

PROGRAM

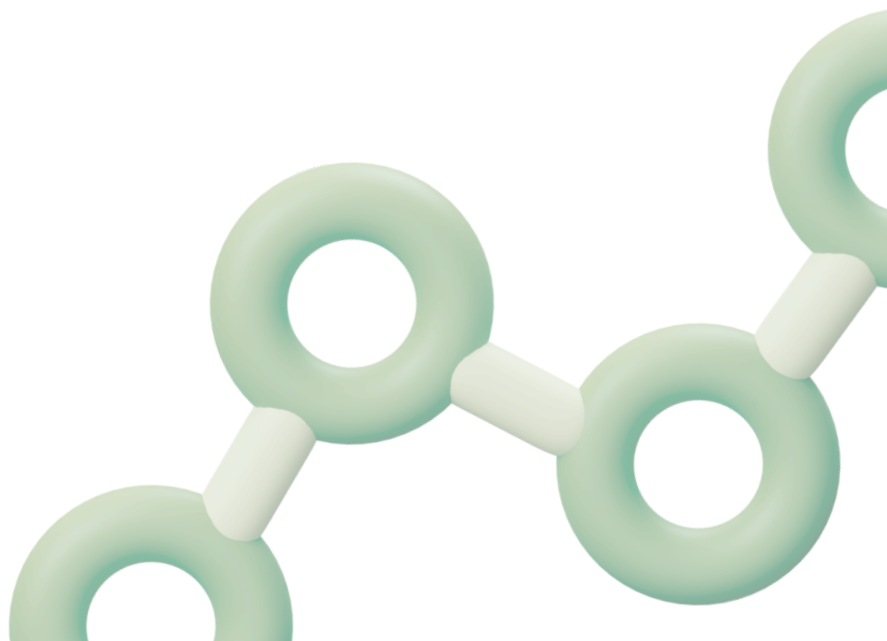


2025
R&D TOPICS
CONFERENCE

IN ANALYTICAL AND ENVIRONMENTAL CHEMISTRY

5-7
NOV

ADELAIDE, AUSTRALIA



MEET THE ORGANISING COMMITTEE



MABEL DAY

PHD CANDIDATE (CHEMICAL SCIENCES)
THE UNIVERSITY OF ADELAIDE



GERARDO URBINA

PHD CANDIDATE (CHEMICAL SCIENCES)
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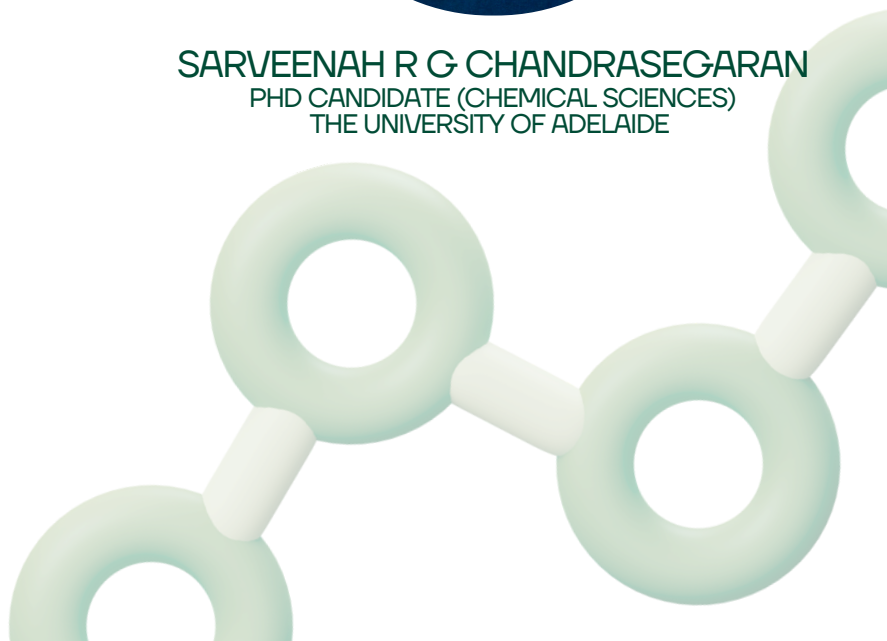
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Wednesday 5th November 2025

Program Overview

1200	Conference Registration Opens
1300	Conference Opening Remarks & Welcome to Country (Robert Taylor)
1325	2025 Graeme Batley Medal Recipient Prof. Malcolm McLeod, <i>Drug Checking: Getting in Before the Harm</i>
1355	Session 1: Processes for Environmental Remediation <i>Chair: Rachael Matthews (Organising Committee)</i> Delroy Sheng Yu Huang, <i>Enzymatic Degradation of Environmentally Toxic Resin Acids</i> , [19] Gimhani Danushika, <i>A Greener method for quantifying Epoxide groups in Graphene Oxide</i> , [33] Abdullah Aloufi, <i>Variation, Source Identification and Apportionment of Ultrafine Particles in Auckland</i> , [35] Bjoern Kolbe, <i>Eco-friendly sanitisers born from lightning: Plasma-activated water as novel food sanitisation approach</i> , [44] Mikaela Radke, <i>Assessment of groundwater contamination using novel non-targeted analysis methodologies and toxicity testing</i> , [51]
1510	Afternoon Tea
1540	Platinum Sponsor Talk Sviat Eliseenko, Waters Australia, <i>Advancing Chromatographic Performance for Acidic Molecule Analysis Using Waters Premier Technology</i>
1600	Session 2: Microplastics & Nanoplastics <i>Chair: Harrison McAfee (PhD Student)</i> Theresa Lam, <i>A city-wide investigation of small microplastics in urban road dust in Melbourne, Australia</i> , [58] Lloyd Straatsma, <i>Detection of Nanoplastic Particles Using Capillary Isotachophoresis</i> , [60] Chloe Broeckelmann, <i>Towards a Multimodal Workflow for Assessing the Recyclability of Medical Plastics</i> , [63] Adam Kolobaric, <i>The use of near-infrared (NIR) spectroscopy to screen microplastic contamination in black soldier fly larvae reared on food waste</i> , [65]
1700	Closing Remarks Day 1
1800	Welcome Reception @ The Golden Wattle

Thursday 6th November 2025

Morning Program Overview

0845	Opening Remarks Day 2
0855	2025 Environmental Chemistry Medal Recipient Prof. Youhong Tang, <i>Bring aggregation-induced emission luminogens to small aquatic organisms for environmental monitoring</i>
0925	Session 3: Wastewater Treatment <i>Chair: Ani Baker (PhD Student)</i> <i>Ziyue Li, Monitoring organic UV filters in wastewater/sludge in New Zealand, by wastewater-based epidemiology, [5]</i> <i>Ammara Waheed, Advancing Hospital Wastewater Treatment via Continuous Adsorption in a Coiled Flow Inverter Reactor, [13]</i> <i>Rabia Sabir, Engineering of Arsenic Removal from Natural Water Using a Coiled Flow Inverter, [14]</i> <i>Tuhin Das, Biocatalytic oxidation of Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) found in wastewater, [25]</i> <i>Madara Weerasooriyagedara, Seasonal Dynamics, Removal Efficiencies, and Environmental Risks of Contaminants of Emerging Concern in Wastewater Treatment Plants in Victoria, Australia, [54]</i>
1040	Morning Tea
1110	Platinum Sponsor Talk Caroline Noble, Agilent Technologies, <i>Going Anywhere: Careers Outside of Research</i>
1130	Session 4: Renewable Energy <i>Chair: Tom Small (Early Career Researcher)</i> <i>Tom O'Dea, MOF-Templated Synthesis of Homogeneously Doped SrTiO₃:La/Rh, [11]</i> <i>Harrison McAfee, Singlet Fission Sensitization of Non-fullerene Acceptors for Photocatalytic Hydrogen Evolution, [22]</i> <i>Andrew Dolan, Photo-induced exciton dissociation in high performance organic semiconductors, [26]</i> <i>Zi Goh, Size-Dependent Photocatalytic Activity of Organic Semiconducting Nanoparticles, [36]</i>

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Thursday 6th November 2025

Afternoon Program Overview

1230	Lunch & Poster Session A
1330	Invited Speaker Talk A/Prof. Brad Clarke, <i>The Chemical Experiment: The Hidden Cost of Convenience</i>
1400	Session 5: PFAS: Identification & Detection Chair: Xueying (Lucy) Li (Honours Student) Wejdan Alghamdi, <i>Evaluating PFAS Contamination in Australian Tap Water: Baseline Quantification and Exposure Implications in Regional and Urban Areas</i> , [2] Jayamini Bimali Koongolla, <i>Quantitative Profiling of PFAS in Water and Sediment Across Urban Creeks Using Targeted Analysis</i> , [7] Jordan Partington, <i>Microsampling for PFAS analysis: Cheap high-resolution biomonitoring</i> , [53] Ellis Mackay, <i>Urban Possums as Sentinels for Environmental Contamination: First Evidence of PFAS in Australian Marsupials</i> , [57]
1500	Afternoon Tea
1530	Session 6: Biological Applications of Mass Spectrometry Chair: Mei Tieng Yong (PhD Student) Elaheh Eskandari, <i>Mass spectrometry-based insights into investigating links between lipid metabolism and protein post-translational modifications in Alzheimer's disease</i> , [10] Emily Sunnucks, <i>Evaluation of chromatographic and mass spectrometric approaches for post-mortem metabolome and lipidome analysis</i> , [32] Rosemary Bergin, <i>A Multi-Modal Tyramide-Ruthenium Tag for amplified Elemental-Mass Spectrometry and Immunofluorescence Imaging</i> , [38] Huyen Nguyen, <i>Method development for quantifying Chlorantraniliprole in water samples for toxicity testing</i> , [40] Shaun Ellis, <i>Using Mass Spectrometry to Gain Insights into Snake Venom Proteins</i> , [50] Huysean Huot, <i>Prevalence and Antimicrobial Resistance of Salmonella in Chicken and Beef in Phnom Penh, Cambodia</i> , [61]
1700	Closing Remarks Day 2

Friday 7th November 2025

Morning Program Overview

0845	Opening Remarks Day 3
0855	2025 Original Research Publication Award Recipient Dr. Chen Hu, <i>Direct detection of microRNA in liquid biopsies from single cancer spheroids</i>
0925	Session 7: Applications in Microfluidics <i>Chair: Sarveenah Chandrasegaran (Organising Committee)</i> Ayesha Sandaruwani, <i>Advancing Green Chemistry: The Role of Microfluidic Technologies in Sustainable Chemical Engineering</i> , [18] Vijaykumar Bodarya, <i>To design and engineer an array of sensing technologies, integrated into microfluidic platforms, to monitor key parameters of the manufacturing of mRNA vaccines in real-time</i> , [21] Kim Nicolau, <i>High-resolution 3D printing and applications: Development of a microfluidic calibrated continuous flow nitrite water measurement system</i> , [22] Md Kawser Alam, <i>Design and Fabrication Challenges of Spiral Inertial Microfluidics for Lab-on-chip Bacteria Detection Device</i> , [43] Rabin Duwal, <i>Bioactive Isolation from Plasma-Deliberated Biomass via Batch and Continuous Micro-Flow Extraction</i> , [46]
1040	Morning Tea
1110	Platinum Sponsor Talk Karen Duong, Merck Life Science, <i>Orthogonal Selectivity with Porous Graphitic Carbon: A Method Development Essential</i>
1130	Session 8: Heavy Metals & Electrochemical Sensing <i>Chair: Gerardo Urbina (Organising Committee)</i> Heshani Mudalige, <i>Co-occurrence of microplastics with heavy metals in freshwater sediment</i> , [16] Yucong Yuan, <i>Temperature-Stimulated Electrical Signalling in Mimosa pudica: Generation and Propagation of Action Potentials Monitored by Multi-electrodes System</i> , [24] Ani Baker, <i>Arsenic distribution and speciation in the novel extremophile nematode Tokorhabditis tufae</i> , [28] Muhammad Tahir Waseem, <i>Fluorescent Sensor Arrays for the Detection of Metals in Biology and the Environment: A Multivariate Approach</i> , [31]

Friday 7th November 2025

Afternoon Program Overview

1230	Lunch & Poster Session B
1330	Invited Speaker Talk Prof. Oli Jones, <i>The use of metabolomics in environmental science. Can we bring omic science out of the lab and into the field?</i>
1400	Session 9: PFAS: Removal & Destruction <i>Chair: Tom O'Dea (PhD Student)</i> Chantelle Falanga, <i>ANbO3 (A = Li, Na, K, Ag) photocatalysts for the degradation of persistent organic pollutants</i> , [4] Alex Keltie, <i>Advanced Catalytic Reduction Processes for the Breakdown of Fluorinated Pollutants</i> , [29] Mahmoud Gharib, <i>Ra-Inspired Solution for Visible-Light Degradation of PFAS (Forever Chemicals)</i> , [45] Mulugeta Akele, <i>Optimizing Extraction and Clean-Up for Reliable PFAS Quantification in Soils</i> , [59]
1500	Afternoon Tea
1530	Conference Closing Remarks & Awards
1830	2025 R&D Topics Gala Dinner @ Adelaide Pavilion

Poster Session A	Poster Session B
Navneet Singh [P2] Shima Amini [P4] Mahnaz Dadkhah Jazi [P6] Khamaael Fayyadh [P8] Mohamad Mayer [P10] Aaron Bourke [P12] Tom Small [P14] Mandeep Kaur [P16] Carys Marulli de Barletta [P18] Cameron Isaacs [P20]	Akinyinka Akinnusotu [P1] River Pachulicz [P3] Salihu Abdullahi Kiyawa [P5] Keith Dias [P7] Fatimah Alzubaidi [P9] Ian Gass [P11] Bjoern Kolbe [P13] Sebastian Wojtulewski [P15] Madara Weerasooriyagedara [P17] Amirreza Azadmehr [P19]