



Positively Innovative



Feb.7-10th
2022

NAATBatt Annual Meeting & Conference 2022

Kelly Koliopoulos, Daikin Vice President Application Development

DAIKIN AMERICA, INC.

Americas



Europe



Asia



Daikin Industries, Ltd.

- Founded **1924**
- **\$23 Billion** revenue
- **84,870** employees

Chemicals Division

- **\$1.5 Billion** revenue
- **4,000** employees

Daikin Is One Of The Largest Global Manufacturers Of Fluorochemical Products



Automotive Segment HQ



Region HQ



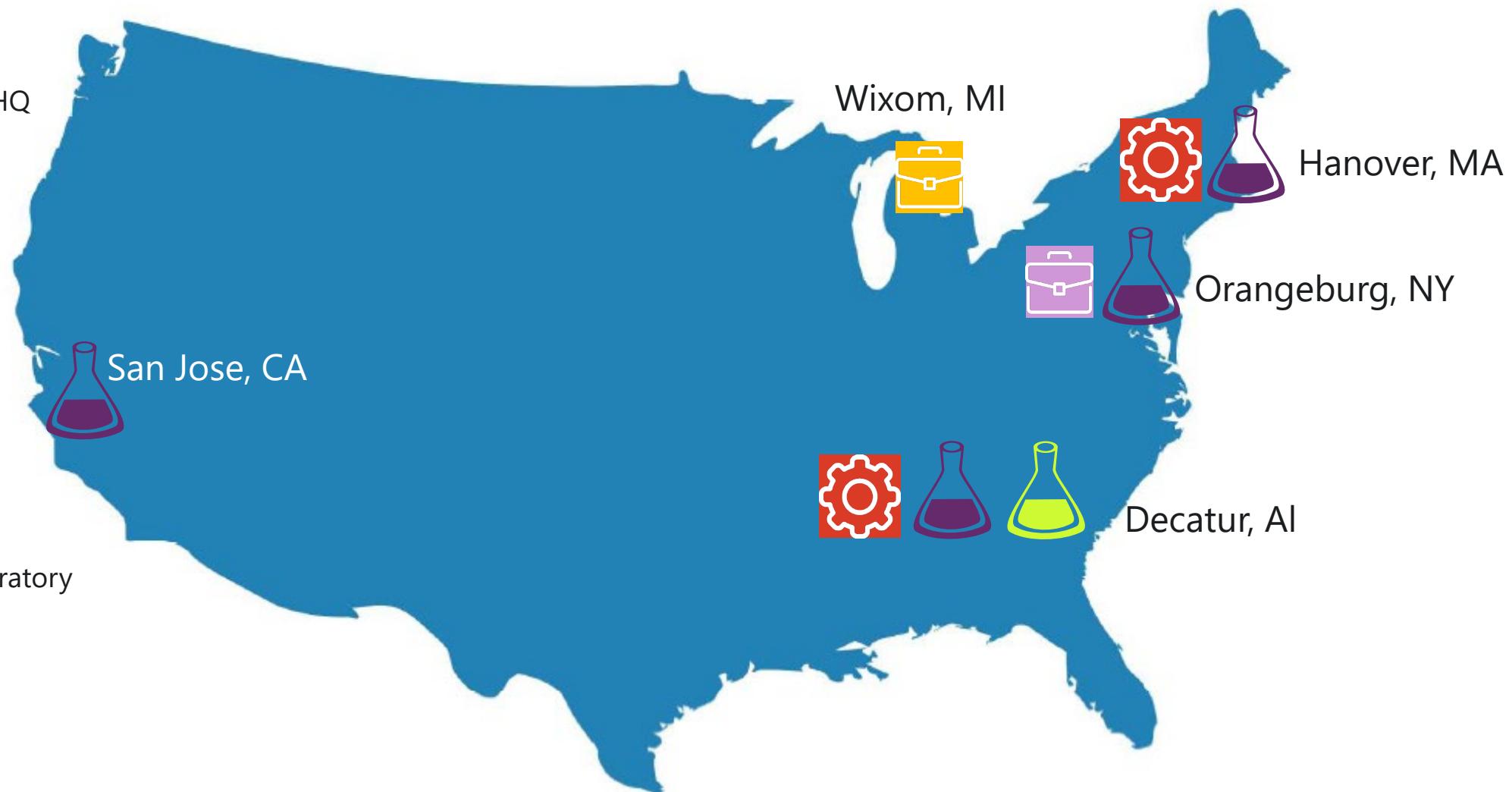
Manufacturing



Central R&D



Technical Service Laboratory



Daikin America's Business Is Established, Investing And Growing

Water & Oil Repellency



Corrosion & Chemical Resistance



Electrical Insulation



Anti Adhesion



Weather Resistance



Low Refractive Index



Fluorspar

Heat & Flame Resistance



Low Gas Permeability



Fluorochemicals Provide Excellent Heat / Chemical / Weather Resistance, Non-Stick / Repellency / And Electrical Stability

Industries and Materials



Daikin Materials Enable Our Customers To Create Innovative Solutions Across A Range Industries.

Gasket material

Long-term reliability

- Excellent Sealing,
- Chemical resistance
- Low moisture permeability
- Heat resistance

Chemical resistance

Electrolyte additive & solvents

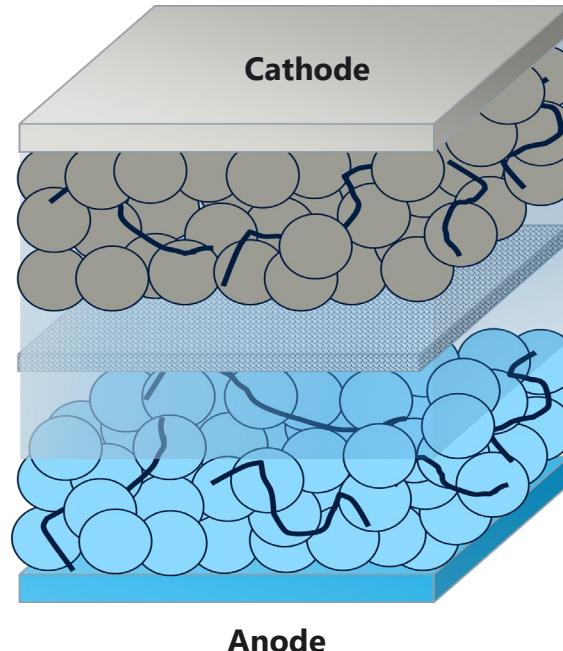
Increased power

Suppressed Gassing

Improved safety non-flammable

High voltage enabler

Lithium-Ion Battery (conventional)



Cathode binder

High-capacity

- Increased energy density
- Flexible and crack resistant
- Improved slurry stability with a Hi-Ni cathode

Flexibility

Cathode Binder with SWCNT

High adhesion

Low resistance

- A high density and crack resistant
- Higher adhesion, conductivity
- Improved slurry stability with a Hi-Ni cathode



Cathode binder – dry process

Eco-friendly

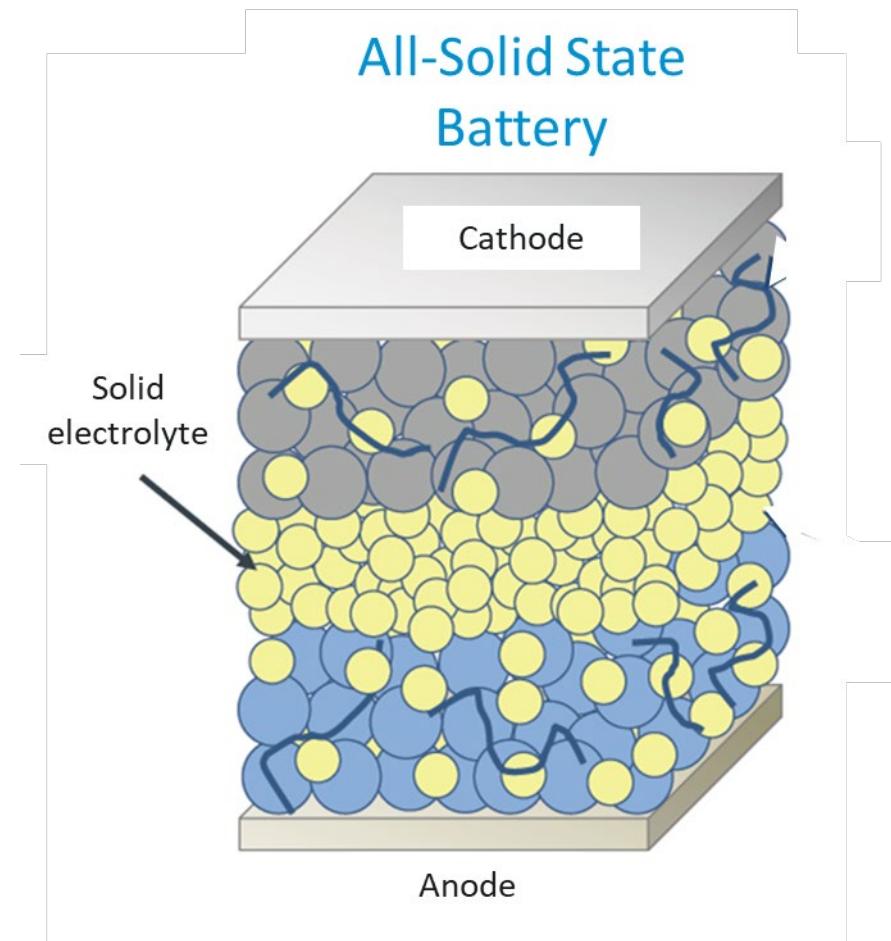
Cost down

- Higher energy density (cathode thickness)

Increasing Range, Reliability, and Safety – Focus for Daikin Lithium-Ion Battery Team

Polymer Electrolyte

- Development with ASTRABAT (EU consortium)



ASTRABAT will investigate and develop a new Li-ion cell architecture with an **all-solid-state electrolyte** design suitable for the use of new high-energy electrode materials and mass production.

R&D Investments And Collaborations For Battery Improvement

- Daikin has Global Reach and Local Focus
 - USA Manufacturing, Technical Service and R&D, Including a Full Scale Battery Cell Lab
- Electric Vehicles and Batteries are Important to our Past, Present and Future
 - Daikin Has 25 Years Of Battery Materials Innovation Experience
 - Binder Materials, Gasket Materials and Electrolytes Increase Range, Reliability and Safety
- Ready to Collaborate

Daikin Is Excited To Be Part Of This Energy Journey

Kelly Koliopoulos

*Vice President Applications
Development*
Daikin America, Inc.
20 Olympic Drive,
Orangeburg, NY 10962
Tel 1 (484) 366-7817
kkoliopoulos@daikin-america.com

Kathleen T. Quick

Automotive Director
Daikin America, Inc.
28345 Beck Rd, Suite 211,
Wixom, MI 48393
Tel. 1 (845) 641- 4352
kquick@daikin-america.com

Janet Maxwell

ジャネット マクスウェル
Automotive Business Development Executive
Daikin America, Inc
28345 Beck Rd, Suite 211, Wixom, MI 48393
Tel: 1 (810) 845-8505
jmaxwell@daikin-america.com

<https://www.daikinchemicals.com/>
<https://daikin-america.com/automotive/>

Thank You



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