

From: Francis, Felicity (Energy, Kensington WA)
Sent: Monday, 30 March 2020 4:59 PM
To: Energy All Staff and Affiliates-DG
Cc: Energy Support-DG
Subject: The Energy Mix | March 2020

March 2020

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The Energy Mix



Dear Energy colleagues,

It's hard to think beyond the immediate impact of the COVID-19 crisis and my thoughts are with all of you, your family and friends as you manage through these trying times. I know that there has been plenty of advice on managing the impact of our changing work and home lives and so I am pleased that, despite all these changes, we continue to deliver great outcomes from our engagement and research activities as highlighted in this news update.

Please take the time to read through these stories and links to new changes in CSIRO and support services available to staff and families.

Best wishes, Jonathan

Support for you and others



Just a quick note from HR to ensure staff are aware of the support available to them in these challenging times.

- You line manager should be your first port of call for questions
- HR support is available; [please call or email](#)

- There are resources available on [MyCSIRO COVID-19 resource hub](#)
- [Employee Assistance Program](#)
- [BeyondBlue](#)

- [Lifeline](#) 13 11 14

Please consider registering for the Resilience Workshops the BU promoted recently, contact [Helena Hink](#) if you would like to attend.

Stay safe,

Greg Dowling

Harmony Week

In Queensland, the cool autumn temperature has begun to set but at QCAT, the atmosphere was warmer than ever before. It was a fantastic Monday on the 16th of March. We had a delicious morning tea accompanied by many people from different cultures across business units, sharing a plate of delicacy from their country of origin at the library. David Harris gave a great speech on the importance of harmony, welcoming people coming from different backgrounds and making CSIRO a better place for innovation. There was a large world map underpinned by two notice boards displaying colourful dots, representing the nations from different parts of the globe congregated in Brisbane's innovation hub. TV wall showed slides of photos and statements from various staff championing diversity and again, making CSIRO a harmonious place to work and succeed. Harmony Week truly celebrates the diversity in us and helps bring out positive impact on our science.



Submitted by Sanger Huang from QCAT on behalf of the Energy IDC

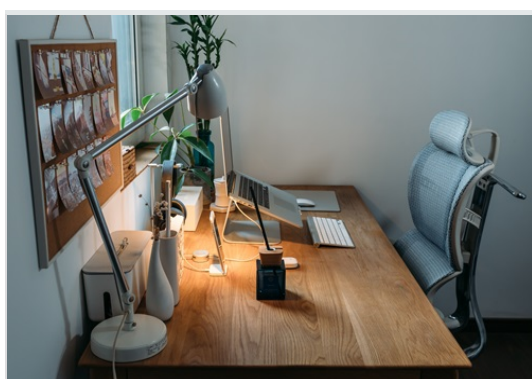
Three decades of safeguarding Australian air quality through science



After nearly 30 years with CSIRO, we said farewell to Merched Azzi, group leader Emissions & CO₂-capture within Low Emissions Technology on March 4. Merched had a long, distinguished and rich career in CSIRO during which he filled multiple roles. He never ceased to be a scientist and remained a staunch advocate for a data-driven, fact-based approach to solving emissions

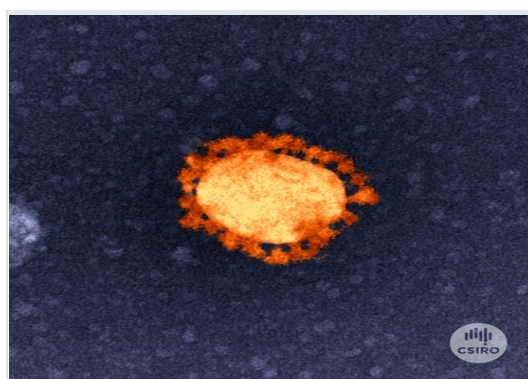
conundrums. We celebrated this by honouring him with a plaque entitled “Three decades of safeguarding Australian air quality through science”. Merched made seminal contributions towards understanding, modelling and assessing the impact of emissions (VOC’s, NO_x) on the formation of other pollutants, such as ozone and particulates. The underlying chemical mechanisms are complex, and this is where Merched made his mark through dedicated experimental work in the smog chamber, elucidating the chemical mechanisms with subsequent dispersion modelling and emissions measurement that provided information and advice that the stakeholders could easily absorb. Amongst his achievements are his advisory work for the California Air Resources Board, the assessment of the emissions impact of ethanol additions to automotive fuel for the Commonwealth and investigation of tunnel emissions in Sydney for the RTA. All were impactful thanks to Merched’s clear understanding of the client’s needs and appropriate articulation of research results. His guidance and friendship will be missed, and we wish him well in life after CSIRO.

Submitted by Paul Feron



Making sure you're prepared to work differently

The current situation is changing the way we work. For many of us, this might include working from home. We’ve got all the IMT and HSE information to help set you up.



Latest all staff updates

We’ve collected important all staff messages from the Board and our leaders so you’re connected to the decisions that make CSIRO Australia’s innovation catalyst.

Visiting student from GIST, South Korea

High efficiency thermal and electrochemical technologies group host a PhD student Sunki Chung from Gwangju Institute of Science and Technology (GIST), South Korea for short-term visiting research program (5 months). He is working at H2ES FSP project on Direct ammonia synthesis by alkaline membrane based electrolysis under supervision of Dr HyungKuk Ju at Clayton site. He has commenced the researcher on the fabrication of various metal/metal oxide based electrocatalysts for ammonia synthesis.



Photo: Sunki Chung with Electrochemical Energy Systems team members.

Submitted by HyungKuk Ju and Sunki Chung

Australian Photovoltaics Institute (APVI) – Chris Fell elected Chair



CSIRO is a corporate member of the APVI and Chris Fell from Photovoltaics Development Team at Newcastle, has been the CSIRO nominated representative and a Board member for several years. Chris established CSIRO's Photovoltaic research back in 2005 and this work now includes the only accredited PV measurement facility in

the Southern Hemisphere. Chris's role as Chair of the APVI will further develop CSIRO's engagement with the photovoltaics industry and research community as an advocate for CSIRO and our research contributions to this field.

Among other activities, the APVI organises the Asia Pacific solar Research Conference, which is Australia's leading solar research conference providing a local forum for information sharing and collaboration, reflecting Australia's key role in the energy transition.

Submitted by LET

ASHRAE Winter Conference 2020 Roundup

Aligned with the Grids & Energy Efficiency Systems (GEES) research program and the iHub Smart Buildings Data Clearing House project objectives, Dr Josh Wall recently attended the ASHRAE Winter Conference in Orlando, USA, to learn of the latest developments in smart building IoT sensors, energy management and building-to-grid interactive controls.



A key objective was to obtain valuable insight into the latest developments towards achieving an international standard for information models and semantic tagging of building operations data at different layers of a buildings energy systems and data flows (building level equipment & systems, edge devices, and cloud platform layers), that will drive data interoperability and facilitate smart building applications and their portability across multiple buildings and sites.

During the conference, Dr Wall was invited to be part of the ASHRAE Standard 223P working group, who are currently tasked with developing an international standard to unify building data ontologies such as BIM, BRICK and Haystack, as well as embedding standardised data tagging deep into a buildings native data sources such as Building Management Systems and energy metering as part of the industry adopted BACnet building automation protocol standard.

Submitted by Josh Wall



CSIRO's new on-line travel booking tool, CYTRIC, is now live



Building resilience in uncertain times

It's hard to talk about looking after your mental health without

CYTRIC has been designed to provide an improved online booking functionality and simplify the travel booking process! Access to online bookings will continue to be through the QBT Portal and we anticipate users will find the new interface intuitive and easy to use.

sounding like every second social media post. But it is important because we want to help you build resilience to assist with these complex situations.

JOGMEC workshop in Chiba, Japan



A delegation from CSIRO's Onshore Gas and Oil, Gas and Fuels attended a workshop hosted by JOGMEC (Japan Oil, Gas and Metals National Corporation) in Chiba, Japan on 20-21 February 2020.

The purpose of the workshop was to identify projects for collaboration between CSIRO & JOGMEC based on the areas stated in the MOU

(Unconventional resources, CCUS and

Hydrogen value chain) which was signed by the CSIRO's Director of Energy and the chairman of JOGMEC and witnessed the by the Australian Prime Minister and Japan's Prime Minister.

Currently the Onshore Gas program has already engaged with JOGMEC on Hydraulic Fracturing project which has yielded positive results and will be extended to the next phase. During the two day workshop over 20 projects were identified of mutual interest and both parties agreed to prioritise 3-4 projects to start by June 2020. After the prioritisation process led by CSIRO both parties will appoint focal points for each project and meetings between the respective technical team will take place to discuss and complete detailed project plans which will need to be endorsed by respective management from both parties.

Submitted by Bianca Moiler

Distinguished Visiting Researcher Kitty Milliken

Dr Kitty Milliken joined the Onshore Gas program as a visiting scientist supported by the Research Office Distinguished Visiting Researcher funding program. Kitty is a senior research scientist at the **Bureau of Economic Geology (BEG)**

in Austin, Texas, and is a global authority on sedimentary petrography, the microscopic description and

classification of sedimentary rocks. Her research focuses on the diagenesis of siliciclastic sediments and the evolution of rock properties in the subsurface as inferred from observations collected using electron microbeam imaging techniques. She served as Associate Editor of the Journal of Sedimentary Research (1993-2000) and as Co-Editor (2004-2008). She was elected a Fellow of the Geological Society of America (2008). She has been recognized by the AAPG with the J. Ben Carsey Distinguished Lectureship (2005-2006), the Robert Berg Outstanding Research Award (2015), and the Pratt Award (with co-authors) for best paper in the Bulletin (2015).

Kitty will be based at the Kensington site for the next 12 months working on collaborative research aiming to advance the fundamental scientific understanding of Earth's most abundant type of sedimentary rock, i.e. shales, with potential applications for extraction of resources, sequestration of waste, and for understanding the biologic and climatic histories of our planet.



Submitted by Claudio Delle Piane

Seeking Indigenous Engagement Implementation Committee Members

Developed in 2007, the Indigenous Engagement Strategy aims to achieve greater Indigenous participation in CSIRO's research and activities and is dedicated to closing the gap between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians. The strategy addresses four key areas covering scientific opportunities, employment, education and outreach, and cultural learning and development. CSIRO's Reconciliation Action Plan (RAP) builds on the Indigenous Engagement Strategy by outlining practical actions the organisation will take to improve the awareness and understanding of the culture, customs, history and achievements of Indigenous Australians.

The Indigenous Engagement Implementation Committee (IEIC) is the CSIRO body committed to ensuring that CSIRO's Indigenous Engagement Strategy is being delivered. Representation is sought from each business unit, and a vacancy now exists for an Energy

business unit colleague to join the committee.

The role of the IEIC is to:

- Champion CSIRO's RAP by supporting the delivery, monitoring and implementation of RAP actions and associated programs that support opportunities for Indigenous Australians.
- Act as a conduit to each BU to encourage opportunities for collaboration and engagement with Indigenous Australians.
- Take collective leadership in supporting the delivery of organisation-wide progress against strategic objectives through coordination of project activity.
- Take individual and collective responsibility in integrated Indigenous engagement considerations across other CSIRO governance & decision-making processes.
- Facilitate a community of practice for staff working on Indigenous programs and initiatives to share knowledge and foster best practice when working with Indigenous Australians.

Meetings are held three times annually. If interested, please contact [Louisa Warren](#).

Submitted by Charlotte Stalvies on behalf of Energy IDC

External News



Collaborative action can future-proof Australia's energy supply chain and add an additional \$7 billion to the national economy by 2030

A coordinated effort between oil & gas suppliers, operators, governments and research organisations can triple the growth of Australia's oil & gas supply chain over the next decade and add an extra \$7 billion to the national



2020 has kicked off!

2020 has kicked off with much activity for the Innovation Hub for Affordable Heating and Cooling (i-Hub) team. With the formal announcement made in November by Energy Minister Angus Taylor of the three year \$18 million dollar project work has begun on our key initiatives. Sign up to the i-Hub Newsletter now to find out more.

economy by 2030, according to a new report released on 11 March 2020.

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