



Next Generation Battery Technology

Press release

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OXIS ENERGY TECHNOLOGY LAUNCHES INTO SPACE PROJECT

OXIS Energy has eagerly joined the European Consortium for Lithium Sulfur Power for Space Environments (ECLIPSE) which will be led by Airbus Defence and Space. The research, aimed at developing Li-S technology for space applications will ensure that harsh space constraints are taken into account. The most recent battery technology based on Lithium Sulfur and developed by OXIS Energy has shown very promising results, particularly in terms of specific energy and cycling performances. This could become the next breakthrough technology for space batteries with a factor of two reductions in weight compared to the current Lithium Ion products. ECLIPSE research will focus on three levels:

- Cell level studies, including research to optimise the four main cells components - anode, cathode, separator and electrolyte to achieve 400Wh/kg cells compatible with space cycling profiles
- Battery and encapsulation level, including prototyping and theoretical studies
- System level studies for integration in satellite and launcher architectures, taking into account the economic constraints and the future technical challenges. The project will have a duration of 24 months

The expected results of ECLIPSE are:

- Weight reduction of batteries by a factor two
- Cost reduction at all levels: subsystem, system and launching costs
- Further advancement of the technology

Steven Rowlands, who is the Technical Lead on the project, said the following: "Using OXIS's innovative lithium sulfur rechargeable battery technology, much lighter payloads will be possible and this will reduce launch and mission costs considerably. For example, at current launch prices, for every kilogram of weight saved, we anticipate a saving of up to €20,000. An energy density of 400Wh/kg is anticipated in two years, which will half the weight of the incumbent satellite battery systems. The ECLIPSE project brings together the perfect team to accelerate not only the progress of satellite batteries but all electrical energy storage applications in the future."

As well as OXIS and Airbus Defence and Space, other players comprise Fraunhofer IWS, CEA, SAFT, SPRL, Solvay S.A., Imperial College London and Brno University of Technology. ECLIPSE is a very ambitious proposal with ground breaking objectives to reach long lifetime and high energy density cells, with very low self-discharge. It has the potential to improve battery technologies that is beyond the state of the art.

About OXIS Energy Ltd

Since it was founded in 2005, OXIS Energy Ltd. has been at the forefront of developing Lithium Sulfur battery technology. With 23 families of patents, OXIS has been granted 65 patents with another 62 pending.

One of the most important breakthroughs achieved by OXIS relates to safety. One of the problems with Lithium ion is its volatility but OXIS now has demonstrable empirical data to demonstrate the safety of its battery technology.

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