



Next Generation Battery Technology

Press Release

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OXIS Energy is close to achieving 500Wh/kg and is targeting 600Wh/kg with Solid State Lithium Sulfur technology

OXIS Energy has successfully tested its cell prototypes at 471Wh/kg and is confident of achieving 500Wh/kg in the next 12 months.

Consistently shipping cells at 400Wh/kg to its clients in Europe, the USA and Japan, OXIS is collaborating with major European chemical partners to develop an advanced lithium metal protection mechanism to ensure a significant improvement in the Lithium Sulfur (Li-S) life cycle.

OXIS has also successfully developed a standard Li-S battery module that saves production time and cost. It is the key building block for customer batteries and can be utilised in electric buses, electric trucks, aircraft and marine vessels.



Its main features are:

- Lightweight design – less than 20% of the module is non-cell mass ensuring that the high cell gravimetric energy is harnessed at module level
- Modular design which can be easily scaled into larger batteries
- A fire-resistant carbon-fibre enclosure developed with our partners for improved safety
- Compatible with many cooling solutions for effective thermal management
- Designed to minimise assembly time whilst maintaining quality

With demand for its cells increasing two-fold in the next twelve months, OXIS will double its cell production capacity in the UK during 2020. It has already built what is potentially the largest Test Centre in Europe for aircraft and vehicle manufacturers to test Li-S cells and battery systems safely.

The OXIS cell technology has already been successfully integrated and ground tested in an aircraft battery system and is scheduled to achieve Technology Readiness Level 9 in flight trials in the USA.

Huw Hampson-Jones, CEO OXIS Energy, said, "OXIS continues to focus on the Aerospace, Defence, Marine vessels and Heavy Electric Vehicles market sectors where weight reduction, elimination of distance anxiety and safety are of paramount importance. The culture of early adoption of new technology, which characterises the "can do" attitude of US business is driving the implementation of OXIS Li-S cell and battery systems across multiple markets. The United States and Japan are emerging as key new entrants in the use of Lithium Sulfur cells and battery systems."

To bolster its achievements, OXIS is working with its clients and partners to develop Solid State Li-S technology. Its research scientists believe that they can extend both gravimetric and volumetric energy density towards 600Wh/kg and in excess of 800Wh/L with a significantly extended life cycle. Currently at TRL 2, OXIS is extending the research to hit the target of TRL 4 by 2021.

To support the above technological innovation, OXIS has filed key patents associated with Advanced Lithium Metal Protection (ALMP) and in Solid State Li-S technology.

Editor's Notes

OXIS Energy Ltd is involved in the design, development and now the move towards commercial production of lithium sulfur cells for battery systems. OXIS manufactures and produces all aspects and components in the making of the Li-S cell. With over 43 patent families, OXIS has been granted 193 patents with 94 pending.

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