CONFERENCE PROGRAMME

17 to 18 November 2026

2nd International Conference on Responsible Electronics and Circular Technologies (REACT)

Day 1 · Tuesday 17 November

Single track · Compere: Jack Marley McIntyre

09:00 Registration

10:00 Welcome Address: Eric Yeatman, Vice Principal and Head of College, University of Glasgow

10:10 Introduction to the Conference and REACT Centre — Mahmoud Wagih

10:15 OPENING KEYNOTE — Chair: Jeff Kettle

Mike Berners-Lee, Lancaster University and Small World Consulting

11:00 Sustainability in Industry — Chair: Jeff Kettle

Lizzie Boakes, imec INVITED
Environmental sustainability in semiconductor device manufacturing

Sarah Downes, ILM INVITED

Arthur Removille, naKnow INVITED
naKnow: building environmental intelligence for the microelectronics industry

Johanna Zikulnig, Silicon Austria Labs INVITED
AT-C3: Sustainability Dimensions of Pilot Line Technologies

12:00 Lunch and Posters

13:15 KEYNOTE — Chair: Charlie Simms

Frances Wall, Camborne School of Mines, University of Exeter
A geologist's view of anthropogenic resources

14:00 Urban Mining and New Materials — Chair: Jason Love and Paul Daly

David Greenfield, TTB CircularIT INVITED
Can Robots Make Electronics Resource Resilient?

Sebastien Farnaud, Coventry University INVITED
Bridging Biology and Industry for Sustainability: Scalable Bioleaching for Critical Mineral Metal Recovery from E-Waste, Li-Batteries, and Superalloys

Alun Morgan, JIVA Materials INVITED
Printed Circuit (PCB) Materials, market dynamics and the route to sustainability

Charlie Simms, University of Edinburgh
A supramolecular method for the recovery of rare earth elements from end-of-life fluorescent lamp phosphors

Evandro Castaldelli, University of Leicester
Challenges in developing AI inspired WEEE recycling flowsheets

15:25 Break

15:45 Panel: Circular Economy and Business Perspectives — Moderators: Diego Bermudez Bermejo and Georgie Hopkins

Diego Bermudez Bermejo, DICE

Paul Tincknell, Lenovo

Jan Hoogstrate, Free ICT Europe

Gerry Docharty, Circulus

Nuran Acur, REACT

Sophie Dejonckheere, Lloyds Banking Group

16:30 Poster Flash Talks — Chair: Jeff Kettle

Merve Yunlu Dogruyol (University of Glasgow) · Sadish Oumabady (Queen's University Belfast) · Jennifer Stephenson (imec) · Alireza Parsa (University of Glasgow) · Xiaochuan Fang (University of Glasgow)

16:45 Poster Session

18:00 End of Day 1

18:30 SOCIAL PROGRAMME

Civic Welcome Reception, Glasgow City Chambers, George Square

Welcome address from the Lord Provost of Glasgow, followed by a drinks reception and canapés.

Day 2 · Wednesday 18 November

Parallel sessions in Auditorium B and Room 2 · Compere: Jack Marley McIntyre

09:00 Registration

09:15

OPENING KEYNOTE

Nils F. Nissen, Fraunhofer IZM

The Role of Packaging for Sustainable and Green Electronics

10:15 Coffee

10:30

AUDITORIUM B

New Materials — Chair: Joseph Cameron and Xiaochuan Fang

Julianna Panidi, University of Edinburgh INVITED
Improving sustainability without compromising efficiency of organic semiconducting devices

Daniela Iacopino, Tyndall National Institute INVITED
Direct Laser Writing of biopolymers for sustainable wearable electronics

Suzanne Costello, Forensic Eyes INVITED

Mikel G. Palomo, Universidad de Granada
Metal-Free PEDOT:PSS Inks for Additively Manufactured Textile Frequency-Selective Absorbers

Jiaqi Zong, University of Glasgow
Biodegradable Origami Piezoelectric Membranes for Sustainable Self-Powered Sensors

ROOM 2

Business, Policy and Digital — Chair: Nuran Acur and Jawad Abbas

Evi Petavratzi, British Geological Survey INVITED
Critical Minerals: Navigating Demand, Supply and Circularity

Zhilin Yang, University of Surrey INVITED

Bing Xu and Ran Liu, Heriot Watt University
Beyond the Linear Ledger: A Firm-level Framework Linking Circular Economy to Financial Performance in the UK Electronics Sector

Paul Cantwell, Zero Waste Scotland INVITED

Ana Julieth Calderón Márquez, Queen's University Belfast
Operationalising the Circular Technical Network as a Policy Diagnostic Framework for Lithium-Ion Battery Circularity

12:00 Lunch and Posters

13:00

AUDITORIUM B

Semiconductors, Electronics Design and Manufacture — Chair: Venkat Kandregula and Paul Jarvie

Paul Meredith, Swansea University INVITED
Circularity @Source in Semiconductor Manufacturing

Zhe Li, Queen Mary University of London INVITED
Toward Sustainable Organic and Perovskite Semiconductors for a Circular Economy: Controlled Degradation, Reduced Ecotoxicity and Sustainable Recycling

John Boggie, NXP INVITED

Tugana Anderson, Research Fab Microelectronics (FMD)
Carbon Footprint of an InP-HBT Process

ROOM 2

Value Retention — Chair: Stephen Fitzpatrick

Ryan McCuaig, Renewable Parts Ltd INVITED

Gladys Benghalia, NASPIC INVITED

Francisco Fourcade, Global Electronics Association INVITED

Jawad Abbas INVITED

Jushui Lai, National Manufacturing Institute Scotland (NMIS) INVITED

14:10 Break

SIDE SESSION **REACT Clinic** Room 2, 14:10 to 14:50
Network with the REACT Centre: what is in each pillar

14:40

AUDITORIUM B

Design for Circularity — Chair: Merve Yunlu Dogruyol and Paul Prentice

Margreet de Kok, TNO at Holst Centre, Eindhoven KEYNOTE
Sustainable-by-design printed electronics and End-of-Life scenarios

Theresa Seeholzer, Infineon Technologies AG
End-of-Life Scenario Modelling for Silver-Containing Printed Electronics in Smart Wound Care

Alvaro Méndez-Espinosa, Universidad de Granada
Closed-Loop Recycling of Metal-Free Hydrogel-Based Inks for Screen-Printed Antennas

Benjamin King, University of Glasgow
Large-Area Electromagnetic Chitosan Humidity Sensors with Embedded Circularity

ROOM 2

New Materials and Processes — Chair: Georgie Hopkins and Diego Bermudez Bermejo

Christina Webb, University of Southampton INVITED
Addressing the sustainability issues of advanced electronic textiles

Rob Farr, NMI, TechWorks INVITED
Sustainability challenges across semiconductors: industry insights from fab to systems

Max Mosig, University of Freiburg
Key Performance Indicator Analysis of RF Mixer Designs on RF Technologies with Focus on Sustainability

Roberto Navarro-Tovar, University of Manchester
Molecular Recognition Technology® (MRT™) for Selective Copper Recovery from Iron-Dominant Leach Solutions

15:55 Closing Remarks and Best Paper Prizes

Poster Presentations

Lunch and breaks on both days, and the Day 1 poster session from 16:45

P01 **From regulation to Implementation: A circular technical network-based reference architecture for battery passports**
Ana Julieth Calderón Márquez, Queen's University Belfast

P02 **Developing Evidence-Based TL-BMC Archetypes for Circular Bus-Battery Value Chains: Resource Security and Circular Local Value**
Ana Julieth Calderón Márquez, Queen's University Belfast

P03 **Neobin: An AI-Enabled Smart Recycling System for Circular Waste Management and Behavioral Engagement**
Ammar Yasser Ali, Fayoum University

P04 **Analyzing Power Handling in Sustainable and Recyclable RF Transmission Lines**
Xiaochuan Fang, University of Glasgow

P05 **Reading Regulation as a Market Signal: A Cross-Sector Framework for Policy- Enabled Innovation in Electronics and Adjacent Industries**
Amirreza Ahkami, Silicon Austria Labs GmbH

P06 **CFD-Based Evaluation of Hybrid Air-Distribution Strategies for Energy-Efficient Data-Centre Thermal Management**
Azeem Mujawar, King Fahd University of Petroleum and Minerals

P07 **Cross-Source Validation of Machine-Learning Models for Embodied-Carbon Prediction in IC Manufacturing and Packaging**
Merve Yunlu Dogruyol, University of Glasgow

P08 **The integration of an Ultrasonic Tube Transducer into a continuous oscillatory baffled reactor to enable the industrial scale recovery of technology critical materials from e-waste**
Paul Daly, University of Glasgow

P09 **Rare-Earth-Free Magnetoelectric Antennas Using AlN/CoFeB for Sustainable MEMS connectivity**
Laura Mazón-Maldonado, University of Glasgow

P10 **Towards Circular Microfluidics: Biodegradable PEGDA Hydrogel as a sustainable PDMS Alternatives**
Paria Kamkar, University of Glasgow

P11 **Laser-Sintered Zinc Electrodes Applied to Schottky Diodes**
Luís H. T. Bertoldo, University of Glasgow

P12 **Electrode Width as a Design Lever for Field Concentration in Interdigitated DEP Electrodes**
Ali Masoudi, University of Glasgow

P13 **Ultrasonically enhanced gold coating removal from end-of-life spring test probes (pogo pins)**
Alireza Parsa, University of Glasgow

P14 **Characterising Computational Headroom in Laptop Usage: A Telemetry-Based Study Across User Profiles**
Mohammad Amir, University of Glasgow

P15 **Selective and Circular Recovery of Gold and Copper from PCB Leachates Using a Regenerable Single Precipitant**
Mukesh Singh, University of Edinburgh

P16 **Advancing Circular Strategies for Material and Energy Recovery from e-waste: LCA Insights from the iRECYCLE-Malaysia Project**
Sadish Oumabady, Queen's University Belfast

P17 **Green electronics cooling design using topology optimisation**
Ahmed Ali, CSA Catapult

P18 **AI-assisted Discovery of Extractants for Critical Materials Recovery**
Jiyizhe Zhang, University of Manchester

P19 **Independent Software Maintenance Beyond Manufacturer Support**
Kern Tallett, University of Glasgow

P20 **Mapping Responsible and Sustainable Supply Chains for Quantum Technologies**
Gemma Milne, University of Glasgow

P21 **E-textile Circularity Enabled by Contactless Modular RF Interposers: A Life Cycle Assessment Perspective**
Tasneem Khodair, University of Glasgow

P22 **A Simulation-Based Value Retention Strategies for Electrical and Electronic Product Categories**
Themiya Kuruppuge, University of Exeter

P23 **Can Circular Supply Chains Reduce Corporate Risk? An Empirical Study Based on Firm-Level Data**
Ran Liu, Heriot Watt University

P24 **Degradable RF Transmission Lines and Antennas using Additive Zinc Circuits**
Sitong Mu, University of Glasgow

P25 **The Road to Net Zero: Financing Supply, Demand, and Institutional Drivers**
Thi Hoa Nguyen, Heriot Watt University

P26 **The Price of Transformation: Financial Challenges of Green Innovation in the Electronics Industry**
Thi Hoa Nguyen, Heriot Watt University

P27 **Integrated Biodegradable Multi-sensor Node for Agricultural Monitoring**
Andrew Rollo, University of Glasgow

P28 **Easily recyclable polymer synthesised from naturally derived monomers**
Joseph Cameron, University of Glasgow

P29 **Morphology-Engineered WO3 Thin Films for Triboelectric Energy Harvesting towards Self-Powered IoT Sensors**
Michael McKinlay, University of Glasgow

P30 **Recyclable Wire-Bond Antennas Towards RF Chip and System-in-Package (SiP) Circularity**
Jinghong Yue, University of Glasgow

P31 **PVDF Interlayer Development for Screen Printed Textile Electrodes towards Manganese(II) Monitoring in Water**
Wenfu Li, Edinburgh Napier University

P32 **Life Cycle Assessment of VCSEL and SiC MOSFET Semiconductor Fabrication: A Cradle-to-Gate Analysis**
Laura McKenzie, University of Glasgow

P33 **Engineering Multifunctional Soft 3D Architectures with Functionalised ZnO Nanoflowers**
Jithin Kanathedath, Edinburgh Napier University

P34 **Screen Printed Textile Electrodes for Mn2+ Monitoring in Water**
Wenfu Li, Edinburgh Napier University