

PRELIMINARY CONFERENCE PROGRAM (24/09/2024)

TECHNICAL TOURS

Technical Tour 1: Ningxia | Thursday - Friday, September 19-20, 2024

Technical Tour 2: Tengzhou | Saturday, September 21, 2024

Technical Tour 3: Shanghai | Monday, September 23, 2024

Monday, September 23, 2024

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

Tuesday, September 24, 2024

08:30 – 16:30 Registration, Poster & Exhibition, Ballroom Foyer

09:00 – 10:30 **Opening Ceremony**
Chair: Martin Gräbner
Room: Ballroom B

09:00 – 09:40 **Welcome by Conference Organizer and Co-Organizers**
Martin Gräbner, TU Bergakademie Freiberg – Germany
East China University of Science and Technology – China
Synfuels China Technology Co., Ltd. – China

09:40 – 10:10 **Plenary Session 1: Transformation towards Resource Efficiency and Climate Neutrality**
Chair: Bernd Meyer
Room: Ballroom B

09:40 – 09:55 Sourcing green carbon for the future chemical industry
(Martin Gräbner, TU Bergakademie Freiberg – Germany)

09:55 – 10:10 Transformation towards green chemistry: Case study of waste gasification for methanol production in China
(Roh Pin Lee, Chair of Decarbonization and Transformation of Industry, Brandenburg University of Technology Cottbus-Senftenberg – Germany)

10:10 – 10:20 Conference Organization Information
(Roh Pin Lee, TU Bergakademie Freiberg – Germany)

10:20 – 10:30 Group Picture

10:30 – 11:00 Coffee Break

11:00 – 12:20 **Session 1:**
Industrial gasification technologies
Chair: Martin Gräbner
Room: Ballroom B

11:00 – 12:20 **Session 2:**
TEA and LCA I
Chair: Roh Pin Lee
Room: Ballroom A

11:00 – 12:20 **Session 3:**
CCS and CCUS
Chair: Aleksander Sobolewski
Room: Ballroom C

11:00 – 11:20 01-1 R-GASTM gasification technology – a gasification technology suitable for high ash content and high ash flow temperature coals (Johan van Dyk, GTI Energy – United States)

02-1 Renewable olefins from biomass gasification: MTO or FTO (Yan Cheng, BASF Advanced Chemical Co., Ltd. – China)

03-1 Can coal have a future as a low/near zero carbon resource supplier? (Andrew Minchener, International Centre for Sustainable Carbon – United Kingdom)

11:20 – 11:40 01-2 CHOREN entrained flow gasification – update of technology and projects (Manuel Kordese, CHOREN Industrietechnik GmbH – Germany)

02-2 Electrification of gasification-based chemical recycling process chains: techno-economic assessment (Antonia Helf, TU Bergakademie Freiberg – Germany)

03-2
03-3 Experimental study on the formation process of CO₂ hydrate in TBAB-SDS (Yuchen Wu, East China University of Science and Technology – China)

11:40 – 12:00 01-3 Scalable, affordable and carbon negative biomethanol production (Robin Post van der Burg, Torrgas – Netherlands)

02-3 Techno-economic assessment of plasma-assisted entrained flow gasification for thermochemical recycling of municipal solid waste (Sebastian Bastek, TU Munich – Germany)

12:00 – 12:20 01-4

02-4 An assessment framework on emission of pollutants from point source within an urban canopy: Singapore case study of decentralized pyrolysis unit (Genevieve Soon, Nanyang Technological University – Singapore)

03-4 The application of selected ferrites for biomass chemical looping combustion (Ewelina Ksepko, Wroclaw University of Science and Technology – Poland)

12:20 – 13:20 Lunch

13:20 – 14:40		Session 4: Entrained flow investigations Chair: Guangsuo Yu Room: Ballroom B	Session 5: TEA and LCA II Chair: Andrew Minchener Room: Ballroom A	Session 6: Mineral matter I Chair: Stefan Guhl Room: Ballroom C		
13:20 – 13:40	04-1	Comprehensive particle behaviors in an impinging entrained-flow gasifier: from atomization to deposition (Yan Gong, East China University of Science and Technology – China)	05-1	STEEP online tool: CO ₂ reduction through waste pyrolysis and gasification compared to incineration and petrochemicals (Roh Pin Lee, Brandenburg University of Technology Cottbus-Senftenberg – Germany)	06-1	Investigations on chemical hot gas cleaning of alkali, chlorine and sulfur species in a sorption-enhanced biomass gasification process (Michael Müller, Forschungszentrum Jülich – Germany)
13:40 – 14:00	04-2	Study on physicochemical properties, distribution modes and formation mechanism of coal gasification fine slag in an industrial entrained-flow gasifier (Bin Liu, Ningxia University – China)	05-2	Life cycle greenhouse gas emission assessment of pyrolysis-based chemical recycling of post-consumer waste: focus on feedstock composition, oil processing and balancing consistency (Katina Krell, TU Bergakademie Freiberg – Germany)	06-2	Machine learning methods for viscosity and Tcv prediction of coal slags (Weiwei Xuan, University of Science and Technology Beijing – China)
14:00 – 14:20	04-3	Experimental study on the effect of pyrolysis conditions on pyrolysis-gasification decoupling characteristics of Yili coal (Haigang Zhang, East China University of Science and Technology – China)	05-3	A life cycle assessment (LCA) of high temperature slagging gasification conversion of sewage sludge and sludge-derived slag as an alternative material for sustainable construction (Sofea Al Munawarah Binte Yusoff, Nanyang Technological University – Singapore)	06-3	The crystallization pathway and kinetics of three common minerals in slag under gasification conditions (Hao Lu, Institute of Coal Chemistry, Chinese Academy of Sciences – China)
14:20 – 14:40	04-4	Innovative probe design for enhanced burner flame analysis in gasification processes: a case study of interdisciplinary engineering solutions (Wei Fu, TU Bergakademie Freiberg – Germany)	05-4	Decarbonization of a district heating system – a case study for a city with 100,000 inhabitants (Tomasz Iluk, Institute of Energy and Fuel Processing Technology – Poland)	06-4	Promising combination of thermodynamic database and machine learning in predicting slag properties (Guixuan Wu, Institute of Coal Chemistry, Chinese Academy of Sciences – China)
14:40 – 15:10 Coffee Break						
15:10 – 16:30		Session 7: Fluidized bed gasification Chair: Johan van Dyk Room: Ballroom B	Session 8: Waste and Co-pyrolysis Chair: Wei Ping Chan Room: Ballroom A	Session 9: Gasification modeling studies Chair: Andreas Richter Room: Ballroom C		
15:10 – 15:30	07-1	Pilot-scale study of waste wood and RDF co-gasification in HTW® 2.0 gasifier (Alireza Mohammadi, GIDARA ENERGY – Netherlands and Bernd Epple, TU Darmstadt – Germany)	08-1	Basic investigations into the material and energetic using of GRP (Stefan Thiel, DBI-Virtuhcon GmbH – Germany)	09-1	Analysis of carbon emission reduction in coal chemical processes through full-time scale multi-objective optimization model coupling green power and green hydrogen (Ye Li, CHN Energy Economic and Technological Research Institute – China)
15:30 – 15:50	07-2	Recent advancements in U-GAS® technology for a circular and low carbon economy (Bo Li, GTI Energy – United States)	08-2	Thermochemical conversion of wind turbine blade waste: mapping of the kinetic parameters and heat transfer (Markus Reinmøller, Technical University of Denmark – Denmark)	09-2	Fixed bed gasification modeling for automotive shredder residues (Xiushan Tian, BASF Advanced Chemicals Co., Ltd. – China)
15:50 – 16:10	07-3	From cashew nut shells to synthesis gas: operation of a 1 MW dual fluidized bed steam gasifier and downstream gas cleaning units (Daniel Hochstöger, BEST - Bioenergy and Sustainable Technologies GmbH – Austria)	08-3	Co-pyrolysis of lignite and waste plastic: product distribution, hydrogen transfer route and redistribution characteristics (Song Cao, East China University of Science and Technology – China)	09-3	Dynamic characteristic analysis of gas temperature, heat duty, and slag behavior in an IGCC coal gasifier in response to changes in the oxidant/coal ratio (Joonyeong Nam, Sungkyunkwan University – Republic of Korea)
16:10 – 16:30	07-4	Enhancing low-carbon utilization pathways through biomass gasification in fluidized beds: a CFD study (Shuai Wang, Zhejiang University – China)	08-4	Novel Insight into co-pyrolysis interaction of Naomaohu coal and waste tire under varied mixing configurations via in-situ Py-TOF-MS (Wenqing Lv, Dalian University of Technology – China)	09-4	Data reconciliation and analysis of a high pressure pulverized coal gasification plant (Yan Zhang, University of Science and Technology Beijing – China)
18:00 – 22:00 Conference Dinner, Radisson Blu Hotel Shanghai New World Meeting Point Departure 17:30 Entrance JW Marriott Hotel						

08:30 – 19:00	Registration, Poster & Exhibition, Ballroom Foyer		
09:00 – 10:20	Plenary Session 2: Technology Innovation in Industry Chair: Martin Gräbner Room: Ballroom B		
09:00 – 09:20	Development and Application of OMB Coal Gasification Technology (Qinghua Guo, East China University of Science and Technology – China)		
09:20 – 09:40	Resource-Efficient Utilization: a new chapter in HT-L pressurized coal gasification technology (Zhihong Ge, Changzheng Engineering Co., Limited – China)		
09:40 – 10:00	Establishment and development of Sinopec's high temperature gasification platform (Kang Wanzhong, SINOPEC Ningbo Engineering Co. Ltd. – China)		
10:00 – 10:20	Zeolite Catalysis for Fischer-Tropsch Products Upgrading (Zhang Ling, Synfuels China Technology Co., Ltd. – China)		
10:20 – 10:50	Coffee Break		
10:50 – 12:30	Session 10: Plasma-enhanced conversion Chair: Markus Reinmöller Room: Ballroom B	Session 11: Tar reduction of product gas Chair: Jian Xu Room: Ballroom A	Session 12: Kinetics Chair: Qi Chen Room: Ballroom C
10:50 – 11:10	10-1 High-performance electrode materials for industrial plasma torches: overcoming the challenges of arc erosion (Felix Baitalow, TU Bergakademie Freiberg – Germany)	11-1 MW plasma technology for gas upgrading (Anton Serov, TU Bergakademie Freiberg – Germany)	12-1 Enabling waste-to-X pathways: a comprehensive analysis of the entrained-flow gasification kinetics of biogenic residues under industrial conditions (Weiss Naim, TU Munich – Germany)
11:10 – 11:30	10-2 Fixed bed gasification with plasma integration (Ronny Schimpke, TU Bergakademie Freiberg – Germany)	11-2 Catalytic steam reforming of tar and methane at high pressure for H ₂ production (Chunguang Zhou, KTH Royal Institute of Technology – Sweden)	12-2 Illustrating the effect of physicochemical properties within vitrinite and inertinite on residual carbon formation in drop tube furnace (Yonghui Bai, Ningxia University – China)
11:30 – 11:50	10-3 The biogeniV alliance & plasma-assisted solutions for conversion of biogenic residues to green fuels & valuable materials (Stefan Klebingat, Leibniz Institute for Plasma Science and Technology – Germany)	11-3 Catalytic upgrading of coal pyrolysis volatiles over acid-base bifunctional carbon composite (Qian Wang, Taiyuan University of Technology – China)	12-3 Kinetic investigation of the gasification of alternative carbon sources considering CO inhibition using TGA (Stefan Guhl, TU Bergakademie Freiberg – Germany)
11:50 – 12:10	10-4 Model-based investigation of fluid dynamics and temperature distribution in an atmospheric microwave discharge (Sophie Rodmacher, TU Bergakademie Freiberg – Germany)	11-4 Reduction of tars in fluidized bed gasification: parameter study in a lab-scale reactor and comparison to pilot tests (Fabiola Panitz, TU Darmstadt – Germany)	12-4 Interactions of the single and binary catalysts with ashless coal in CO ₂ atmosphere (Zhuoran Liu, East China University of Science and Technology – China)
12:10 – 12:30	10-5 CFD modeling of allothermal plasma-assisted entrained flow gasification (Sebastian Wilhelm, TU Munich – Germany)	11-5 Catalyst upgrading of biomass pyrolysis volatile over zeolite/carbon catalysts prepared from coal based solid waste (Peng Lv, Ningxia University – China)	12-5 Detailed mass transfer study of the conversion process in a TGA: from single particle to packed bed using non-porous reactor graphite (Fengbo An, TU Bergakademie Freiberg – Germany)
12:30 – 13:30	Lunch		
13:30 – 15:10	Session 13: CH₄ and HC cracking Chair: Ludwig Seidl Room: Ballroom B	Session 14: Biomass pyrolysis and product upgrading Chair: Robin Post van der Burg Room: Ballroom A	Session 15: Mineral matter II Chair: Michael Müller Room: Ballroom C
13:30 – 13:50	13-1 Advanced power electronics driving plasma-based methane pyrolysis (Casten Winnewisser, TRUMPF Hüttinger – Germany)	14-1 Pyrolysis characteristics of biomass derived C1-C6 mixed alcohols to olefins (Liu Guangxuan, Xinjiang University – China)	15-1 Immobilization behavior and mechanism of heavy metals during thermal treatment of MSWI fly ash (Mingxue Kong, Chinese Academy of Sciences – China)

13:50 – 14:10	13-2	Turquoise H ₂ production from thermal methane cracking: an experimental and kinetic modeling study with focus on carbon product morphology (Matteo Pelucchi, Politecnico di Milano – Italy)	14-2	Atom-doped Ni/ZrO ₂ as the catalyst for modulating the hydrodeoxygenation of methyl palmitate (Changhai Liang, Dalian University of Technology – China)	15-2	Application of ETV-ICP OES for fast multielement characterization and in-situ measurement of element mobilization in simulated process gas atmospheres (Teres Pietschner, TU Bergakademie Freiberg – Germany)
14:10 – 14:30	13-3	Methane cracking in molten media for turquoise H ₂ : the role of the produced carbon (Benedetta de Caprariis, Sapienza University – Italy)	14-3	CHAR:ME - Biochar and biomass-derived waste products as sustainable and safe domestic fuel (Riccardo Caraccio, Politecnico di Milano – Italy)	15-3	Retention mechanism of potassium in biomass by kaolin addition in the slagging and non-slagging gasification condition (Chong He, Taiyuan University of Technology – China)
14:30 – 14:50	13-4	Study on the properties and carbon black generation of oily sludge, hydrocracking tail oil and water mixture (Song Yang, Xinjiang University – China)	14-4	Effects of SiO ₂ /CaO on gas-solid interactions during the fast pyrolysis of cellulose pellets (Chang Zhang, East China University of Science and Technology – China)	15-4	In-situ study of the effect of potassium release on ash sintering behavior during the co-gasification of coal and biomass (Chaoyue Zhao, Ningxia University – China)
14:50 – 15:10	13-5		14-5	Effect of Van Soest method on pyrolysis characteristics of BSG and mechanism of tar generation and transformation (Pengbo Liu, East China University of Science and Technology – China)	15-5	In-situ release detection and mechanism of alkali metals during coal and biomass co-pyrolysis/gasification (Jiaofei Wang, Ningxia University – China)

15:10 – 15:40 Coffee Break

15:40 – 17:20	Session 16: Concept studies Chair: Alexander Rösch Room: Ballroom B		Session 17: Conversion of single-type plastics Chair: Markus Weber Room: Ballroom A		Session 18: Mineral matter III Chair: Mingxue Kong Room: Ballroom C	
15:40 – 16:00	16-1	A decentralized waste management strategy for resource recovery and carbon sequestration through the deployment of thermo-disintegration waste to resource (TDWR) system (Ching Wei Low, Nanyang Technological University – Singapore)	17-1	Application breakthrough of waste plastic pyrolysis (Yongchao Li, Sulzer Shanghai Engineering & Machinery Works Ltd. – China)	18-1	Rheological properties of molten slag in entrained flow co-gasification of coal and other feedstocks (Xudong Song, Ningxia University – China)
16:00 – 16:20	16-2	Two-staged hydrothermal pre-treatment of food waste for anaerobic digestion: enhancement and optimization of methane production (Lu Ding, East China University of Science and Technology – China)	17-2	Chemical recycling of engineering plastics by pyrolysis (Philipp Rathsack, Fraunhofer IKTS – Germany)	18-2	Effect of residual carbon on the flow properties of iron-containing coal ash and its modification mechanisms (Wei Zhao, Ningxia University – China)
16:20 – 16:40	16-3	Syngas - the key to unlock the recarbonization of industry (Qi Chen, Chiron Energy Solutions – Netherlands)	17-3	Secondary gas-phase reactions of polyethylene pyrolysis: semi-detailed kinetics (Alessandro Pegurri, Politecnico di Milano – Italy)	18-3	Investigating the ash fusion characteristics and mineral transformations of biomass and coal ashes at high temperature (Jie Xu, Qingdao Agricultural University – China)
16:40 – 17:00	16-4	Using an entropy-based model for enhanced plastic recycling (Jörg Kleeberg, Fraunhofer IKTS – Germany)	17-4	Hydrothermal co-liquefaction of PET and invasive species for monomer production, biofuels and bio-asphalt applications (Luis Cutz, TU Delft – Netherlands)	18-4	Coal ash melting thermal kinetics (Wenju Shi, China University of Mining and Technology – China)
17:00 – 17:20	16-5	Future for hard coal in Poland under "Fit for 55 conditions" (Aleksander Sobolewski, Institute of Energy and Fuel Processing Technology – Poland)	17-5	Co-pyrolysis effect of PVC and waste tires: migration characteristics of chlorine and sulfur during staged pyrolysis (Yue Sheng, East China University of Science and Technology – China)	18-5	Iron transformation behavior in coal slag with residual char under entrained flow gasification conditions (Ji Wang, North University of China – China)

17:20 – 19:00 Poster Reception, Ballroom Foyer

08:30 – 14:30	Registration, Poster & Exhibition, Ballroom Foyer		
09:00 – 09:40	Plenary Session 3: Transformation Strategies towards Sustainability Chair: Martin Gräßner Room: Ballroom B		
09:00 – 09:20	Innovation and Engineering Practices in Green and Low-Carbon Technologies at China Energy Investment Group (Minghui Zhang, National Institute of Clean-and-low-carbon Energy – China)		
09:20 – 09:40	Keynote (tba, Yulin City – China)		
09:40 – 10:10	Coffee Break		
10:10 – 11:50	Session 19: CO₂ as feedstock Chair: Liu Zhen Room: Ballroom B	Session 20: Coal pyrolysis Chair: Haoquan Hu Room: Ballroom A	Session 21: Alternative H₂ production and integration Chair: Felix Baitalow Room: Ballroom C
10:10 – 10:30	19-1 Leading the way: Air Liquide's Lurgi methanol technology is unlocking solutions to decarbonize carbon intensive industries (Alexander Rösch, Air Liquide Global E&C Solutions – Germany)	20-1	21-1 Hydrogen production from refuse derived fuel (RDF) in a novel bore-hole gasification process combined with advanced gas separation: project HydroMine (Krzysztof Kapusta, Central Mining Institute – Poland)
10:30 – 10:50	19-2 The robust three-dimensional macroporous iron-foam catalyst for direct conversion of CO ₂ to olefins (Yi Liu, National Institute of Clean-and-Low-Carbon Energy – China)	20-2 Modeling pore structure evolution during coal pyrolysis (He Yang, Dalian University of Technology – China)	21-2 Research on a low-carbon hydrogen production technology: aqueous phase reforming (Baiyang Lin, Air Liquide Innovation Campus Shanghai – China)
10:50 – 11:10	19-3 First operation experience of a methanol demonstration plant with steel mill gases (Tim Schulzke, Fraunhofer UMSICHT – Germany)	20-3 Migrating and transformation behavior of sulfur and nitrogen during the rapid pyrolysis of coal (Keke Zhao, Taiyuan University of Technology – China)	21-3 Modeling and integration of the renewable hydrogen value chain using the example of the Fraunhofer Hydrogen Lab Görlitz (Maciej Satora, Fraunhofer IWU – Germany)
11:10 – 11:30	19-4 Cu ⁰ at the Cu/ZnO interface efficiently accelerate CO ₂ hydrogenation to methanol on Cu/ZnO modified by phosphorus doped carbon (Xinyu Wei, Ningxia University – China)	20-4 Synthetical analysis of the influence of coalification degree on the tar formation mechanism (Weixiang Zhang, Xinjiang University – China)	21-4 Simulation on hydrogen production from biomass gasification by Aspen Plus (Juntao Wei, Nanjing Forestry University – China)
11:30 – 11:50	19-5 Carbon coated In ₂ O ₃ hollow tubes embedded with ultra-low content ZnO quantum dots as catalysts for CO ₂ hydrogenation to methanol (Weiguang Su, Ningxia University – China)	20-5 CO ₂ enhanced tar-rich coal pyrolysis to produce high quality tar and CO-rich gas (Duoer Yang, University of Technology Beijing – China)	21-5 Syngas generation from microalgae through chemical looping gasification: primary results from an EU Marie-Curie project (Daofeng Mei, Instituto de Carboquímica – Spain)
11:50 – 12:50	Lunch		
12:50 – 14:10	Session 22: Gasification concepts and optimization Chair: Bernd Epple Room: Ballroom B	Session 23: Partial oxidation Chair: Qinghua Guo Room: Ballroom A	Session 24: Valuable products from coal Chair: Kang Wanzhong Room: Ballroom C
12:50 – 13:10	22-1 A technical evaluation through demonstration trial of high temperature slagging gasification conversion of sewage sludge and the application of sludge-derived slag as a sustainable construction aggregate in concrete (Wei Ping Chan, Nanyang Technological University – Singapore)	23-1 Project update SCOORE: synthesis gas from recycling of CO ₂ (Simon Wachter, BASF SE – Germany)	24-1 Technology development and industrial application of coal hydrogasification for methane and aromatics process (Liang Zeng, ENN Science & Technology Development Co., Ltd. – China)

13:10 – 13:30	22-2	Machine learning enhanced LIBS to measure and process biofuels and coal wastes for gasifier improved operation (Zheng Yao, Lehigh University – USA)	23-2	PyroPOX: a reliable pathway for the conversion of municipal solid waste to cost-competitive low-carbon fuels and chemicals (Bo Li, GTI Energy – United States)	24-2	Synthesis, characterization and catalytic performance of a novel and efficient iron-based catalyst NaFeS ₂ for direct coal liquefaction (Rui Zhang, Dalian University of Technology – China)
13:30 – 13:50	22-3	Determining correlations for the hydrodynamics of bubbling fluidized beds using CFD & ANNs (Ravi Ramesh, TU Delft – Netherlands)	23-3	Options and pathways towards climate neutrality in chemical industry (Elena Marras, Air Liquide Innovation Campus Frankfurt – Germany)	24-3	Production of lump coke from stamped low-ranked coals and biogenic residues (Franz Fehse, TU Bergakademie Freiberg – Germany)
13:50 – 14:10	22-4		23-4	Development of a detailed CFD model for high-pressure partial oxidation using large-eddy-simulation (Lukas Etzold, IEC, TU Bergakademie Freiberg – Germany)	24-4	
14:10 – 14:30	Closing Ceremony (Martin Gräbner, TU Bergakademie Freiberg – Germany) Room: Ballroom B					

Poster Session Program, Ballroom Foyer

Poster 01	Optimization of electrolysis: use of the by-products waste heat and oxygen to increase profitability (Laura Thiel, Fraunhofer IWU – Germany)
Poster 02	Key-catalyst research on the Sustainable CO ₂ as feed for the production of renewable methanol (Xiaoying Xu, National Institute of Clean-and-Low-Carbon Energy – China)
Poster 03	Study on the migration and transformation of sulfur and mercury during pyrolysis of medium and low rank coal (Caixia Yue, Taiyuan University of Technology – China)
Poster 04	Investigations on the interaction mechanisms of hydrogen donor and non-hydrogen donor on hydrogenation behaviors of asphaltene (Yuanlin Zhang, East China University of Science and Technology – China)
Poster 05	Modification of USY by leaching and Zr, Ni loading for upgrading pyrolysis volatiles from coal tar residue (Jie Luo, Xinjiang University – China)
Poster 06	Analysis of fragmentation mechanisms and influencing factors of two-component water-based composite droplet and mixed droplet (Yang Han, East China University of Science and Technology – China)
Poster 07	Distribution and migration pathways of phosphorus and nitrogen during hydrothermal processing of municipal sewage sludge for biofuel production (Krzysztof Kapusta, Central Mining Institute – Poland)
Poster 08	Numerical study on the sedimentation characteristics of single/binary particle-supercritical water systems in confined space (HuiBo Wang, Xian Jiaotong University – China)
Poster 09	Conversion of syngas to high-melting wax (Ruonan He, National Institute of Clean-and-Low-Carbon Energy – China)
Poster 10	Chemical recycling of plastics through chemical looping technology (Daofeng Mei, Instituto de Carboquímica – Spain)
Poster 11	Identification of coal characteristics from near-infrared spectra: machine learning predictions and experimental validations (Haiquan An, National Institute of Clean-and-Low-Carbon Energy – China)
Poster 12	A brief introduction to Shaanxi Coal and Chemical Technology Research Institute Co., Ltd. (Shenjun Zhang, Shaanxi Coal and Chemical Technology Research Institute Co., Ltd. – China)
Poster 13	Migration law of fluorine element during coal pyrolysis (Lingmei Zhou, China University of Mining and Technology – China)
Poster 14	Kinetics of redox reactions of Fe spinel-based materials for energy generation processes (Ewelina Ksepko, Wroclaw University of Science and Technology – Poland)
Poster 15	Biogas as a renewable carbon carrier for the chemical industry (Stefan Thiel, DBI-Virtuhcon GmbH – Germany)