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Press release

INNOVATE UK FUNDING GIVEN TO DEVELOP LITHIUM SULFUR BATTERIES FOR MARINE AUTONOMOUS SYSTEMS

OXIS Energy Ltd's technological expertise will be one of the main components in a collaboration which includes a consortium of UK companies and academic partners for the research and development of the next generation of Lithium Batteries for Marine Autonomous Systems. Innovate UK agreed funding of £1.1 million which will be led by Steatite whose speciality is the design and manufacture of Lithium battery pack solutions. In addition this collaboration will involve the underwater vehicle designers and manufacturers MSubs Ltd and the National Oceanography Centre (NOC).

OXIS Energy is leading the world with its cell capacity. OXIS Lithium Sulfur cells are ideally suited for use in subsea applications due to their increased specific energy, their mass density and high safety. Li-S cells have five times the theoretical maximum specific energy of Lithium-ion cells. The mass density of Lithium Sulfur cells is very similar to that of water. As a result, bulky and expensive buoyancy foam is not required for the Lithium Sulfur battery as it is with Lithium Polymer batteries in use today. The combination of both these factors allows for a significant improvement in the performance of a neutral buoyancy battery system. Through this project OXIS Energy would expect an improvement of at least 70% against the cells used in the best batteries on the market today with an expectation of achieving a five-fold improvement. The continuing development of a Li-S battery will enable greater endurance at higher speeds for transit to survey sites which are often in remote locations, resulting in fewer launches and recoveries, allowing more sensing equipment to be installed and will provide research institutions or end users the ability to collect more valuable data.

Lithium-ion batteries have safety issues which have been highlighted by incidents on Dreamliner and electric vehicle fires. Li-S is a safe chemistry that does not react aggressively when damaged and continues to provide reliable function. Indeed, the Li-S chemistry is inherently safe, withstanding abuse such as short circuiting, crushing and even the puncturing of cells.

OXIS Energy CEO, Huw Hampson-Jones said “We are extremely proud of being at the forefront of developing Lithium Sulfur battery technology and this collaborative funding will allow us to combine our strengths. Our safety and energy density expertise will play a crucial role in this important research that will be achieved in underwater vessels through the funding of Innovate UK”.

OXIS battery technology is able to produce batteries which are superior in terms of safety, energy, weight, cycle life, costs and ageing.

OXIS Energy is delighted to be on board with such a dynamic team and look forward to the strides in research and development that will be achieved through the funding of Innovate UK.

About OXIS Energy Ltd

Since it was founded in 2005, OXIS Energy Ltd. has been at the forefront of developing Lithium Sulfur battery technology. During the first phase the company invested heavily in design and development and is now ready to move into the production of Lithium Sulfur cells for a series of applications. With 20 families of patents, OXIS has been granted 63 patents with another 57 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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