



Engineering Integrity Society

WEBINAR SERIES: Durability Advances in Renewable Energy & Storage Technology

Beyond Lithium-ion Batteries for Greener and more Sustainable Electrical Energy Storage
Serena Margadonna, Swansea University
17 November 1-2pm



An overview of the current state and future of electrochemical energy storage systems will be provided. Technologies will be discussed in terms of energy/power densities and cycle-life for applications including transport, buildings and the grid. Furthermore, the sustainability and environmental costs of state-of-the-art lithium-ion batteries considering material abundance and manufacturing processes will be introduced, highlighting how near to the market technologies (e.g. Lithium-sulfur and Na-ion batteries) will enable a more widespread and greener electrification of the economy.

Green Hydrogen and Energy Storage
Graham Cooley, ITM Power
24 November 1-2pm



During this presentation, Dr Graham Cooley will explain the use of polymer electrolyte membrane electrolyzers in green hydrogen production, in the roll out of renewable energy. Graham will discuss the importance of green hydrogen, the only Net-Zero gas, and how it can be utilised as a long-term energy storage solution.

Automotive Battery Testing Capability and Best Practice
Peter Miller, UTAC
30 November 1-2pm



This presentation will start by giving an overview of the various automotive battery applications (from SLI to EV) and the battery requirements for each. It will then look at test methods and standards for automotive batteries for xEV's that cover abuse, performance and life and give some examples of these. Finally, the split of testing between cells, modules and packs will be discussed.

Materials Challenges for Sustainable Aerospace
Neil Glover, Rolls Royce
9 December 1-2pm



Neil will discuss the "de-carbonisation" of aerospace, the introduction of hybrid-electric power systems and sustainable fuels and the challenges these bring for materials engineering, performance and durability.

FREE TO
ATTEND

To register
email
info@e-i-s.org.uk

November/
December
2021