

# CONFERENCE PROGRAM

## TECHNICAL TOURS

Technical Tour 1: Vienna | Monday, September 15, 2025

Technical Tour 2: Freiberg | Friday, September 19, 2025

## Monday, September 15, 2025

18:00 – 20:00 Registration & Welcome Reception, Foyer Prague

## Tuesday, September 16, 2025

|               |  |  |      |  |      |   |
|---------------|--|--|------|--|------|---|
| 07:00 - 07:45 | Morning run with a tour of Prague together with the General Manager and other employees of the Hotel (6-7 kilometres), Meeting Point Departure: Entrance Hotel |  |      |  |      |   |
| 08:30 – 09:00 | Registration Foyer Prague  |  |      |  |      |   |
| 09:00 – 10:00 | <b>Opening Ceremony</b><br><b>Chair: Martin Gräbner</b><br>Room: Prague A-D  |  |      |  |      |   |
| 09:00 – 09:20 | <b>Welcome by Conference Organizer</b><br>(Martin Gräbner, TU Bergakademie Freiberg – Germany)   |  |      |  |      |   |
| 09:20 – 09:40 | Pathways to net-zero under pressure – A European perspective on carbon management<br>(Martin Gräbner, TU Bergakademie Freiberg - Germany)                      |  |      |  |      |   |
| 09:40 – 09:50 | Conference organization information<br>(Antonia Helf, TU Bergakademie Freiberg – Germany)  |  |      |  |      |   |
| 09:50 – 10:00 | Group Picture  |  |      |  |      |   |
| 10:00 – 10:30 | Coffee Break   |  |      |  |      |   |
| 10:30 – 12:10 | <b>Session 1:</b><br><b>Industrial gasification technologies I</b><br><b>Chair: Martin Gräbner</b><br>Room: Prague A-D   | <b>Session 2:</b><br><b>Depolymerization and co-pyrolysis</b><br><b>Chair: Robin Post van der Burg</b><br>Room: Cracow I+II  |      | <b>Session 3:</b><br><b>Biomass pyrolysis products</b><br><b>Chair: David Kubicka</b><br>Room: Belvedere I+II  |      |   |
| 10:30 – 10:50 | 01-1   | Air Liquide GasPOx technology: transforming syngas production for a low-carbon future (Louis Frigola, Air Liquide Global E&C Solutions Germany GmbH – Germany)               | 02-1 | Pyrolysis of PC/ABS-blends in gaseous ammonia (Philipp Rathsack, Fraunhofer IKTS – Germany)  | 03-1 | Effect of internal pyrolysis oil recirculation on bio-oil quality in an auger reactor (Yusuf Tolunay Kilic, Luleå University of Technology – Sweden)                |
| 10:50 – 11:10 | 01-2   | CHOREN entrained flow gasification – update of technology and projects (Manuel Kordese, CHOREN Industrietechnik GmbH – Germany)  | 02-2 | Pyrolytic interactions of polyurethanes with thermoplastics: implications for chemical recycling (Michael Zeller, Karlsruhe Institute of Technology – Germany) | 03-2 | Biocarbon production for metallurgical use: opportunities and challenges (Zainab Afailal, Laborelec – Belgium)  |
| 11:10 – 11:30 | 01-3   | Forest residue gasification in the advanced R-GASTM entrained flow gasifier (Zach El Zahab, GTI Energy – United States)  | 02-3 | Pyrolysis behavior and synergistic mechanism of mixed plastics containing PVC (Haoquan Hu, Dalian University of Technology – China)                            | 03-3 | From horticultural waste to biochar catalysts: for hydrogen production and CO <sub>2</sub> /CO conversion (Cyrus Foo, Nanyang Technological University – Singapore) |
| 11:30 – 11:50 | 01-4   | Feedstock flexibility in HTW <sup>®</sup> gasification – understanding key composition variations (Alireza Mohammadi, Bernd Epple, GIDARA Energy – Netherland)               | 02-4 | Interaction mechanism of waste plastic and paper during co-pyrolysis (Chen Xueli, East China University of Science and Technology – China)                     | 03-4 | Evaluation of lump coke production from fossil and renewable feedstocks by stamped-charged coking (Franz Fehse, TU Bergakademie Freiberg – Germany)                 |
| 11:50 – 12:10 | 01-5   | CO <sub>2</sub> reduction from renewable chemicals and fuels production using plasma gasification of waste and biomass feedstocks (Matthew Targett, InEnTec – United States) | 02-5 | Optimizing pyrolysis products from waste plastics using machine learning techniques (Akhil Mohan, KTH Royal Institute of Technology – Sweden)                  | 03-5 | Evolution characteristics and mechanism of products from large-particle biomass pyrolysis in molten salt media (Peng Lyu, Ningxia University – China)               |
| 12:10 – 13:10 | Lunch  |  |      |  |      |   |

| 13:10 – 14:50   |      | <b>Session 4:</b><br>Industrial gasification technologies II<br>Chair: Guangsuo Yu<br>Room: Prague A-D  | 4 | <b>Session 5:</b><br>Liquefaction and oil upgrading<br>Chair: Jörg Kleeberg<br>Room: Cracow I+II | 5   | <b>Session 6:</b><br>Mineral matter I<br>Chair: Stefan Guhl<br>Room: Belvedere I+II                     | 6   |
|---|------|---|---|--|---|---|---|
| 13:10 – 13:30   | 04-1 | Navigating investments in gasification (Claus Hindsgaul, Ramboll – Denmark)   |   | 05-1   | To transform – We innovate: ReOil® - OMV’s pioneering industrial scale chemical recycling technology, for a circular future (Wolfgang Hofer, OMV Downstream GmbH – Austria)   | 06-1  | Ash chemistry during gasification and slag utilization (Jin Bai, Chinese Academy of Sciences – China)   |
| 13:30 – 13:50   | 04-2 | Integration of gasification into existing plant as pathway to carbon utilization (Zdenek Jonat, Sokolovska uhelna – Czech Republic)   |   | 05-2   | Controlling the carbon retention in liquid products of pyrolysis bio-oil upgrading: the case of model phenolic compounds (David Kubicka, University of Chemistry and Technology Prague – Czech Republic)                      | 06-2  | Characterizing the petrological, mineralogical, and chemical sintering mechanism of wood pellet ash in high temperature conversion processes (Andrés Verdugo, TU Bergakademie Freiberg – Germany)                               |
| 13:50 – 14:10   | 04-3 | Enabling low carbon steel making via Blue Syngas (Naveen Ahlawat, Jindal Steel – India)   |   | 05-3   | How can temperature-staged pyrolysis contribute to reaching specification-compliant petrochemical feedstock? (Salar Tavakkol, Karlsruhe Institute of Technology – Germany)  | 06-3  | Effect of residual carbon on the crystallinity of high-iron coal ash and its modification mechanisms (Wei Zhao, Ningxia University – China)   |
| 14:10 – 14:30   | 04-4 | Technology options analysis for operationally reliable & economically sustainable gasification of Indian coal (Chatterjee Saikat, Dastur Energy – India)  |   | 05-4   | Development of a novel semi-pilot scale screw reactor for continuous pyrolysis of biomass and wastes at high temperature (Hasan Can Okutan, Istanbul Technical University – Turkey)   | 06-4  | Examining ash agglomeration behavior using a high-temperature fluidized bed (Stefan Guhl, TU Bergakademie Freiberg – Germany)   |
| 14:30 – 14:50   | 04-5 | Torrefaction of crop residues emerges as a critical pre-treatment process that enhances the security of feedstock supply, enables true circularity, and optimized coast structures (Robin Post van der Burg, Torrgas – The Netherlands) |   | 05-5   |   | 06-5  | Investigation of ash and slag deposition mechanisms in industrial-scale radiant syngas cooler for entrained-flow coal gasification (Weidong Xia, East China University of Science and Technology – China)                       |
| 14:50 – 15:20 Coffee Break  |      |   |   |  |   |   |   |
| 15:20 – 16:40   |      | <b>Session 7:</b><br>Electrification of carbon value chains<br>Chair: Ronny Schimpke<br>Room: Prague A-D  | 7 | <b>Session 8:</b><br>Syngas conversion<br>Chair: Jian Xu<br>Room: Cracow I+II                    | 8   | <b>Session 9:</b><br>Plasma CH <sub>4</sub> -cracking<br>Chair: Andreas Richter<br>Room: Belvedere I+II | 9   |
| 15:20 – 15:40   | 07-1 | Techno-economic comparison of waste-to-methanol pathways: incineration, gasification, and plasma gasification for thermochemical recycling of municipal solid waste (Sebastian Bastek, TU Munich – Germany)                             |   | 08-1   | $\alpha$ -, $\beta$ -, and $\gamma$ -Ga <sub>2</sub> O <sub>3</sub> catalyzed hydrogenation of CO <sub>2</sub> to prepare different product processes by mechanical studies (Xinyu Wei, Ningxia University – China)           | 09-1  | Syngas production via methane pyrolysis and soot gasification (Andreas Waibel, CAPHENIA GmbH – Germany)   |
| 15:40 – 16:00   | 07-2 | Comparative techno-economic assessment of various feedstocks in plasma-assisted gasification for efficient waste valorization (Antonia Helf, TU Bergakademie Freiberg – Germany)  |   | 08-2   | Comprehensive understanding of iron-catalyzed Fischer–Tropsch synthesis product distribution with extensive reliable data (Liping Zhou, Synfuels China Technology Co., Ltd. – China)  | 09-2  | Methane plasma catalytic pyrolysis and utilization of produced carbon nanotubes mixed with zerovalent iron nanoparticles for environmental remediation (Jafar Fathi, Czech University of Life Sciences Prague – Czech Republic) |
| 16:00 – 16:20   | 07-3 | Electrolyzers in cost-optimized energy systems using the example of electrified gasification (Laura Thiel, Fraunhofer IWU – Germany)  |   | 08-3   | Investigation of an innovative perovskite-based catalyst for process optimization in the reverse water gas shift reaction: Unlocking the potential for e-fuel production (Marion Andritz, Montanuniversität Leoben – Austria) | 09-3  |   |
| 16:20 – 16:40   | 07-4 | Methane pyrolysis – low-emission hydrogen for industrial applications and solid carbon as soil amendment for agriculture (Robert Obenaus-Emler, Montanuniversität Leoben – Austria)   |   |  |   | 09-4  |   |
| 19:00 – 22:00 Conference Dinner, Municipal House Prague<br>Meeting Point Departure 18:00 Entrance Vienna House by Wyndham Diplomat Prague Hotel |      |   |   |  |   |   |   |

## Wednesday, September 17, 2025

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|---------------|--|--|---|
| 07:00 – 07:45 | Calm Morning Yoga Session (limited to 20 participants)<br>Meeting Point: Loft  |  |   |
| 09:00 – 10:30 | <b>Plenary Session: Transformation in China</b><br><b>Chair: Martin Gräbner / Roh Pin Lee</b><br>Room: Prague A-D  |  |   |
| 09:00 – 09:30 | Fischer-Tropsch: a bridge to sustainable future<br>(Jian Xu, Synfuels China Technology Co., Ltd. – China)  |  |   |
| 09:30 – 10:00 | Development and application of OMB coal gasification technology<br>(Qinghua Guo, East China University of Science and Technology – China)                              |  |   |
| 10:00 – 10:30 | The development of low carbon emission and carbon neutralization technologies for clean coal utilization in ICC, CAS<br>(Jin Bai, Chinese Academy of Sciences – China) |  |   |
| 10:30 – 11:00 | Coffee Break   |  |   |
| 11:00 – 12:40 | <b>Session 10:</b><br><b>Plasma technology and material development</b><br><b>Chair: Martin Gräbner</b><br>Room: Prague A-D  | <b>Session 11:</b><br><b>Carbon management I</b><br><b>Chair: Frank Hannemann</b><br>Room: Cracow I+II   | <b>Session 12:</b><br><b>Kinetic I</b><br><b>Chair: David Harris</b><br>Room: Belvedere I+II  |
| 11:00 – 11:20 | 10-1 Advanced power electronics driving plasma-based methane pyrolysis (Hanna Basche, TRUMPF Hüttinger – Germany)  | 11-1 Mapping of advanced recycling technologies and global capacities (Lars Krause, nova-Institut GmbH – Germany)  | 12-1 Quantifying diffusion limitations in packed beds for the evaluation of intrinsic kinetics using CFD-based TGA experiments (Fengbo An, TU Bergakademie Freiberg – Germany)                                |
| 11:20 – 11:40 | 10-2 Development of a 100 kW steam plasma torch (SPT) for waste remediation (Hamid Reza Yousefi, PlasmaAir AG – Germany)   | 11-2 LCA of chemical recycling – industry harmonization and practical application (Fabian Loske, Sphera Solutions GmbH – Germany)                        | 12-2 Reaction kinetics and pathways of carbon nanoparticle oxidation and gasification by NO <sub>x</sub> , O <sub>2</sub> , and H <sub>2</sub> O (Hyun Gu Kang, Max Planck Institute for Chemistry – Germany) |
| 11:40 – 12:00 | 10-3 High-performance electrode materials for industrial plasma torch: study of erosion factors (Viktoriia Kison, TU Bergakademie Freiberg – Germany)                  | 11-3 Eight guiding principles for PtX chemicals in a sustainable chemical industry (Sarah Bernhardt, PtX Lab Lausitz – Germany)                          | 12-3 Mechanistic insights into hydrogen production from CaO-catalyzed lignin gasification: a ReaxFF MD and DFT study (Qifu Luo, Ningxia University – China)   |
| 12:00 – 12:20 | 10-4 Influence of different discharge frequencies on plasma-catalytic ammonia de-composition for hydrogen recovery (Michalina Perron, TRUMPF Huettinger – Poland)      | 11-4 Chemical recycling of plastics – 30 years of research and development: lessons learned and current status (Reinhard Schu, EcoEnergy GmbH – Germany) | 12-4 Drop-tube steam co-gasification of coal and waste plastics for H <sub>2</sub> production (Enkhsaruul Byambajav, National University of Mongolia – Mongolia)  |
| 12:20 – 12:40 | 10-5 High power plasma torch for the pyrolysis of methane (Bernd Glocker – PlasmaAir AG – Germany)   |  | 12-5 The evaluation of pulp and paper industry waste use as additives catalyzing the steam gasification of tire-char (Katarzyna Spiewak, AGH University of Krakow – Poland)                                   |
| 12:40 – 13:40 | Lunch  |  |   |

| 13:40 – 15:00 | <b>Session 13:<br/>Sewage sludge conversion</b><br>Chair: Grezgorz Lisak<br>Room: Prague A-D |  | <b>Session 14:<br/>Carbon management II</b><br>Chair: Jason Laumb<br>Room: Cracow I+II |  | <b>Session 15:<br/>CCU and CCS</b><br>Chair: Joanna Bigda<br>Room: Belvedere I+II         |   |
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|               |  | 13   |  |  | 14  | 15  |
| 13:40 – 14:00 | 13-1   | Thermal upcycling of sewage sludge in a 1 MW dual fluidized bed steam gasifier and downstream gas cleaning units (Daniel Hochstätger, BEST - Bioenergy and Sustainable Technologies GmbH – Austria)                            | 14-1   | Absorbent Hygiene Product recycling pilot by BASF, Essity and TU Vienna opens new circularity perspectives (André Bader, BASF – Germany)   | 15-1  | A systematic approach for design and optimization of CCUS industrial complexes toward feasibility (Thuy Nguyen, National Institute of Advanced Industrial Science and Technology – Japan)                               |
| 14:00 – 14:20 | 13-2   | Experimental and numerical investigation on deposited particulates during a high temperature slagging gasification of converting sewage sludge into valuable resources (Ya Zhao, Nanyang Technological University – Singapore) | 14-2   | Circular economy projects and pilot plants at the RWE Innovation Centre in Niederaußem: Status update (Christian Wolfersdorf, RWE Power AG – Germany)  | 15-2  | Integrating direct air capture into renewable heat supply (Eva Klockow, German Aerospace Center – Germany)  |
| 14:20 – 14:40 | 13-3   | Kinetic study on phosphorus release and carbon conversion of sewage sludge during gasification (Eric Franke, TU Bergakademie Freiberg – Germany)   | 14-3   | Development of polygeneration system with CO <sub>2</sub> capture - coal and plastic waste gasification and syngas clean-up (Satoshi Umemoto, CRIEPI – Japan)  | 15-3  | CO <sub>2</sub> Capture from pyrolysis gas: a path towards enhanced hydrogen and material recovery from waste (Andrei Veksha, Nanyang Technological University – Singapore)   |
| 14:40 – 15:00 | 13-4   | Investigation of the catalytic effects of low-cost natural minerals on the gasification of domestic sewage sludge (Alper Sarıođlan, Istanbul Technical University – Turkey)  | 14-4   | Achieving a sustainable circular economy in the chemical industry – the case of waste-based olefin production (Witold-Roger Pogonietz, Karlsruhe Institute of Technology – Germany)  | 15-4  | Solubility of CO <sub>2</sub> in ionic liquids with additional water and methanol: modeling with PC-SAFT equation of state (Ke Zheng, Synfuels China Technology Co., Ltd. – China)                                      |
| 15:00 – 15:30 | Coffee Break   |  |  |  |   |   |
| 15:30 – 16:30 | <b>Poster Session Preparation</b><br>Room: Prague A-D  |  | <b>Session 16:<br/>Tars in product gases</b><br>Chair: Haoquan Hu<br>Room: Cracow I+II |  | <b>Session 17:<br/>Mineral matter II</b><br>Chair: Qiuliang Huang<br>Room: Belvedere I+II |   |
|               |  |  |  |  | 16  | 17  |
| 15:30 – 15:50 |  |  | 16-1   | Influence of feedstock and process conditions on tar formation in fluidized bed gasification (Fabiola Panitz, TU Darmstadt – Germany)  | 17-1  | Gasifier feed-forward control by means of thermodynamic modeling of the slag behavior (Johan van Dyk, GTI Energy – United States and Petra Mühlen, Spectraflow Analytics – Switzerland)                                 |
| 15:50 – 16:10 |  |  | 16-2   | Fine gas cleaning for advanced biofuel production: reduction of PAHs and nitrogen compounds from cashew and coconut shells (Anna Egger, BEST – Bioenergy and Sustainable Technologies GmbH – Austria)  | 17-2  | Ash deposition behavior coupled with impact surface temperature in radiant syngas cooler for entrained-flow coal gasification using CFD modeling (Guoyu Zhang, East China University of Science and Technology – China) |
| 16:10 – 16:30 | Instructions for Poster Presenters   |  | 16-3   | Development and updating of a database for carbonaceous waste and residual materials to derive suitable thermal utilization paths from the analytically determined material properties (Stefan Thiel, TU Bergakademie Freiberg, IEC – Germany) | 17-3  | Application of ETV-ICP OES for in situ measurement of element mobilization from substitute fuels in simulated process gas atmospheres (Teres Pietschner, TU Bergakademie Freiberg – Germany)                            |
| 16:30 – 16:40 | Short Break  |  |  |  |   |   |
| 16:40 – 18:30 | <b>Poster Pitch &amp; Poster Reception</b><br>Prague A-D, Foyer Prague, Vienna I+II          |  |  |  |   |   |

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| 07:00 – 07:45 | Morning run with a tour of Prague together with the General Manager and other employees of the Hotel (6-7 kilometres), Meeting Point Departure: Entrance Hotel  |   |   |
| 09:00 – 10:40 | <b>Session 18:</b><br><b>Pilot-scale gasification</b><br><b>Chair: Markus Reinmüller</b><br><b>Room: Prague A-D</b>   | <b>Session 19:</b><br><b>Plasma application and modeling</b><br><b>Chair: André Bader</b><br><b>Room: Cracow I+II</b>   | <b>Session 20:</b><br><b>Pilot-scale testing and modeling</b><br><b>Chair: Zach El Zahab</b><br><b>Room: Belvedere I+II</b>   |
| 09:00 – 09:20 | 18-1 Enabling solid fuel chemical looping combustion in a 1 MW dual fluidized bed biomass gasifier: a simulation study on process design (Miriam Huber, BEST - Bioenergy and Sustainable Technologies GmbH – Austria)   | 19-1 Key performance indicators for plasma-based dry reforming of methane and reverse water-gas shift (Anton Serov, TU Bergakademie Freiberg, – Germany)  | 20-1 Pilot-scale testing and modeling of biomass and cofired gasification, syngas treatment, and CO <sub>2</sub> capture in a pressurized oxygen-blown fluidized bed (Jason Laumb, University of North Dakota and Energy and Environmental Research Center – United States) |
| 09:20 – 09:40 | 18-2 Scalable simulation models for the high-pressure partial oxidation of methane (Gabriel Gonzalez Ortiz, TU Bergakademie Freiberg – Germany)   | 19-2 Recovery of monomers and alcohols from waste PMMA plastics using a nonthermal plasma with solid acids (Kyoung-Su Ha, Sogang University – South Korea)  | 20-2 Biocarbon production in fluidized beds: evolution of particle physical properties during biomass conversion (Eduardo Arango Durango, Luleå University of Technology – Sweden)  |
| 09:40 – 10:00 | 18-3 Enhancing hydrogen yield in plastic waste gasification: experimental results from a pilot plant (Claudia Masala, Sotacarbo S.p.A. – Italy)   | 19-3 CFD modeling of plasma-assisted entrained flow gasification – evaluation of different modeling approaches (Sebastian Wilhelm, TU Munich – Germany)   | 20-3 Temperature based investigation on the mechanism of single coal particle fragmentation (Yue Wu, East China University of Science and Technology – China)   |
| 10:00 – 10:20 | 18-4 Experimental, balancing and equilibrium data from 5 MW high-pressure entrained flow gasification for process monitoring, optimization and scale-up (Ulrike Santo, Karlsruhe Institute of Technology – Germany)   | 19-4 Machine learning and generative adversarial networks (GANs) for predicting and generating plasma flames (Farideh Hoseinian Maleki, TU Bergakademie Freiberg – Germany)                           | 20-4 CFD analysis of tar yields in chemical looping gasification depending on fuel feeding positions (Christoph Graf, TU Darmstadt – Germany)   |
| 10:20 – 10:40 | 18-5 Enhancing the operational stability and slag melting performance in a high temperature slagging gasifier for effective conversion of sewage sludge into valuable resources for a more circular economy (Wei Ping Chan, Nanyang Technological University – Singapore) | 19-5 Carbon and hydrogen-enriched gas recovery from plastic by non-catalytic pyrolysis (Ieva Kiminaitė, Lithuanian Energy Institute – Lithuania)  | 20-5 In-situ study of particle evolution at different stages during coal gasification process (Gong Yan, East China University of Science and Technology – China)   |
| 10:40 – 11:10 | Coffee Break  |   |   |
| 11:10 – 12:50 | <b>Session 21:</b><br><b>MeOH value chain</b><br><b>Chair: Alexander Rösch</b><br><b>Room: Prague A-D</b>   | <b>Session 22:</b><br><b>Economic and sociopolitical assessments</b><br><b>Chair: Andreas Neumann</b><br><b>Room: Cracow I+II</b>   | <b>Session 23:</b><br><b>Kinetic II</b><br><b>Chair: Stefan Guhl</b><br><b>Room: Belvedere I+II</b>   |
| 11:10 – 11:30 | 21-1 Methanol on demand: flexible plants for a renewable future (Henrik Schlösser, Air Liquide F&E GmbH – Germany)  | 22-1 Economic analysis of district heating system decarbonization – case study for a city of 100,000 inhabitants in Poland (Tomasz Iluk, Institute of Energy and Fuel Processing Technology – Poland) | 23-1 Pyrolysis and gasification kinetics of various organic waste feedstocks for emerging conversion pathways in CFB reactors (Mohammad Shahrivar, TU Darmstadt – Germany)  |
| 11:30 – 11:50 | 21-2 The methanol-to-gasoline (MtG) process on a semi-industrial scale as a key step in renewable gasoline production – The DeCarTrans project (Malena Peuker, TU Bergakademie Freiberg – Germany)  | 22-2 Improved offsetting categorization for effective decarbonization (Elena Huber, TU Berlin – Germany)  | 23-2 Kinetics of cellulose pyrolysis discovered by an extended chemical reaction neural network (Cheng Chi, University of Magdeburg – Germany)  |

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| 11:50 – 12:10 | 21-3  | Evaluation of DeCarTrans fuels in passenger car applications: a comprehensive study of emission reduction, combustion efficiency, and engine performance (Max Schüttenhelm, Volkswagen AG – Germany)          | 22-3   | Transdisciplinary community education for sustainable carbon technology awareness insights from SAFE and MOSA (Corina Pacher, Montanuniversität Leoben – Austria)  | 23-3  | Revisiting kinetic model for cellulose pyrolysis: molecular structure, reaction kinetics, and vapor-liquid equilibrium (Sruthy Vattaparambil Sudharsan, Luleå University of Technology – Sweden) |
| 12:10 – 12:30 | 21-4  | Development of the olefins-to-jet fuel (OtJ) process as a key step towards low carbon footprint kerosene production – the EwOPro project (Katina Krell, TU Bergakademie Freiberg – Germany)                   | 22-4   | “Waste-to-Products” for the sustainability transformation of megacities: impacts of public knowledge & perception on chemical recycling deployments in Singapore (Roh Pin Lee, Brandenburg University of Technology (BTU) Cottbus-Senftenberg – Germany) | 23-4  | Structural analysis and gasification reactivity of chars derived from the slow pyrolysis of extruded coal fines and recycled plastic (Hein Neomagus, North-West University – South Africa)       |
| 12:30 – 12:50 | 21-5  | Methanol production from steel mill gases - comparison of plant performance for different carbon sources (Tim Schulzke, Fraunhofer UMSICHT – Germany)   | 22-5   |  | 23-5  | Fundamental and scientific understanding of biomass properties for gasification (Johan van Dyk, GTI Energy – United States)  |
| 12:50 – 13:50 | Lunch   |   |  |  |   |  |
| 13:50 – 15:10 | <b>Session 24:</b><br><b>PtX and PtSAF concepts</b><br><b>Chair: Peter Seifert</b><br><b>Room: Prague A-D</b> |   | <b>Session 25:</b><br><b>Carbon management III</b><br><b>Chair: Urs Overhoff</b><br><b>Room: Cracow I+II</b> |  | <b>Session 26:</b><br><b>Mineral matter III</b><br><b>Chair: Johan van Dyk</b><br><b>Room: Belvedere I+II</b> |  |
| 13:50 – 14:10 | 24-1  | Production of sustainable aviation fuels as an important contribution to circular carbon economy (Markus Kinzl, Siemens Energy – Germany)   | 25-1   | Integrated thermochemical valorization of poultry waste for power generation: process optimization and economic analysis (Fawad Rahim Malik, Czech Technical University in Prague – Czech Republic)  | 26-1  | Sustainable utilization of post-mining waste – results of gasification studies on coal bearing fractions (Joanna Bigda, Institute of Energy and Fuel Processing Technology – Poland)             |
| 14:10 – 14:30 | 24-2  | The technology platform power-to-liquid fuels (TPP) as flagship project to overcome obstacles in the market ramp-up of SAF (Sandra Richter, German Aerospace Center – Germany)                                | 25-2   | Chemical recycling of polymer barrier-coated board reject via gasification (Sanna Tuomi, VTT Technical Research Centre of Finland Ltd – Finland)   | 26-2  | Closing the waste loop: integrated recovery of phosphorus and zinc from sewage sludge gasification fly ash (Grzegorz Lisak, Nanyang Technological University – Singapore)                        |
| 14:30 – 14:50 | 24-3  | Green hydrogen for use in sustainable aviation fuel – a techno-economic analysis and life-cycle assessment considering novel PEM electrolysis and PtL approach (Talia Moonsamy, Hasselt University – Belgium) | 25-3   | Hydrogen production from high-volume organic construction and demolition wastes (Jason Laumb, University of North Dakota Energy & Environmental Research Center – United States)   | 26-3  | Ashes, the golden treasure (Haim Cohen, Ariel University – Israel)   |
| 14:50 – 15:10 | 24-4  | Social implementation of e-methane for carbon-neutral city gas supply and proper GHG accounting rules incentivizing recycled carbon fuels (Tomokazu Ueda, Japan Gas Association – Japan)                      |  |  | 26-4  | Preparation of functionalized materials using coal gasification fine slag as precursor for CO <sub>2</sub> capture (Xueqin Hai, Ningxia University – China)                                      |
| 15:10 – 15:30 | <b>Closing Ceremony (Martin Gräbner, TU Bergakademie Freiberg – Germany)</b><br><b>Room: Prague A-D</b>       |   |  |  |   |  |