16th International Conference on Sustainable Energy & Environmental Protection **SEEP2024** **9th – 12th September 2024** **BOKU-Vienna-Austria**		
Day 1: 9th September		
Muthgasse 18, Lecture room 1 (MUG 1)		
08:00 – 09:00 **Registration**		
Opening Session **Conference Chair** **Prof. Christoph Pfeifer**		
09:00 – 09:15	**Welcome talk by** Rector Univ.Prof. Dr. Eva Schulev-Steindl	
9:15 – 9:40	**SEEP 2004 to 2024** Prof. Abdul Ghani Olabi, Director of Sustainable Energy and Power Systems Research Centre, University of Sharjah **SEEP 2024 in numbers** Prof. Rafat Al-Afif, BOKU University	
09:40 – 10:20	**Keynote by** Professor Tobias Pröll BOKU University Vienna	*"Carbon dioxide removal with a positive energy balance – the case of biomass-based negative emission technologies"*
10:20 – 11:00	**Keynote by** Professor Hussam Jouhara Brunel University London	*"Advances in industrial waste heat recovery systems"*
11:00 – 11:30	Coffee Break	

Symposium on Water closed loop in industrial processes

9th September 2024

Session A1
Muthgasse 18, Lecture room 1 (MUG 1)
Chairperson: Prof. Luca Montorsi

11:30 – 12:00	Luca Montorsi	Progress on Water closed loop in industrial processes
12:00 – 12:15	Matteo Venturelli	Numerical Simulation and Experimental Validation of a Radiative Heat Pipe Heat Exchanger
12:15 – 12:30	Robertas Poskas	Performance of a Heat Pipe Condensing Heat Exchanger in an Aggressive Gas Stream

"Hydrogen & Fuel Cell"

9th September 2024

Session B1
Muthgasse 18, Lecture room 2 (MUG 2)
Chairperson Dr. Florian Benedikt

11:30 – 11:45	Maximilian Arras	Decarbonizing China's Iron and Steel Industry: Hydrogen-Based Mitigation Pathways and Techno-Economic Implications
11:45 – 12:00	Enas Sayed	Deciding optimal operating conditions of direct urea fuel cell vis fuzzy modelling
12:00 – 12:15	Kyong-Hwan Chung	Production of hydrogen and carbon from waste volatile organic

						compounds using liquid plasma on perovskite composite catalysts
				12:15 –12:30	Seyed Vahid Hosseini	Evaluating the Feasibility of a Hydrogen Micro Gas Turbine Generator for Sustainable Urban Air Mobility
12:30 – 12:45	Jurgita Malinauskaite	The Water-Energy-Materials nexus in an industrial setting: legal and practical peripheries		12:30 – 12:45	Shubham Parashar	Experimental study on novel multi tube finned metal hydride reactor for stationary hydrogen storage and fuel cell applications
				12:45 – 13:00	Nikhil Chauhan	Numerical investigation incorporating comparative study of metal hydride based multi-annular tube bundle reactor with different fin configuration for commercial hydrogen storage
13:00 – 14:00	Lunch					

14:00 – 14:30		**Keynote by** Professor Prof. Ibrahim Dincer President, Hydrogen Technologies Association		*" High voltage, temperature and volumetric efficiency capacitors for applications in power electronics"*			
Session A2 **Muthgasse 18, Lecture room 1 (MUG 1)** **Chairperson: Prof. Luca Montorsi**				**Session B2: Hydrogen & Fuel Cell** **Muthgasse 18, Lecture room 2 (MUG 2)** **Chairperson Dr. Florian Benedikt**			
14:30 – 14:45	Alessandro Montagneretto Olivari	Experimental evaluation of the water-aluminium reaction for hydrogen production on a labscale prototype		14:30 – 14:45	Nahyeon Kim	Eco-hybrid hydrogen: Utilizing biomass-driven chemical looping for green and blue integration	
14:45 – 15:00	Joao Ribeiro	Circularity Assessment of Industrial Heat Exchanger and Water Treatment Systems Integration		14:45 – 15:00	Lorenzo Bartolucci	Development of a Dual-Membrane Solar Reactor for Hydrogen Production through Water Thermolysis	
15:00 – 15:15	Antonis Vlasopoulos	Life cycle analysis of a heat recovery system in the ceramics industry		15:00 – 15:15	Sandeep Kumar	Biomass Gasification: Sustainable technology for Waste to Hydrogen	
15:15– 15:30	Fouad Al-Mansour	Development of energy efficiency trends in Slovenia		15:15 – 15:30	Charlene Vance	Projecting the development of hydrogen demand in Ireland from now to 2050	
15:30 – 16:00	Coffee Break						
Session A3 **Muthgasse 18, Lecture room 1 (MUG 1)** **Chairperson: Prof. Luca Montorsi**				**Session B3: Solar Energy & Case Studies** **Muthgasse 18, Lecture room 2 (MUG 2)** **Chairperson Prof. Rafat Al-Afif**			
16:00 – 16:15	Naoki Nishikawa	Flowmeter-Less Estimation of Hot Water Demand in		16:00 – 16:15	Sara Abou Chakra	Enhancing Photovoltaic Efficiency through Phase Change Materials	

		Heat-Pump Water Heater Systems
16:15 – 16:30	Francesco Orlandi	Numerical Analysis of Water Condensation in a Condensing Economiser for Heat Recovery
16:30 – 16:45	Viktor Jejcic	Carbon Footprint Of Rapeseed Oil For Energy Use
16:45 – 17:00	Klemen Rola	Performance Assessment of a Compression Cycle Ejector Heat Pump

		Integration with Domestic Solar Hot Water Storage Systems: A Case Study in Lebanon
16:15 – 16:30	Rafaela Agathokleous	Photovoltaics (PV) cleaning: Comparison between robot cleaning and manual cleaning
16:30 – 16:45	Dilip Kumar	Development of an Optical Model for Arc Sources in Metal Halide Lamp-based High Flux Solar Simulator
16:45 – 17:00	Nayanita Kalita	Design and performance evaluation of hybrid mode solar dryer integrated with biogas driven back up air heater
17:00 – 17:15	Sadettin Ergun	Solar Integration and Grid Harmony: Assessing Voltage, Frequency Stability, and Curtailment in Turkey's Power Network
17:15 – 17:30	Kuldeep Awasthi	A Novel Partially Segmented Ellipsoidal Reflector For High-Flux Solar Simulator
17:30 – 17:45	Malik I. Alamayreh	Optimization and Numerical Analysis of Cogeneration Power Hydrogen Systems

						Compared to Photovoltaic Thermal (PVT) Systems in Different Climates
				17:45 – 18:00	Puja Hazarika	Life Cycle Assessment of a Building Integrated Semitransparent Photovoltaic Thermal (BiSPVT) Facade: Effect on Resources, Human health and Ecosystem
				18:00 – 18:15	Hillary Kasedde	Design and Modeling of an Energy Village for rural Communities in Uganda
				18:15 – 18:30	Norah Alwadai	Cobalt sulfide as an effective anode for direct urea fuel cell
				18:30 – 18:45	A.G. Olabi & M.A. Abdulkareem	Multi-Criteria Decision-Making For Selecting Renewable And Sustainable Gasoline Biofuel Additives Based On The Integrated Ahp-Topsis Model
				18:45 – 19:00	Nurettin Sezer	Design and assessment of an autonomous charging station for electric buses in public transport
Closing Day 1						

	Day 2 10th September 2024	
08:15–08:45	**Keynote by** Professor Ian M Reaney University of Sheffield	*High voltage, temperature and volumetric efficiency capacitors for applications in power electronics*
08:45–09:15	**Keynote by** Prof. Maricruz Sánchez-Sánchez TU Wien, Institute of Chemical, Environmental and Bioscience Engineering	*"Nanostructured catalysts for sustainable production of fuels and chemicals"*

Sustainable Steam Symposium

Muthgasse 18, Lecture room 1 (MUG 1)
Day 2
10th September 2024
Session A4
Symposium Chair Dr. Julien Porre

08:45 – 8:50	Safety moment	
08:50 – 09:00	Welcome Talk by: Dr. Julien Porre Head of Global Research and Technology at STS, Spirax Group	

"Energy Storage"
Muthgasse 18, Lecture room 2 (MUG 2)
Day 2
10th September 2024
Session B4
Chairperson Prof. Fouad Al Mansour

09:15 – 09:30	Damiana Chinese	Pursuing full industrial decarbonisation through renewable energy communities: insights from a simulation model
09:30 – 09:45	Yasmine Ayed	Assessing the Competitiveness and Trade-offs of National Hydrogen Strategies in The

					Maghreb: A TIMES Scenario-Based Analysis
09:00 – 09:30	Keynote By: Cormac Hanly *Lead Sector & insights Manager at STS, Spirax Group*		09:45 – 10:00	Toshiaki Fukada	Development of a numerical model for heat transfer of thermal energy storage systems with solid particles
09:30 – 10:00	Break		10:00 – 10:15	Yeongeun Joo	Clean sodium bicarbonate for a circular economy: Enhancing large-scale lithium recovery from spent batteries
			10:15 – 10:30	Lorenzo Bartolucci	3D CFD Modeling of a Single High-Temperature PEM Fuel Cell: Critical Analysis and Key Insights for Full Stack Simulation
10:30 – 11:00	Coffee Break				
Session A5 **Muthgasse 18, Lecture room 1 (MUG 1)** **Chairperson: Dr. Julien Porre**			**Symposium on Bioenergy** **Session B5** **Muthgasse 18, Lecture room 2 (MUG 2)** **Symposium chairs: Dr. Jitka Hrbek, Prof. Christoph Pfeifer**		
10:00 – 10:30	Invited talk By:	Prof. Abdulnaser Sayma	11:00 – 11:15	Ahmed Tawfik	Algal/Bacterial Membrane Bioreactor For Bioremediation Of Chemical Industrial Wastewater Containing 1,4 Dioxane
10:30 – 10:50	Ben Frisby		11:15 – 11:30	Mohadeseh Naderi	Aspen Plus modelling of the MILENA dual fluidised bed biomass gasifier technology
			11:30 – 11:45	Guozhen Li	Swirly bionic pipeline transport characteristics in a slurry shield

		Steam Compression - challenges and technologies
10:50 – 11:10	Jonas Lundsted Poulsen & David Oliver	Sustainable process Heating with high temperature heat pumps using natural refrigerants
11:10 –11:30	Luke Gardener & Soren Mortenson	Specifically configured pumps contributing to Sustainable Steam + Grants Whiskey Case Study’
11:30 – 11:50	Martin White	Innovation in heat recovery systems operating with organic fluids
11:50 – 13:00	Break	
13:00 – 14:00	Lunch	
Session A6 **Muthgasse 18, Lecture room 1 (MUG 1)** **Chairperson: Dr. Sulaiman Almahmoud**		
13:00 – 13:30	Keynote by Dave Forte	

		circulation system: a CFD-DEM investigation
11:45 – 12:00	Kálmán Botond Süli	Co-fermentation for production of cheese whey based biogas partially using EcoGas simulation software
12:00 – 12:15	Kakali Borah	Valorisation of Passion fruit Rind for the Production of Bioethanol: Statistical Optimisation of Hemicellulose and Fermentation with Pichia stipitis
12:15 – 12:30	Sumin Jeong	Sustainable ammonia synthesis: A biomass-centric approach for South Korea
12:30 – 12:45	Jifeng Li	Phosphorus-enriched biochar for Pb and Cd immobilization: synthesis, aging resistance, and soil application
12:45 – 13:00	Serhii Kharchenko	Studies on the influence of the mechanical damage of biological objects on their biopotential
Wind Energy **Session B6** **Muthgasse 18, Lecture room 2 (MUG 2)** **Chairperson: Prof. Fouad Al Mansour**		
14:00 – 14:15	Naghmeh Akbari zadeh	Fully-coupled numerical comparative of spar and semisubmersible wind turbine

	Head of Strategic Business at STS, Spirax Group	
13:30 – 13:50	Bertrand Delpech	Radiative Heat Pipe Ceiling for Waste Heat Recovery and Uniform Cooling in the ceramics industry
13:50 – 14:10	Kevin Rushbrooke	A review of technology and commercial readiness of Thermal Energy Storage technologies for industrial steam applications.
14:10 – 14:30	Rafal Chachulski	The Latest Advancements and Challenges in the Digital Analysis of Steam Heat Exchanger Systems
15:30 - 16:00	Coffee Break	
Session A7 **Muthgasse 18, Lecture room 1 (MUG 1)**		

		aerodynamic performance in the Irish sea
14:15 – 14:30	Suhyun Kim	An Enhanced Short-term Wind Power Forecasting Using Probabilistic Power Curves based on Uncertainty of Meteorological Variables
14:30 – 14:45	Smail Houria	New approach to optimize the architecture of a wind generators connection: A case study Kabertene city, Algeria
15:45 – 15:00	Yuri Han	A Short-term Wind Power Forecasting using Automated Machine Learning for Implementing Optimal Generation Mix based on the Enhanced Screening Curve Method
15:00 – 15: 15	Yujung Jo	An Improved Ramp Events Forecasting of Wind Generating Resources Using Ensemble Learning of Numerical Weather Prediction : The Case of Jeju Island's Wind Farms
15:15 – 15:30	Siniša Bikić	Effect of nanoparticle concentration on the force of nanofluids free jet flow exerts on the stationary obstacle
Renewable and Environmental Case Studies **Session B7**		

Chairperson: Dr. Sulaiman Almahmoud		
15:00 – 15:20	Vitaliy Sechenyh	Background noise in acoustic-based non-intrusive condition monitoring of steam equipment
15:20 – 15:40	Piyush Lakhani	Optimizing Acoustic-based Monitoring through Feature Importance Analysis

Muthgasse 18, Lecture room 2 (MUG 2) Chairperson: Prof. Martin Wendland		
16:00 – 16:15	Minerva Vierunketo	A comparison of lithium-ion battery recycling processes using exentropy, a novel multidimensional engineering tool for circular economy
16:15 – 16:30	Basab Chakraborty	Data-driven Analytics for Power Theft detection in smart grid: An Unsupervised Deep-Learning Approach
16:30 – 16:45	Montaser Mahmoud, Noura Nasir Salim Musfar Alkarbi	Multi-Criteria Decision-Making for Selecting Hydrogen Types Based on Societal Acceptance: A Case Study in the UAE
16:45 –17:00	Yuning Fu	Tracing consumption-side responsibilities of China's aluminium use and its carbon emissions: an accounting model based on material flow analysis and extended input-output analysis
17:00 – 17:15	Yige Liu	Hygrothermal Properties of Tibetan Paper: A Key to Cultural Heritage Environmental Managment in Tibet
17:15 – 17:30	Xingyuan YANG	The long-term potential of energy conservation and carbon emission reduction by steel recycling in China: a dynamic material flow analysis model

15:40 – 16:00	Francis Deterville	Advanced Techniques for Measuring Steam Dryness: Applications and Impact on the Food and Beverage Industry
16:00 – 17:00	Panel discussion Chaired by: Dr. Julien Porre	
	Closing Day 2	

17:30 – 17:45	Yuan Yuan	Understanding the transmission mechanism of carbon emission responsibility among multiple regions by an energy-economic nexus perspective: an energy allocation induced multi-regional input-output method and a case study of China
17:45 – 18:00	Eugene Hao Chen Yu	Mapping the international supply chain of the iron and steel industry: an integrated methodology of complex network analysis and material flow analysis
18:00 – 18:15	Thomas Karl Hannl	Electrically-assisted sorption enhanced reforming (SER) in fluidized bed systems – advances and opportunities
18:15 – 18:30	Bianca Beer	Energy recovery and waste minimization through coupling hydrothermal carbonization with anaerobic digestion
18:30 – 18:45	Gerald Schweiger	Load prediction for mixed use districts
18:45 – 19:00	Hakim Merarda	Optimizing the pylons size of the small model heliostat with expanded reflective area: in southern Algeria

	Day3 **11th September 2024** **Muthgasse 18, Lecture room 1 (MUG 1)**					
08:30 – 09:15	**Keynote by** Prof. Jürgen Karl Chair of Energy Process Engineering at the University of Erlangen-Nuremberg's EnergyCampus Nuremberg		*Sector coupling in the heavy industries – The upcoming role of renewable electricity in energy intensive process*			
4th Special IMechE Greater London Region Symposium **Muthgasse 18, Lecture room 2 (MUG 2)** **Day 3** **11th September 2024** **Session A8**				**Symposium on Sustainable Synfuels** **Muthgasse 18, Lecture room 1 (MUG 1)** **Day 3** **11th September 2024** **Session B8**		
Symposium Chair Mr Martin Robinson				**Prof. Jürgen Karl, Dr. Thomas Hannl, Prof. Christoph Pfeifer**		
09:15 – 09:50	**Keynote Address:** Mr Martin Robinson IMechE	*"The Need for Sustainable Energy and Environmental Protection on a growing Global Population"*		09:15 – 09:30	Stefan Geier	Methodological concept for the development of a spatial potential cataster for air source heat pumps with Austria as a case study

09:50 – 10:30	Invited talk by Prof. Hussam Jouhara	Engineering Progress on Waste Heat Recovery		09:30 – 09:45	Constanze Rzihacek	Validation of the IPSEpro Model of a Thermally Activated Residential Building Façade in Vienna
				09:45 – 10:00	Gregor Karte	Electrification of sorption enhanced gasification: Introduction of a novel fluidized bed reactor system
				10:00 – 10:15	Thomas Keller	Energy Efficiency in Pharmaceutical Freeze-Drying: Adapting to EU Legislation on Fluorinated Gases and Per- and polyfluoroalkyl substances (PFAS)
				10:15 – 10:30	Vinu Alungalparambil Venu	Energy Production via Expanding Water During Freezing
10:30 – 11:00	Coffee Break					
Session A9 **Muthgasse 18, Lecture room 2 (MUG 2)** **Symposium Chair Mr Martin Robinson**				**Symposium on Sustainable Synfuels** **Session B9** **Muthgasse 18, Lecture room 1 (MUG 1)** **Prof. Jürgen Karl, Dr. Thomas Hannl, Prof. Christoph Pfeifer**		
11:00 – 11:15	Xiangxu Wang	Frequency Security Probability Indicators of Power Systems Following a Large Disturbance		11:00 – 11:15	Gregor Tondl	Integration of Anaerobic Digestion and Hydrothermal Carbonization for Brewery Digestates: Process Optimization and Circular Economy Feasibility
11:15 – 11:30	Bertrand Delpech	Investigation of Building-Integrated Photovoltaic		11:15 – 11:30	Rafat Al afif	Experimental Study and Techno-Economic Evaluation of Anaerobic

		Thermal panel for Net Zero Building emissions using TRNSYS
11:30 – 11:45	Razan Almohamad	Decarbonizing Desalination Processes Using Green Hydrogen to Achieve Sustainable Development Goals
11:45 – 12:00	Ahsan Shah	Sequential novel use of Moringa oleifera Lam., biochar, and sand to remove turbidity, E. coli, and heavy metals from drinking water
12:00 – 12:15	Abdul Hai Alami	Experimental determination of air properties for compressed air energy storage systems
12:15 – 12:30	Halima Ali Alnaqbi	Storing Energy By Utilizing Waste Heat
12:30 – 12:45	Ohood Hameed Adhari	Use of Activated Carbons Were Produced From Seeds
12:45 – 13:00	Tamer M. M. Abdellatief	Sustainable Production of High-Octane, and Low-Carbon Gasoline Biofuel

		Digestion of Sugar Production By-products with Co-fermentation for Enhanced Methane Production and Sustainable Waste Management
11:30 – 11:45	Stefanie Feilner	CFD simulation for optimizing flow dynamics in a bioelectrochemically enhanced single-chamber anaerobic digester
11:45 – 12:00	Klemen Rola	Solid and Liquid Product Analysis of Waste Biomass Torrefaction
12:00 – 12:15	Amani Al-Othman	Development of Tungsten trioxide-graphene biopolymer-based membranes for PEM fuel cells at high temperatures
12:15 – 12:30	Miriam Huber	Enabling Solid Fuel Chemical Looping Combustion in a 1 MW Dual Fluidized Bed Biomass Gasifier
12:30 – 12:45	Chauhan Sanjay	Optimizing anaerobic digestion of food waste and human faeces
12:45 – 13:00	Florian Benedikt	Impact of Fuel Properties and Operating Parameters on the Energy Balance in Dual Fluidized Bed Steam Gasification

		for Reduced Environmental Impact			
13:00 – 14:00	Lunch				
Session A10 **Muthgasse 18, Lecture room 2 (MUG 2)** **Chaired by: Mr Martin Robinson**				**Energy Management & Conversion** **Session B10** **Muthgasse 18, Lecture room 1 (MUG 1)** **Chairperson: Prof. Martin Wendland**	
14:00 – 14:15	Adnan Alashkar	Advancements in Buoyancy Work Energy Storage Systems	14:00 – 14:15	Qaisar Abbas	The Perovskite Nanomaterials based on Ca0.5Ce0.5MO3 (M = Fe, Mn, Ni) for Energy Conversion Devices
14:15 – 14:30	Raimondas Šadzevičius	Evaluation of environmental factors influence on reliability of spillways	14:15 – 14:30	Bernhard Kling	Behavior of a forecast based controller for temperature regulation in residential buildings
14:30 – 14:45	Jakub Jura	Renewable energy solutions for the Baltic Sea harbours	14:30 – 14:45	Misganaw Zeleke	Synthesis of Sn2+-SnO2 Nanomaterials for Ultrafast Reduction of Cr(VI): Green Technology Approach
14:45 – 15:00	Montaser Mahmoud	Advances in Shallow Geothermal Energy Systems	15:45 – 15:00	Fang-Bor Weng	Enhancing Performance and Efficiency: Integration of Wire Mesh Flow Field in Open Cathode PEMFC Stack
15:00 – 15:15	Shamima Begum	Fabrication of magnetically reclaimable Fe3O4/g-C3N4 nanocomposite and its photocatalytic degradation of dye under visible light	15:00 – 15: 15	Azzedine Boutelhig	Geospatial Management of water supply in Algerian territory, based
15:15 – 15:30	Emma Keel	3D graphene foam-based Triboelectric			

		nanogenerator for energy harvesting devices
15:30 – 15:45	Valentina Olabi	Designing a sustainable hydrogen supply chain network in the Arabian Gulf: multi-objective optimisation using a Kuwait case-study
15:30 – 16:00	Coffee Break	
16:00 – 17:30	**IMechE Judges Meeting & Consultation**	

		on the Water Stress Indicator analysis
15:15 – 15:30	Hasan Kanjo	Simulation and Modeling of Hydrogen Combustion Engines
	Renewable & Environmental **Session B11** **Muthgasse 18, Lecture room 1 (MUG 1)** **Chairperson:** Prof. Blaž Luin	
16:00 – 16:15	Blaž Luin	Estimating and Distributing of Delivery Emissions in Complex Supply Chains
16:15 – 16:30	Maryam Ebrahimzadeh Sarvestani	E-fuels for CO2 Reduction in Passenger Cars: A Review Study
16:30 – 16:45	Ziqu Ouyang	Experimental research on effect of activating temperature on combustion and NOx emission characteristics of pulverized coal in a novel purification-combustion reaction system
16:45 – 17:00	Hyeonjeong Lee	Next-gen simulation platforms: Bridging chemical simulators and open-source languages for computational cost optimization

		17:00 – 17:15	Jaerak Ko	Environmental feasibility estimation of hydrometallurgical recycling process for cathode active materials with NaHCO3 production using captured CO2
		17:15 – 17:30	Manar Alshatwi	Ab initio study of two valence electrons of diatomic system
		17:30 – 17:45	Byeongmin Ha	A review of the applications of machine learning algorithms in large-scale plant
		17:45 – 18:00	Magdalena Joka Yildiz	Valorization of Potato Pulp through Hydrothermal Carbonization: Impact of Temperature on Hydrochar Properties and Yields
19:00 – 22:00 Conference Dinner **Restaurant "Donaubräu" (https://www.donauturm.at/en/restaurants-and-shop/donau-braeu/)** **In the basement of the Danube Tower Vienna** **Donauturmplatz 1, 1220 Vienna** **gps-coordinates: 48.24042324068766, 16.409758822472384**				

Day 4
12th September 2024

Poster Session

Muthgasse 18, Lobby
12th September 2024

Chairperson XXX
09:00 – 11:00

Shza Elyazori	Bibliometric Analysis of Regulatory Approaches/Strategies and Potential Challenges in SMRs' Deployment
Marium Fiaz	Antibiotic Susceptibility and Soil Remediation Potential of Plant Growth-Promoting Rhizobacteria (PGPR)

Session B12: Renewable Energy Case Studies

Muthgasse 18, Lecture room 1 (MUG 1)
12th September 2024

Chairperson Prof. Rafat Al-Afif

08:00 – 08:15	Zihua Tang	Experimental study on the influence of fuel type on variable load of circulating fluidized bed (CFB) under fuel high-temperature preheating coupled CFB technology
08:15 – 08:30	Nida Maqbool	Enhancing Fecal Sludge Biodegradation through Anaerobic Co-Digestion: Investigating the Impact of Co-Substrate

Antonio De León Rodríguez	Effect of the pH control on the production of bioalcohols and biohydrogen by Enterobacter cloacae in batch mode bioreactors
Guivis Zeufack Nkemgha	Does environmental policy stringency mitigate the environmental impacts of international trade? Evidence from Sub-Saharan Africa
Ramez Abdallah	Assessing the Potential for Solar Energy Hydrogen Production in Palestine
Hafsa Mohammed Ashraf	Techno-Economic Analysis and Process Simulation of Sustainable Linear Alpha Olefins Production
Bashar Shboul	Energy, exergy, economic and environmental (4E) analysis of a New Hybrid Parabolic Trough Collectors -Fuel Cell System for Hydrogen, Heat and Power Generation
Arjumand Shah Bano	Optimization of Biomethane production potential in mono and co-anaerobic digestion by using a lab-scale anaerobic digester
Amani Al-Othman	Advancements in Zinc-Air Battery Technology and Water-Splitting
Houria Smail	Enhanced Grey Wolf Optimizer with Linear Decrease of 'a' Parameter for

08:30 – 08:45	Sadia Manzoor	Genomic Insights to Discover New Bacterial Candidates from Pakistan
08:45 – 09:00	Godwin Mong Kalu-Uka	Mitigating the Effect of Carbon Deposition on the Performance of Solid Oxide Fuel Cell
09:00 – 09:15	Ammar Alkhalidi	Strategies comprehensive review for selecting Battery End-of-Life Management in the MENA Region
09:15 – 09:30	Mehdi Neshat	Advanced Prediction Model for Total Power Output in Large Offshore Wave Farms using Hybrid Deep Learning Approaches
09:30 – 09:45	Amani Al-Othman	Flexible Gelatin-based PEM membranes for Potential Low Temperature Fuel Cells Applications
09:45 – 10:00	Farwah Yasin	Growth response of wheat and rice to application of Phosphorus based nanocoated-fertilizer
10:00 – 10:15	Edvard Kosnjek	Combining Different Methods And Tools For Formulating Strategies For Sustainable Local Planning And Energy Sectors Coupling
10:15 – 10:30	Boris Sucic	Innovative Approach for Creation of Energy Communities in Urban Areas

	MPPT Under Partial Shading: A Case Study in Bouira City, Algeria			- From Comprehensive Simulation to Actual Implementation
Robertas Poskas	Influence of flue gas temperature and water spraying dispersity to interaction of the heat and mass transfer processes in to phase change regimes cycle of droplets in industrial boilers	10:30 – 10:45	Pandu Ranga	A study on Performance and Two-phase flow in Proton Exchange Membrane Water Electrolyzers using porous transport layers and high-speed visualization: A review
Ahmad Ayesh	Investigation of half-metallic dichalcogenide alloy for highly selective gas adsorption	10:45 – 11:00	Sarah Odeh and Heba Ghazal	17α-Ethinylestradiol (EE2): Wastewater Treatment Methods and challenges
		11:00 – 11:15	Ping He	Estimation of urban land use implication on energy-related carbon emissions based on machine learning methods
		11:15 – 11:30	Shza Elyazori	Mitigation Techniques of Membranes Biofouling in Bioelectrocemical Cells (BEC Cells): Recent Advances
		11:30 – 11:45	Tajamul Shafi	Boosting the environmental performance of polymeric graphitic carbon nitride by introducing boron defects
		11:45 – 12:00	M.A. Abdelkareem & A.G. Olabi	Artificial Neural Networks Applications in Fuel Cell Systems: Technical Review
12:00 – 12:15	**Muthgasse 18, Lecture room 1 (MUG 1)** Closing & Final Remarks			