



UV Curing Technology
for a Greener Battery.

NAATBatt
INTERNATIONAL



UV curable Binders
and Lamp Systems

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Manufacturer of High-Powered
Industrial UV Curing Systems

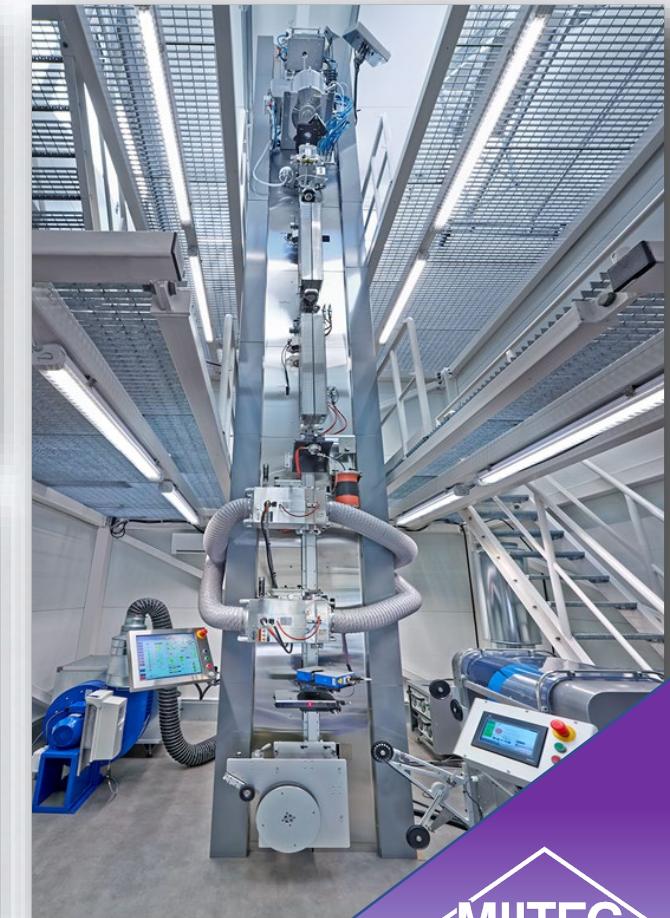
Developing UV Processes for Li-Ion
Cell Manufacturing since 2009

Dedicated Team of Scientists and
Engineers Creating UV-Binder

Privately Held Corporation
Established in 1989
Stevensville, MD-USA

UV Curing:

Eco-Friendly - Quick – Safe – Cost efficient



MILTEC UV Process and Product Portfolio

Development

- Extensive knowledge of UV Polymer Formulation and Li-Ion Batteries
- Collaboration with Global Battery Manufacturers
- Strong Relationships with Process Equipment Manufacturers

Products

- UV Curable Binder Chemistry
- UV Curing Lamp Systems

Intellectual Property

- Broad Global Patent Protection

Cathodes

NMC, LFP, NCA, BMLMP,...

Ceramic Coatings on Separators and Electrodes

Gel Polymer Electrolytes

Anodes

Silicon, LTO, ...

Solid State Ceramics

Specialty Adhesives

Patented UV technology replaces legacy binders and thermal drying methods

-  Maintain or improves cell performance
-  Replace toxic solvents
-  Lower energy use
-  Reduce equipment investment
-  Require less floor space
-  Increase manufacturing speed
-  Integrate with existing manufacturing equipment



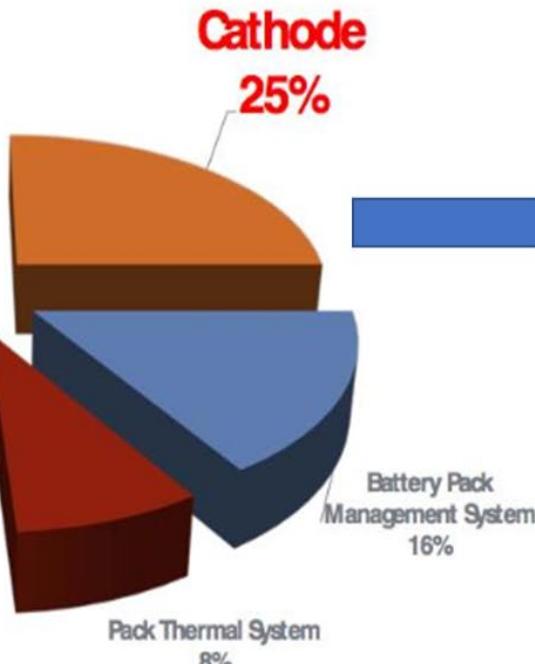
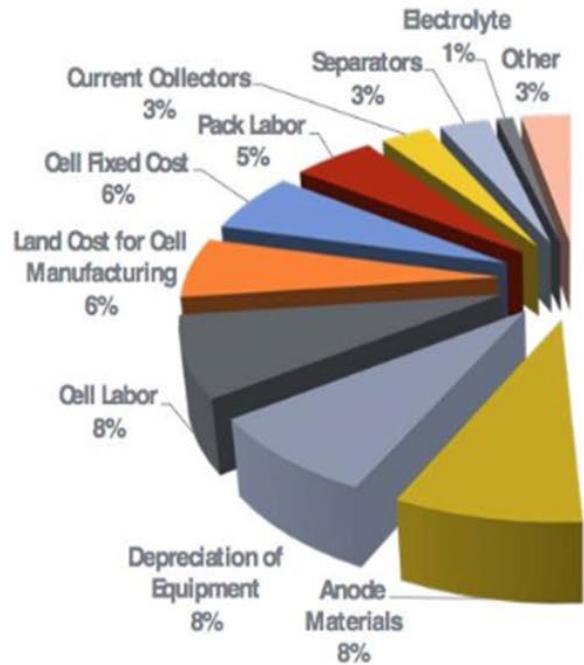
Safer for employees and the environment



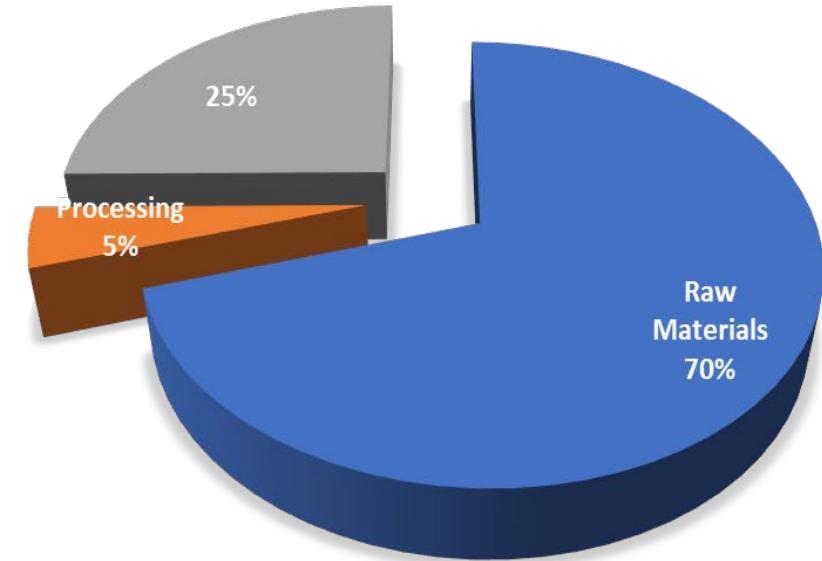
Significant manufacturing cost reduction

Example: UV Process for NMC-811 Cathode Coating

Cost Breakdown of Lithium Ion Battery Pack



Cathode Cost with UV Binder



<http://articles.sae.org/14195/>

UV-Curable Binder Reduces
Cathode Processing Cost by 85%



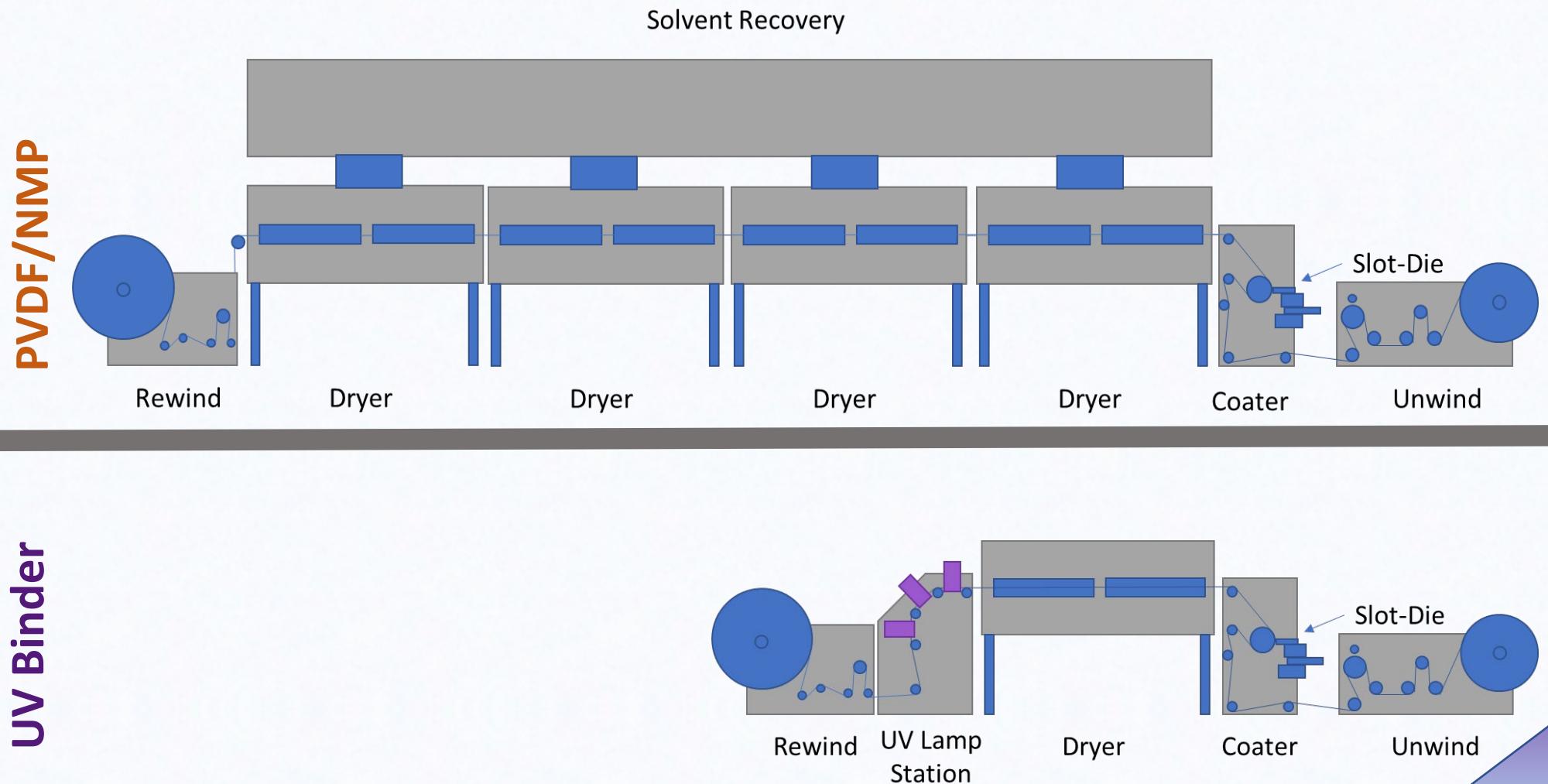
UV-Curable Binder Reduces
Cathode Cost by 25%



UV-Curable Binder Reduces
Battery Pack Cost by 5%

Example: UV Process for NMC-811 Cathode Coating

- Replace PVDF with UV curable Binder
- Eliminate NMP



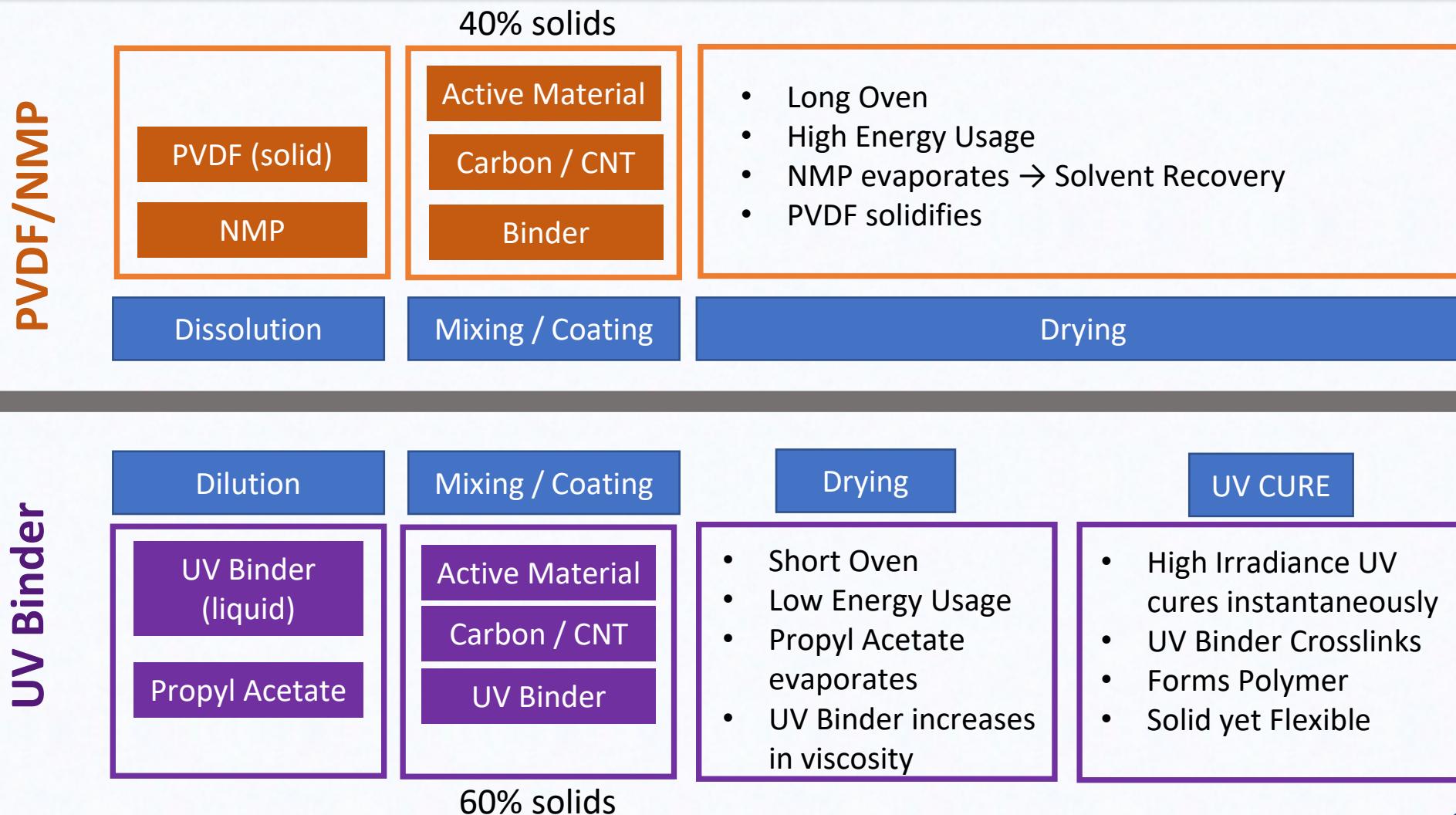
Example: UV Process for NMC-811 Cathode Coating



Replace PVDF with UV curable Binder



Eliminate NMP





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