

ASX ANNOUNCEMENT

24 June 2022

HiPurA™ HPA Micro Plant Commissioning & Pre-feasibility Study Update

- **HiPurA™ High Purity Alumina (HPA) Micro Plant advanced commissioning progressing**
- **HiPurA™ HPA Prefeasibility Study (PFS) optimisation in final stages**
- **HPA included in Australian Federal Government Critical Minerals List**

ChemX Materials (ASX:CMX) (ChemX or the Company), a materials technology company focused on providing critical materials required for electrification and decarbonisation, is pleased to provide an update on progress regarding its HiPurA™ High Purity Alumina (HPA) Micro Plant commissioning and Pilot Plant Pre-feasibility Study (PFS).

High Purity Alumina (HPA)

HPA is a high value critical material used in lithium-ion batteries to manufacture ceramic separators, which provides increased thermal insulation for improved safety and charging. HPA is also a critical ingredient in the production of synthetic sapphire used in LEDs, semiconductors, and optical lenses.

HiPurA™ HPA Micro Plant

ChemX has completed commissioning of the individual stages of its HPA Micro Plant and is now undergoing final stage integrated process commissioning. The key objectives from the Micro Plant operation are:

- Optimisation of process and controls under continuous operation
- Achieving a 99.99% (4N) purity HPA on a consistent basis
- Ongoing production of samples of HPA for customer qualification testing
- Research and development on the development of additional products for assessment, including achieving a targeted 99.999% (5N) purity

The Micro Plant has been designed to be highly flexible and accommodate flowsheet modifications in anticipation of potential process improvements to achieve the Company's plans of producing a number of products including 5N (99.999%) HPA or higher specification.

Chief Operating Officer Mr Peter Lee said "Integrated process commissioning of the Micro Plant and running the HiPurA™ HPA process under continuous operation will be a significant milestone for the technology. The Micro Plant operation will allow the Company to optimise the current Pre-feasibility Study and achieve a major competitive step forward by providing product samples to potential customers. Successful commissioning will also demonstrate the potential to offer customers a scalable, modular plant to supply HPA with significantly shorter plant construction times to feed directly into their lithium-ion battery supply chain."

HiPurA™ HPA Pilot Plant Pre-feasibility Study

The HiPurA™ process is expected to produce HPA with significantly lower levels of energy and reagent usage, resulting in lower capital and operating costs than most incumbent and potential producers.

The Pilot Plant PFS is progressing well, with several major milestones already achieved:

- Flowsheet extensively modelled to assess alternative reagents
- Operating costs identified
- Key equipment manufacturers engaged for quotation
- Equipment and pilot plant sizing optimization currently under way

Throughout the PFS process work undertaken to date, the Company has identified several opportunities to optimise the process design, equipment modifications and scale. These work streams will have a positive impact in terms of a reduction in capital and operating costs. As a result, the Company will extend completion of the PFS into Q3 2022 to complete these work streams.

ChemX Managing Director David Leavy commented: "The PFS has confirmed a number of the technical and operational objectives of the HiPurA™ process. As is common with studies utilising advanced novel technologies, several areas have been highlighted for optimisation which are best completed as part of the current study. The short extension of time to complete the PFS will provide significant benefits for the development of the technology."

HPA added to the Critical Minerals List by the Australian Federal Government.

HPA has been added to the Federal Government's Critical Minerals List. Inclusion on the list reflects the high value and critical nature of HPA in building a fully integrated supply chain of battery materials domestically, further strengthening Australia's reputation as a reliable supplier of critical minerals and sophisticated products to local and global markets. ChemX welcomes this addition and looks forward to ongoing engagement with both the Federal and State Governments to commercialise its HPA assets.

This Announcement has been authorised for release by the Board.

For enquiries:

David Leavy

Managing Director

ChemX Materials Ltd

david@chemxmaterials.com.au

+61 424 153 957

Peter Kermode

Associate Director

Cannings Purple

pkermode@canningspurple.com.au

+61 411 209 459

About ChemX Materials (ASX: CMX)

ChemX is a materials technology company focused on providing critical materials required for electrification and decarbonisation. The Company's vision is to support the energy transition with materials and technology that provide real solutions to lowering carbon emissions.

Developed in-house, ChemX's HiPurA™ Process is a unique technology that is capable of producing high purity alumina (HPA) and high purity aluminium cathode precursor salts for lithium-ion batteries. Initial testwork has indicated that the process is low cost and low in energy consumption, compared to alternative technologies. A key competitive advantage is that the HiPurA™ process is not tied to mine production, with the feedstock being a widely available chemical.

The Company has projects in South Australia and Western Australia.

The South Australian Eyre Peninsula projects include the Kimba Kaolin-REE Project and the Jamieson Tank Manganese Project. The ChemX HiPurA™ Project is located in Western Australia.

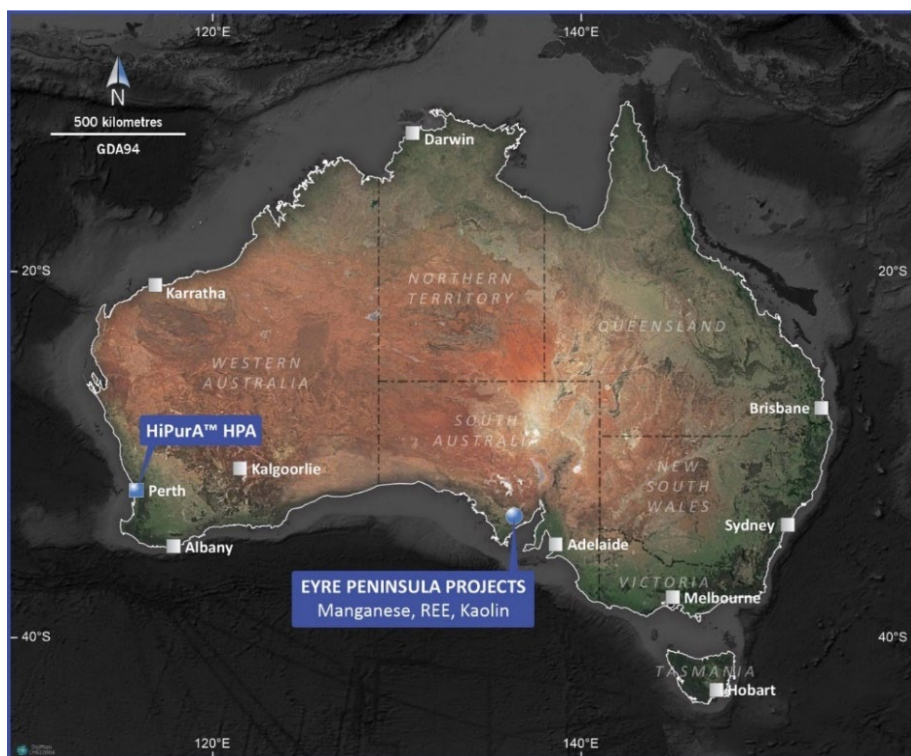


Figure 1 - ChemX Project Locations

www.chemxmaterials.com.au

[LinkedIn](#)

Directors

Kristie Young

David Leavy

Stephen Strubel

Warrick Hazeldine

Non-Executive Chair

Managing Director

Executive Director

Non-Executive Director