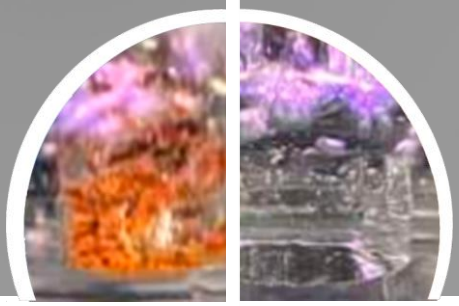
Organisers

Volker Hessel
University of Adelaide

PJ Cullen
University of Sydney

Tomohiro Nozaki
Tokyo Institute of Technology



2023 Australia - Japan Symposium on Plasma Catalysis

Nov. 23 - 1st day
The University of Adelaide

Plasma Catalysis towards Products

Nov. 24 - 2nd day
The University of Adelaide

Plasma Catalysis towards Applications

Sponsors:
Institute of Sustainability, Energy and Resources (ISER) at the University of Adelaide, Japanese Science and Technology Agency (JST)

AJSPC2023

2023 Australia - Japan Symposium on Plasma Catalysis

(AJSPC2023)

Programme handout

Nov. 23 - 1st day

Venue: The University of Adelaide, IW 715, Ingkarni Wardli Building, North Terrace

8:45	Opening (Volker Hessel, Tomohiro Nozaki), Welcome: Paula Angerstein, ISER (UoA); David Lewis (HoS School of Chemical Engineering, UoA)
9:00 - 9:30	Hyun-Ha Kim (National Inst Adv Industrial Sci Technol: AIST): Nitrogen fixation using spark discharge and catalyst
9:30 - 10:00	Tony Murphy (CSIRO Manufacturing Sydney): Prospects for plasma-assisted production of ammonia
10:00 - 10:15	Break
10:15 - 10:45	Tomohiro Nozaki (Tokyo Institute of Technology): CO conversion to carbon nanofiber by fluidized-bed plasma
10:45 - 11:15	Yunxia Yang (CSIRO Energy Sydney): Plasma assisted CO_2 hydrogenation
11:15 - 11:45	Manabu Tanaka (Kyushu University): Hydrogen production via thermal plasma pyrolysis of hydrocarbons
11:45 - 12:15	Marcela Bilek (University of Sydney); online Plasma catalysis: an opportunity to fully harness Australia's abundant renewable energy resources
12:15 - 13:30	Lunch
13:30 - 14:00	Satoru Takakusagi (Hokkaido University) Development of synchrotron X-ray and surface science techniques for characterizing plasma catalysis
14:00 - 14:30	Nam Tran (University of Adelaide) Environmental, Social, and Governance (ESG) integrated chemical process design and optimization
14:30 – 14:45	Group Photo
14:45 - 16:00	Poster
16:00 - 16:30	Jason Scott (University of New South Wales) Considerations for catalyst design for plasma-catalytic CO_2 reduction
16:30 - 17:15	Lab tour (Volker)
18:00 -	Dinner

Nov. 24 - 2nd day

Venue: The University of Adelaide, The Braggs 313+314, Braggs Building, North Terrace

9:00	Opening
9:00 - 9:30	Aiichiro Nagaki (Hokkaido University): Flash Chemistry Makes Impossible Chemistry Possible
9:30 - 10:00	Tianqi Zhang, PJ Cullen (University of Sydney): Plasma bubbles, catalysts and electrochemistry for sustainable chemistry
10:00 - 10:15	Break
10:15 - 10:45	Naoki Shirai (Hokkaido University) Catalyst-free synthesis of ammonia using atmospheric-pressure DC plasma in contact with water
10:45 - 11:15	Volker Hessel (University of Adelaide) Plasma-based NOx formation in gas and gas/liquid phases: 'At-farm fertilizer manufacture'
11:15 - 11:45	Keisuke Takashima (Tohoku University) Plasma nitrogen vibrational excitation and chemistry of reactive nitrogen species for agricultural applications
11:45 - 12:15	Prof. Krasimir Vasilev (Flinders University): Nanoengineered plasma polymers coatings for medicine and beyond
12:30	Closing

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Posters session

Dae-Yeong Kim (Tokyo Tech)
Promotion of low-temperature CO_2 methanation by plasma-activated hydrogen

Lu Bang (Hokkaido University)
Plasma-assisted nitrogen fixation and ammonia synthesis on Co surface at room temperature

Yoshinobu Inagaki (Hokkaido University)
Detection of hydrated electron below the interface between plasma and water

Kazuhiro Okamoto (Hokkaido University)
Deuterium-Labelling Studies by Flash Generation of Lithium Carbenoid Species

Several posters from Adelaide and Zhang groups