate Change: Machine Learning Evidence from China
15:50-16:10	2	Mei Song and Zisha Wang	Spatiotemporal dynamics and grouping path of 3D carbon footprints of resource-based cities in the Yellow River Basin under the “dual-carbon” Goal
16:10-16:30	48	Zhuowei Wang	Lifting scheme of environmental carrying capacity of important branch water in Three Gorges reservoir
16:30-16:50	37	Feng Jiang and Bin Chen	Water Savings from Photovoltaics in China via Energy Substitution and Microclimate Effects
16:50-17:10	38	Rui Su and Bin Chen	Health Inequalities in the Coordinated Control of Regional PM2.5 and Ozone Pollution

Oral Presentations (31 Aug)

Session Room: H3002, TU Berlin Session Title: Energy and Energy Economics			
Chair: Yingzhu Li			
Time	Paper ID	Author	Paper Title
09:00-09:20	34	Yufei Wang and Linyu Xu	How Does Climate Change Impact the Low-Carbon Transition of Power Systems in power deficit area? New Evidence from the Greater Bay Area，China
09:20-09:40	36	Yating Deng and Paul Burke	How Wind and Solar Erode Generator Revenues: Evidence from Australia's National Electricity Market
09:40-10:00	19	Lin Lv, Miaomiao Liu and Yuli Shan	Short-Term Debts and Long-Term Gains: Uneven Multi-Dimensional Paybacks in China's low-Carbon Infrastructure Transition
10:00-10:30	TEA/COFFEE BREAK		
Chair: Weize Song			
10:30-10:50	11	Rui Min, Dong Wang and Qi Tao	Effective Decapsulation Method for Photovoltaic Modules: Limonene-induced EVA Controlled Swelling Under Sonication and Debonding Mechanism Analysis
10:50-11:10	25	Dong Wang and Hongmei Cao	Molten Salt-Assisted Direct Regeneration and Elemental Doping of Degraded Layer Cathodes
11:10-11:30	28	Zhenqian Wang, Yuezhang He, Yunchuan Liu, Tianduo Peng and Zheng Li	Modeling of Electrolytic Hydrogen Production System Considering Multiple Variables
11:30-11:50	45	Yunchuan Liu, Yuezhang He, Zhenqian Wang, Tianduo Peng and Zheng Li	Design and Techno-economic Assessment of a Low-Carbon Flexible Hydrogen-based Steelmaking System: A State-Scale Analysis in India
11:50-13:30	LUNCH		
Chair: Kaipeng Ren			
13:30-13:50	23	Kaipeng Ren, Xu Tang, Jakob Willerström, Mikael Höök and Mengtong Li	Unlocking the puzzle of China's uncertain long-term oil demand pathways
13:50-14:10	54	Song Chai and Jin Yang	Waterbed Effects of Carbon Trading under Renewable Portfolio Constraints
14:10-14:30	55	Xinyi Zhang, Tianduo Peng, Zheng Li	Material Metabolism of Copper in China and Its Future Demand in Key Sector
14:30-14:50	56	Zixuan Zhang, Marek Makowski, Zbigniew Nahorski, Janusz Granat, Yadong Yu and Tieju Ma	Structured modeling of hybrid energy storage for multi-timescale decision-making in wind-farm management
14:50-15:10	58	Cuncun Duan	Energy-pollutant nexus for wastewater treatment in China

Oral Presentations (31 Aug)

Session Room: H3004, TU Berlin Session Title: Ecology and Environment			
Chair: Cuncun Duan			
Time	Paper ID	Author	Paper Title
09:00-09:20	22	Yufan Shi, Miaomiao Liu and Fan Ning	Urban – Rural Disparities in Health – Environmental Trade-offs of Dietary Transitions in China
09:20-09:40	46	Xingchen Liu, Ang Li and Leixiang Wu	Mitigating Riparian Greenhouse Gas Emissions through Vegetation Harvesting
09:40-10:00	47	Ang Li, Zhuowei Wang and Leixiang Wu	Value Realization of Hydro-ecological Products
10:00-10:30	TEA/COFFEE BREAK		
Chair: Shaoqing Chen			
10:30-10:50	24	Yining Huang, Miaomiao Liu and Jun Bi	Health Risk Assessment and Integrated Management Strategies for Air Pollution from Municipal Solid Waste Incineration in China
10:50-11:10	33	Xinxin Shang and Linyu Xu	Decarbonization potential of the transportation system in the Bay Area urban agglomeration from power-transportation synergy perspective
11:10-11:30	27	Yuzhe Yang and Miaomiao Liu	Regional differentiation promotion strategies for new energy vehicles in China and assessment of their environmental health benefits
11:30-11:50	26	Junliang Wu, Yafei Wang and Shaoqing Chen	Adapting while mitigating: quantifiable contributions of ecosystem services and carbon offset to climate resilience in cities
11:50-13:30	LUNCH		
Chair: Wei Zhang			
13:30-13:50	17	Zhihan Zhang, Dong Wang and Guobiao Li	Phase control and green selective extraction of NdFeB waste materials
13:50-14:10	18	Wei Zhang	Investigation of metal-catalyzed effects and the pyrolysis mechanism of waste enameled wires
14:10-14:30	51	Da Yang, Fu Wan, Yupeng Lin, Wenwei Yin, Ruiqi Liu, Bing Luo, Zheng Zhong and Weigen Chen	The Direct Regeneration of Spent Polycrystalline NCM Cathodes is Achieved via Structural Regulation Based on the Depth of Mechanical Activation
14:30-14:50	57	Lan Mu, Wanting Wu and Guanyi Chen	Preparation and application research of biomass-based carbon dots

Note

Note

