



**Australian Hydrogen
Research Conference**
16-19 February 2026
MELBOURNE

Hosted by
AHRN
THE AUSTRALIAN
HYDROGEN RESEARCH
NETWORK

Australian Hydrogen Research Conference 2026

As at 26 November 2025

Preliminary program subject to change**Monday, 16 February 2026**

11:30-16:00	Site Visit 1: Viva Energy Hub, Geelong
11:30-16:00	Site Visit 2: The Calix Technology Centre, Bacchus Marsh
16:00-18:30	Registration Open (Promenade, 1st Floor, Sofitel on Collins, Melbourne)
17:30-18:30	Welcome Reception (Sofi's Lounge, Sofitel on Collins, Melbourne)

Tuesday, 17 February 2026

08:30-18:00	Exhibition Open (Sofi's Lounge, Sofitel on Collins, Melbourne)			
07:30-18:00	Registration Open (Promenade, 1st Floor, Sofitel on Collins, Melbourne)			
09:00-09:30	Conference Opening and Welcome (Grand Ballroom, Sofitel on Collins, Melbourne)			
09:30-10:15	Plenary Session 1			
Room	Grand Ballroom			
Presentation title	Chemical hydrogen storage - systems, challenges and innovations			
Speaker	Professor Peter Wassercheid			
10:15-11:00	Morning Tea (Sofi's Lounge, Sofitel on Collins, Melbourne)			
11:00-13:00	Concurrent Session 1			
Session	Concurrent 1A	Concurrent 1B	Concurrent 1C	Concurrent 1D
Theme	Electrolysis	Underground hydrogen storage	Combustion & high-temperature industrial processes	Hydrogen policy & regulation
Room	Perth Room	Sydney Room	Brisbane Room	Fitzroy Ballroom
11:00-11:40	Invited Speaker Organic-inorganic blended structures: possible catalysts for seawater splitting Nasir Mahmood 20 mins Optimising water electrolyser system to improve green hydrogen production Lixue Jiang 20 mins	Keynote Speaker Beneath the surface: challenges and opportunities in underground hydrogen storage Dr Joel Sarout 40 mins	Keynote Speaker Opportunities and challenges for hydrogen in the net-zero transition for heavy industry Prof Graham 'Gus' Nathan 40 mins	Keynote Speaker The necessity of diverse knowledge for progressing the hydrogen industry Dr Mitchell Scovell 40 mins
11:40-12:00	Modelling the impact of elevated temperatures on mass transport in electrolysis Muhammad Yousuf 20 mins	Underground hydrogen storage - a demonstration pilot Rod Harris 20 mins	Investigation of velocity effects on large-scale hydrogen combustion modelling as an energy source for industrial drying applications Sams Jarin 20 mins	Hydrogen patents and publications: global trends and Australia overview Peter Grubnic 20 mins
12:00-12:20	Low-cost and high-performance electrocatalysts for water splitting Jiaxi Ding 20 mins	Underground hydrogen storage in the Otway Basin - H ₂ interactions in geological formations Regina Sander 20 mins	Flame-acoustic interaction in hydrogen/natural gas flames Abdulaziz Alahmadi 20 mins	Optimal temporal correlation for grid-connected hydrogen certification: the interplay between grid characteristics and renewable resources Chengzhe Li 20 mins

12:20-12:40	Overcoming substrate pore size constraints in fabrication of btese-derived hydrogen-selective silica membranes Derrick Ng 20 mins	How low can you go? Exploring the minimum viable hydrogen mass for a pilot UHS project in the onshore Otway Basin, Victoria, Australia Samuel Jackson 20 mins	Ammonia-moderated hydrogen engine combustion Alex Sherwood 20 mins	Hydrogen electrolyzers as flexible loads: simulation studies and experimental tests on their grid support capabilities Supun Meethiyagoda 20 mins
12:40-13:00	Full pH range hydrogen evolution using mxene-supported dual-single-atom electrocatalyst Jianan He 20 mins	Monitoring of underground hydrogen storage in depleted fields Jonathan Ennis-king 20 mins	Predicting thermoacoustic stability limits in hydrogen-enriched gas turbines Jeremias Fleger 20 mins	Enhanced gas isotope capabilities for hydrogen and atmospheric methane: applications in sample containment and source fingerprinting Se Gong 20 mins
13:00-13:40	Lunch (Sofi's Lounge, Sofitel on Collins, Melbourne)			
13:40-15:20	Concurrent Session 2			
Session	Concurrent Session 2A	Concurrent Session 2B	Concurrent Session 2C	Concurrent Session 2D
Theme	Natural hydrogen	Cryogenic & liquid hydrogen	Fuel cells	Social licence
Room	Perth Room	Sydney Room	Brisbane Room	Fitzroy Ballroom
13:40-14:20	Keynote Speaker Natural hydrogen systems in Australia: learnings from CSIRO's geogenic hydrogen project Dr Emma Frery 40 mins	Modelling of long distance hydrogen transport on ships in liquid carriers Rupert Bachler 20 mins Enabling future hydrogen infrastructure: design and optimisation of large-scale liquid hydrogen tanks Upeka Gunarathne 20 mins	Keynote Speaker Accelerating PEM fuel cell innovation through rapid prototyping and open source technology pathways A/Prof Michael Pereira 40 mins	Keynote Speaker Unlocking impediments to a hydrogen industry at scale: Fact or Fiction? Prof Peta Ashworth 40 mins
14:20-14:40	Experimental characterisation of natural hydrogen generation through fluid-olivine interactions under high-pressure high-temperature conditions Lingping Zeng 20 mins	Weak nonlinear sloshing hydrodynamics in liquid hydrogen storage tanks Nisanga Nuwantha 20 mins	High temperature PEM fuel cell development for hydrogen aircraft Andrew Dicks 20 mins	Clearing the path for green hydrogen: stakeholder insights on approvals and obstacles Nehemia Gurusinga 20 mins
14:40-15:00	Nickel-enhanced hydrogen production from iron minerals: implications for natural and engineered systems Emma Black 20 mins	Re-evaluating the role of purification adsorbents in ortho-para hydrogen conversion for liquefaction systems Guinevere Sellner 20 mins	Approaches and challenges in thermal management of high temperature proton-exchange membrane fuel cells Michael Opolot 20 mins	Hydrogen futures in Central Queensland: expert perspectives after the 2025 federal election Analiese Barr 20 mins
15:00-15:20	Reservoir-scale natural hydrogen generation from olivine in ultramafic rocks: influence of reaction rate Sirous Hosseinzadeh 20 mins	Ortho-para hydrogen adsorption analysis using diffuse reflectance infrared fourier transform spectroscopy at cryogenic temperatures Amin Kamiar 20 mins	Reliability of hydrogen fuel cell based emergency power supply systems Kosala Gunawardane 20 mins	Cautious curiosity: social licence for underground hydrogen storage in regional Victoria Molly Campbell 20 mins
15:20-16:05	Afternoon Tea (Sofi's Lounge, Sofitel on Collins, Melbourne)			
16:05-16:45	Panel Session 1: Australia's hydrogen industry policy: R&D aspects			
Room	Grand Ballroom			
Moderator	Patrick Hartley			
Panelists	Catherine Zerger, Kenneth Baldwin, David Oglesby			
16:50-18:00	Poster Networking Session (Sofi's Lounge, Sofitel on Collins, Melbourne)			

Wednesday, 18 February 2026				
08:30-17:00	Exhibition Open (Sofi's Lounge, Sofitel on Collins, Melbourne)			
08:00-17:00	Registration Open (Promenade, 1st Floor, Sofitel on Collins, Melbourne)			
09:15-10:15	Plenary Session 2			
Room	Grand Ballroom			
Presentation title	Metal hydrides based hydrogen storage solutions			
Speaker	Professor Pratibha Sharma			
10:15-11:00	Morning Tea (Sofi's Lounge, Sofitel on Collins, Melbourne)			
11:00-13:00	Concurrent Session 3			
Session	Concurrent 3A	Concurrent 3B	Concurrent 3C	Concurrent 3D
Theme	Techno-economic modelling	Hydrogen storage applications & materials	Green iron & steel	Hydrogen risk & safety
Room	Perth Room	Sydney Room	Brisbane Room	Fitzroy Ballroom
11:00-11:40	Keynote Speaker Economic modelling of hydrogen technologies Dr Jenny Hayward <i>40 mins</i>	Keynote Speaker Polymer coatings to reduce hydrogen embrittlement Prof Sandra Kentish <i>40 mins</i>	Keynote Speaker Hydrogen DRI: Where is it heading? Prof Geoffrey Brooks <i>40 mins</i>	Keynote Speaker Geoscience informing environmental risk in the hydrogen industry Dr Andrew Feitz <i>40 mins</i>
11:40-12:00	Assessing the impact from underground salt storage of hydrogen on Australian green iron and steel production potential Marcus Haynes <i>20 mins</i>	Sustainable hydrogen storage materials from cheap and widely available household materials Melinda Krebsz <i>20 mins</i>	Spatio-temporal techno-economic mapping of green steel production: an Australian case study Changlong Wang <i>20 mins</i>	Advancing safe hydrogen infrastructure: challenges, knowledge gaps, and research priorities Sara Ahmadi <i>20 mins</i>
12:00-12:20	Industrial hydrogen storage to support high-renewable grids Bin Lu <i>20 mins</i>	Room temperature hydrogen permeability of plastics, metals and ceramics Joshua Butson <i>20 mins</i>	Hydrogen fluidised-bed reduction of Australian hematite-goethite iron ores Daniel Lane <i>20 mins</i>	Advancing safety and reliability for large-scale deployment of hydrogen Fatemeh Salehi <i>20 mins</i>
12:20-12:40	Sustainable valorization of PET plastic waste via solar-powered electroreforming: a feasibility study on hydrogen and valuable chemical production Gavesha Gunasekara <i>20 mins</i>	Engineering nanoporous materials for achieving extremely high hydrogen densities for storage applications Valeska Ting <i>20 mins</i>	Studies of H ₂ direct reduction of iron ore in fluidised bed reactor and DRI smelting Kwaku Owusu <i>20 mins</i>	Understanding the hydrogen embrittlement behavior of welded high strength low alloy steels Shahid Parapurath <i>20 mins</i>
12:40-13:00	Cost analysis of hydrogen methanation in the Australian context Mohsen Talei <i>20 mins</i>	Thermodynamic modelling of a hydrogen tube-trailer filling process Matthias Weizl <i>20 mins</i>	Hydrogen plasma reactor: design, development, and application to oxide smelting and reduction Akbar Rhamdhani <i>20 mins</i>	Highly sensitive, selective and innovative hydrogen gas sensors Mahnaz Shafiei <i>20 mins</i>
13:00-13:40	Lunch (Sofi's Lounge, Sofitel on Collins, Melbourne)			

13:40-15:20	Concurrent Session 4			
Session	Concurrent 4A	Concurrent 4B	Concurrent 4C	Concurrent 4D
Theme	Technical & economic evaluation	Underground hydrogen storage	International perspectives	Hydrogen risk & safety
Room	Perth Room	Sydney Room	Brisbane Room	Fitzroy Ballroom
13:40-14:20	Keynote Speaker Future directions for hydrogen energy research: why 'URFCs' and 'proton batteries' have a role to play Emeritus Prof John Andrews <i>40 mins</i>	A structured workflow to increase confidence in underground hydrogen storage feasibility assessments Jacqueline Sutton <i>20 mins</i> Mined, lined rock caverns and their application for hydrogen storage Andrew Feitz <i>20 mins</i>	Keynote Speaker He Honoka Hauwai / Green Hydrogen in New Zealand Prof Sally Brooker <i>40 mins</i>	Keynote Speaker Hydrogen and gas transmission pipeline structural integrity Prof Andrej Atrens <i>40 mins</i>
14:20-14:40	Techno-economic comparison of electrochemical compression via water electrolysis and mechanical compression of hydrogen Matthew Watson <i>20 mins</i>	The Petrel sub-basin: underground hydrogen storage potential Stephanie Rees <i>20 mins</i>	Invited Speaker Coping with the Dunkelflaute: power sector implications of variable renewable energy droughts in Europe Martin Kittel <i>20 mins</i>	Experimental investigation of impact of ambient air humidity on hydrogen plume dispersion Qiang Ge <i>20 mins</i>
14:40-15:00	A techno-economic and environmental comparison of Fischer-Tropsch and methanol-to-jet SAF production Mehdi Parivazh <i>20 mins</i>	Simulation-based optimisation of underground hydrogen storage under supply-demand fluctuations Mohammad Sayyafzadeh <i>20 mins</i>	Invited Speaker Hydrogen programs and initiatives in India Ranjith Krishna Pai <i>20 mins</i>	An Australian field study of large-scale hydrogen-air explosions Alex Remennikov <i>20 mins</i>
15:00-15:20	Levelised cost of hydrogen compression for metal hydride-based compressors Ashleigh Cousins <i>20 mins</i>	Impact of hydrogen exposure on the mechanical properties of the Waarre sandstone formations - an experimental study. Jeremie Dautriat <i>20 mins</i>	Invited Speaker A mix of long-duration hydrogen and thermal storage enables large-scale electrified heating in a renewable European energy system Wolf-Peter Schill <i>20 mins</i>	Using artificial intelligence in the blast load prediction of unconfined hydrogen explosions Kirilous Gindie <i>20 mins</i>
15:20-15:40	Techno-economic evaluation of heavy-duty hydrogen powered prime movers, tipper trucks, excavators and front wheel loaders in an industrial environment Anthony Parrington <i>20 mins</i>	Short-term hydrogen storage in subsurface lenses Saeed Salimzadeh <i>20 mins</i>	A model intercomparison of international hydrogen supply chains under IEA/H2TCP: lessons from ongoing analysis Yuki Ishimoto <i>20 mins</i>	Ignition hazard assessment of cryogenic hydrogen leaks in the presence of ambient wind Deepak Saini <i>20 mins</i>
15:40-16:25	Afternoon Tea (Sofi's Lounge, Sofitel on Collins, Melbourne)			
16:25-17:05	Panel Session 2: Hydrogen end-use in industry			
Room	Grand Ballroom			
Moderator	Jenny Selway			
Panellists	Sreeraj Balachandran, Michael van Baarle, Matt Boot-Handford			
18:30-20:30	Cocktail Networking Reception, Investment Centre Victoria			

Thursday, 19 February 2026				
08:30-14:00	Exhibition Open (Sofi's Lounge, Sofitel on Collins, Melbourne)			
08:30-15:15	Registration Open (Promenade, 1st Floor, Sofitel on Collins, Melbourne)			
09:15-10:15	Plenary Session 3			
Room	Grand Ballroom			
Presentation title	Hydrogen pathways in Australia - production costs and price expectations			
Speaker	Professor Andreas Löschel			
10:15-11:00	Morning Tea (Sofi's Lounge, Sofitel on Collins, Melbourne)			
11:00-13:00	Concurrent Session 5			
Session	Concurrent 5A	Concurrent 5B	Concurrent 5C	Concurrent 5D
Theme	Emerging hydrogen production pathways	Chemical & physical hydrogen carriers	Cryogenic & liquid hydrogen	Emerging hydrogen materials
Room	Perth Room	Sydney Room	Brisbane Room	Fitzroy Ballroom
11:00-11:40	Keynote Speaker Ion beam engineered electrocatalysts for Hydrogen and Ammonia Prof John Kennedy 40 mins	Chemical hydrogen storage using 3D printed structured catalysts Christian Hornung 20 mins Enhanced LOHC dehydrogenation performance via carbon-based catalytic static mixer coatings with improved selectivity Marcel Disl 20 mins	Keynote Speaker Hydrogen technologies supporting domestic utilization and prospective exports Prof Eric May 40 mins	Keynote Speaker Steam electrolysis for energy-efficiency hydrogen production Prof Hiroshige Matsumoto 40 mins
11:40-12:00	Hydrogen production from biomass via formic acid: a technoeconomic and experimental investigation Patrick Schuehle 20 mins	Modular hydrogel scaffolds for reversible hydrogen enclathration under mild conditions Lijin Chen 20 mins	Linking ortho-para hydrogen kinetics to catalytic converter design: a quantitative review. Liam Turner 20 mins	Novel material design approach towards lightweight liquid hydrogen polymer composite tanks Susiri Costa 20 mins
12:00-12:20	Sustainable valorization of beverage waste into 5-hydroxymethylfurfural using ZSM-5/KH ₂ PO ₄ catalyst: a route to green hydrogen production Sumaya Sarmin 20 mins	Dehydrogenation of liquid hydrogen carriers in an integrated membrane flow reactor Christian Doblin 20 mins	High-temperature superconducting magnetic refrigeration enables hydrogen liquefaction use in heavy vehicles Saif Al Ghafri 20 mins	Hydrogen materials for heavy industrial applications Lachlan Carter 20 mins
12:20-12:40	Desalination technologies: an undervalued opportunity for rapid scaling of renewable hydrogen systems Pranjal Kumar 20 mins	Sodium borohydride hydrolysis for hydrogen export: catalyst design and reactor development Terry Humphries 20 mins	Detailed simulation of a liquid H ₂ plant including ortho-para hydrogen conversion Fuyu Jiao 20 mins	Scalable magnetron-sputtered catalysts for pH-universal and (photo)electrochemical water splitting Farid Attar 20 mins
12:40-13:00	A description of the untapped potential of PEM water electrolysis Pierre Millet 20 mins	Degradation pathways of intermetallic metal hydrides under isochoric thermal cycling: establishing a baseline for machine-integrated hydrogen storage alloy Evan Gray 20 mins	Towards cost-effective hydrogen liquefaction: rare-earth intermetallic with enhanced magnetocaloric properties Mahboobeh Shahbazi 20 mins	In silico investigation of advanced functional materials for hydrogen adsorption, separation, and transport Anjaiah Nalaparaju 20 mins
13:00-14:00	Lunch (Sofi's Lounge, Sofitel on Collins, Melbourne)			
14:00-14:45	Panel Session 3: Navigating the startup journey for hydrogen technologies			
Room	Grand Ballroom			
Moderator	Karen Kaozielski			
Panelists	Chris Rowland, Sam Rowe, Jehan Kanga			
14:45-15:30	Conference Close			
Room	Grand Ballroom			