PURE LITHIUM

Lithium Metal: The Next Generation Battery

Prepared for NaatBatt 2022
Top 10 New Battery Companies of 2022
Emilie Bodoin, Founder & CEO

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Pure Lithium Leadership

Emilie Bodoin, Founder and CEO

10 years of experience in the lithium and battery industries

4 granted patents for high purity Li-metal & batteries, numerous pending applications

Co-Founder Professor Don Sadoway and Founder Emilie Bodoin

Professor Don Sadoway, Co-Founder and CSO

45 years with MIT Dept. Materials Science

Expert in battery technology, granted 35+ patents

BOSTON METAL	Co-founder, invented M.O.E. technology to make green steel, Boston Metal raised $76M in 6 rounds
SES Beyond Li-ion™	Technology developed in GroupSadoway Lab at MIT, SPAC $3.6B
Ambri Batteries for clean energy	Co-founder, inventor of Liquid Metal Battery for grid level storage - recent fundraise for $144M
	Chosen by TIME as one of the most Influential People of the Year, 2012

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Pure Lithium Lab

Established January 1, 2021

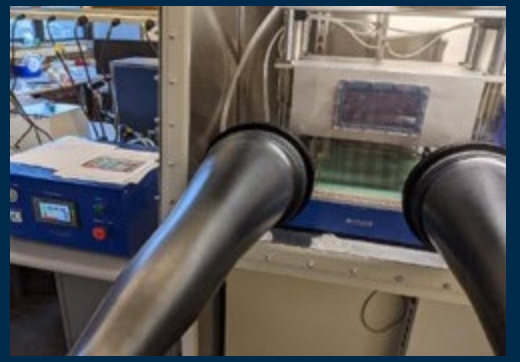
HQ in Boston, MA

Advanced analytical capabilities including SEM & ICP-OES

Proximate to MIT, Harvard & Logan Int. Airport

Producing lithium metal electrodes, polymer electrolytes & batteries

PL Pouch Cell



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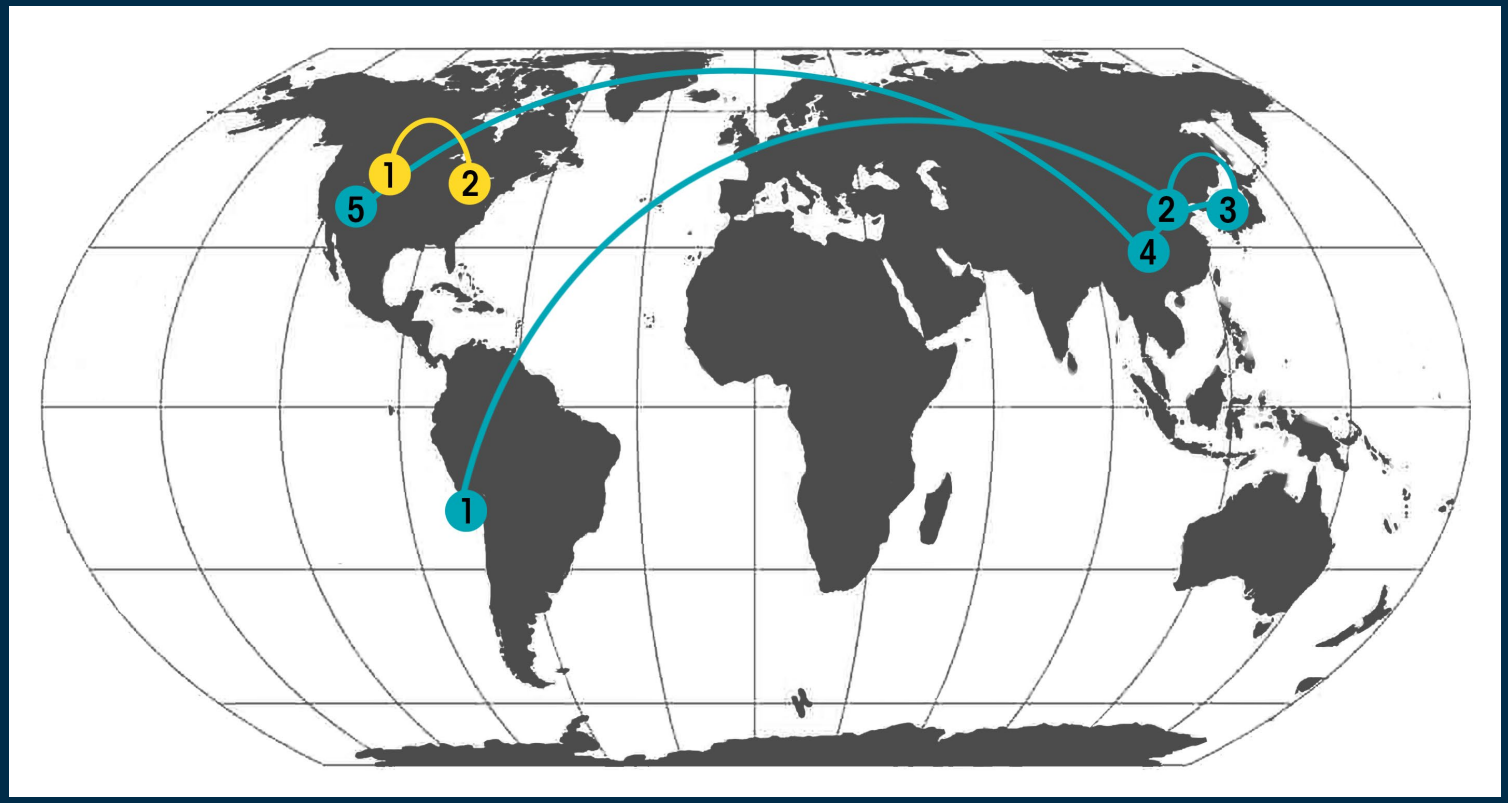
Pure Lithium's Mission

Our mission is to enable the mass adoption of the lithium metal battery by:

1. Getting lithium from the ground into a battery as quickly, sustainably, and inexpensively as possible
2. Manufacturing the purest lithium metal as a battery electrode
3. Commercializing safe, non-flammable high energy density batteries for EVs



Blue = current Lithium route
Yellow = Pure Lithium US sourcing route

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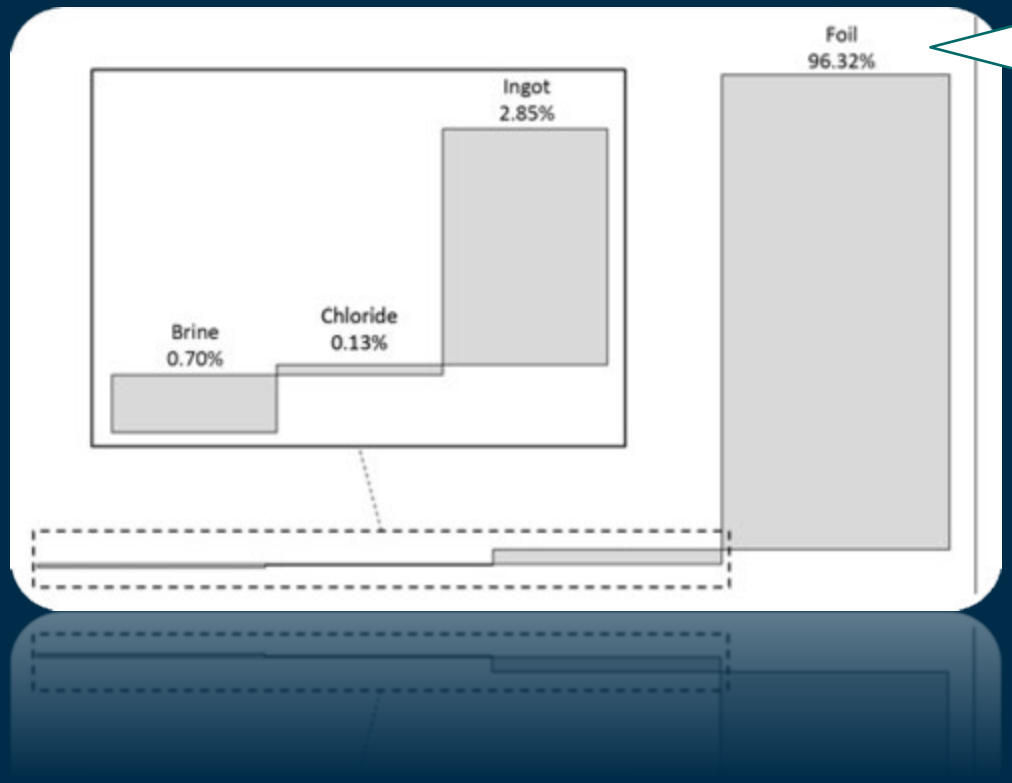
Current Manufacturing Challenges: Ingot Extrusion and Physical Vapor Deposition

Incumbent Material Costs

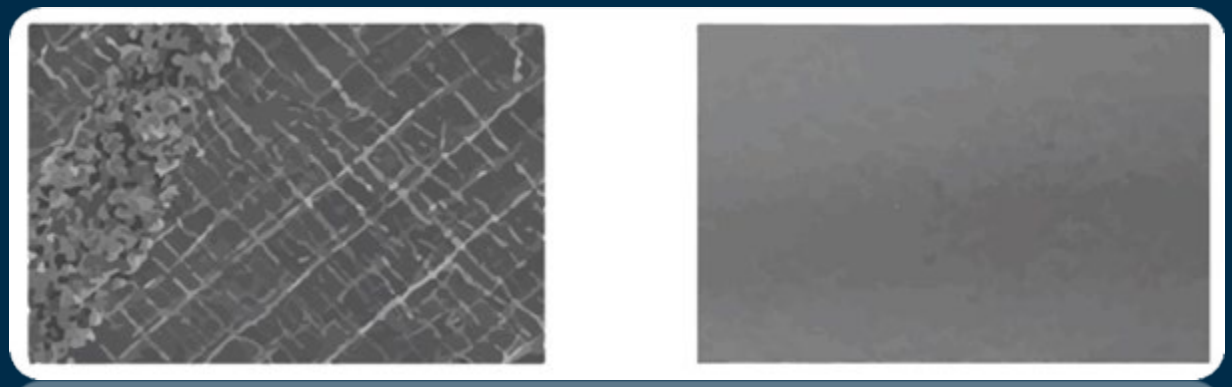


96.32% of cost for lithium metal is in extrusion

"Today's lithium metal foil is insufficient for rechargeable lithium metal batteries."- ARPA-e

Lithium Foil Purity:
99.0% 750 µm thick.

Pure Lithium Anode Purity:
99.998% < 5 µm – 30 µm



*Taken from "Securing Lithium Foil Supply in a Future Imbalanced Market" Jónsson and Larsson, Chalmers University of Technology, Feb. 20168

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Lithium Metal Production Cost Comparison in $/kWh

$3647	Ingot Extrusion
$655	Physical Vapor Deposition
$15.75	Pure Lithium
$6.70	Pure Lithium Target

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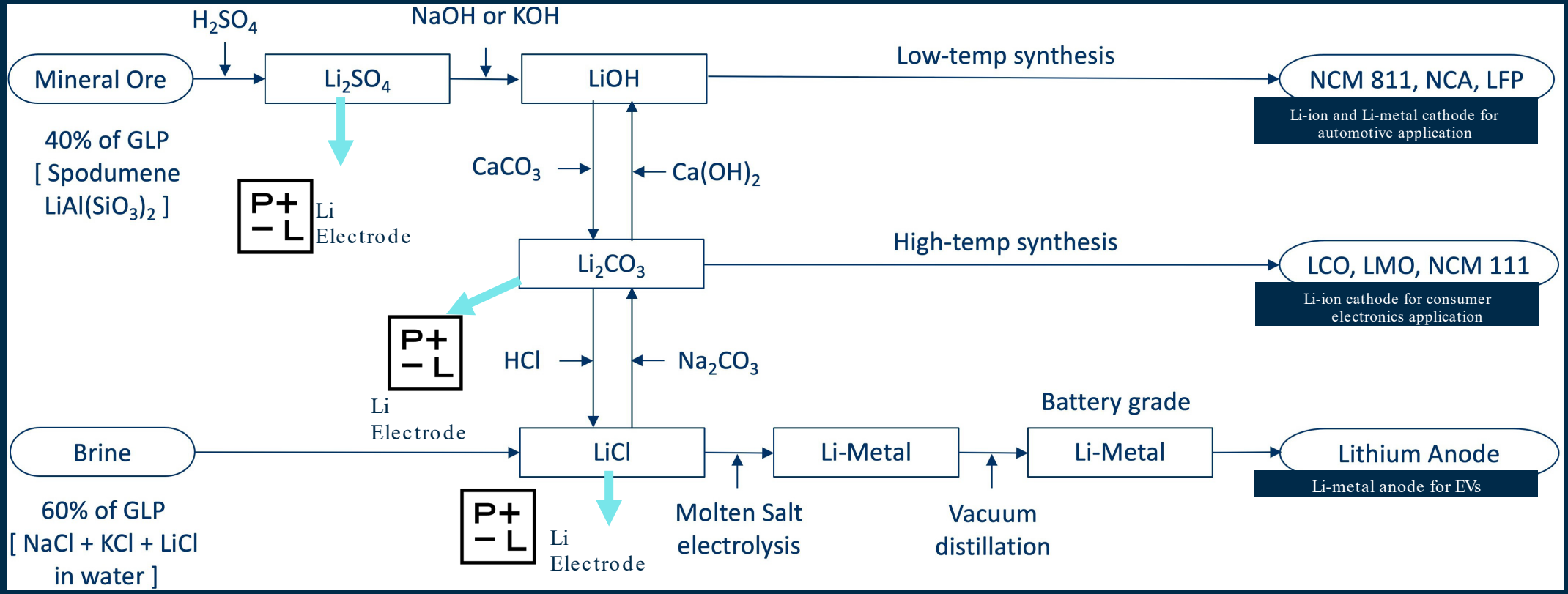
Pure Lithium Supply Chain Intervention



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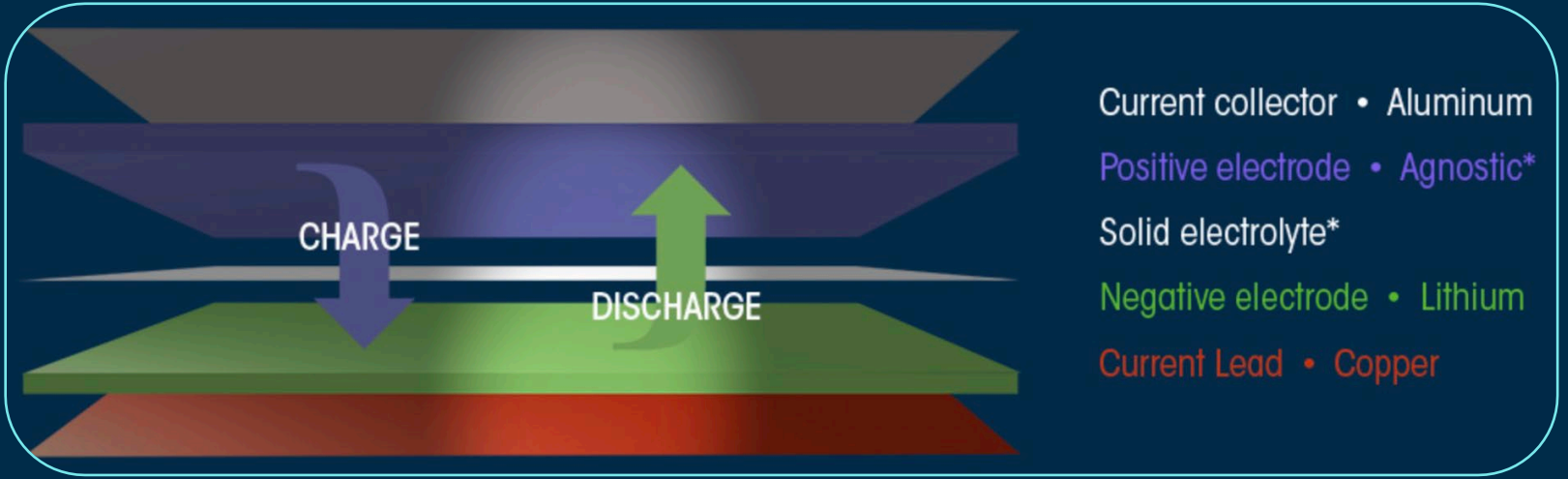
Pure Lithium's Lithium Metal Battery Redefines Metrics



- ✓ Non-flammable liquid & solid electrolytes
- ✓ Salt to battery in a charged state
- ✓ Cathode agnostic
- ✓ New class of low-temp molten salts

1. Start with brine containing dissolved lithium salts
2. Solid electrolyte selectively extracts lithium from the brine and deposits lithium metal onto copper substrate
3. Lithium metal negative electrode and solid electrolyte joined by positive electrode

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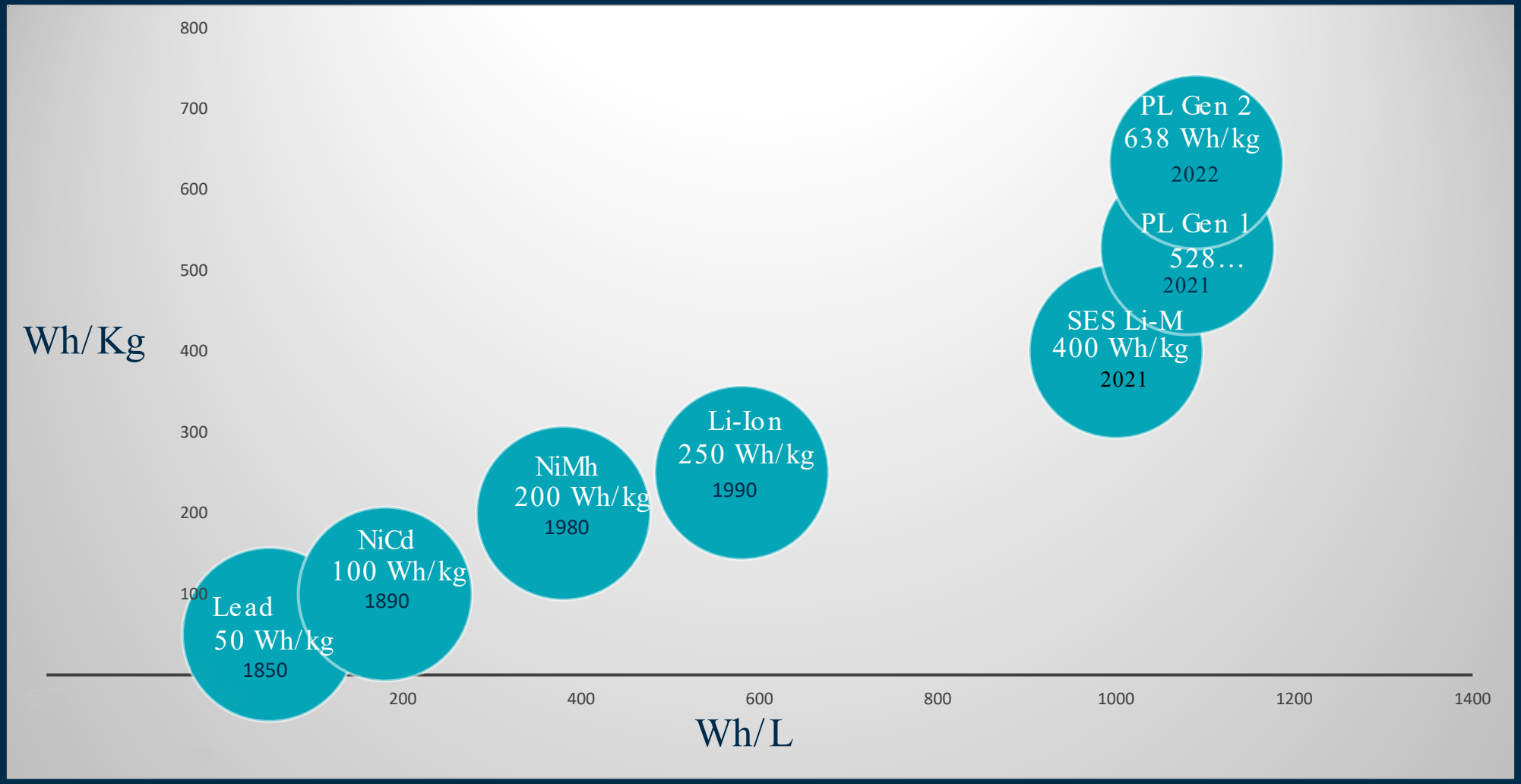
Gen 1 Chemistry Demonstrated 528 Wh/Kg in 2021



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