

International Conference on

Circular Economy for Climate and Environment CECE2025



(22 - 24 Sep 2025), Melbourne Connect, www.nicecece.org

Day 1: Monday 22 September 2025

47.00	Registration
17:00	Boatbuilders Yard, Southbank
17:00 - 19:00	Welcome drinks
	Boatbuilders Yard, Southbank

Day 2: Tuesday 23 September 2025

8:00	Re	gistration	
8:30-9:00	Openi	ng ceremony	
9:00-10:00	Plenary Sess	sion 1 (Forum 1-2-3)	
	Speaker 1: Sean O'Malley , Circular Econ	omy Manager, Coles Group, "Circularity in Coles"	
	Speaker 2: Ian Dagley, CEO, Solving Plastic Waste CRC, "Industr	y-driven research collaborations to solve Australia's plastic waste problem"	
10:00-10:30		n, The University of Melbourne a break (Forum 1-2)	
10.00-10.00	Forum 1-2 – Plastic Recycling	Forum 3 – Circular Water	
	Chair: Sandra Kentish (University of Melbourne)	Chair: Mikel Duke (Victoria University)	
10:30-10:50	Keynote: Jeroen Wassenaar (Cleanaway Waste Management)	Keynote: Jason Cotton (Intelligent Water Networks)	
10.00-10.00	Developing Circular solutions for rigid and flexible plastic packaging		
		The water sector circular economy imperative	
10:50-11:10	Keynote: Minoo Naebe (Deakin University)	Keynote: Michael Thomas and Kerryn Lester-Smith (Barwon Water)	
	Plastics at the end of life: challenges and opportunities for recycling	H₂O 360°: Rethinking water projects	
11:10-11.30	Keynotes conversation chaired by Sandra Kentish	Keynotes conversation chaired by Mikel Duke	
11:30-11:45	Abbas Rezamand, University of Melbourne	Linda Zou, Victoria University	
	Waste tyre permeable kerbs	Removal of pharmaceutical compounds by catalytic chitosan nanocomposite membranes from wastewater	
11:45-12:00	Sina Mehdifar, University of Melbourne	Bhavya Karumanchi, RMIT	
	PTFE conversion to value-added products using low emission liquid metal systems	Sustainable Sulfate Removal from Wastewater Using Tannin-Iron Functionaliz NF-270 Membrane	
12:00-12:15	Yeong Ni Hng, University of Melbourne	Benjamin Fox/Walter Jehne, Regenerate Earth	
	Characterisation and Upcycling Strategies for Decommissioned Subsea	The Soil Energy Network: Can Canberra's Underground Sponge Create Coole	
	Flexible Flowline Polymers	Cities?	
12:15-12:30	Rebecca Patrick (presented by Urvi Thanekar), University of	Qiang Fu, University of Technology Sydney	
	Melbourne	Advanced Interfacial Solar Evaporation for Sustainable Water Production and	
	Insights from Sustainable Healthcare Research Priority Setting Workshop: Materials Efficiency and Circularity	Mineral Recovery	
12:30-12:45	Ayesha Obaid, RMIT	Linitho Suu (presenting for Youngkwon Choi) , Korea Institute of Civil Engineering and Building Technology	
	Machine Learning-Guided Catalyst Discovery with LCA Integration for Hydrogen Production from Plastic Waste: A Sustainable Circular Economy Approach	Development of resource recovery technology from high-concentration wastewater using F-SMDC with anti-solvent and electro-crystallization	
12:45-13:00	Shima Jafarzadeh, Deakin University	Marzieh Namdari, University of British Columbia	
	Solving Two Problems, One Solution: Transforming Food Waste into Active Biodegradable Plastics with Carbon Dots	Process Simulation of Circular Carbon Capture and Conversion	
13:00-14:00	Lunch br	l reak (Forum 1-2)	
	Forum 1-2 – Circular Construction	Forum 3 – Nutrient Recycling	
	Chair: Ehsan Yaghoubi (Victoria University)	Chair: Ho Kyong Shon (University Technology Sydney)	
14:00-14:20	Keynote: Andrew Kiesel (Tonkin Taylor)	Keynote: Roya Khalil (Incitec Pivot Fertilisers)	
	Sustainability in pavement design and construction	Advancing Circular Agriculture through Enhanced Efficiency Fertilisers	
14:20-14:40	Keynote: Dan Hill (University of Melbourne)	Keynote: Django Secombe (Sydney Water)	
	Australian Reduction Roadmap	Rethinking Nutrient Management in Water Utilities—From Linear Removal to Circular Recovery	
14:40-15:00	Keynotes conversation chaired by Ehsan Yaghoubi	Keynote: Deli Chen (University of Melbourne)	
	and Malindu Sandanayake		
15:00-15:15	Yaser Mohammed Rageh Gamil, Monash University Malaysia	Keynotes conversation chaired by Ho Kyong Shon	
	Construction Waste generation hotspots detection using image processing assisted by BIM-VR toward greener construction projects		
15:15-15:30	Angelique Milojevic, University of Technology Sydney	Kashif Rasool, Hamad Bin Khalifa University	
	Reimagining Waste: House Deconstruction and Timber Reuse as Part of a Circular Economy Strategy	Maximizing Single-Cell Protein Yield from Agricultural Waste: Strain Selection, Pretreatment Optimization, and Scalable Bioreactor Production	
15:30-15:45	Zohreh (Venus)Shakeri, University of Melbourne	Saeromi Lee, Korean Institute of Civil Engineering and Building Technology	
	Enhancing Mechanical and Environmental Performance of Pervious Concrete Pavements for Sustainable Urban Infrastructure	Monitoring Greenhouse Gases Emissions During the Secondary Composting Process of Food Waste Compost Products	
15:45 15:00		Weonjung Sohn, University of Technology Sydney	
15:45-16:00	Zahra Kamali, Victoria University		
	Fire-Resilient Asphalt Pavements Using Recycled Aggregates: A Comparative Study of Fire Performance, Mechanical Properties, and Environmental Impacts	Source-separated urine in pilot-scale membrane bioreactor and production of urine fertiliser: Impact of hydraulic retention time	

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16:00-16:15	6:15 Foad Ghasemi, Victoria University Serhiy Marchuk, University of Southern Queensland	
	Unveiling Asphalt Surface Temperature Under Climate Extremes: A Comparative Study of Linear and Evolutionary Models	Nitrogen fertilising potential of source-separated human urine
16:15-16:30	6:15-16:30 Noushin Islam, Victoria University Veera Koskue, University of Melbourne	
	Construction and Demolition Waste Management Practices in Australia: A Systematic Literature Review	Bioelectroconcentration for nutrient recovery from human urine: Up-scaling from laboratory to pilot scale
16:30-17:00	Afternoon tea break (Forum 1-2)	
17:00-18:00	Sustainability campus tour + NiCE Loo Lab Meet at Melbourne Connect Mezzanine level	
18:30-21:30	Gala Dinner University House, Woodward Centre	

Day 3: Wednesday 24 September 2025

8:30		gistration	
9:00-10:00		sion 2 (Forum 1-2-3)	
	Speaker: Matthew Snell, Group Manager Circular Economy, South East Water		
10.00.10.00		a, The University of Melbourne	
10:00-10:30	Forum 1-2 – Battery Recycling	Forum 3 – Supply Chain and Governance	
	Chair: Helena Wang (University of Melbourne)	Chair: Franz Wohlgezogen (University of Melbourne)	
	Chair. Helena Wang (University of Melbourne)	Chail. Franz Worngezogen (Oniversity of Melbourne)	
10:30-10:50	Keynote: Simon Adams (Metallium)	Keynote: George Panas (University of Melbourne)	
	A Scalable Technology for Critical Metal Recovery from Black Mass and	Overcoming barriers and challenges for a circular economy	
	E-Waste		
10:50-11:10	Keynote: Aleksandar Nikosolki (Murdoch University)	Keynote: Lena Jungbluth (Monash Behaviour Works)	
	Evolution and Challenges in Battery Recycling Technology in Australia	Designing behaviour change interventions for a circular economy	
11:10-11:30	Keynote: Gavin Collis (CSIRO)	Koynetee convergation chaired by Front Weblacean	
	LIB recycling in Australia, the Indo-Pacific and the US: Opportunities for a Circular Economy	Keynotes conversation chaired by Franz Wohlgezogen	
11:30-11:45		Mayuri Wijayasundara, Anvarta	
	Keynotes conversation chaired by Helena Wang	Unlocking Scope 3 Emissions Reductions through Circular Business Models: Supply Chain and Governance Perspective	
11:45-12:00	Damien Giurco, University of Technology Sydney	A control of the second of the	
	Battery minerals for a circular economy: Australia's role in responsible	Amelia Leavesley, University of Melbourne	
10.00.10.15	sourcing	Circular economy governance in three Australian cities	
12:00-12:15	Jianfeng Mao, University of Adelaide	Chanuthi Rajapaksa, Yokohama City University	
	Selective Extraction of Critical Metal Resources from Spent Li-ion Batteries	Rethinking Transparency in Fashion Supply Chains: Between Visibility and justice	
13:15-12:30		Paul Solomon VinothKumar, V3 Eco Solutions	
	Will Ng (presenting for George Franks), University of Melbourne	Unintended Consequences of Climate Change Mitigation and Adaptation	
	Recovering graphite and cathode oxides from black mass	Measures in the Circular Economy Framework	
12:30-12:45	Linda Zou, Victoria University Recovery of lithium by pseudocapacitive electrodes in capacitive deionization	Yuqing Lu, University of Melbourne	
		Surgical device companies' commitments towards net zero	
12:45-13:00		Urvi Thanekar, University of Melbourne	
12.40-10.00	Parama Chakraborty Banerjee, Monash University	Stakeholder Driven Insights to Embed Circularity in Healthcare Procurement	
42.00 44.00	Lithium-ion battery recycling-Challenges and opportunities	·	
13:00-14:00		nch break + Gao (South East Water) in Forum 1-2	
	Forum 1-2-3 – Un	intended Consequences	
	Chair: Stefano Freg	uia (University of Melbourne)	
14:00-14:20	·	rironment Protection Authority Victoria)	
	Emerging contaminants in the environment: Where should research and management efforts be directed for optimal environmental outcomes?		
14:20-14:40	Keynote: Matthew Ask	eland (ADE Consulting Group)	
	Emerging contaminants	: unintended versus unforeseen	
14:40-15:00		n chaired by Stefano Freguia	
15:00-15:15			
	A novel method to assess leaching of contaminants of concern from recycled tyre products		
15:15-15:30			
	How Consumer Informal Production Can Support Market-Autonomous Circular Economies		
15:30-15:45			
	Achieving circularity in dairy processing		
15:45-16:00	Forbes McGain, Western Health		
	Healthcare & the circular economy		
16:00-16:30	Afternoon tea break		
	Closing Remarks and Awards		

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Day 4: Thursday 25 September 2025

Technical tours 8:00 AM - 1:00 PM

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Tour 1	Cleanaway site	
Tour 2 South East Water site		

List of posters

P1	Meenaakshi Balakrishnan, V3 Eco Solutions	The Circular Shift - Circular Model To Eliminate Future Emissions And Heal The Past
P2	Yi Zhang, University of Melbourne	Nutrient recovery from hydrolysed urine by high-rate electrodialysis: A proof-of-concept study
P3	Ibrahim El Saliby, University of Technology Sydney	Anthroponics in a Circular Economy: Effect of urine fertiliser on the flowering and longevity of Gerbera cut-flower plants (<i>Gerbera jamesonii</i>)
P4	Jaishree Yadav, RMIT	Selective recovery of rare earth elements from NdFeB magnet using a deep eutectic solvent
P5	Linitho Suu , Korea Institute of Civil Engineering and Building Technology	Study on an electrocrystallization method for selective recovery of valuable resources from high- concentration wastewater
P6	Xichao Zhang, University of Melbourne	Electrocapillary-Driven Metal Separation: A Low-Energy Pathway for Sustainable Alloy Recycling
P7	Haiwei Zhou, University of Melbourne	Environmental Effectiveness of Circular Economy Strategies for Lithium-ion Batteries
P8	Joowan Lim, Korea Institute of Civil Engineering and Building Technology	Development of Bipolar Membrane Electrodialysis for Selective Recovery of Valuable Resources from Brine and Wastewater

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