

LICAP

Unleashing the Power of Activated Dry Electrode™

Dr. Katharina Gerber,
Sr. Director Business Development
katharina.gerber@licaptechnologies.com

Gold Battery Rush Days

The demand for batteries is growing rapidly, creating opportunities for companies & investors to strike “battery gold”.



The competition is fierce, only the best companies with the most efficient and cost-effective technologies will come out on top.



“in a gold rush, the wise man is not the one who strikes gold, but the one who sells the shovels”

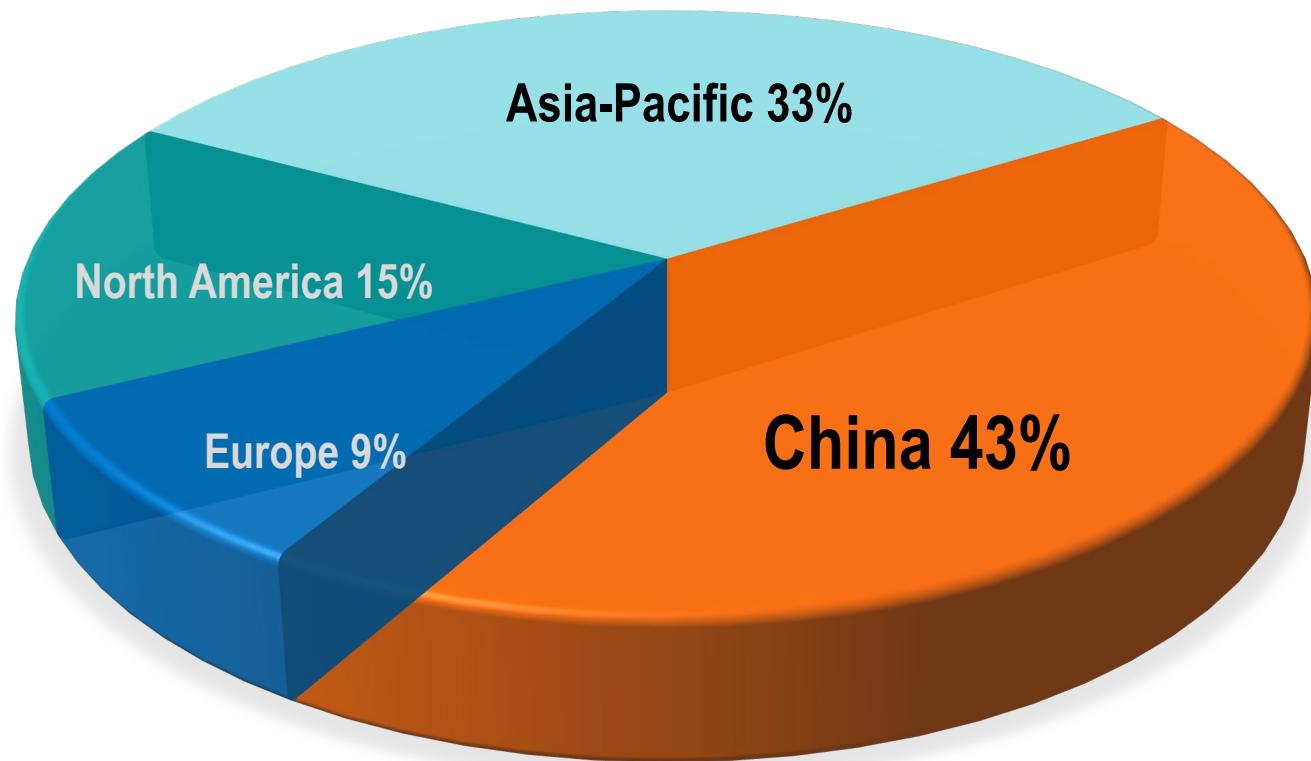


Activated Dry Electrode™:
Process and turnkey equipment solutions



Problem: Looming Supply Chain Bottlenecks

Wet Electrode Coating Equipment Suppliers by Region



McKinsey
& Company

- Asia-based equipment manufacturers for slurry mixing and wet electrode coating processes dominate supply chain with 76%.
- Manufacturing **output** is at **95% capacity**, leaving little room for further increase
- US and EU battery cell manufacturers and EV OEMs are likely to face a **bottleneck** in equipment supply that will place their planned start of production at risk.

Problem: Battery Cost and Sustainability

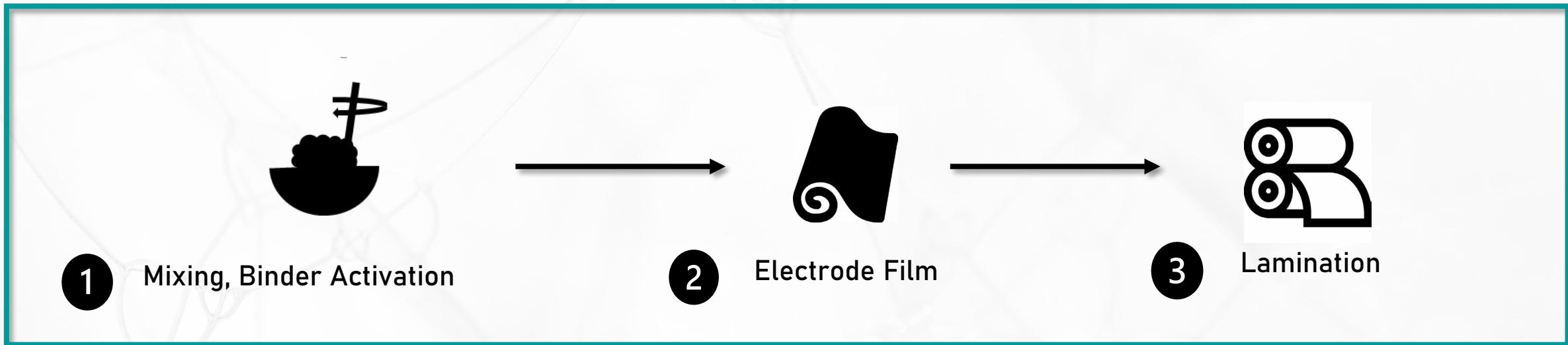
real 2022 \$/kWh



- Raw material will remain expensive. **Manufacturing costs can and must be reduced.**
- **Wet Electrode** process is the major cost and CO₂ emissions contributor.
- **Nearly 1/2 of CAPEX and OPEX** of battery cell manufacturing is associated with wet electrode coating.

Our Solution – Activated Dry Electrode™

LiCAP's patented Activated Dry Electrode™ process and equipment lines remove toxic solvent and huge energy-consuming drying ovens from Gigafactories, eliminate space-consuming solvent recovery system, and enable high energy and power density in battery cells.



CAPEX:
20% Reduction

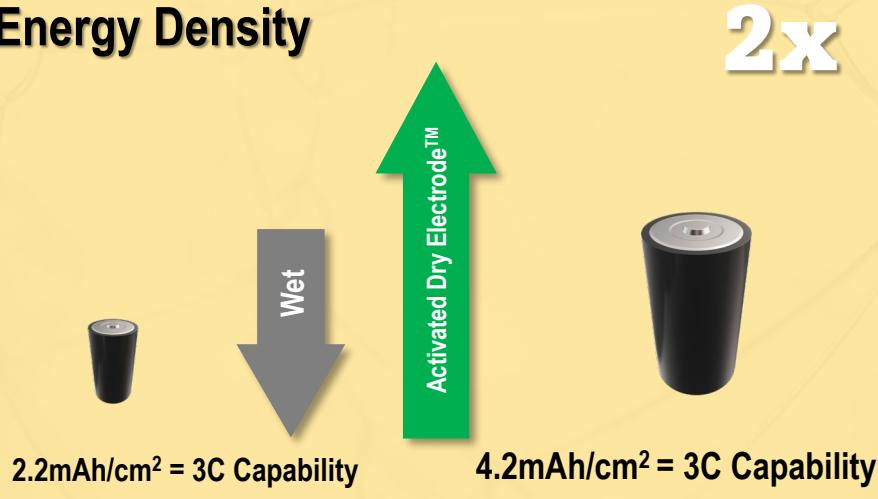
Energy Consumption:
70% Reduction
(3 kWh / 1kWh battery storage)

Manufacturing Footprint:
65% Reduction

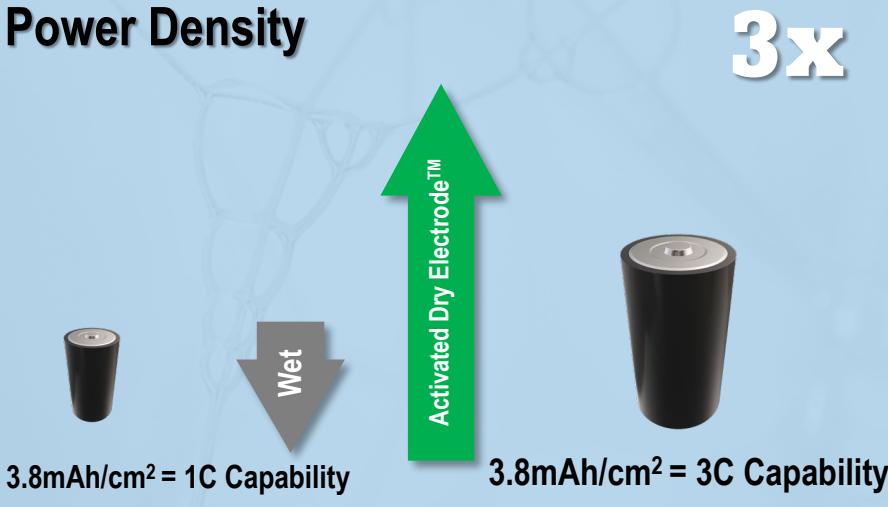
Carbon footprint:
70% of Total
(1.5 kg CO₂ / 1kWh)

Performance Improvement

Energy Density

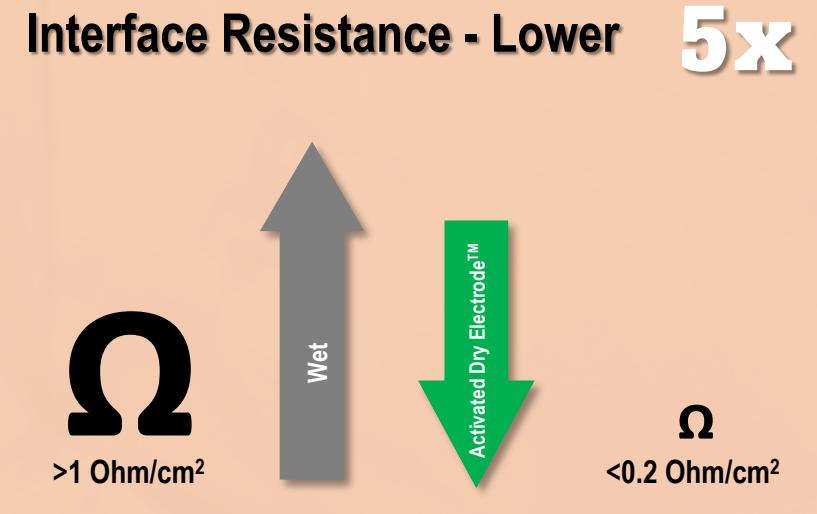


Power Density



Activated Dry Electrode™ outperforms wet electrode in several KPIs: **energy density, power density, bulk resistance, interfacial resistivity, compatibility with SSB materials**

Interface Resistance - Lower

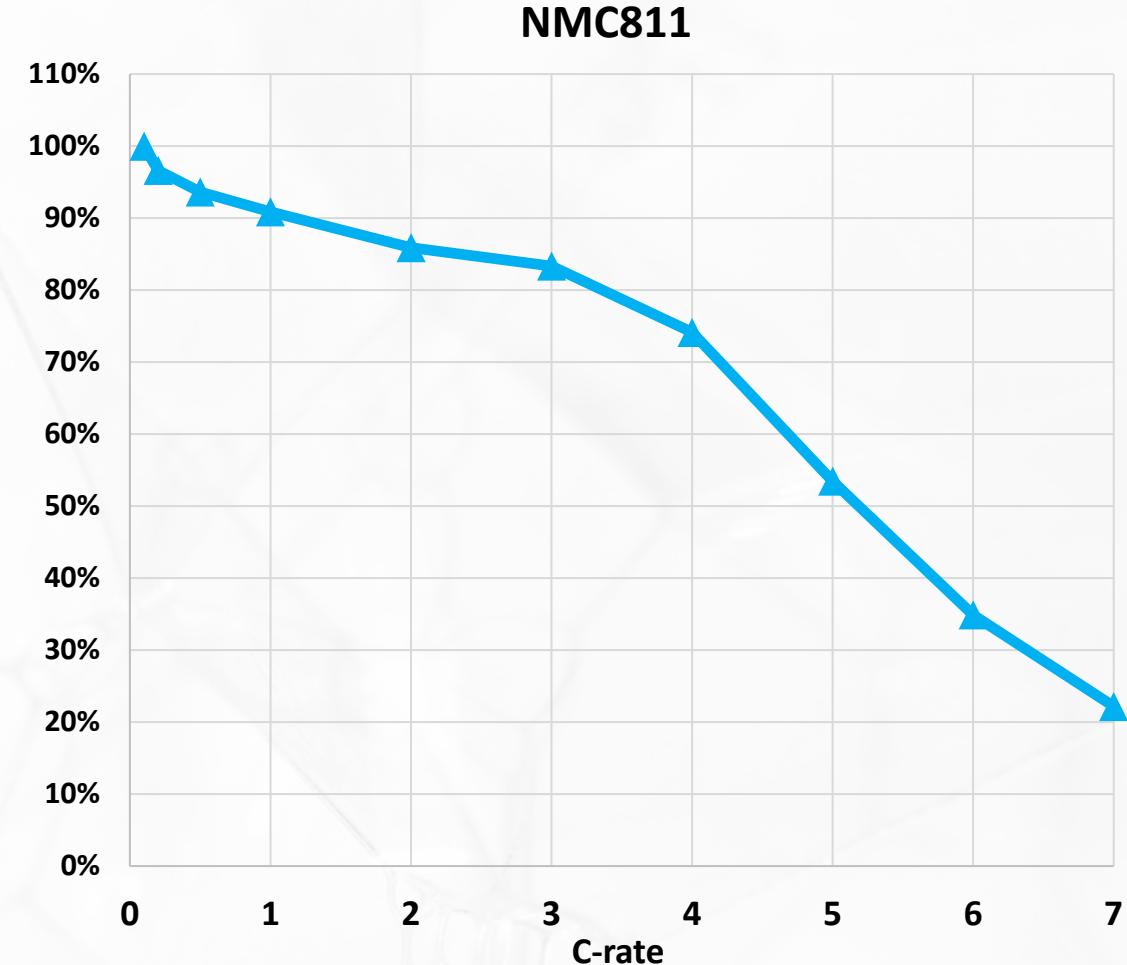
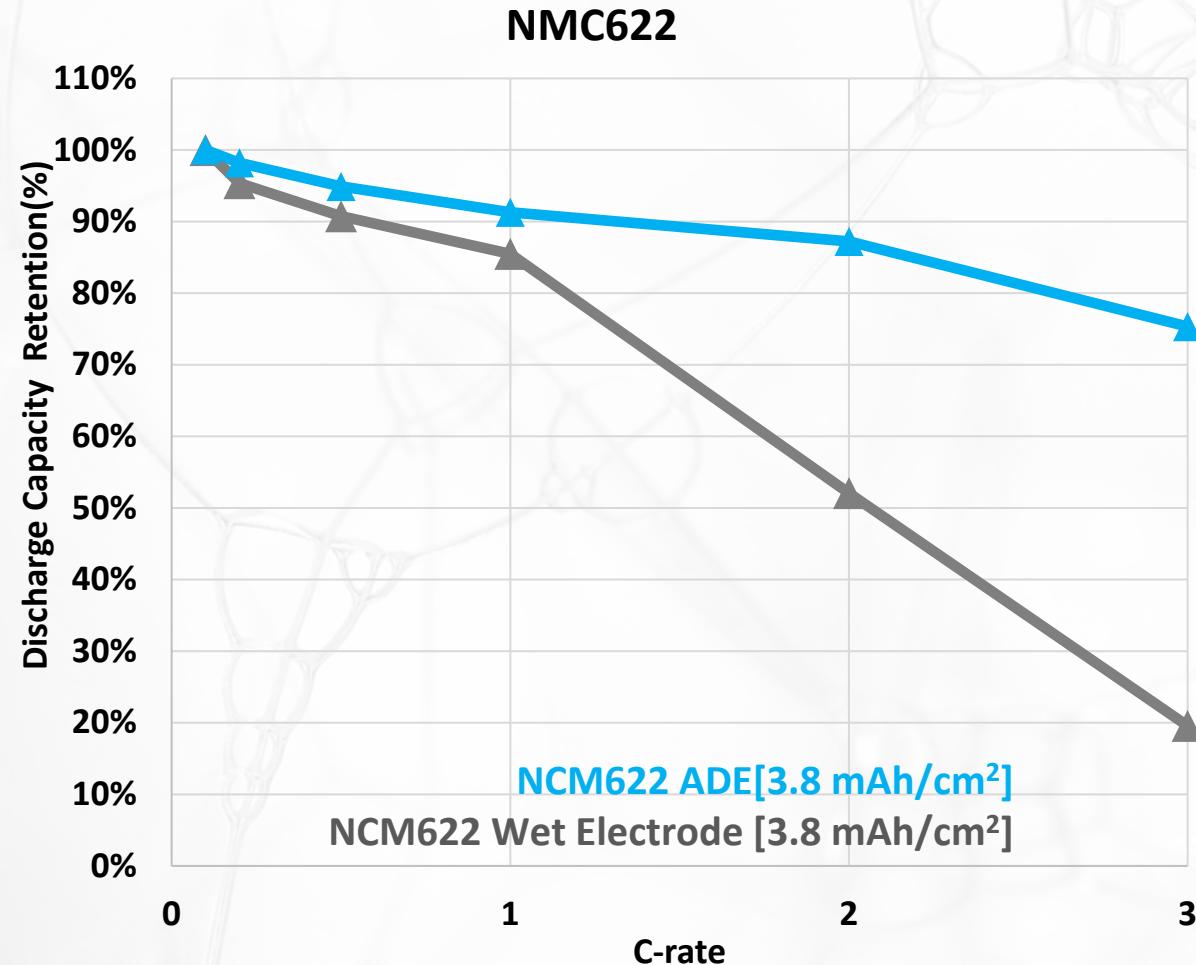


Compatibility with Solid-State Battery



Unleashing Power in Battery Cells

Activated Dry Electrode™ outperforms commercial wet electrode and allows fast charge/discharge



Empowering Battery Industry

