



ANNUAL MEETING OF THE FOUR SOCIETIES

*The Australian Institute of Energy
The Australian Nuclear Association
Sydney Division of Engineers Australia
The Royal Society of New South Wales*

“Challenges for the Future: Energy Storage and Waste Plastic — Two Australian Solutions Going Global” Professor Thomas Maschmeyer

6.30pm Thursday 12th March 2020

In any discussion of a sustainable future, two issues loom large. First, how do we store the energy from Australia's abundant renewable resources? Second, how do we deal with the growing mountain of plastic waste?

As it happens, two technological breakthroughs addressing these issues have been developed in Australia by companies co-founded by our speaker, Prof. Thomas Maschmeyer, Professor of Chemistry at the University of Sydney:

- a zinc-bromide battery, Gelion's Endure, and
- Licella's Cat-HTR Technology, a chemical recycling process, which turns plastic waste into fuels, waxes, and new plastics that can be recycled again and again.

Prof. Maschmeyer will discuss these within their respective contexts of a changing energy landscape and the circular economy. He will briefly review the status quo in each field and current projections of where the fields as a whole are headed, paying particular attention to the Australian perspective. Within 10 years 8% of the world's expected battery storage will be located here. With huge resources of energy and space, so close to Asia, Australia has a great opportunity to process plastic wastes, uplift their value and send the intermediate products for further refining into new plastics, chemicals and fuels offshore.

Professor Thomas Maschmeyer, HonDSc FAA FTSE FMAE FRSN



Thomas is Founding Chairman of Gelion Technologies (2015), co-Founder of Licella Holdings (2007) and inventor of its Cat-HTRTM technology. He is also the Principal Technology Consultant for Cat-HTRTM licensee's Mura Technologies and RenewELP. In 2001 he was one of the founding Professors of Avantium, a Dutch High-tech company.

Currently Professor of Chemistry at the University of Sydney, he served as Founding Director of the \$150m Australian Institute of Nanoscale Science and Technology. In 2011 he was elected the youngest Foreign Member of the Academia Europea and he is a Fellow of the Australian Academy of Science and the Australian Academy of Technological Sciences.

Professor Maschmeyer has authored 325+ publications, cited 10,000+ times, including 26 patents. He serves on the editorial/advisory boards of ten international journals and received many awards, including the Le Fèvre Prize of the Australian Academy of Science (2007), the RACI Applied Research Award (2011), the RACI Weickhardt Medal for Economic Contributions (2012), the RACI R. K. Murphy Medal for Industrial Chemistry (2018) the Eureka Prize for Leadership in Innovation and Science (2018) – Australia's Principal Science Prize – and, most recently, the Federation of Asian Chemical Societies' Contribution to Economic Development Award (2019).

Date: Thursday 12 March 2020

Time: 6:00 pm for a 6.30 pm start

Venue: Metcalfe Auditorium, State Library of NSW, Macquarie St, Sydney

Refreshments: Will be served from 6:00 pm in the adjacent Macquarie Room.

RSVP: Register at <https://nsw-royalsoc.currinda.com/register/event/83>, Cost: \$20. Please register early as places are limited.

Questions: royalsoc@royalsoc.org.au