

AGENDA

FEBRUARY 17

Waste-to-energy

08:30 - 09:00 Registration & Welcome and Coffee

09:00 - 09:20 Conference Overview & Opening remarks

Session 1 - General Current Trends in Waste Management: KSA and World Perspectives

09:20 – 09:45 **Mr. Suleiman Al-Amro | MWAN, Saudi Arabia**
*Transformative Planning in the Waste Management
Sector: A Journey to A Circular Economy*

09:45 – 10:10 **Dr. Ahmed Khan | SIRC, Saudi Arabia**
*The SIRCularity Applied Solutions Centre @ KAUST
Synergy for Energy*

10:10 – 10:35 **Dr. Charlotte Morton | World Biogas
Association, UK**
"Making Biogas Happen by 2030"

10:35 – 11:00 **Prof. Xiaodong Li | Zhejiang University, China**
*Development process and experiences of waste to energy
technology in China in the past 30 years*

11:00 – 11:25 Coffee Break

10:25 – 12:00 **Panel Discussion**
Moderator: Mani Sarathy, KAUST, Saudi Arabia

12:00 – 14:00 Lunch

KAUST Research Conference:
**Optimizing Energy
in the Circular
Economy**



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Session 2 - Transforming Plastics: Innovation in Circularity

- 14:00 – 14:25** **Prof. George Huber | University of Wisconsin, USA**
Advanced Technologies for Plastic Recycling
- 14:25 – 14:50** **Prof. Ajay Dalai | University of Saskatchewan, Canada**
Sustainable process development for hydrogen production from waste plastics
- 14:50 – 15:15** **Dr. Omer Koseoglu | Technology Innovation Farms LLC, USA**
Waste plastic to value added product using existing assets
- 15:15 – 15:45** Coffee Break
- 15:45 – 16:10** **Prof. Pedro Castano | KAUST, Saudi Arabia**
Wasteomics: Quantitative and Molecular-Level Analytical Platforms for Waste Valorization Processes.
- 16:10 – 16:35** **Dr. Saumitra Saxena | KAUST, Saudi Arabia**
Sustainable valorization of plastic and municipal solid waste
- 16:35 – 17:00** **Mr. Omar Mohammed Badros | SABIC, Saudi Arabia**
Circular Economy Opportunities via refinery intergration
- 17:00 – 17:15** Closing Remarks and Announcements
- 18:00 – 21:00** Poster session + Dinner Reception

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AGENDA

FEBRUARY 18

Waste-to-value

09:30 - 09:40 Announcements for the day

Session 3 - Research Perspectives: Driving Innovation in the Waste-to-Energy Transition

09:40 – 10:05 **Dr. Nils Hansen | Sandia National Lab, USA**
Basic Research Needs for Chemical Transformations in a Circular Energy Economy

10:05 – 10:30 **Prof. Mohammad Alotaibi | KACST, Saudi Arabia**
Innovative Waste-to-Energy Solutions: Pioneering Sustainable Waste Management in Saudi Arabia

10:30 – 10:55 **Dr. Reda Kabbaj | WtERT, Canada**
The role of academia in supporting waste-to-energy for a circular economy society: Insights from China's model and its applicability to emerging economies

10:55 – 11:10 Coffee Break

11:10 – 11:35 **Dr. Awad Alquaity | KFUPM, Saudi Arabia**
Organic Rankine Cycle for Dual – Purpose Waste Heat Recovery: Cooling and Power Generation

11:35 – 12:00 **Dr. Muhammad Imran | Aston University, UK**
Digital Twin of Thermal Energy Systems

12:00 – 14:00 Lunch

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Waste-to-value

Session 4 - Biomass-based Waste Valorization:
Unlocking Renewable Potential

14:00 – 14:25 **Dr. Adil Abdelnour | Estidamah, Saudi Arabia**
Valorizing Agricultural and Organic Waste: Accelerating Emission Reduction and Enhancing Saudi Circular Bioeconomy

14:25 – 14:50 **Prof. Kyle J. Lauersen | KAUST, Saudi Arabia**
The Role of Algal Biotechnology in circularity.

14:50 – 15:15 **Prof. Chinnathan Areeprasert | Kasetsart University, Thailand**
Innovative Waste Conversion Strategies for Community Toward Circular Economy Development in Thailand

15:15 – 15:30 Coffee Break

15:30 – 15:55 **Dr. Chujun Li | Unique Biotech, China**
Black Soldier Fly Thermal Biology Overview and Personal Insights on Research to Application

15:55 – 16:20 **Prof. Min Min Cai | Huazhong Agricultural University, China**
Application of efficient conversion technology of black soldier fly with microbes

16:20 – 16:30 Closing Remarks and Announcements

17:00 – 20:00 Trip to Thuwal

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AGENDA

FEBRUARY 19 CCS and WU

Session 5 - Carbon and Resource Management: Leveraging Waste for Sustainability

- 09:40 – 10:05** **Dr. Collin Ward | KAPSARC, Saudi Arabia**
Trash to Treasure: Waste heat and the Circular Carbon Economy
- 10:05 – 10:30** **Amna Bezanty | Sustainable Molecules (SuMo) Ltd., UK**
Unlocking Negative-Carbon Advanced Molecules from Waste: The Power of Advanced Gasification in the Circular Economy
- 10:30 – 10:45** Coffee Break
- 10:45 – 11:10** **Prof. Faride Chejne Jana | National University of Colombia, Colombia**
Generation strategies from biomass and waste heat
- 11:10 – 11:35** **Dr. Sai Shrinivas Sreedharan | KAUST, Saudi Arabia**
Carbon Capture Technology Development in Saudi Arabia
- 11:35 – 12:00** **Dr. Aziz Nechache | CERP, KAUST, Saudi Arabia**
High Temperature Electrolyzer for Advancing Hydrogen and e-Fuels Production in KSA
- 12:00 – 14:00** Lunch
- 14:00 – Onwards** Desert camp excursion & Gala dinner

