



icRS 2023

# 2023 International Conference on Resource Sustainability

August 7-9, 2023

University of Surrey

Guildford, United Kingdom

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## icRS 2023 Program

<b>Sunday, 6 August 2023</b>	
13:00-17:00	<b>Registration</b> (Foyer of Braggs Lecture Theatre)

<b>Monday 7 August 2023</b>	
8:00-8:40	<b>Registration</b> (Foyer of Braggs Lecture Theatre)
<b>Plenary Session</b> (Lecture Theatre D)	
9:00-9:10	Greetings Lirong Liu, Conference Co-Chair
9:10-9:20	Conference Opening Professor G Q Max Lu, President and Vice-Chancellor, University of Surrey
9:20-9:30	Introduction of the icRS 2023 Ming Xu, icRS General Chair
9:30-10:00	Keynote Speech Zhijun Jin, Peking University
10:00-10:30	Keynote Speech Sara Walker, Newcastle University
10:30-11:00	Tea Break (Lower Concourse)

<b>Parallel Session 1.1</b>					
<b>Monday 7 August (11:00-12:30)</b>	<b>Lecture Theatre A</b>	<b>Lecture Theatre B</b>	<b>Lecture Theatre H</b>	<b>Lecture Theatre J</b>	<b>Lecture Theatre E</b>
	<b>Clean Energy</b>	<b>Nexus</b>	<b>Sustainability and Carbon Neutrality</b>	<b>Greenhouse Gases Emissions</b>	<b>Built Environment</b>
	<b>Session Chair:</b> <b>Quanyou Liu</b>	<b>Session Chair:</b> <b>Assem Abu Hatab</b>	<b>Session Chair:</b> <b>Ru Guo</b>	<b>Session Chair:</b> <b>Amin Vafadarnikjoo</b>	<b>Session Chair:</b> <b>Zhi Cao</b>
	<p><b>Chen, Bin;</b> Yu, Huajun; Zhang, Xuange; Wang, Peng; Wang, Yutao</p> <p><i>Global mining activities undermine substantial land carbon storage</i></p>	<p><b>Bai, Yuping;</b> Wang, Yiwei; Deng, Xiangzheng</p> <p><i>Tele-connections driving forces and scenario analysis of agricultural land, water use and carbon emission in China's trade</i></p>	<p><b>Xiaowen Zhuang, Yurui Fan</b></p> <p><i>Bayesian vine copula machine learning (BVC-ML) method for evaluating climate change impacts on water resources in the source region of the Yellow river</i></p>	<p><b>Li, Wei;</b> Jia, Ziyang; Li, Guomin</p> <p><i>Cross-scale characteristics and emission reduction pathways of embodied carbon flows from provincial trade in China</i></p>	<p><b>Su, XiaoKe;</b> Chu, Chunli; Cao, Zhi</p> <p><i>Measuring resource efficiency of global cement and concrete cycle: a multinational dynamic material flow analysis</i></p>
	<p><b>Lin, Yuancheng;</b> Ma, Linwei; Li, Zheng</p> <p><i>The CO2 reduction potential of CCUS in China's iron and steel sector: A plant-level source-sink analysis</i></p>	<p><b>Wang, Sijing;</b> Chen, Bin; Sun, Zhongxiao; <b>Xue, Meili;</b> Yu, Huajun; Sun, Mingxing; Wang, Yutao</p> <p><i>The booming non-food bioeconomy drives large share of global land-use emissions</i></p>	<p><b>Ren, Kaipeng;</b> Tang, Xu; Willerström, Jakob; Höök, Mikael</p> <p><i>Assessing prospective metal requirements of China's wind power and PV development towards carbon neutrality by 2060</i></p>	<p><b>Xu, Lixiao;</b> Zhang, Xun</p> <p><i>Population aging and climate change: Evidence from China</i></p>	<p><b>Drewniok, Michal P.;</b> <b>Marsh, Alastair T.M.</b></p> <p><i>Element-based mapping to identify industrial symbiosis opportunities in the UK cement, steel, glass and ceramics sectors</i></p>
	<p><b>Zheng, Boyue;</b> Liu, Lirong; Zhang, Kaiqiang</p> <p><i>Dynamic source-sink matching CCUS model for net-zero target</i></p>	<p><b>Wu, Xiaomeng;</b> Wang, Chunyan; Yu, Zongqi; Jiang, Jitong; Liu, Yi</p> <p><i>Assessment on urban water-energy nexus characteristic in China and the U.S.</i></p>	<p><b>Shi, Jie;</b> Cai, Jingwen; Wang, Jiaying</p> <p><i>Wind power potential evaluation of high time resolution at provincial-level in China</i></p>	<p><b>Cai, Zimeng;</b> Xu, Ming</p> <p><i>Life cycle greenhouse gas emissions and mitigation opportunities of High Speed Railway in China</i></p>	<p><b>Dueñas, Alexi;</b> Defilippi, Milagros; Herrera, Jose Antonio; Mantilla, Joaquin; Eyzaguirre, Cesar</p> <p><i>Reuse of construction waste (excavation material) in the recovery of public space. Case study of the San Miguel-Lima-Peru waterfront</i></p>

	<p>Zhang, Fenglian; Zhao, Mengfei; Jiang, Guoxia; Li, Ganggang; Zhang, Zhongshen; Cheng, Jie; Hao, Zhengping</p> <p><i>Hydrogen and carbon disulfide production by methane reforming with H<sub>2</sub>S over LaFeAl<sub>12</sub>-xO<sub>19</sub> hexaaluminate catalysts</i></p>	<p><b>Xu, Shujie;</b> Hsu, Shu-chien</p> <p><i>Sustainable infrastructure: a study of the water-energy-carbon nexus for drinking water treatment plant</i></p>	<p>Li, Li; Song, Xiaojing; Li, Chai; Xu, Xiuli</p> <p><i>Being unique for a common goal: innovative hybrids in Chinese provinces toward carbon neutrality</i></p>	<p><b>Chang, Huimin;</b> Xu, Ming; Zhao, Yan; Damgaard, Anders; Christensen, Thomas H.</p> <p><i>Climate change impacts of sewage sludge treatment and disposal based on uncertainty analysis</i></p>	<p>Yúsuf Yagia Bersabé Ortega, <b>Edwin S. Pinto</b>, Beatriz Amante</p> <p><i>Analysis of the building envelope energy efficiency in accordance to the Spain regulations</i></p>
	<p><b>Kang, Shuang;</b> Zhou, Yue</p> <p><i>Optimal design of a hybrid grid-connected biomass-based energy system for rural areas</i></p>	<p><b>Li, Zonghan;</b> Wang, Chunyan; Liu, Yi; Wang, Jiangshan</p> <p><i>Enhancing the explanation of household water consumption through the water-energy nexus concept: a case in Beijing, China</i></p>	<p><b>Stagliano, A. J.</b></p> <p><i>Sustaining the atmosphere through carbon emissions curtailment: Additional empirical evidence on the superiority of mandated cap-and-trade mechanisms</i></p>	<p><b>Wang, Xinru</b></p> <p><i>Spatial spillover effect and driving mechanism of carbon emissions in new energy demonstration cities: from the perspective of urban agglomeration correlation network</i></p>	<p><b>Zhang, Yan</b></p> <p><i>The potential for residential energy conservation based on a comprehensive survey of occupant behavior and energy use in Beijing</i></p>
		<p><b>Wada, Ojima</b> Zechariah; Vincent, Annette Shoba; Mckay, Gordon; Mackey, Hamish Robert</p> <p><i>Recovery of purple non-sulfur bacteria biomass from the treatment of gas-to-liquid process water: a potential food-water-waste nexus</i></p>	<p><b>Wang, Zhufang;</b> Nnorom, Mac-Anthony Ezennia; Tian, Zilin; Guo, Bing</p> <p><i>Enhancing anaerobic ammonium oxidation (anammox) for nitrogen removal from UK sewage using granular activated carbon</i></p>	<p><b>Wang, Lei;</b> Zheng, Jingyu; Yuan, Yanhong; Wang, Yujie; He, Yaoyu</p> <p><i>Urban energy performance improvement policy selection in China based on policy effect prediction: An analysis from the dimensions of economy, environment and well-being</i></p>	

12:30  
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13:30

Lunch (Lower Concourse)

**Parallel Session 1.2**

Monday 7 August (13:30-15:30)

Lecture Theatre A	Lecture Theatre B	Lecture Theatre H	Lecture Theatre J	Lecture Theatre E
<b>Clean Energy</b>	<b>Whole System Approach</b>	<b>Sustainability and Carbon Neutrality</b>	<b>Greenhouse Gases Emissions and Environmental Risk</b>	<b>Sustainable Behaviour</b>
<b>Session Chair:</b> <b>Kaiqiang Zhang</b>	<b>Session Chair:</b> <b>Fazleena Badurdeen</b>	<b>Session Chair:</b> <b>Richard Murphy</b>	<b>Session Chair:</b> <b>Chang Yu</b>	<b>Session Chair:</b> <b>Miguel A. Franesqui</b>
<p>Yuan, Qiuling; <b>Meng, Fanxin;</b> Hou, Jiaqi; Sun, Yutong; Liu, Gengyuan; Yang, Zhifeng</p> <p><i>Trade-offs perspective highlights the potential of rooftop photovoltaic development in cities</i></p>	<p><b>Ananda, Jayanath;</b> Karunasena, Gamithri Gayana; Pearson, David</p> <p><i>Peering into the pantry: An analysis of behaviours behind the most wasted food products at home</i></p>	<p><b>Yang, Ken;</b> Mogi, Gento</p> <p><i>Research on China's provincial carbon shadow price and carbon emission efficiency, based on Stochastic Frontier Analysis</i></p>	<p><b>Yang, Shuhan;</b> Long, Ruyin</p> <p><i>What is the mitigated environmental impact potential of solid waste resource digestion in the Central Plains Urban Agglomeration of the Yellow River Basin? Based on scenario assumptions</i></p>	<p>Han, Shangrong; Han, Bo; <b>Guo, Yunhang</b></p> <p><i>The relationship between school energy consumption and children's Body Mass Index: evidence from Chinese kindergartens</i></p>
<p>Triganza, Thomas; <b>Refalo, Paul;</b> Rochman, Arif</p> <p><i>Towards sustainable manufacturing of polymeric components used in water treatment systems</i></p>	<p><b>Ye, Dan;</b> Huang, Lingyun</p> <p><i>Air pollution induced productivity change? A decomposition analysis on air pollution-induced productivity change in Chinese manufacturing industry</i></p>	<p><b>Dai, Yuqi;</b> Xu, Linyu</p> <p><i>Allocating carbon emission quotas in the textile sector using a double vortex model to promote cooperative energy conservation among carbon trading enterprises</i></p>	<p><b>Xiong, Ruoxi;</b> Xu, Ming</p> <p><i>Accounting of greenhouse gas emissions in China's electricity generation and consumption</i></p>	<p>Kawamata, Tsuyoshi; Itoi, Kazane; Mohammed, Sumaa; <b>Kaida, Naoko</b></p> <p><i>The sense of consent facilitates plastic waste separation at the household level: survey evidence from Tsukuba, Japan</i></p>

<p><b>Pan, Ziqing;</b> Zhang, Kaiqiang</p> <p><i>Dynamic and equilibrium interfacial tension and oil swelling during carbonated water injection: Implications for geological CO2 utilization and storage</i></p>	<p><b>Yue, Ting;</b> Zhou, Jing; Zhang, Yingkai; Zhang, Xinyue; Long, Ruyin; Chen, Hong; Liu, Junli</p> <p><i>Policy intervention simulation of residents' energy-saving behavior based on dynamic evolution perspective</i></p>	<p><b>Dai, Min;</b> Sun, Mingxing; Chen, Bin; Wang, Yutao</p> <p><i>Country-specific strategies for water saving under carbon neutrality target of the pulp and paper industry</i></p>	<p><b>Sanchit Gupta,</b> Sandeep Chaudhary</p> <p><i>Resource sustainability and the bubble of carbon neutrality in cement manufacturing industry</i></p>	<p><b>Stocco, Laura;</b> Slekiene, Jurgita; Nguyen, Thi Hanh Tien; Zurbrugg, Christian</p> <p><i>What drives household segregation of recyclables in Vietnam?</i></p>
<p><b>Chu, Wenzheng;</b> Zhang, Kaiqiang</p> <p><i>Shale-Fluid Phase Behaviour in Nanopores</i></p>	<p><b>Li, Qianwen;</b> Qian, Tingyu; Long, Ruyin; Chen, Hong</p> <p><i>Social "win-win" promotion of green residence under the four-subject evolutionary game</i></p>	<p><b>Xie, Hongyi;</b> Yu, Huajun; Chen, Bin; Wang, Yutao</p> <p><i>Towards Carbon Neutrality: Coordinated Integration of Alternative Fuels and Transport Technologies in Inland Waterway Network</i></p>	<p><b>Chen, Rundong;</b> Xu, Pengpeng</p> <p><i>Electrification and carbon reduction in public buildings: A provincial analysis in China</i></p>	<p><b>Yunyun, Li;</b> Filimonau, Viachaslau; Ling-en, Wang; Shengkui, Cheng</p> <p><i>Assessing the sustainability of household food consumption in rural and urban China</i></p>
<p>Vives, Mariona Battestini; akrabortyMoalisa; <b>Abdelaiz, Omar;</b> Katae, Amirrezav de PeppelMrcel; Henrksson, Gunnar; Lndström, Rkel Wrelad; Hulteber, Christian</p> <p><i>Sustainable redox flow batteries using lignin-based electrolytes</i></p>	<p><b>Chen, Jiawei;</b> Chen, Hong; Long, Ruyin; Sun, Qingqing</p> <p><i>Do regional economy, resource and environment always go hand in hand? Uncovering the evolutionary pathways towards their coordinated development in the Yangtze River Delta</i></p>	<p><b>Guo, Ru;</b> Tian, Bowen; Wang, Leyi; He, Weiqi</p> <p><i>Analyzing synergies and trade-offs of carbon neutrality for sustainable urban transition</i></p>	<p><b>Peng, Xu;</b> Chen, Hong; Long, Ruyin</p> <p><i>Determinants of embodied CO2 transfer through electricity trade within China</i></p>	<p>Ahmad, Shahzad; Siyal, Saeed; <b>Xin, Chunlin</b></p> <p><i>Corporate social responsibility and organizational citizenship behavior for the environment. Mediation moderation analysis</i></p>
<p><b>Jiang, Guoxia;</b> Hao, Zhengping</p> <p><i>Highly sulfur-resistant Ni-based catalysts to recover hydrogen resource from acidic gas</i></p>	<p>Shankar, Siddharth; <b>Othayoth, Darshana</b></p> <p><i>Evaluating the Level of Integration in terms of Sustainability Between Public Transport Modes and Paratransit Systems: A Case Study of Kochi city, India</i></p>	<p><b>Zhang, Yuhao;</b> Peng, Kaiming; Ni, Xiaojing; Cao, Xiaojing; Cai, Chen; Liu, Jia; Huang, Xiangfeng; Guo, Ru</p> <p><i>How nexus approach can contribute to carbon neutrality from a sustainable perspective</i></p>	<p>Baghel, Pratibha; Mathew, Aneesh; <b>Othayoth, Darshana</b></p> <p><i>Modeling vehicular emissions using international vehicle emission model</i></p>	<p><b>Cheng, Shujun;</b> Ren, Yanjun; Zhao, Minjuan; Jiang, Zhide; Lu, Yang; Yang, Di; Luo, Yu</p> <p><i>Could information intervention effectively reduce food waste caused by consumers' misunderstanding of food date labeling</i></p>
<p><b>Kaur, Lovepreet</b></p> <p><i>Optimization of the pyrolysis process for the production of cattle dung bio-oil and characterization of its properties</i></p>	<p><b>Ptach, Dominika Izabela;</b> Andrews, Deborah; Philbin, Simon P</p> <p><i>"Translating" UN Sustainable Development Goals for an all-round data centre industry green transformation.</i></p>	<p><b>Shao, Panyang;</b> Guo, Ru; Hu, Jingnan</p> <p><i>Achieving carbon neutrality and improving air quality in a more efficient, green and sustainable path: insights from synergistic research on greenhouse gases and air pollutants</i></p>	<p><b>Ren, Weizhen;</b> Liu, Yan; Zhang, Zilong; Zhang, Hui; Wan, Shilong; Wu, Jianxi</p> <p><i>The characteristics and determinants of household carbon emissions in China: empirical findings from China Family Panel Studies</i></p>	<p><b>Deubzer, Otmar Karl;</b> Schlegel, Moritz-Caspar</p> <p><i>Fundamentals of an overall sustainability label for products: Flagging product recyclability, recycled content and reparability for consumers within a merge approach</i></p>
<p><b>Zhao, Songru;</b> Druckman, Angela; Liu, Lirong</p> <p><i>Techno-economic analysis of solar PV systems for different types of houses: a case study of social housing in the UK</i></p>	<p><b>Yang, Xue;</b> Zhang, Chao</p> <p><i>Revealing the socio-Economic metabolism of steel: phases, patterns, and perspectives for sustainable development</i></p>		<p><b>Xia, Ziqian;</b> Ye, Jinquan; Yang, Jianxun; Zhang, Chao</p> <p><i>Growing climate change perception but rising regional disparities in China</i></p>	<p><b>Lundberg, Piia;</b> Vainio, Annukka; Viholainen, Noora; Korsunova, Angelina</p> <p><i>Consumers and self-repair: What they repair, what skills they have and what they are willing to learn</i></p>

15:30  
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16:00

Tea Break (Lower Concourse)

Parallel Session 1.3					
Lecture Theatre A	Lecture Theatre B	Lecture Theatre H	Lecture Theatre J	Lecture Theatre E	
Clean Energy	LCA Applications	Sustainable Supply Chain	Sustainable Business Model	Transportation Sustainability	
Session Chair: Wei Gan	Session Chair: Ian Vázquez-Rowe	Session Chair: Xinfang Wang	Session Chair: Regina Frei	Session Chair: Yuanshu Liang	
<p><b>Dong, Yujie;</b> Zhang, Chao</p> <p><i>A complete electric generating unit level analysis on the driving factors of carbon mitigation in China's power sector</i></p>	<p><b>Batten, Rahamim Raymond;</b> Karanjikar, Mukund; Spatarí, Sabrina</p> <p><i>Environmental and cost evaluation of advanced bio-jet fuel: a bottom-up chemical process-based LCA and TEA for low-C aviation</i></p>	<p><b>Velastín Osorio, Natalia;</b> Espinoza Pérez, Andrea; Santander Tapia, Pavlo; Mena Carrasco, Marcelo; Masip Macia, Yunesky</p> <p><i>Design of a Sustainable Hydrogen Supply Chain: An empirical approach through the Case of Chilean Seaports</i></p>	<p>Siyal, Saeed; <b>Xin, Chunlin</b></p> <p><i>Breaking down barriers: inclusive leadership and its effect on hospitality employee performance</i></p>	<p><b>Liang, Yuanshu;</b> Ye, Kunhu; Chen, Keda; Zhong, Yuhong</p> <p><i>Measurement of ecosystem services value loss due to highway construction in China</i></p>	
<p><b>Hao, Zhengping;</b> Shui, Ziyi; Li, Ganggang; Zhang, Fenglian</p> <p><i>Atomic location-modulated electronic metal-support interaction for boosting water-gas shift reaction</i></p>	<p>Xue, Meili; Chen, Bin; <b>Sun, Mingxing;</b> Wang, Sijing; Dai, Min; Wang, Yutao</p> <p><i>Understanding the benefits and challenges of wood-based products in response to climate change from life cycle perspective</i></p>	<p><b>Wang, Xinfang;</b> Lopez-Quiroga, Estefania; Fryer, Peter; Radcliffe, Jonathan; Wu, Junzhang</p> <p><i>Systematic literature review on local food manufacture and food cold chains</i></p>	<p>Na, Jingwen; <b>Long, Ruyin</b></p> <p><i>The impact of green finance on the upgrading of regional industrial structure: A case study of western China</i></p>	<p><b>Lu, Xiaohui;</b> Chan, Faith Ka Shun; Chan, Hing Kai; Chen, Wei-Qiang</p> <p><i>Investigating surface water flood impacts on road transport via integrated analysis of physical vulnerability and news media data</i></p>	
<p><b>Gan, Wei;</b> Zhou, Yue; Abeyasinghe, Sathara; Wu, Jianzhong</p> <p><i>Statistical impact quantification of peer-to-peer energy trading on distribution network flows</i></p>	<p><b>DONG, Huijuan</b></p> <p><i>Life cycle environmental and economic assessment of Tetra Pak recycling technologies</i></p>	<p><b>Yang, Xuechun</b></p> <p><i>Global supply chain drivers of agricultural antibiotic emissions in China</i></p>	<p><b>Peng, Yifeng;</b> Hong, Jingke</p> <p><i>Unraveling the green consumption puzzle: A comprehensive meta-analysis of attitude-behavior determinants</i></p>	<p><b>Fransesqui, Miguel A.;</b> Cabrera, Amílcar J.</p> <p><i>Local natural resources for the construction of an emergency "green road" on recent volcanic lava in a biosphere reserve territory</i></p>	
<p><b>Matsuoka, Ken;</b> Fujii, Yusuke; Koide, Ryu; Murakami, Shinsuke</p> <p><i>Regional Sensitivity Analysis to identify key parameters for forecasting material flows and assessing the circularity of PV panels</i></p>	<p><b>Zhang, Lingyun;</b> Pang, Cheng Heng; Kow, Kien Woh; Lester, Edward; Wu, Tao; Shen, Qun; Sun, Nannan; Wei, Wei</p> <p><i>Techno-economic analysis and life cycle environmental assessment of green and low-carbon ethanol production by low-value tail gas</i></p>	<p><b>Zhang, Chi;</b> Van Ewijk, Stijn; Stegemann, Julia</p> <p><i>Timber flow analysis in UK</i></p>	<p><b>Wang, Peipei;</b> Zheng, Minrui; Li, Tianle; Zheng, Xinqi</p> <p><i>A few check-in point POI recommendation method considering geographical and temporal preferences</i></p>	<p><b>Hou, LiJing;</b> Chu, Chunli; Cao, Zhi</p> <p><i>Parametric pavement life cycle assessment reveals high spatial variability in greenhouse gas emissions of road infrastructure in China</i></p>	
<p><b>Wang, Hao-ran;</b> Feng, Tian-tian; Cui, Ming-li</p> <p><i>How will carbon trading policy and green certificate trading policy have a coordination and optimization in China's electricity market?</i></p>	<p><b>Liu, Xiaoyi;</b> Hsu, Shu-Chien</p> <p><i>Comparative LCA-MCDA of high strength eco-pervious concrete by using recycled waste glass materials</i></p>	<p><b>Zhao, Na;</b> Li, Xiaolian; Ma, Bingqi</p> <p><i>Resource integration superimposed revenue mechanism of sustainable supply chain under sudden public risks</i></p>	<p><b>Zhang, Danni;</b> Frei, Regina; Su, Shihang; Litaudon, Virginie; Kimera, Joseph</p> <p><i>Towards sustainable product returns: collaborating with returns providers for circular and sharing economy</i></p>	<p><b>Fransesqui, Miguel A.;</b> Yepes, Jorge; García-González, Cándida; Valencia-Díaz, Samuel</p> <p><i>Sustainable consumption of geomaterials and production of asphalt pavements in sensitive environments: low energy asphalt with waste materials from volcanic islands</i></p>	
<p><b>Li, Zonghan;</b> Wang, Chunyan; Liu, Yi</p>	<p><b>Olortegui - Cristobal,</b> Denisse; Sanchez - Matos, Joan; Kahhat, Ramzy; Vázquez - Rowe, Ian</p>	<p><b>Zhou, Ya;</b> Guan, Aiqun; Liu, Qiuli</p>	<p><b>Mancinelli, Raimondo;</b> Wehmeyer, Walter; Liu, Lirong; Lee, Jacquetta; Embley, Tim</p>	<p><b>Koorikkattil, Ajeesh;</b> Nayar, Sunitha k; Venudharan, Veena; Viswanath, Angitha k</p>	

Monday 7 August (16:00-18:00)

	<p><i>CEEG, an energy efficiency grade dataset for white goods in mainland China at regional and household levels</i></p>	<p><i>Assessing the impact of an oil spill through Life Cycle Analysis: development of effect factors (EFs)</i></p>	<p><i>Food consumption and environmental implications for digitalization of food delivery</i></p>	<p><i>A Product Market System framework for Sustainability Assessment for business early decision-making</i></p>	<p><i>Comparative assessment of the sustainability value of jointed plain concrete pavements and fibre reinforced concrete pavements</i></p>
	<p><b>Gao, Wenfang</b></p> <p><i>Green and low-carbon recovery of critical metal resources in energy materials: a comprehensive technology and evaluation system</i></p>	<p><b>Zapp, Petra;</b> Schreiber, Andrea</p> <p><i>Resource criticality in life cycle sustainability assessment</i></p>	<p>Xiuzhi Hua, <b>Jingru Liu</b></p> <p><i>Study on industrial solid waste metabolism from the perspective of network and supply chain: the case of Tianjin</i></p>	<p><b>Silva, Dhanitha Nayanee;</b> Wehmeyer, Walter; Murphy, Richard</p> <p><i>Managing Business Sustainability: A new framework for sustainability measurement in the private sector</i></p>	<p>Zhang, Fenglian; Zhao, Mengfei; Jiang, Guoxia; Li, Ganggang; Zhang, Zhongshen; Cheng, Jie; <b>Hao, Zhengping</b></p> <p><i>Thermosetting phenolic resin-based carbon fibers for VOCs adsorption: electrospinning, pre-oxidation and carbonization</i></p>
	<p><b>Segers, Britt;</b> de Graaf, Christophe; Tschulkow, Maxim; Vasilakou, Konstantina; Buyle, Matthias; Billen, Pieter; Nimmegeers, Philippe</p> <p><i>Generic prospective quantitative sustainability assessments for lignin-first biorefineries</i></p>		<p><b>Shuai, Chenyang;</b> Chen, Xi; Xu, Ming</p> <p><i>Global spread of water scarcity risk through trade</i></p>	<p><b>Zhang, Danni;</b> Frei, Regina</p> <p><i>Understanding the challenges of applying circular economy principles to product returns</i></p>	
<p>19:00 - 22:30</p>	<p>Conference Dinner (Hillside Restaurant)</p>				



Tuesday 8 August 2023					
8:30-8:55	Registration (Foyer of Braggs Lecture Theatre)				
	Plenary Session (Lecture Theatre D)				
9:00-9:30	Keynote Speech	Gordon Huang, University of Regina			
9:30-10:00	Keynote Speech	Yang Xia, Nature Journal			
10:00-10:30	Tea Break (Lower Concourse)				
Tuesday 8 August (10:30-12:30)	Parallel Session 2.1				
	Lecture Theatre A	Lecture Theatre B	Lecture Theatre H	Lecture Theatre J	Lecture Theatre E
	Waste Management	LCA Applications	Sustainable Supply Chain	Circular Economy	Governance and Policy
	Session Chair: Naoko Kaida	Session Chair: Fanran Meng	Session Chair: Chenyang Shuai	Session Chair: Mar Palmeros Parada	Session Chair: Deborah Elizabeth de Lange
	Li, Tianxin; Li, Yufei; Cheng, Shikun; Li, Zifu	Khan, Sahil Ali; Kinnane, Oliver; O'Hegarty, Richard	Fernando, Yudi; Tseng, Ming-Lang	Daniel Danyang Li	Acevedo, Laura Isabel; Pigosso, Daniela; McAlone, Tim
	<i>Constructing 8S management system for sustainable sanitation value chain towards toilet revolution</i>	<i>Analysing the environmental footprints of domestic air source heat pumps</i>	<i>Developing a green economy framework for sustainable development goals: circular supply chain and green resources productivity</i>	<i>Circular economies on green sustainability: a review</i>	<i>Strategic Implementation of Sustainability Philosophies: A systematic review</i>
	Raut, Shiven R.; Chandel, Munish Kumar	Xinyi, Li; Chao, Zhang	Viken Strand, Andrea; Stoud Myhre, Magnus; Mehta, Shraddha; Ólafsdóttir, Gudrun; Saviolidis, Nina Maria	Singh, Pooja; Dhanorkar, Manikprabhu	Liu, Zhaorunqing; Chen, Haibin; Chen, Liang
	<i>Advancing the circular economy for E-commerce packaging waste in India by closed loop models</i>	<i>Global multi-stage footprints of iron and steel elaborate material basis of economy: integrating physical material cycle analysis and monetary multi-regional input-output analysis</i>	<i>Can higher resource utilization be achieved in fisheries supply chains? - Status and challenges from Iceland and Norway</i>	<i>Valorization of aquatic plant biomass resource: A strategic approach towards closed-loop technologies, circular economy, and sustainability</i>	<i>Effects of rangeland collaborative management on diversity practices of pastoralists from the perspective of institutional fit: based on the ALAAM modelling</i>
Šleiniūtė, Agne; Mumladze, Tamar; Bochoidze, Inga; Denafas, Gintaras	Xia, Ziqian; Xie, Jinliang; Liu, Kuang; Zhang, Chao	Aprilianto, Hendri Cahya; Rau, Hsin	Liu, Haiping	Cheng, Shikun; Chen, Zhengxian; Chen, Jingang; Dorea, Caetano; Li, Tianxin; Ma, Xiaolei; Mang, Heinz-Peter; Li, Zifu	
<i>Sustainable solutions for the management and recycling of pharmaceutical blister packaging waste</i>	<i>Advancing high-impact pro-environmental behaviors: a comprehensive review and development of a novel carbon footprint calculator</i>	<i>Sustainable supply chain design for palm oil wastes in the regions of Indonesia</i>	<i>Evolution and endogenous mechanism of platinum trade dependence network from the perspective of industrial chain.</i>	<i>Can faecal sludge management be standardized?</i>	
Zhang, Chunbo; Stegemann, Julia	Hu, Xiaocheng; Yan, Xiaoyu	Di, Jinghan; Wen, Zongguo	Jain, Mayank; Hopkinson, Peter; Zils, Markus; Khedmati Morasae, Esmaeil	Cheng, Su-Ting; Li, Tung-Han	
<i>Construction, demolition, and excavation waste management in the U.K.: A analysis based on the European Waste Catalogue statistics</i>	<i>The dynamic environmental impact of household laptop consumption in the UK from 2011 to 2020: A full life cycle assessment</i>	<i>Analysis on the resource-environment net benefit and equity in the global trade of rare earth</i>	<i>Taxonomy for circular capital project delivery</i>	<i>Modeling fine particulate matter concentration and potential improvement strategies in urban areas</i>	
Huang, Chu-Long	Liu, Yu; Wang, Yafei	Uemura Reche, Alda Yoshi; de Castro e Silva, Andreia; Canciglieri Junior, Osiris;	Frei, Regina; Vazquez-Brust, Diego; Litaudon, Virginie	de Lange, Deborah Elizabeth	

	<i>Distinguishing phosphorus loss categories for its sustainable management</i>	<i>China capital service accounts 2003-2020: a perspective of capital endogenization in input-output tables</i>	<i>Integrated product development model oriented to green supply chain management – application in a furniture industry in the south region of Brazil</i>	<i>Business resilience through circularity</i>	<i>Delaying the renewable energy transition: An examination of the effects of subsidies on energy industry concentration and competition</i>
	Kim, Ji-Hoon; Kwon, Hee-Joo; Kim, Kyung-Duk; Ju, Yeon-Ji; Jung, Phil-In; <b>Lim, Seong-Rin</b>	<b>Meng, Fanran</b> ; Gast, Lukas; Favero Bolson, Natanael; Cullen, Jonathan	<b>Vafadarnikjoo, Amin</b> ; Kedir, Abbi	<b>Palmeros Parada, Mar</b> ; Gamboa, Gonzalo; Palenzuela Ardila, Patricia; Alarcon, Diego; Zaragoza, Guillermo	<b>Zhao, Manyi</b> ; Wang, Ke
	<i>Environmental footprints of beverage cups based on their different materials and management methods</i>	<i>Waste flow and environmental analysis of the municipal solid waste management in England</i>	<i>Implications of deglobalisation for sustainable supply chain management: an exploratory study</i>	<i>Thermal seawater desalination in Almeria – exploring the trade-offs of the circular economy</i>	<i>Comprehensive evaluation and policy practice of co-benefits of greenhouse gas reduction and air pollution control: Literature review</i>
	<b>Frei, Regina</b> ; Vazquez-Brust, Diego; Litaudon, Virginie	<b>Tschulkow, Maxim</b> ; Pizzol, Massimo; Compennolle, Tine; Van Passel, Steven	<b>Yu, Chang</b>	Wall, Frances; Marquis, Eva; <b>Pettit, Carol-lyne</b>	<b>Lyu, Zhengwei</b> ; Lan, Hongjie; Hua, Guowei; Cheng, T. C. E.; Xu, Yadong
	<i>PlastiCity: capturing lost urban plastics for circular applications</i>	<i>The environmental impacts of emerging lignin-first biorefineries: A consequential life cycle assessment approach</i>	<i>Can industrial agglomeration increase the wood resource efficiency?</i>	<i>Critical minerals, circular economy roadmaps, and the UN resource management system</i>	<i>From trash to treasure: Evolutionary game analysis of food waste-to-energy conversion under the charging policy</i>
	<b>Nguyen, Hue Thi Dang</b> ; Kaida, Naoko; Tamura, Makoto	<b>Shi, Shuning</b> ; Liu, Yinchen; Yan, Xiaoyu		Chen, Wan Chiao; <b>Rau, Hsin</b>	<b>Shao, Yanmin</b> ; Yang, Yiwen; Li, Junlong
	<i>Potentials of no single-use plastic initiatives in plastic waste management in island communities in Central Vietnam: Implications from local stakeholder interviews</i>	<i>Spatially explicit life cycle assessment of China's power sector in 2020</i>		<i>Developing an optimal mode of operation in frozen food processing with the circular economy perspective</i>	<i>The impact of environmental policies in various countries on steel industry trade: an empirical study based on major global steel trading countries</i>

12:30-13:30

Lunch (Lower Concourse)

**Parallel Session 2.2**

	Lecture Theatre A	Lecture Theatre B	Lecture Theatre H	Lecture Theatre J	Lecture Theatre E
	<b>Waste Management</b>	<b>Whole System Impacts</b>	<b>Sustainable Materials</b>	<b>Circular Economy Policy</b>	<b>Governance and Policy</b>
	<b>Session Chair: Yurui Fan</b>	<b>Session Chair: Yutao Wang</b>	<b>Session Chair: Mitchell Jones</b>	<b>Session Chair: Ryan Nolan</b>	<b>Session Chair: Jonathan Chenoweth</b>
Tuesday 8 August (13:30-15:30)	Deng, Yun; Zhou, Yuguang; Dong, Renjie	<b>Ehsan Vahidi</b> , Kamal Mousavi, Sheida Nili	<b>Phengsaart, Theerayut</b> ; Bumrungsak, Chanatip; Srichonphaisan, Palot; Julapong, Pongsiri; Tabelin, Carlito Baltazar; Juntarasakul, Onchanok	<b>Simioni, Flávio José</b> ; Soares, Juliana Ferreira; Rosário, Jeane de Almeida do; Sell, Luiza Garcia; Pereira, Juliana Araújo; Bertol, Eduardo; Souza, Fabio Murilo Padilha	<b>Sun, Mingxing</b> ; Xu, Xiangbo; Fu, Chao
	<i>Emergy analysis of agricultural waste biomass for pellet production: A case study in China</i>	<i>The environmental impacts of direct lithium extraction from brine resources in Nevada.</i>	<i>Particle geometry of crushed plastics: the randomness of size reduction in three-dimension</i>	<i>Industrial symbiosis in clusters around thermoelectric power plants: cases analysis that represent circular economy initiatives</i>	<i>Can carbon tax on food promote low-carbon and healthy food consumption? Evidence from rural China</i>
	<b>Feyerer, Christoph</b> ; Lasch, Tatjana; Khodier, Karim; Sarc, Renato	<b>Guan, Youbang</b> ; Liu, Lian; Chen, Yingyi; Liu, Lirong	<b>Nnorom, Mac-Anthony</b> ; Avery, Lisa; Hough, Rupert; Guo, Bing	<b>Vulsteke, Kobe</b> ; Huysveld, Sophie; Thomassen, Gwenny; Dewulf, Jo	<b>Sun, Xin</b>
	<i>The influence of wear on throughput and energy</i>	<i>Environmental impact assessment of industrial</i>	<i>Metagenomic profiling of the microbiome and antibiotic resistome in commercial</i>	<i>What does 'value' mean in a circular economy? A conceptual framework</i>	<i>Extensive foreign direct investment may reduce supply risk of critical clean energy</i>

<i>consumption in the shredding of mixed commercial waste</i>	<i>aquaponics system: a case study in Chongqing, China</i>	<i>biogas plants operating at hyper-mesophilic temperatures</i>	<i>advancing the operationalization of the circular economy</i>	<i>materials faced by importing countries</i>
<b>Pérez Horno, Beatriz;</b> Feldmann, Andreas; Samuelsson, Peter	<b>Wang, Ju;</b> Yu, Huajun; Sun, Mingxing; Chen, Bin; Wang, Yutao	<b>Orbecido, Aileen;</b> Turingan, Casey Oliver; Tabelin, Carlito	<b>Akeredolu-Ale, Omorinola;</b> Muranko, Zaneta; Nolan, Ryan; Charney, Fiona	<b>Tan, Yiqi;</b> Wen, Zongguo
<i>Lost in the shuffle: A characterization and categorisation of the accumulated resources in scrap.</i>	<i>Life cycle carbon emissions and environment burdens of cotton textile: a meta-analysis</i>	<i>Sequential treatment of acid mine drainage using various media in a permeable reactive barrier</i>	<i>Enabling the UK's transition to a Circular Economy: A Critical Evaluation of Government Policies</i>	<i>Counterproductive effects of alternatives policy of single-use plastics in China</i>
<b>Chan, Teresa HC;</b> Hui, TY; <b>Chan, Janet KY</b>	<b>Julapong, Pongsiri;</b> Srichonphaisam, Palot; Meekoch, Thidarat; Tabelin, Carlito Baltazar; Juntarasakul, Onchanok; Phengsaart, Theerayut	<b>Gomes, Helena I.;</b> Naybour, Esther; Funari, Valerio	<b>Chapardar, Hadi</b>	<b>Zhang, Yixin;</b> Liu, Ting; Zhang, Chenyue; Jing, Zehui; Lin, Qiaoyan
<i>From trash to treasure: Assessing the effectiveness of Green@Community's recycling stores in Hong Kong</i>	<i>The effects of washing laundry parameters on the emission of microplastics</i>	<i>Combining bioleaching and electro dialysis for recovery of platinum group elements from spent car catalysts</i>	<i>Exploring a hybrid model for policymaking toward business-driven circular economy</i>	<i>Sustainable conservation strategies for rivers and watersheds: Restoration and rewilding in a changing world</i>
<b>Liu, Zhaowen;</b> Schraven, Daan; de Jong, Martin; Hertogh, Marcel	<b>Zhao, Manyi;</b> Wang, Ke	Zapata-Jiménez, Julia; Andecochea Saiz, Carlos; <b>Rodríguez-Alegre, Rubén;</b> Pérez Megias, Laura; Sanchis, Sonia; You, Xialei	<b>Ryan Nolan</b>	<b>Zhang, Yixin;</b> Zhang, Xindi; Hu, Siyuan; Huang, Qiuyue; Yang, Yin
<i>From zero to leadership: A longitudinal case study of the municipal solid waste infrastructure system in Almere, the Netherlands (1976–2022)</i>	<i>Disentangling the effects of air pollutants on the COVID-19 pandemic with many instruments—A global perspective</i>	<i>On-site validation of nutrient recovery from pig slurry liquid fraction using membrane technologies at pilot scale.</i>	<i>Mission CE? The role of public policy in driving circular innovation</i>	<i>Multiscale greenness supporting people's mental health</i>
<b>Gu, Shuai;</b> Yu, Jianguo	<b>Zheng, Lin;</b> Mueller, Markus; Luo, Chunbo; Yan, Xiaoyu	<b>Vashistha, Prabhat;</b> Moges, Kebede A.; Pyo, Sukhoon	<b>Lesniewska, Feja</b>	<b>Larrain, Macarena;</b> Van Passel, Steven; Billen, Pieter
<i>Self-driven enhanced electrochemical leaching of spent lithium-ion battery cathode and anode</i>	<i>Predicting whole-life carbon emissions for buildings using different machine learning algorithms: a case study on typical residential properties in the UK</i>	<i>Fabrication of lime mud based cementless binder: an environment friendly approach to mitigate climate change</i>	<i>A systems approach to policy making for a circular economy: a comparative analysis UK and devolved administration's policies and governance approaches (case study cement and concrete)</i>	<i>Profitability and policy instruments for plastic recycling: A comparative study across countries with different economic, demographic and policy characteristics</i>
<b>Li, Ganggang;</b> Li, Bingzhi; Zhang, Zhongshen; Hao, Zhengping	Gaurav Tyagi, Anupam Singhal, Srikanta Routroy, Dipendu Bhunia, <b>Shreyas Pranav,</b> Mukund Lahoti	<b>Shreyas Pranav,</b> Mukund Lahoti, G. Muthukumar, En-Hua Yang	<b>Esmaeil Morasae</b>	<b>Ma, Qianqian;</b> Xu, Bing; Bititci, Umir
<i>Highly defective composite oxides derived from spent lithium-ion batteries for catalytic oxidation of volatile organic compounds</i>	<i>Factory-scale fired clay bricks with synergistic incorporation of fly ash and chrome plating sludge: Mechanical, microstructural, and leaching characteristics with life cycle assessment</i>	<i>Investigating the potential of calcium oxide incorporating high-volume silica fume as a cementitious binder for pavement application</i>	<i>Embracing complexity in public policy: A Circular Economy perspective</i>	<i>Financial aspects of the circular economy: a systematic literature review</i>
<b>Gambaro, Nicola;</b> Plancherel, Yves; Brito-Parada, Pablo; Glöser-Chahoud, Simon	<b>Deville, Alejandro;</b> Vázquez-Rowe, Ian; Kahhat, Ramzy; Avadí, Ángel; Miranda, Fernando		<b>Marini, Michele;</b> Antelmi Pigozzo, Daniela Cristina; de Padua Pieroni, Marina; McAloone, Tim C.	
<i>Supply of critical metals: a quantitative and dynamic framework to forecast</i>	<i>Identifying current trends in the environmental impacts linked to fishmeal production in Peru</i>		<i>How to reconsider circular economy strategies into science-based targets for carbon emission reduction? A</i>	

	<i>material stocks and flows in the economy</i>		<i>critical methodological evaluation on how to incorporate circular economy carbon performance into science-based targets of manufacturing companies.</i>	
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15:30-16:00

Tea Break (Lower Concourse)

**Parallel Session 2.3**

Tuesday 8 August (16:00-17:30)

Lecture Theatre A	Lecture Theatre B	Lecture Theatre H	Lecture Theatre J	Lecture Theatre E
<b>Resource Recovery</b>	<b>Whole System Impacts</b>	<b>Sustainable Urbanisation Strategy</b>	<b>Circular Economy Case Studies</b>	<b>Urban Sustainability Case Studies</b>
<b>Session Chair: Tiantian Feng</b>	<b>Session Chair: Linyu Xu</b>	<b>Session Chair: Yudi Fernando</b>	<b>Session Chair: Flávio José Simioni</b>	<b>Session Chair: Hsin Rau</b>
<p>Vitale, Laura; <b>Gomes, Helena I.</b>; Coppola, Daniela; Depascale, Donatella; Galasso, Christian; Mantovani, Luciana; Meisel, Thomas; Siciliano, Antonietta; Tedesco, Pietro; Funari, Valerio</p> <p><i>Biobleaching and bio-recovery of PGE from anthropogenic matrices</i></p>	<p><b>Yan, Ruiwen</b>; Zhao, Nan; Wang, Yongyu; Liu, Xiaojie</p> <p><i>The water resource use efficiency impact of water rights trading: evidence from China's water rights trading pilots</i></p>	<p>de Castro e Silva, Andreia; <b>Uemura Reche, Alda Yoshi</b>; Brittes Benitez, Guilherme; Canciglieri Junior, Osiris; Benitez Nara, Elpidio Oscar</p> <p><i>Content analysis methodologies and metadata on resources of sustainable smart cities, sustainable digital transformation, and sustainable city management: A review from 2010 to 2023</i></p>	<p><b>Borms, Lize</b>; Pals, Emma; Dams, Yoko</p> <p><i>Labour market effects of the circular economy in Belgium: modelling the recycling and waste sectors using a general equilibrium model</i></p>	<p><b>Jiang, Xuemei</b>; Zhang, Xinyang; Xia, Yan</p> <p><i>Peer effect on low-carbon activities of firms along the value chain: Evidence from China</i></p>
<p><b>Keber, Sebastian</b>; Elwert, Tobias; Goldmann, Daniel</p> <p><i>Recovery of copper from municipal solid waste incineration bottom ash by flotation</i></p>	<p><b>Kaddoura, Mohamad</b>; Majeau-Bettez, Guillaume; Amor, Ben; Margni, Manuele</p> <p><i>Estimating material dissipative losses in thermal spray</i></p>	<p><b>Wang, Peipei</b>; Zheng, Minrui; Li, Tianle; Zheng, Xinqi</p> <p><i>Cross-city POI recommendation based on transfer learning of urban functional zones</i></p>	<p>Qu, Ruini; <b>Chang, Kaiwen</b>; Bititci, Umit; Xuan, Jin; Xu, Bing</p> <p><i>Consumer Perceptions and Adoption of a Circular Chemical Economy</i></p>	<p><b>He, Qi</b>; Sudmant, Andrew; Ji, Han</p> <p><i>Decarbonising Urban Form: Opportunities and Benefits in Reducing the Use of Concrete and Cement in Chinese Cities</i></p>
<p><b>Liu, Chengyan</b>; Zhai, Siyuan; Cheng, Haoyi; Wang, Aijie</p> <p><i>Recycling treatment of waste activated sludge lysate based on bioelectrochemical systems: carbon and nitrogen separation, recovery of ammonia nitrogen</i></p>	<p><b>Assem Abu Hatab</b>; Tabeer Riaz; Raed Abd-Elnasser; Mohsin Raza; Mai Ha</p> <p><i>Managing water resources under conditions of scarcity: A contingent valuation of smallholder farmers' willingness to pay for improved irrigation water supply in Egypt</i></p>	<p><b>Yang, Pu</b>; Mi, Zhifu</p> <p><i>Solely economic mitigation strategy suggests upward revision of nationally determined contributions</i></p>	<p><b>Liu, Haoning</b>; Domenech, Teresa</p> <p><i>The role of lithium in the low-carbon and circular transition in China's lithium-ion battery sector</i></p>	<p><b>Deng, Xiangzheng</b>; Li, Zhihui; Yu, Ziyue; Wang, Wenxuan</p> <p><i>Exploring adaptive strategies for the black soil region to guarantee China's food security under various uncertainties</i></p>
<p><b>Zhai, Siyuan</b>; Zeng, Ran; Liu, Chengyan; Zhao, Yingxin; Cheng, Hao-Yi; Wang, Aijie</p> <p><i>Ammonium recovery driven by benzoic acid removal in two-chambered bioelectrochemical system</i></p>	<p><b>Zhenyang Chen</b>, Rene Kleijn, Hai Xiang Lin</p> <p><i>Global material demand and associated climate impact for servers and storage of data centers and mitigation strategies to 2050</i></p>	<p><b>Wong, Yuen May</b>; Mak, Athena H.N.</p> <p><i>Motivations and barriers to surplus food redistribution from consumer and business perspectives: A case study of a surplus food mobile application</i></p>	<p><b>Saviolidis, Nina Maria</b>; Ólafsdóttir, Guðrún; Stoud Myhre, Magnus; Viken Strand, Andrea; Mehta, Shraddha</p> <p><i>Drivers and barriers for the advancement of a circular blue bioeconomy in Iceland and Norway</i></p>	<p>Mao, Chao; <b>Zhao, Shuming</b>; Peng, Yaoyan</p> <p><i>Multi-agent based for the driving mechanism and policy simulation of residents' garbage classification behavior: Take Chongqing's garbage classification as an example</i></p>
<p><b>Araya-Gomez, Natalia</b>; Saaed, Mohazzam; Tas, Gulsah; Serna-Guerrero, Rodrigo</p>	<p><b>Gokulram Azhaguvel</b></p>	<p>Hu, Jasmine JR; Hui, TY; <b>Chan, Janet KY</b></p>	<p><b>Mohammed, Sumaa</b>; Kaida, Naoko</p>	<p><b>Nguyen, Kim Ngan Phan</b>; Chen, Pi-Cheng</p>

	<p><i>Data collection needs for the simulation of LIB recycling processes</i></p>	<p><i>Industrial symbiosis in India - an exploration of an Indian industrial estate</i></p>	<p><i>The governance mechanism of household waste sorting in residential communities: Insights from Changsha, China</i></p>	<p><i>Opportunities and challenges for circular economy in Maldives: a stakeholder analysis of the informal sector in e-waste management in the Greater Male' Region</i></p>	<p><i>Environmental extended input-output analysis in sustainable supply chain management: greenhouse gas emission inventories of regional level in Taiwan</i></p>
	<p>Deng, Lulu; <b>Wang, Lei</b></p> <p><i>The chemical recycling of waste plastics using a bio-based solvent dimethyl isosorbide</i></p>	<p><b>Wang, Binze;</b> Liu, Qiance; Zhang, Zhengyang; Liu, Gang; Matsubae, Kazuyo</p> <p><i>Total material requirement (TMR) of China's automotive industry in the context of green and low-carbon transition</i></p>	<p><b>Drangert, Jan-Olof</b></p> <p><i>Redesigned urban sanitation can arrest environmental degradation and improve food security</i></p>		<p><b>Hua, Weiqi;</b> Azizi, Elnaz; Sun, Hongjian</p> <p><i>Unlocking carbon visibility from micro-scope of power systems</i></p>

Wednesday 9 August 2023					
8:30-8:55	Registration (Foyer of Braggs Lecture Theatre)				
Plenary Session (Lecture Theatre D)					
9:00-9:30	Keynote Speech	Joanne Wade, Association for Decentralised Energy			
9:30-10:00	Keynote Speech	Rutger Hoekstra, Leiden University			
10:00-10:30	Tea Break (Lower Concourse)				
Wednesday 9 August (10:30-12:30)	Parallel Session 3.1				
	Lecture Theatre A	Lecture Theatre B	Lecture Theatre H	Lecture Theatre J	Lecture Theatre E
	Resource Recovery	Whole System Approach	Sustainable Materials	Waste Treatment	Urban Sustainability
	Session Chair: Helena I. Gomes	Session Chair: Macarena Larrain	Session Chair: Aileen Orbecido	Session Chair: Bing Guo	Session Chair: Weiqi Hua
	<b>Ju, Zhi-Chin;</b> Chen, Pi-Cheng  <i>Are reuses growing in industrial metabolism: Analyses from a perspective of the diversity of byproducts and companies</i>	<b>Ko, Junwon;</b> Guedes, Gisele; Badurdeen, Fazleena; Jawahir, I.S.  <i>A critical review of circular product attributes and product circularity assessment tools</i>	<b>Meddah, Mohammed Seddik;</b> Al-Owaisi, Munira; Hago, Abdul Wahid; Al-Jabri, Khalifa  <i>Calcined clay as a sustainable cementitious material</i>	<b>Zhang, Ting;</b> Lin, Sen; Yu, Jianguo  <i>Preparation of uniform multi-doped micro-nano LiFePO<sub>4</sub>/C cathode material from waste steel slag</i>	<b>Huang, Ying</b>  <i>Has the carbon emission trading scheme induced investment leakage in China? Firm-level evidence from China's stock market</i>
	<b>Li, Zifu; Ao, Xiuwei; Wang, Xuemei; Cheng, Shikun; Zhou, Xiaoqin; Men, Cong;</b> Zhang, Lingling  <i>Synergetic treatment of rural different waste flows for improved resource recovery in arid and cold regions of China</i>	<b>Shi, Shuning;</b> Yan, Xiaoyu  <i>A critical review on spatially explicit life cycle assessment methodologies and applications</i>	<b>Wang, Xuemei; Li, Zifu;</b> Bao, Wenjun; Cheng, Shikun; Mang, Heinz-Peter  <i>Potential of organic wastes hydrolysate as an alternative carbon source for microbial oil synthesis</i>	<b>MK, Manu;</b> Wong, Jonathan  <i>Microplastics in food waste biological treatment facility: Occurrence, detection and their implications</i>	<b>Kraßnig, Verena;</b> Lechner, Gernot; Güsser-Fachbach, Ines  <i>How can repair businesses improve their service? A consumer perspective on operational aspects of repair services</i>
	<b>Li, Shengwu;</b> Gu, Shuai; Yu, Jianguo  <i>Efficient lithium extraction from brines with porous and hydrophilic LiMn<sub>2</sub>O<sub>4</sub> membrane electrode</i>	<b>Wang, Chaoju;</b> Zou, Tong; Zhou, Tongyu; Dawodu, Ayotunde; Cheshmehzangi, Ali  <i>Combining urban agriculture and data center cooling: a novel approach with small-scale vertical farming modules</i>	<b>Rao, Juncheng;</b> Hagare, Dharmappa; <b>Tao, Zhong</b>  <i>Upcycling of End-of-Life-Vehicle (ELV) plastic as a replacement to natural fine aggregate in concrete</i>	<b>Lin, Hui;</b> Zhang, Mengjie; Cheng, Qilu; Fu, Yuan; Shi, Feifan; Xu, Jianlin; <b>Zhou, Qifa</b>  <i>A novel organic solid waste treatment system for producing high-quality biofertilizer by combining aerobic bioliquefaction and microalgal cultivation</i>	<b>Wang, Peipei;</b> Zheng, Minrui; Li, Tianle; Zheng, Xinqi  <i>Prediction and analysis of urban activity based on spatial-temporal location modeling</i>
	<b>Pausta, Carla Mae;</b> Saroj, Devendra  <i>The assessment of nutrient recovery systems for sustainable wastewater management and protecting water quality in lakes using the case study of Laguna de Bay, Philippines</i>	<b>Rochelle duPlessis;</b> Aletia Chisin; <b>Sweta Patnaik</b>  <i>Land pollution caused by the clothing retail industry: a proactive approach in supporting sustainable product life cycles</i>	<b>Hajj, Ramez</b>  <i>Considerations for rejuvenating larger amounts of recycled asphalt binder</i>	<b>Zhou, Qifa;</b> Zhang, Mengjie; Shi, Feifan; <b>Lin, Hui;</b> Zheng, Huabao  <i>Nitrogen-high manure from protein-high food waste from a large dining room</i>	<b>Fu, Chenling;</b> Zhang, Yan; <b>Xu, Ming</b>  <i>Unsaturated and accelerating material stock accumulation in China's megacities as urbanization approaches 80%</i>
<b>Zhao, Guangling;</b> Baker, Jenny; Pleydell-Pearce, Cameron  	<b>Chen, Yanqiong;</b> <b>Li, Jinhua;</b> Zhang, Chu; Yu, Hao; Jia, Zhibin; Zhang, Yun  	<b>Jones, Mitchell Peter</b>  	<b>Chen, Jyh-Cherng;</b> Lin, Yi-Jie; Luo, Han-Jie"  	<b>Gupta, Bhawana;</b> Hasnain, Saher; Zurek, Monika; Ng, Kok Siew  	

	<i>Life cycle assessment of recycling steel in the UK with respect to global scrap markets</i>	<i>An enterprise input-output model for industrial symbiosis assessment and optimization: a case study of Ulan Buh Demonstration Eco-industrial Park</i>	<i>Leveraging greener polymers for environmental and economic benefit</i>	<i>Treatment and resourcization of waste incineration bottom ash for the synthesis of zeolite and applications</i>	<i>Closing the nutrients flows loop using a systems approach-Stakeholders perspective</i>
	<b>Dou, Yi</b>	<b>Suzuki, Taichi;</b> Daigo, Ichiro		<b>Rohit;</b> Chandel, Munish Kumar	Wang, Chunyan; Ni, Xiaoyuan; <b>Li, Zonghan;</b> Shi, Wenlei; Zhang, Jia; Bian, Jiang; Liu, Yi
	<i>Development of an ultimate recycling system for spent lithium-ion batteries through innovative separation technologies</i>	<i>Methodology of mass balance accounting for environmental claims of a specific material</i>		<i>Kinetics and thermodynamic analysis of pyrolysis of paper waste</i>	<i>Residential water and energy consumption prediction at hourly resolution based on a hybrid machine learning approach</i>
	Wang, Zhongli; Wang, Yanming; Gomes, Rachel L.; <b>Gomes, Helena I.</b>	<b>Liu, Xinlai;</b> Fu, Yelin; Huang, George Q.		<b>Tian, Zilin; Wang, Zhufang; Nnorom, Mac-Anthony;</b> Saroj, Devendra; Guo, Bing	Mduduzi Khumalo, Alettia Chisin, <b>Sweta Patnaik</b>
	<i>Exploring wet magnetic separation for the recovery of selenium and residue zero-valent iron in a water-sediment system</i>	<i>Data-driven Dual ESG Index Using Random Forest Regression</i>		<i>Microalgae-bacteria consortia for net zero wastewater treatment using a combined top-down and bottom-up approach</i>	<i>Waste management in clothing and textiles: A circular economy approach in the redesign of clothing waste through small social enterprises</i>
	<b>Sweta Patnaik</b>	Shi, Yanmin; <b>Long, Ruyin</b>		<b>Wang, Zhufang; Nnorom, Mac-Anthony</b> Ezennia; Tian, Zilin; Guo, Bing	<b>Babington, Lauren;</b> Eustachio, Joao; Parry, Elen; Barbir, Jelena; Fletcher, Carly Adele
	<i>Embrace sustainable ways to minimise waste in the clothing retail cycle – South African perspective</i>	<i>Carbon price prediction research based on decomposition-reconstruction and SSA-LSTM</i>		<i>Enhancing anaerobic ammonium oxidation (anammox) for nitrogen removal from UK sewage using granular activated carbon</i>	<i>Utilising stakeholder engagement activities to support the development a sustainability framework for bio-based projects.</i>
12:30-13:30	Lunch (Lower Concourse)				
13:30-14:30	Awards and Closing Ceremony				

# Venue

## Lecture Theatre Block

Step free access to building is via the second floor entrance or the Learning Centre entrance (through the centre and down a steep ramp). The Senate House Entrance is accessed via steps and a ramp from the patio outside the Hive (Senate House lift can be used to get to the second floor and then to this ramp with no steps used). There is signage within the building showing the way for step-free access through the Lecture Theatre to the Hive (bypasses the steps outside).



## Emergency Contacts:

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