



Global Cleaner Production Conference

9-12 November 2023, Marriott Parkview, Shanghai, China



THURSDAY, 9 NOVEMBER 2023			
16:00 - 18:00	Registration Grand Ballroom Foyer		
18:00 - 19:00	Welcome Drinks Reception Grand Ballroom Foyer		
FRIDAY, 10 NOVEMBER 2023			
08:30 - 08:45	Welcome and Opening Ceremony Grand Ballroom 1-2		
08:45 - 10:15	Keynote Talks Grand Ballroom 1-2 - Jianmin Chen 08:45 - 09:15 [KN.01] Key and common cleaner production technologies for copper smelting industry, Prof. Ning Duan, <i>Tongji University, China</i> 09:15 - 09:45 [KN.02] A system's approach to a sustainable, equitable, liveable societal future, Prof. Donald Huisingh, <i>University of Tennessee, USA</i> 09:45 - 10:15 [KN.03] Cellular and molecular toxicity of atmospherically aged anthropogenic and biogenic aerosols in an epithelial-endothelial co-culture using adverse outcome pathways as risk assessment, Yinon Rudich, <i>Weizmann Institute, Israel</i>		
10:15 - 11:15	Coffee Break and Poster Viewing Grand Ballroom Foyer		
11:15 - 12:30	Session A1: Cleaner Engineering and Technical Processes Grand Ballroom 1 - Panos Seferlis 11:15 - 11:30 [A1.01] Value chain of wheat straw to bioactive film under the spotlight. A sustainable and circular perspective. 11:30 - 11:45 [A1.02] A pioneer study on EDOT recovery from the PEDOT wastewater: Integration of COSMO-SAC prediction, experiment, and process simulation 11:45 - 12:00 [A1.03] A quantum chemistry-driven machine learning model for predicting the solubility of carbon dioxide in ionic liquids 12:00 - 12:15 [A1.04] The role of industry 4.0 technologies in boosting the operational performance of industrial energy efficiency measures 12:15 - 12:30 [A1.05] Pilot-plant testing of a novel phase-change solvent for CO ₂ capture under realistic conditions	Session A2: Environmental and Sustainability Assessment Grand Ballroom 2 - Andrea Trianni 11:15 - 11:30 [A2.01] Global spread of water scarcity risk through trade 11:30 - 11:45 [A2.02] Evaluation of the carbon footprint of the water and electricity consumption in residential buildings in Qatar 11:45 - 12:00 [A2.03] Life cycle assessment of concrete mixes for global warming Mitigation and Carbon Footprint Reduction 12:00 - 12:15 [A2.04] Has China's OFDI improved green development in the "Belt and Road" countries? --Evidence from TNDDF and spatial durbin model 12:15 - 12:30 [A2.05] Synergistic decarbonization of power grid and power infrastructure in China to overcome green trade barriers	Session A3: Corporate Sustainability and EMS Grand Ballroom 3 - Tomás Ramos 11:15 - 11:30 [A3.01] Business model innovation for sustainability transition in the dairy industry: insights from Spain 11:30 - 11:45 [A3.02] Developing cross-regional collaboration management networks for construction and demolition waste in Guangdong-Hong Kong-Macao Greater Bay Area 11:45 - 12:00 [A3.03] Utilizing Food-Contaminated Plastic Waste for Liquid Fuel Production: Investigating the effects of presence of palm oil and process parameters through pyrolysis 12:00 - 12:15 [A3.04] Managing market and regulatory uncertainty in steel producers' decarbonization strategies: an European perspective 12:15 - 12:30 [A3.05] Digital platforms for circularity: tackling the challenge of secondary construction materials
12:30 - 13:30	Buffet Lunch Shanghai City Bistro		
13:30 - 14:00	Poster Session 1		
14:00 - 14:30	Grand Ballroom Foyer		
14:30 - 16:00	Session B1: Cleaner Engineering and Technical Processes Grand Ballroom 1 - Petar Varbanov 14:30 - 14:45 [B1.01] A Holistic approach for carbon integration in industrial park 14:45 - 15:00 [B1.02] Optimizing biomass gasification: investigating the impact of agent gas composition on lignin gasification in an entrained-flow reactor 15:00 - 15:15 [B1.03] Model-based scale-up design of rotating packed beds for CO ₂ capture: an iterative methodology and examination of operational parameters 15:15 - 15:30 [B1.04] Carbon footprint estimation of "zero-carbon" power system based on methanol energy storage 15:30 - 15:45 [B1.05] Sustainable approaches in 3d construction printing: parametric manipulations and material constituents for enhanced resource efficiency	Session B2: Environmental and Sustainability Assessment Grand Ballroom 2 - María Teresa Moreira 14:30 - 14:45 [B2.01] Life cycle assessment for the upgrading NCM batteries in China from 2015-2035 14:45 - 15:00 [B2.02] The race to decarbonize solar pv – a life cycle analysis perspective 15:00 - 15:15 [B2.03] Modeling and dynamic optimization of carbon emission in the papermaking process 15:15 - 15:30 [B2.04] Environmental quality and environmental disparity: Evidence from industrial transfer in China 15:30 - 15:45 [B2.05] Towards efficiency in sustainability assessments for the building stock - qualitative expert interviews in Germany	Workshop I: Lifecycle Monitoring of Industrial Product Carbon Footprint Grand Ballroom 3 - Chenhui Jiang - Exploring the inner logic of "Carbon Sink, Carbon Source, Carbon Measurement, and Carbon Trading" Research on the construction of carbon peak and carbon neutrality standard system - Development tendency of automobile industry carbon policy - Research on the retrieval of CO ₂ emission by using satellite remote sensing - Experience in the construction of a national greenhouse gas voluntary emission reduction market and the construction of local carbon inclusion mechanisms

	15:45 - 16:00 [B1.06] Inactivating water-transmissible viruses through the synergy of advanced oxidation techniques	15:45 - 16:00 [B2.06] Life-cycle climate performance of plant factory versus greenhouse under China's power-grid decarbonization: Given short-lived methane and nitrous oxide emissions	
16:00 - 16:30	Coffee Break Grand Ballroom Foyer		
16:30 - 18:00	Session C1: Cleaner Engineering and Technical Processes Grand Ballroom 1 - Kathleen Aviso 16:30 - 16:45 [C1.01] Predicting and analyzing N2O emissions from wastewater treatment plants: a knowledge-data driven approach 16:45 - 17:00 [C1.02] Sustainable transition of civil engineering - just new machines or a need for a change of regime? 17:00 - 17:15 [C1.03] Assessing quality of scenario sets in a stochastic optimization for energy management 17:15 - 17:30 [C1.04] A multi-module eco-driving control framework for platoons of connected autonomous electric vehicles in mixed traffic environments near signalized intersections 17:30 - 17:45 [C1.05] Modelling, simulation and optimisation of a liquid piston system for energy recovery 17:45 - 18:00 [C1.06] Electrification of the basic materials industry: Factors impacting the rate of transition	Session C2: Environmental and Sustainability Assessment Grand Ballroom 2 - Kannan Govindan 16:30 - 16:45 [C2.01] Transitioning from food waste to functional compounds. An environmental and circular approach. 16:45 - 17:00 [C2.02] How urban greening policy affects urban ecological resilience: quasi-natural experimental evidence from three megacity clusters in China 17:00 - 17:15 [C2.03] Mapping the critical paths CO2 emission in supply chain for china's digital economy 17:15 - 17:30 [C2.04] Revealing trade potential for reversing regional freshwater boundary exceedance 17:30 - 17:45 [C2.05] Modeling on chemicals for wastewater treatment: Inaccurate dosage of non-stationary time series 17:45 - 18:00 [C2.06] Emerging industrial symbiosis potential of municipal solid waste incineration fly ash and multi-source heavy metal-rich hazardous solid waste	Workshop II: Carbon Trading, Carbon Finance, and Carbon Market Models Grand Ballroom 3 - Chenhui Jiang - Quantitative remote sensing research on monitoring greenhouse gas emissions using domestic remote sensing data - Principle and application of CO2 flux detection Lidar - Promote innovation in carbon finance products and assist in the construction of the carbon market - How do LCA carbon footprint and International EPD System certification support green design and carbon neutrality along whole supply chain? - Carbon Trading, Carbon Finance, and Carbon Market Models + Innovation and application of ecological carbon sink insurance - Theory and practice of infrastructure carbon management based on LCA
SATURDAY, 11 NOVEMBER 2023			
08:30 - 09:00	Welcome and Notices Grand Ballroom 1-2		
09:00 - 10:00	Keynote Talks Grand Ballroom 1-2 – Cecilia Almeida 09:00 - 09:30 [KN.04] Pontifications on the circular economy: The role of technology, product-services and policy, Arnold Tukker, <i>Leiden University, Netherlands</i> 09:30 - 10:00 [KN.05] Global governance of carbon markets, D'Maris Coffman, <i>The Bartlett School of Sustainable Construction, UCL, UK</i>		
10:00 - 11:00	Coffee Break and Poster Viewing Grand Ballroom Foyer		
11:00 - 12:30	Session D1: Sustainable and Responsible Consumption Grand Ballroom 1 - Jing Meng 11:00 - 11:15 [D1.01] Keg wine, a sustainable innovation fostering responsible consumption. 11:15 - 11:30 [D1.02] Determining resource-efficient and usage-optimal production paths based on product service systems and sharing economy logics: the case of pooled household appliances. 11:30 - 11:45 [D1.03] Assessing global drivers of Ghana's water use from consumption and income-perspective 11:45 - 12:00 [D1.04] The willingness of college students to pay for carbon-labeled drinks 12:00 - 12:15 [D1.05] Research on green consumption behavior—A case study of college students' take-out consumption 12:15 - 12:30 [D1.06] The potential impacts of carbon border adjustment mechanism on carbon neutrality of China	Session D2: Industrial Ecology and Circular Economy Grand Ballroom 2 - Xiaofeng Gao 11:00 - 11:15 [D2.01] Carbon neutrality pathway of China's municipal solid waste treatment sector 11:15 - 11:30 [D2.02] Comparative life cycle assessment of proposed solutions for sustainable management of discarded crystalline silicon photovoltaic panels in Thailand 11:30 - 11:45 [D2.03] Air pollution and corporate financial assets allocation: evidence from China 11:45 - 12:00 [D2.04] Synergy network and optimal management of e-waste recycling: a case of Beijing-Tianjin-Hebei urban agglomeration of China 12:00 - 12:15 [D2.05] Utilising the microstructure of chemically and thermally activated waste textiles for noise attenuation in an urban Australian context 12:15 - 12:30 [D2.06] A multi-objective dynamic optimization model for express waste packaging recycling considering carbon emissions.	Session D3: Urban and Regional Sustainability Grand Ballroom 3 - Mingxing Sun 11:00 - 11:15 [D3.01] Evaluation of resource, well-being, and carbon impact decoupling relationships related to energy use at the subnational level in China from 2000 to 2019 11:15 - 11:30 [D3.02] Subnational integrated sustainability in the telecoupling framework within the planetary boundary 11:30 - 11:45 [D3.03] What is the potential for reducing energy consumption and carbon dioxide emissions in the residential sector, considering economic benefits and landscape conservation? A case study of Kyoto City 11:45 - 12:00 [D3.04] Discussion on a framework for expanding energy systems modeling into the socio-spatial sphere - a Swedish case study 12:00 - 12:15 [D3.05] A 20-year's estimation on building material stocks and embodied carbon in Hong Kong: spatial and life cycle perspectives 12:15 - 12:30 [D3.06] Carbon emissions associated with US lifestyles: an approach utilizing geodemographic segmentation

12:30 - 13:15	Buffet Lunch		
13:15 - 13:30	Shanghai City Bistro		Author workshop
13:30 - 14:15	Poster Session 2		Grand Ballroom 3
14:15 - 14:30	Grand Ballroom Foyer		
14:30 - 16:00	Session E1: Sustainable and Responsible Consumption Grand Ballroom 1 - Wendong Wei 14:30 - 14:45 [E1.01] The impact of emotion dissemination on intention to separate waste in social media setting - evidence based on machine learning and text analysis 14:45 - 15:00 [E1.02] How can sustainable businesses make citizens equally more sustainable? 15:00 - 15:15 [E1.03] Behavioral impact factors to attitude, intention and engagement toward circular economy: a study of Vietnam textile and garment 15:15 - 15:30 [E1.04] Optimizing resource endowments strategy can enhance the adaption of renewable energy generation to climate change 15:30 - 15:45 [E1.05] End-of-life motorcycle treatment: awareness of informal recycling sector and vulnerable motorcycle owner- a case study in Vietnam 15:45 - 16:00 [E1.06] Embodied energy and carbon material footprint of Indian construction sector: A blueprint for mitigation strategies for sustainable building practices	Session E2: Industrial Ecology and Circular Economy Grand Ballroom 2 - Xuechun Yang 14:30 - 14:45 [E2.01] Environmental footprint allocation in driving plastic avoidance and sustainable recycling: game-theoretic model 14:45 - 15:00 [E2.02] Digital product passport for enabling circular economy in the built environment 15:00 - 15:15 [E2.03] High-resolution mapping of material stocks in Belgian road infrastructure: material efficiency patterns, material recycling potentials, and greenhouse gas emissions reduction opportunities 15:15 - 15:30 [E2.04] Zero-carbon oriented multi-energy flow operation control for industrial integrated energy systems 15:30 - 15:45 [E2.05] Planning of island microgrid system considering energy resilience 15:45 - 16:00 [E2.06] Selecting sustainable packaging materials and strategies: a holistic approach considering whole life cycle and decision making	Session E3: Urban and Regional Sustainability Grand Ballroom 3 - Jian Zuo 14:30 - 14:45 [E3.01] Examining the impact of climate change on the Palestinian economy: sectoral reallocation of labor and agriculture preferences (Pre-recorded talk) 14:45 - 15:00 [E3.02] Influence of transformation and upgrading on the green efficiency of industrial water resources 15:00 - 15:15 [E3.03] Influence of China's new urbanization on agricultural carbon performance and its collaborative development path 15:15 - 15:30 [E3.04] Urban water systems improvement using rain gardens: a case study of employing smart devices 15:30 - 15:45 [E3.05] Repurposing underused urban spaces to support electric vehicle charging using agent-based simulation model 15:45 - 16:00 [E3.06] Construction of a comprehensive resilience profiling: a values-based approach to climate policy development
16:00 - 16:15	Coffee Break Grand Ballroom Foyer		
16:15 - 17:45	Session F1: Corporate Sustainability and EMS Grand Ballroom 1 - Lancui Liu 16:15 - 16:30 [F1.01] An optimization model for equitable allocation of carbon credits 16:30 - 16:45 [F1.02] Exploring Industry 4.0's Role in Catalyzing Sustainable development through enhanced manufacturing capabilities: a study in India 16:45 - 17:00 [F1.03] Framework for an integrated environmental management system and energy management system for sustainable ports 17:00 - 17:15 [F1.04] How do environmental regulatory pressure and green market pressure affect enterprise sustainability? Focus on the mediating effects of green knowledge and heterogeneous green innovations 17:15 - 17:30 [F1.05] The environmental competitive advantage of formal recycler: pricing mode and convenience 17:30 - 17:45 [F1.06] A circular economy framework for residential districts based on hydrogen energy cycling	Session F2: Governance and policy for Sustainability Grand Ballroom 2 - Mingzhou Jin 16:15 - 16:30 [F2.01] The ripple effect in gas energy global supply chains: model and implications 16:30 - 16:45 [F2.02] Unveiling building practitioners' compliance behaviours associated with residential building energy codes in Australia 16:45 - 17:00 [F2.03] Identifying the early retirement of coal-fired power plants in India 17:00 - 17:15 [F2.04] Comparative study on cumulative life cycle greenhouse gas emissions of various low-carbon vehicle deployment scenarios : A case study of South Korea 17:15 - 17:30 [F2.05] Approaching underpinning theory building for knowledge exchange from knowledge creation perspective: Exploration on the science-practice interface in Global South 17:30 - 17:45 [F2.06] Reflection on 20-year cleaner production teaching at Tsinghua University, China	Session F3: Environmental and Sustainability Assessment Grand Ballroom 3 – Guoyang Lu 16:15 - 16:30 [F3.01] Eliciting and crystallising relational values of nature for understanding 'IPBES Natures Contribution to People' 16:30 - 16:45 [F3.02] Technical, economic, and environmental evaluation of renewable hydrogen production for multi-energy systems: the case study of Awaji Island 16:45 - 17:00 [F3.03] Sustainable pathways for India's cement industry: evaluating environmental impact and navigating green production strategies 17:00 - 17:15 [F3.04] Assessing the scale effect of greenhouse gas emissions during operation in wastewater treatment plants using causal machine learning 17:15 - 17:30 [F3.05] Real-Time upstream emissions assessment during electric vehicle recharge: A South Korean case study 17:30 - 17:45 [F3.06] The impact of China's economic structure transformation on collaborative pollution reduction and carbon reduction of industrial pollutants
18:30 - 21:00	Gala Dinner (Ticket holders only) Ballroom 4		

SUNDAY, 12 NOVEMBER 2023

08:15 - 08:30	Welcome and Notices Grand Ballroom 1-2	
08:30 - 09:30	Keynote Talks Grand Ballroom 1-2 – Anthony Chiu 08:30 - 09:00 [KN.06] Promoting nexus approaches for food system resilience, Linxiu Zhang, <i>Director of UNEP-IEMP, China</i> 09:00 - 09:30 [KN.07] Cleaner production in the era of generative artificial intelligence, Ming Xu, <i>Tsinghua University, China</i>	
09:30 - 11:00	Session G1: Governance and policy for Sustainability Grand Ballroom 1-2 - Bin Chen 09:30 - 09:45 [G1.01] Research on cross-regional recycling management system of electric vehicles end-of-life power batteries - Based on heterogeneous multi-agent simulation 09:45 - 10:00 [G1.02] Operationalizing a values-based approach for predicting ecosystem service valuation outcomes 10:00 - 10:15 [G1.03] Low carbon transition - decision making processes and obstacles to development: Lessons from Shenzhen International Low Carbon City experiment 10:15 - 10:30 [G1.04] High resolution greenhouse gas emissions from municipal solid waste (MSW) treatment in China based on point sources 10:30 - 10:45 [G1.05] Who's job in waste sorting? The residents'role perception is the key to the success of waste sorting in China 10:45 - 11:00 [G1.06] Sustainable success factors in smart energy: case study of New York, Copenhagen and Singapore	Session G2: Sustainable Products and Services Grand Ballroom 3 - Yi Man 09:30 - 09:45 [G2.01] Embodied energy calculation of banana fiber reinforced Compressed Stabilized Earth Block – a comparative study 09:45 - 10:00 [G2.02] Microstructural evaluation of the <i>Euphorbia Tirucalli</i> bio-binder through Inverse Optical Microscopy 10:00 - 10:15 [G2.03] Toward scaling up sharing economy: integrating key success factors at the design stage of Business Models based on product-service systems 10:15 - 10:30 [G2.04] Research on the integration of intangible cultural heritage Liansi paper and modern sustainable lifestyle: environment, innovation and cultural inheritance 10:30 - 10:45 [G2.05] A Suggested sustainable method for mechanical recycling of plastics towards eliminating novel-entities effect on climate change 10:45 - 11:00 [G2.06] Biocrude generation from plastic waste using pyrolysis process
11:00 - 11:30	Coffee Break Grand Ballroom Foyer	
11:30 - 12:15	Closing Remarks and Awards Grand Ballroom 1-2	

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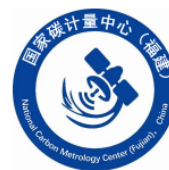


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