

# Producing High Purity Materials For Better Batteries

Investor Presentation October 2023



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This presentation contains no new information to the market.

# ChemX Corporate Overview



## **Board & Management**













#### Warrick Hazeldine Non-Executive Chair

20+ years' experience across capital markets and strategic communications with a focus on battery materials. Cofounder of advisory firm Cannings Purple. Former Chair and Non-Executive Director of Global Lithium Resources Ltd (ASX:GL1); Director of Surfing WA, Advisory Board Member of Curtin University.

#### Tara Berrie Non-Executive Director

15+ years' experience in the mining, chemical, and construction materials industries, specialising in the battery materials sector for the past 7 years. Tara's experience has spanned a variety of commercial roles including Rivian and Tesla, strategy development, M&A, corporate development and market analysis.

## Alwyn Vorster Non-Executive Director

30+ years' experience in resources, most recently CEO of ASX Listed Hastings Technology Metals Limited, formerly MD of ASX-listed BCI Minerals Ltd, formerly MD of Iron Ore Holdings Ltd and Non-Executive Director of Volt Resources. Previously with Aquila Resources Pty Ltd (Head – Iron Ore and Manganese) and Rio Tinto Iron Ore (Regional Manager – China).

# Stephen Strubel Executive Director / Company Secretary

Company Founder with 20 years' experience in finance and corporate governance. Senior role with Patersons Securities and Director and Company Secretary for ASX-listed companies.

#### Peter Lee Chief Executive Officer

20+ Years' experience across mining, metals processing and chemical industries within Canada and Australia. Previous roles include technical management for tier-one companies in Refining and Electrochemical processes, most recently Executive Process Engineer WSPGolder. Peter is a registered P. Eng EGBC Canada, MAusIMM and MAICD.

## **Sustainability At The Heart Of ChemX**



Building capacity in ESG reporting, systems and funding options.

We live a culture of integrity, trust, innovation and responsibility to drive shareholder value.

Meeting market demand for products that will make better batteries for a decarbonising world.



**Economic** 



**Environment** 



**Social** 



Governance



# **ChemX** Purpose



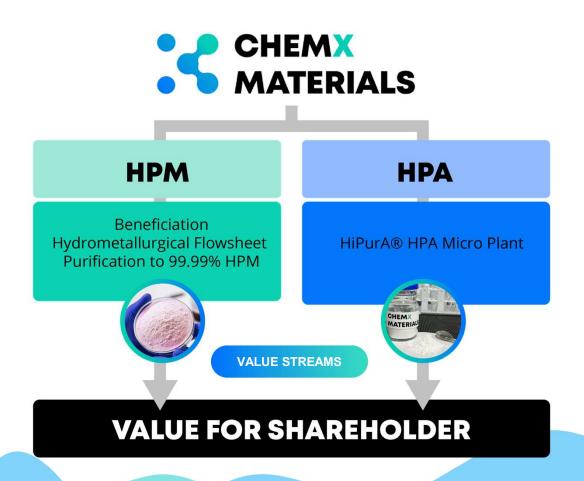
# CHEMX

#### **CHEMX PURPOSE**

Delivering high-purity critical materials from Australia for the global battery industries and semi-conductor markets.

#### **ChemX** Business Model



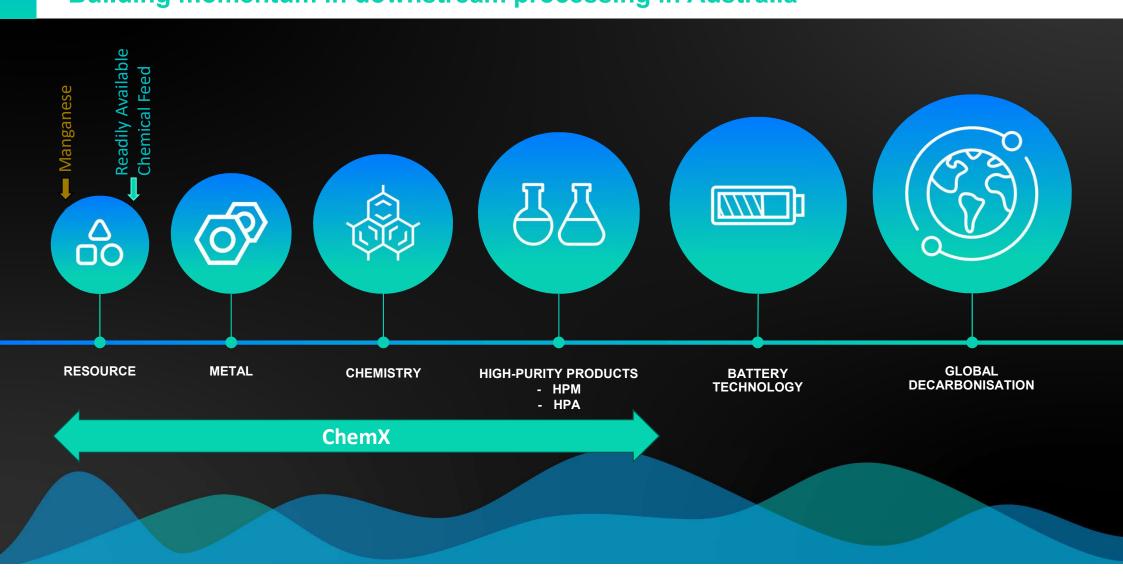


#### **Key Recent ASX Announcements:**

- ❖ 6 September <u>Testwork delivers HPA</u> <u>flowsheet enhancements and HPM</u> market update
- 20 September <u>Maiden Manganese</u> <u>Resource Supports CMX High Purity</u> Strategy
- 29 September Micro Plant Delivers Critical 4N HPA Milestone
- 9 October <u>Tranche 2 Strategic Funding</u> <u>Facility From US Institutional</u> <u>Shareholder</u>

# Integrated Business Model Of High Purity Materials Building momentum in downstream processing in Australia





#### **Strategic Partners**





#### **Pure Battery Technologies (PBT)**

Building a pCAM hub in the Kalgoorlie-Coolgardie region of Western Australia. The Project will initially produce 50,000tpa of pCAM expandable to 100,000tpa within 5 years.

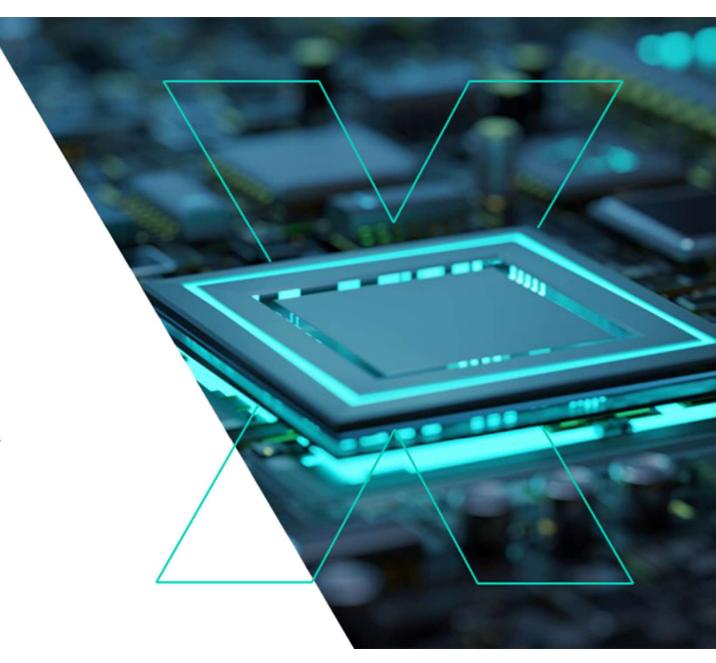
#### C4V

Independent lithium-ion cell manufacturer,
Imperium3 New York (iM3NY), developing the first
US-owned manufacturing facility for lithium-ion
electrochemical cell production.





Delivering A High Purity Alumina (HPA) Value Creation Strategy



## **Our HPA Process**



#### HiPurA® HPA

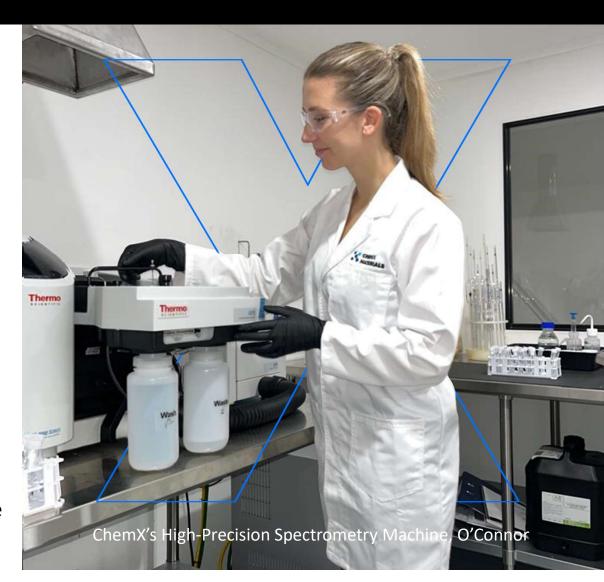
#### High Purity Alumina (HPA) used in:

- Lithium batteries as separator coatings
- Synthetic sapphire for critical applications:
  - Defense, LEDs, and semi-conductors

## ChemX - On Target



- Microplant achieves 99.99% (4N) across 66 elements (O'Connor, WA)
- Pilot plant awarded to procure/construct (O'Connor, WA)
- ✓ In-house laboratory to accelerate
- Aim to product high purity feedstock for
   99.999% (5N) HPA leading to synthetic sapphire



## **Delivering HPA Strategy – Milestones to Monitor**





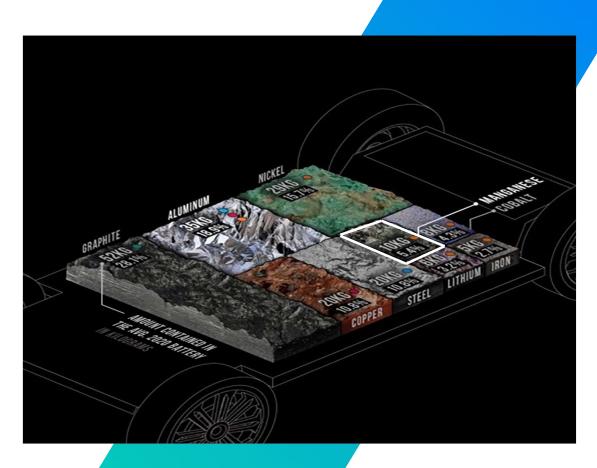
Our High
Purity Manganese
(HPM) Strategy



## **ChemX HPM - Essential In Batteries**



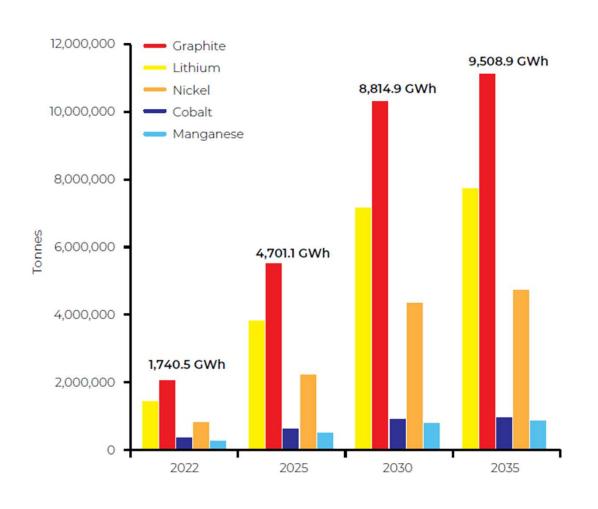
- HPM is an essential lithium-ion battery cathode material – recent escalation in demand and awareness
- HPM provides energy density, battery stability and reduced costs
- Critical material for nearly <u>all</u> predominant commercial battery chemistries



Graphic Elements from Visual Capitalist

# **Gigafactory Raw Material – Manganese Demand**





MATERIAL	2022	2025	2030	2035
LITHIUM	1,425,000	3,841,000	7,218,000	7,789,000
GRAPHITE ANODE	2,054,000	5,547,000	10,402,000	11,220,000
COBALT	336,000	616,000	909,000	954,000
NICKEL	805,000	2,217,000	4,365,000	4,759,000
MANGANESE	246,000	503,000	787,000	848,000
TOTAL GWh	1,740.5	4,701.1	8,814.9	9,508.9

Source: Benchmark Mineral Intelligence, June 2023

## **Manganese - Escalating Demand**



# COMMERCIALLY AVAILABLE

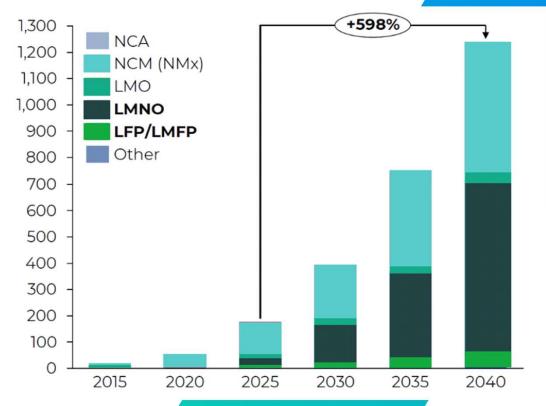
NMx: Reportedly 5% cheaper than NCM, cobalt free.

LNMO: In development since early 2000s but only just at commercialization.

#### **IN DEVELOPMENT**

LMFP: CATL started commercial production in 2022, several others in development.

#### Manganese demand supported by emerging chemistries



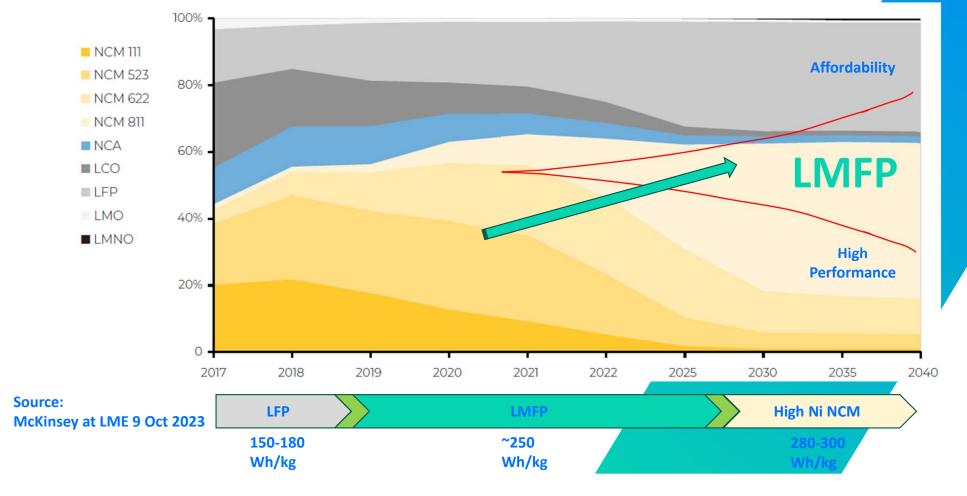
Source: Benchmark Mineral Intelligence, 2022

# **LMFP Chemistries – Emergent and Understated**



#### **Production Capacity by Cathode Type**





# **ChemX - Strategic Asset Development**







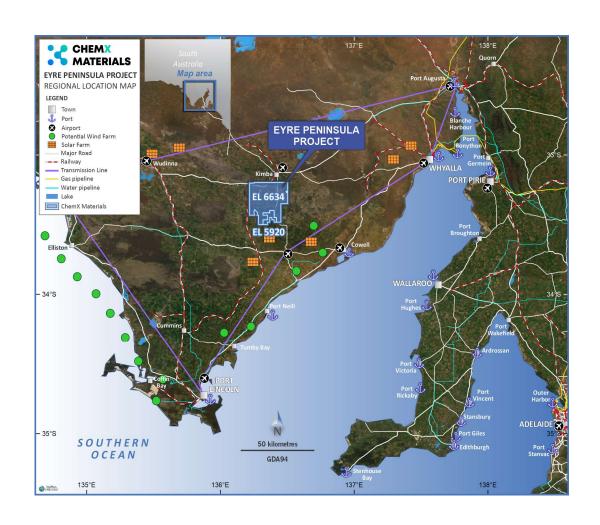




#### South Australia - Infrastructure Rich, Competitive Advantage



- Located within premier renewable energy province with rapidly developing renewable energy infrastructure (wind, solar and future hydrogen)
- Sealed roads, approx. 160km to understated Port of Whyalla
- Local skilled workforce with major regional airport for workforce expansion
- 5<sup>th</sup> generation freehold farmland



# **Manganese Resource Definition Advanced**



- ✓ CYQ1 2022 Exploratory drilling completed
- CYQ1 2023 Resource definition drilling completed
- ✓ JORC Mineral Resource Announced (13MT @ 5.7%Mn)
- ✓ Summer 23/24 drill program in planning to "double both tonnage and grade".



#### Mineral Resources Disclosure



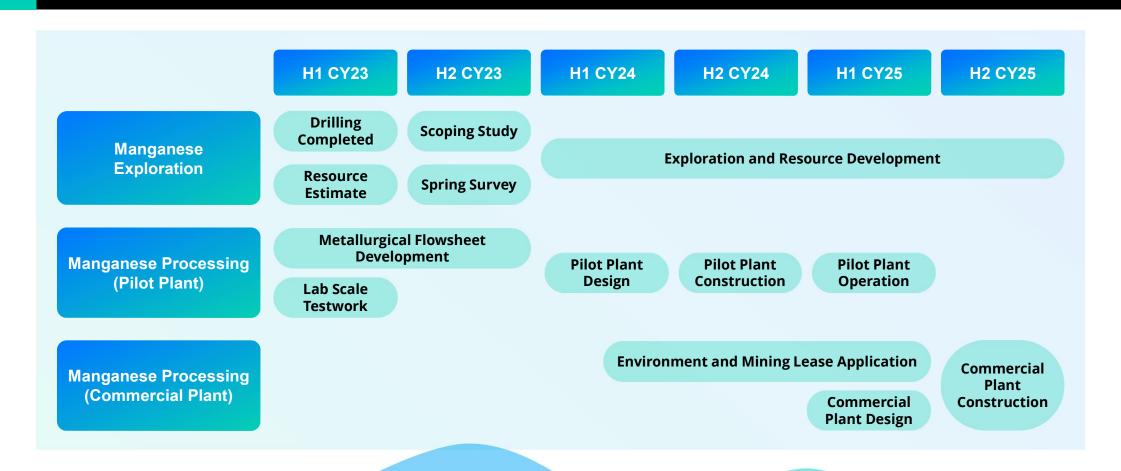
Information on historical exploration results and Mineral Resources for the Jamieson Tank Manganese Project presented in this announcement, together with JORC Table 1 information, is contained in an ASX announcement released on 20 September 2023.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant market announcements, and that the form and context in which the Competent Persons findings are presented have not been materially modified from the original announcements.

Where the Company refers to Mineral Resources for the Jamieson Tank Manganese Project in this announcement (referencing previous releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the Mineral Resource estimate in that announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not materially changed from the original announcement.

## **Delivering HPM Strategy – Milestones to Monitor**





#### Inflation Reduction Act (IRA) - A Development Pathway Partnership for CMX



- Potential HPA plant close to existing industry and strategic battery making facilities.
- ChemX occupies a market space that is high-purity, low-emissions, innovative and committed to unlock the potential of Australia's mineral wealth. Doing it with innovation.
- IRA calls for <u>no</u> manganese sources from China by 2025, but manganese ore / concentrate / refining projects > 3 to 5 years to develop - time to act is <u>NOW</u>.
- China currently supply 95% of global manganese sulphate from 8% of global manganese mining supply.
- Seeking to secure non-Chinese offtake.
- Eager to work with strategic partners to establish and accelerate new supply chains.



#### Why Invest In ChemX Materials (ASX:CMX)



# Strong leadership under CMX Board and CEO Peter Lee 100% ChemX owned

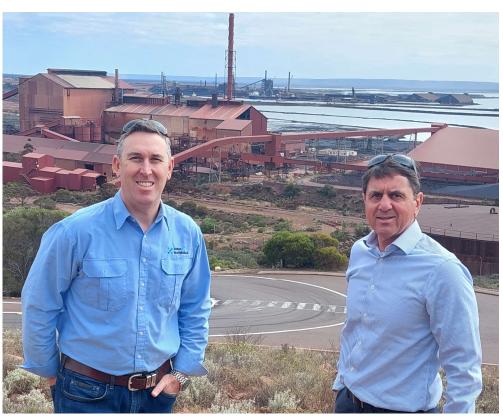
- Tenements (Manganese, Kaolin, REE)
- HiPurA<sup>®</sup> High-Purity Alumina process (patent pending)

#### **High-Purity Manganese (HPM)**

- ✓ In-fill drill completed
- ✓ Maiden mineral resource announced (13Mt @5.7%Mn)
- ✓ Internal scoping study commenced with Wood
- ✓ 2024 exploration advanced to double tonnes & grade

#### **High-Purity Alumina (HPA)**

- ✓ Microplant achieves 99.99% (4N) purity (66 elements)
- ✓ Internal laboratory capability expanded
- Pilot plant delivery accelerated
- Ongoing global marketing (Europe, USA, Asia)



Recent siting visit to Whyalla. Pictured: Peter Lee (CEO) and Alwyn Vorster (Non-Executive Director)



# **Thank You**

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