



**Altech Chemicals**  
Limited

## ASX ANNOUNCEMENT AND MEDIA RELEASE

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# ALTECH – STRATEGIC PARTNERSHIP WITH FRAUNHOFER IKTS FOR SILUMINA ANODES™ QUALIFICATION

### Highlights

- Fast track Silumina Anodes™ product qualification with Fraunhofer IKTS
- Fraunhofer IKTS is a world renowned battery materials and battery performance research centre in Germany
- Independent performance testing and qualification of Silumina Anodes™ product will assist early market entry
- IKTS has expressed potential for Silumina Anodes™ battery material

Altech Chemicals Limited (Altech/the Company) (ASX: ATC) (FRA: A3Y) is pleased to announce that it has executed a framework agreement with leading German institute Fraunhofer IKTS (“IKTS”), as a strategic partner to expedite the testing and qualification process for the Company’s Silumina Anodes™ product. IKTS boasts labs, technical centres with outstanding equipment at its sites in Dresden (Saxony), Hermsdorf (Thuringia) and several other sites in Germany. IKTS is considered as one of, if not the leading know-how and research centre for battery materials in the world . IKTS recently opened their Battery Innovation and Technology Center (BITC) in Arnstadt.

The main objective of the strategic partnership is for IKTS to independently test the long-term performance of Altech’s Silumina Anodes™ battery material in various battery applications. IKTS, through its extensive lithium-ion battery research and network of partners, will be able provide extensive performance testing of various types of battery applications that will assist the qualification process of the Silumina Anodes™ product for potential customers.

Altech is well funded to complete a pilot plant adjacent to its industrial site in Saxony, Germany, in order to supply commercial samples to potential downstream customers and for the qualification process.

Altech recently completed a pre-feasibility study for a 10,000 tpa Silumina Anodes™ plant in Germany. The Company’s silicon graphite composite product not only achieves a much higher energy capacity than the conventional graphite anode, it is also stable during the life of the battery. The Company announced in late 2021 that it had achieved a 30% higher energy battery with improved cyclability or battery life, and is now in the process of commercial development.

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**Figure 1 – Uwe Ahrens (Altech), Prof Alexander Michaelis (IKTS), Iggy Tan (Altech) at IKTS test facilities in Dresden**

With a capital investment of only US\$95 million, the pre-feasibility study for the project returns a net present value of US\$507 million, with yearly net free cash generated of US\$63 million. The internal rate of return of the project is estimated at a very attractive 40%. Altech is quickly advancing the project to the next stage of development.

The Company is well positioned to dramatically reduce supply risks by positioning its operation in Germany and sourcing its graphite and silicon feedstock from European suppliers.

During the recent crisis in Europe forcing supply chain pressures and rising energy prices, it has demonstrated the importance of European material supply for European battery and EV makers. The manufacturing supply risks are becoming increasingly evident, and more focus will be placed on European supply.

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Authorised by: Iggy Tan (Managing Director)

### **About Altech Chemicals Ltd (ASX:ATC) (FRA:A3Y)**

Altech Chemicals ("Altech" or "Company") is a specialty battery materials technology company that has licenced its proprietary high purity alumina coating technology to 75% owned subsidiary Altech Industries Germany GmbH (AIG), which has commenced a definitive feasibility study for the development of a 10,000tpa silicon/graphite alumina coating plant in the state of Saxony, Germany to supply its Silumina Anodes™ product to the burgeoning European electric vehicle market.

This Company recently announced its game changing technology of incorporating high-capacity silicon in lithium-ion batteries. Through in house R&D, the Company has cracked the "silicon code" and successfully achieved a 30% higher energy battery with improved cyclability or battery life. Higher density batteries result in smaller, lighter batteries and substantially less greenhouse gases, and is the future for the EV market. The Company's proprietary silicon graphite product is registered as Silumina Annodes™.

The Company is in the race to get its patented technology to market and recently announced the results of a preliminary feasibility study (PFS) for the construction of a 10,000tpa Silumina Anode™ material plant at AIG's 14 hectare industrial site within the Schwarze Pumpe Industrial Park in Saxony, Germany. The European graphite and silicon feedstock supply partners for this plant will be SGL Carbon and Ferroglobe. The project has also received green accreditation from the independent Norwegian Centre of International Climate and Environmental Research (CICERO). To support the development, AIG has commenced construction of a pilot plant adjacent to the proposed project site to allow the qualification process for its Silumina Anodes™ product. AIG has executed NDAs with two German automakers as well as a European based battery company.

**Silumina Anodes™**

### **HPA Project**

Altech is also further aiming to become a supplier of 99.99% (4N) high purity alumina (Al<sub>2</sub>O<sub>3</sub>) through the construction and operation of a 4,500tpa high purity alumina (HPA) processing plant at Johor, Malaysia, and has finalised Stage 1 and Stage 2 construction of its HPA plant in Johor, Malaysia. Feedstock for the plant will be sourced from the Company's 100%-owned near surface kaolin deposit at Meckering, Western Australia and shipped to Malaysia. The HPA project is significantly de-risked with a bankable feasibility study completed, senior lender project finance from German government owned KfW IPEX-Bank approved, and a German EPC contractor appointed – with initial construction works at the site completed. In addition to the senior debt, conservative (bank case) cash flow modelling of the HPA plant shows a pre-tax net present value of USD 505.6million at a discount rate of 7.5%. The project generates annual average net free cash of ~USD76million at full production. Altech is in the final stages of project finance with a potential raising of US\$100m of secondary debt via the listed green bond market. In addition, US\$100m of project equity is being sought through potential project joint venture partners.

For more information, please contact:

#### **Corporate**

#### **Iggy Tan**

Managing Director  
Altech Chemicals Limited  
Tel: +61 8 6168 1555  
Email: [info@altechchemicals.com](mailto:info@altechchemicals.com)

#### **Martin Stein**

CFO & Company Secretary  
Altech Chemicals Limited  
Tel: +61 8 6168 1555  
Email: [info@altechchemicals.com](mailto:info@altechchemicals.com)

#### **Shane Volk**

Company Secretary  
Altech Chemicals Limited  
Tel: +61 8 6168 1555  
Email: [info@altechchemicals.com](mailto:info@altechchemicals.com)

