



Hydrogen
Society
of Australia

Looking backwards, looking forward!

Hydrogen is marching on – will you join us?

In this month's newsletter....

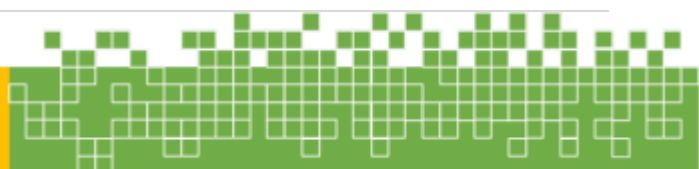
- Message from the HSA Steering Committee
- Upcoming Events – H2 World Webinar Series (Modules 4 and 5)
- Update on the HSA Website upgrade and Members Only Portal
- Members in spotlight – Gas Bubbles – Friend or Foe? (article from Kamran Dastafkan (UNSW))
- External Events
- Snippets of Hydrogen making moves around the world...
- We acknowledge the support of our corporate members

Message from the HSA Steering Committee

As foreshadowed in our April newsletter, we are continuing to pursue a number of key initiatives to add value to our membership. We have upgraded our website to include a members' only portal, designed to facilitate networking and provide a store of knowledge. We have recently launched the [database portal](#), which contains links to government departments and hydrogen clusters around the country. Some of the functionality and content is still under construction, and we would welcome members comments and inputs as we proceed with the upgrade.

Under the leadership of **Adam Osseiran (HSA President)**, and in collaboration with **Clariden Global**, we have launched a series of twelve free events for our members, based on presentations from the 3rd Hydrogen Production, Storage, and Infrastructure Development Global Summit. Adam was the facilitator of the online Global Summit over the three days (19 to 21 January 2022), and has been reaching out to the presenters to provide them with an opportunity to update our members on the current status of the various hydrogen initiatives. The first three modules have been successfully delivered to our members, and recordings of these are now available on our members only portal in the [Knowledge Centre under Video Content](#).

Not yet a member? Consider joining the HSA to get access to free or discounted events, training material and the latest information in the hydrogen space – [become a member](#).



Upcoming Events – H2 World Webinar Series

The successful rollout of the Hydrogen Society of Australia and Clariden Global collaboration web series H2 World is continuing. Content will include presentations from the **3rd Hydrogen Production, Storage, and Infrastructure Development Global Summit (2022)**, updates from respective presenters and experts, live QnA sessions, as well as networking opportunities. We expect to deliver between ten and twelve modules over the next six months. Login to your members portal for easy access to the following links.

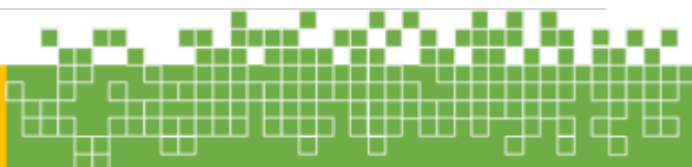
Upcoming

- **Module 4 – [Register now](#)** for 11 May online webinar starting at 14:30 AWST: Our fourth module will feature a recorded presentation on **Green Hydrogen & Ammonia - Scaling Up Commercialization** delivered by Dr. Attilio Pigneri (Founder and CEO H2U - The Hydrogen Utility). An in-person networking event will be hosted by the University of Queensland starting at 16:00 with the online presentation starting at 16:30pm - [Register for the inperson event here](#).
- **Module 5 – [Register now](#)** for 25 May at 15:00 AWST: Our fifth module will feature a recorded presentation on **Enabling Large-Scale Hydrogen in Underground in Preparation for Australia to be the Largest Hydrogen Exporter** delivered by Dr. Matthias Raab CEO CO2CRC. Following this recorded presentation, Matthias will join us online to provide the latest news on these projects and undertake a short QnA with the audience.

Delivered

- **Module 1 – Delivered** on 30 March: Our first module featured Kapz Malhotra (ATCO's General Manager of Engineering Projects) providing unique insights into "**How ATCO is Blending Hydrogen into the Gas Network**". [Watch recording here](#).
- **Module 2 – Delivered** on 13 April: Our second module featured Alan Watkins (Executive General Manager at Coregas) presenting on the "**Port Kembla Case Study: Australia's First Hydrogen - Powered Trucks and Refueling Station In Decarbonizing The Freight Industry**". Following Alan's recorded presentation, Wodek Jakubik (Innovation Manager at Coregas) joined us online to provide the latest news on these projects and undertook a short QnA with the audience. [Watch recording here](#).
- **Module 3 – Delivered** on 27 April at 12:00AWST: Our third module featured a pre-recorded presentation on **Renewable Hydrogen Technology Demonstration in Canberra - A Case Study of Australia's First Public Hydrogen Refuelling Station** delivered by Daniel Harding (Executive Branch Manager - Climate Change and Energy Division, Environment, Planning and Sustainable Development Directorate, ACT Government). [Watch recording here](#).

The participation in the H2 World web series events and access to recorded videos will be available free of charge to HSA Members and will not be available to non-members. Find out more about the H2 World web series [here](#).



Update on our Website Upgrade and Members Only Portal

Based on our membership feedback, we have updated the HSA website to include a members' only portal which will provide the following features:

- a database portal, which contains links to government departments and hydrogen clusters around the country;
- a knowledge portal, which contains an archive of recordings and PowerPoint presentations;
- a networking and collaboration platform;
- a jobs board for opportunities in the hydrogen sector;
- a register of skills and expertise in the hydrogen supply chain.

The website upgrade is a work in progress, with some of the pages still under construction. We welcome your feedback and suggestions regarding content and user experience.

Members in Spotlight:

Gas Bubbles – Friend Or Foe In Electrical Production Of Green Hydrogen?

Compared to blue hydrogen generated from splitting of natural gas along with the capture of CO₂ through steam methane reforming and auto thermal reforming, green hydrogen can be produced by water electrolysis with zero carbon emissions. If combined with renewable energy resources such as solar and wind, green hydrogen can be generated with high efficiency. One of the key opportunities for increasing the efficiency of the water electrolysis process is to address the efficiency limitations due to gas bubble evolution.



Above: Pinned gas bubbles over electrode

Tremendous efforts have been dedicated to produce highly active catalyst materials. However, oxygen and hydrogen gas bubbles are at the same time redox-inactive as they inherently adhere and block the electrode surface. The amount of time spent by a number of evolving gas bubbles over catalysts would bear an energy penalty. This is a potential problem for the industrial use of water electrolyzers in which hydrogen production is carried out by considerably large energy input. The urgency and the prospect of developing practical approaches to address the efficiency limitations due to gas bubbles needs a critical overview.

Dr Kamran Dastafkan is a post-doctoral research fellow and the Hydrogen Cluster Leader in the NanoElectrochemistry Laboratory led at the University of New South Wales by Professor Chuan Zhao. Dr Dastafkan investigates surface and interface electrochemistry in electrocatalysis and water splitting. He has focused on oxygen and hydrogen gas bubble removal at large current loads, and monitoring techniques for gas bubble evolution, of particular relevance for industrial scale water electrolysis. [Click on this link for the full article](#)

External Events

2nd Connecting Green Hydrogen APAC 2022 - July 25th and 26th (Melbourne)

The Hydrogen Society of Australia has partnered with the organisers of one of the largest hydrogen conferences in APAC to be held in Melbourne on July 25 and 26. A landmark event in the industry's calendar, [Connecting Green Hydrogen APAC 2022](#) will bring together the industry live and in-person to discuss the green hydrogen agenda in Australia and Asia Pacific.

Connecting Green Hydrogen APAC 2022 creates a unique set-up where the policy-makers as well as both local and international developers, investors, experts and solution/product providers, meet, get market updates, debate, and learn. Attending the event is an enabler to be part of the future development of hydrogen energy in APAC.

[Click here for further details and registration.](#)

18th International Symposium on Metal-Hydrogen Systems (MH2022) - 2022 Oct 30 to Nov 04 (Perth)

MH2022 is an International Symposium on Hydrogen that is held every two years at international venues around the world, and in 2022 we are expecting a large number of both International and National attendees, approximately 400 delegates. Although focussing on hydrogen storage, the Symposium program covers all areas of hydrogen such as production, storage, distribution and utilisation. The International Symposium runs over 5 days and a MH2022 Summer School will be held over 2 days prior to the Symposium (total length of Symposium + Summer School = 7 days). Craig Buckley (HSA Steering Committee member) will be chairing this conference and the HSA has been invited to support this International Symposium as a sponsor.

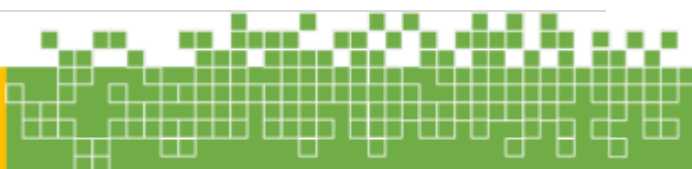
More information on <https://www.metal-hydrogen2022.com/>.

Global Hydrogen Energy Meet: Positioning Hydrogen 2022 - November 21st to 23rd

This three-day conference will be held in Melbourne from 21 to 23 November 2022. One of the objectives of this conference is to highlight Australia's potential as a "green" hydrogen superpower. Positioning Hydrogen 2022 will be a closed door B2B event for international industry leaders and key decision-makers from across the value chain for exchanging valuable insights, building and fostering business relationships, and driving forward innovation and collaboration within the industry. [Click here for further details and registration.](#)

World Renewable Energy Congress XXI (Murdoch University) – December 4th to 9th

The Hydrogen Society of Australia (HSA) is a Supporter of the [World Renewable Energy Congress XXI](#) to be held at Murdoch University in Perth Western Australia from 4th to 9th December 2022. The source and nature of energy, the security of supply and equity of distribution, the environmental impact of its supply and utilization, are all crucial matters to be addressed by suppliers, consumers governments, industry, academia, and financial institutions. In addition to the traditional common and parallel session format the conference will be offering several workshops relating to specific research, industry and policy issues.



As a Supporter, the HSA will be organising two events on the Sunday 4th December.

HSA Short Course: “The Hydrogen Economy and Technology.” Covers the four main areas of the hydrogen economy: generation, storage, transport, and utilisation. Several aspects of each of the areas will be presented and discussed. The presenters will be recognised leaders in industry and academia who are abreast of the most current status of each area, concluding with a moderated discussion with the experts. [Click here for further details.](#)

HSA Workshop: The workshop will run on the afternoon of Sunday 4 December, where hydrogen experts and industry leaders will be invited to present their developments and projects. The workshop could be followed by project demos discussed during the sessions.

Online registration will be available soon on the [WREC2022 website](#) (Early bird registration will be open until 15 August 2022)

For other upcoming events within the hydrogen space, check out the non-HSA events page [here](#).

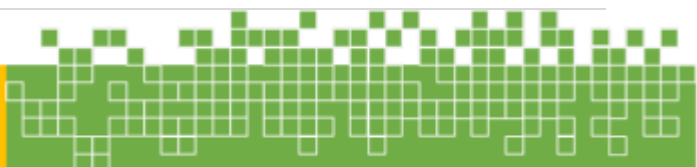
Snippets of Hydrogen making moves around the world...

- [ASX Renewable Energy Stocks: These companies could benefit from McGowan’s plans for renewable hydrogen target in WA](#)
- [WA to consider hydrogen target](#)
- [These green hydrogen stocks are gaining momentum but domestic demand is ‘crucial’](#)
- [Pure Hydrogen seeks leading role in staggering Indian hydrogen market](#)
- [ASX Renewable Energy Stocks: Twiggy embarks on green hydrogen venture with NZ’s largest gas network](#)
- [\\$10bn+ hydrogen plan for Murchison](#)

We acknowledge the support of our corporate members!

[Click here to find out more about their technical services and corporate offerings in the hydrogen space.](#)

- Innovate Australia
- BE&R Consulting
- Good Water Energy Ltd
- Hydrogen Energy Pty Ltd
- Polish Investment and Trade
- Integrated Energy Pty Ltd
- Truck Centre WA
- Environmental Engineers International
- Gexcon



We are all in this together...

Please share this newsletter with your network, as they may be interested in joining the HSA. Together we can foster a hydrogen society for Australia and a global renewable energy future.

Hydrogen is marching on - will you march with us?

<https://hydrogensociety.org.au/>

Contacts



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