

The client and market

The client is an established manufacturer of consumer devices, many of which rely on **lithium-ion batteries (LIB)** for power generation. They are continually searching for improvements in the performance of battery components for current and future products, and actively engage with research and commercial partners to achieve this.

Lithium-ion batteries are used in an ever-increasing range of applications from consumer devices to electric cars, with research focusing until now on innovations around the cathode, anode and electrolyte materials used. As the rate of improvement in energy density begins to slow from these innovations, many research efforts are focusing on next generation battery technologies as a potential route for improved performance and cost, but many of these have a lengthy development trajectory or are exclusively focused on the growing electric vehicle market. However, whilst many manufacturers choose to keep their manufacturing processes as secret know-how, improvements in the various stages of battery cell manufacturing may also provide considerable improvements to battery characteristics, subsequent performance and their CSR (corporate social responsibility) credentials, with potentially faster speed to market.

The search

The client is therefore interested in **identifying innovative material processing and manufacturing technologies that could provide an improvement in lithium-ion battery cell performance**. We are searching for research organisations, universities, consortiums and companies from all stages of the supply chain with innovative technology applicable to lithium-ion battery manufacturing including (but not limited to):-

- **Modification of existing LIB manufacturing processes** - e.g. mixing, coating and drying, calendaring, slitting, stacking, cell assembly and electrolyte filling
- **Innovative new approaches to lithium-ion battery manufacturing**
- **Technologies to increase the energy density, rate capability or manufacturability of cells**
- **Technology to improve the CSR credentials** – e.g. elimination of solvents, reduction in energy consumption, recyclability, etc

Potential technologies / processes should be applicable to use on a production line within a few years

What the client can offer

The client is a major user of lithium ion batteries and has excellent relationships with their suppliers, working with them to introduce new innovations, in addition to working with other partners in the battery manufacturing sector (alternative materials, next generation batteries, etc). This provides an excellent opportunity for companies / research organisations to accelerate a technology's commercialisation via established manufacturers and end users. The client will consider all forms of collaboration to access battery improvements, including supplier relationships, joint development, licensing, investment, acquisition, etc.

Please send preliminary information on any proposed opportunity to: – Diane Kolonko via diane@strategicallies.co.uk