



# Advancing Domestic, High-Performance, and Cost-Effective Hard Carbon and Carbon Nanotubes for Na-Ion Batteries

Hui Dong, Ph.D.

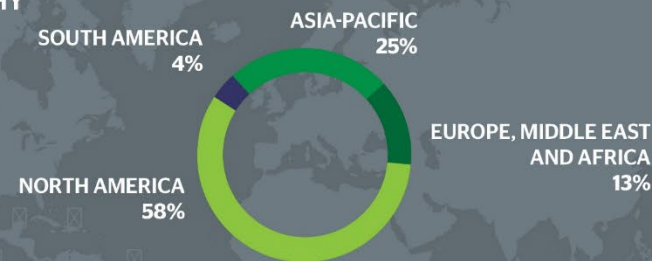
Manager of Energy Storage

Nov. 18, 2025



# INGEVITY (NGVT) AT A GLANCE

## 2024 NET SALES BY GEOGRAPHY



## OUR BUSINESS IN 2024

NET SALES

**\$1.4**  
BILLION

ADJ. EBITDA MARGIN<sup>1</sup>

**25.8%**

**\$3.51**  
DILUTED  
ADJUSTED EPS<sup>1</sup>

PERFORMANCE MATERIALS  
SALES

**\$609.6**  
MILLION

ADVANCED POLYMER  
TECHNOLOGIES SALES

**\$188.6**  
MILLION

PERFORMANCE CHEMICALS  
SALES

**\$608.2**  
MILLION

## OUR COMPANY

EMPLOYEES GLOBALLY

**~1,600**

MANUFACTURING  
SITES

**11**

LOCATIONS

**24**

**7**  
TECHNICAL CENTERS

WE DO  
BUSINESS IN

**75**  
COUNTRIES

### PERFORMANCE MATERIALS

#### Carbon Technologies



#### MARKETS

- Automotive
- Food and beverage purification
- Water Treatment

### ADVANCED POLYMER TECHNOLOGIES

#### Caprolactone Technologies



#### MARKETS

- Automotive and transportation
- Bioplastics
- Consumer packaging
- Footwear and apparel
- Industrial equipment
- Medical and health

### PERFORMANCE CHEMICALS

#### Industrial Specialties



#### MARKETS

- Adhesives
- Agricultural chemicals
- Industrial intermediates
- Lubricants
- Oilfield
- Rubber

#### Road Technologies






#### MARKETS

- Pavement construction
- Pavement markings
- Pavement preservation
- Pavement reconstruction and recycling

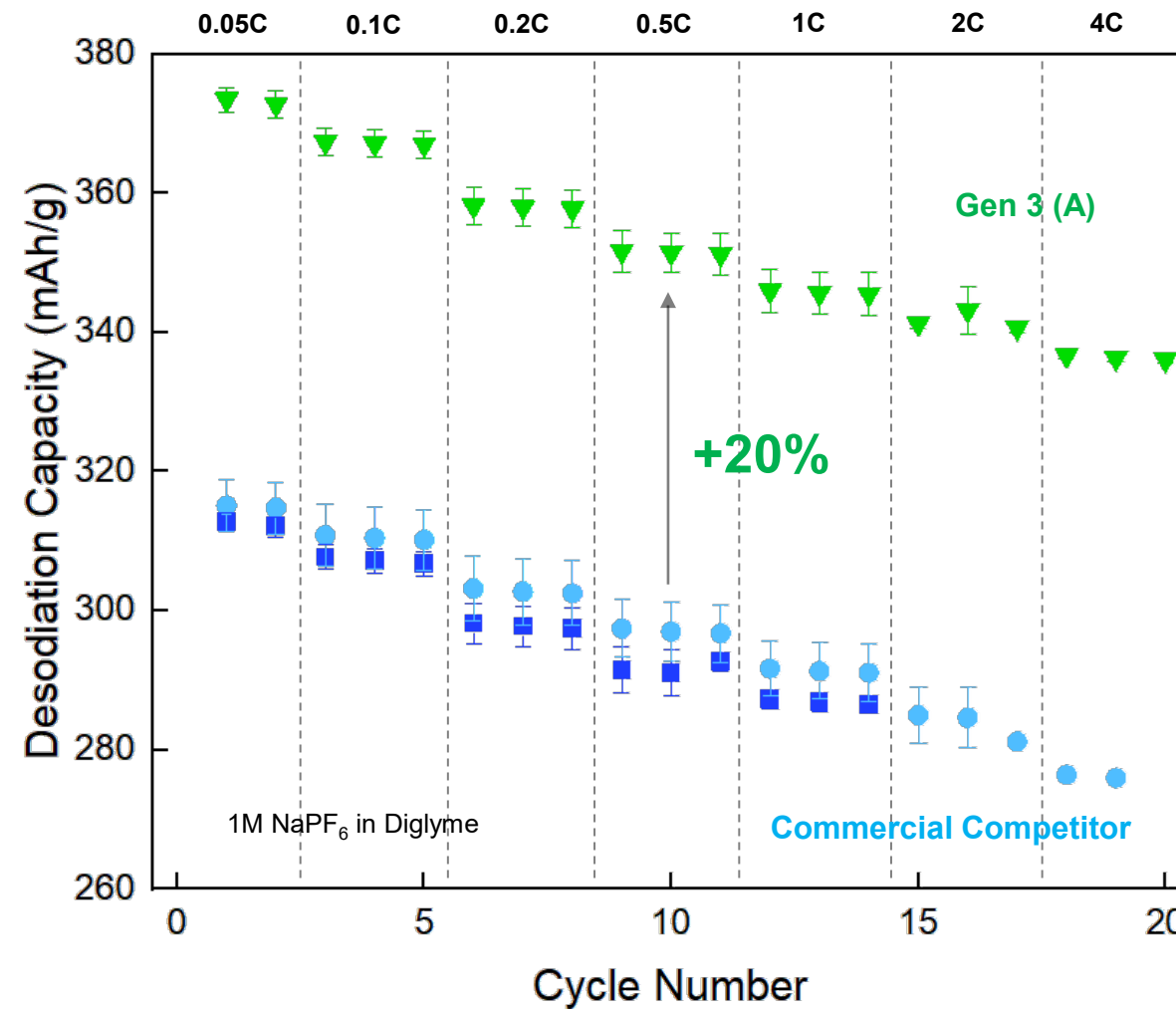
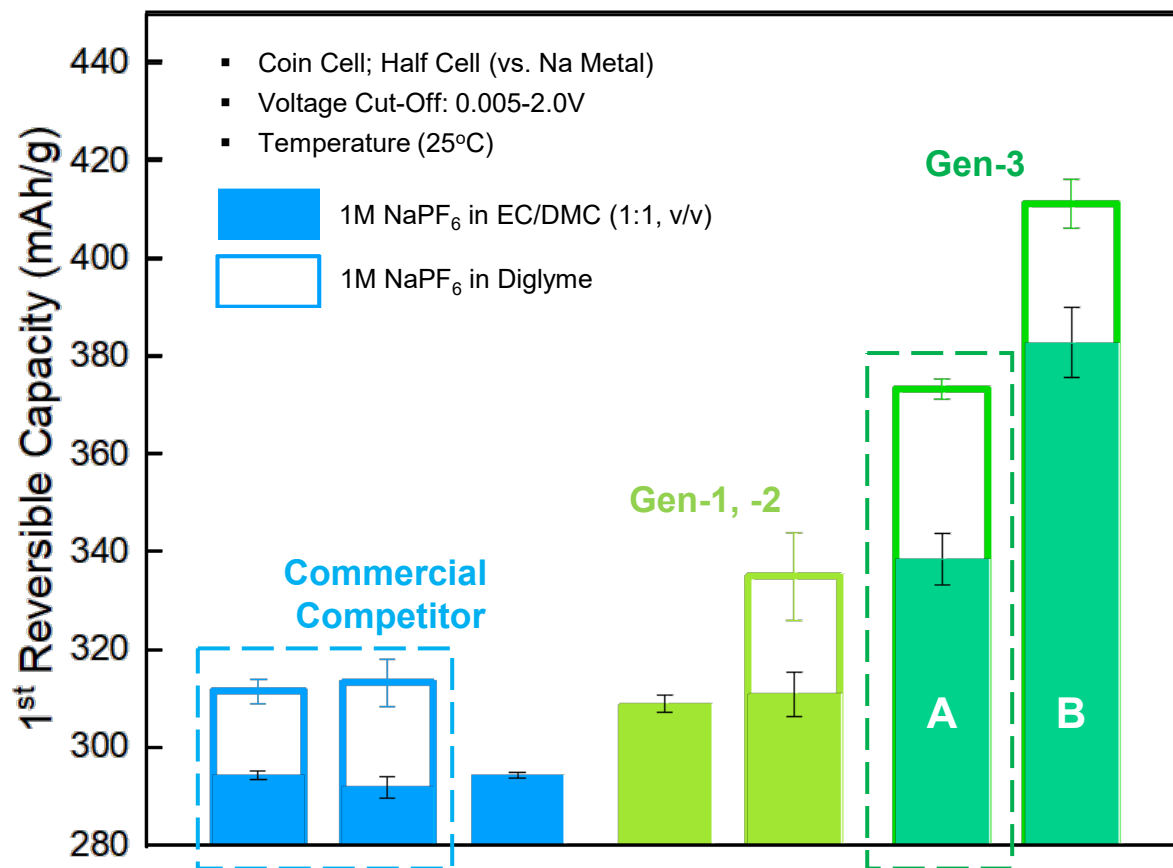
# Innovating to Provide Solutions for EV and Energy Storage Batteries



Material	Si/C Composites	Multiwall Carbon Nanotubes	Hard Carbon Anode
Activity / Partnership			
Why Ingevity	<ul style="list-style-type: none"> <li>✓ Ability to leverage Ingevity manufacturing know-how</li> <li>✓ Utilization of core activated carbon technology</li> </ul>	<ul style="list-style-type: none"> <li>✓ Overlapping process knowledge</li> <li>✓ Favorable supply-demand dynamics</li> </ul>	<ul style="list-style-type: none"> <li>✓ Ability to leverage Ingevity manufacturing know-how</li> <li>✓ Room to shape and play in the evolving value chain</li> </ul>

**EV battery and Energy Storage markets** offer multitude of opportunities and are being prioritized as next leg of growth for Performance Materials business

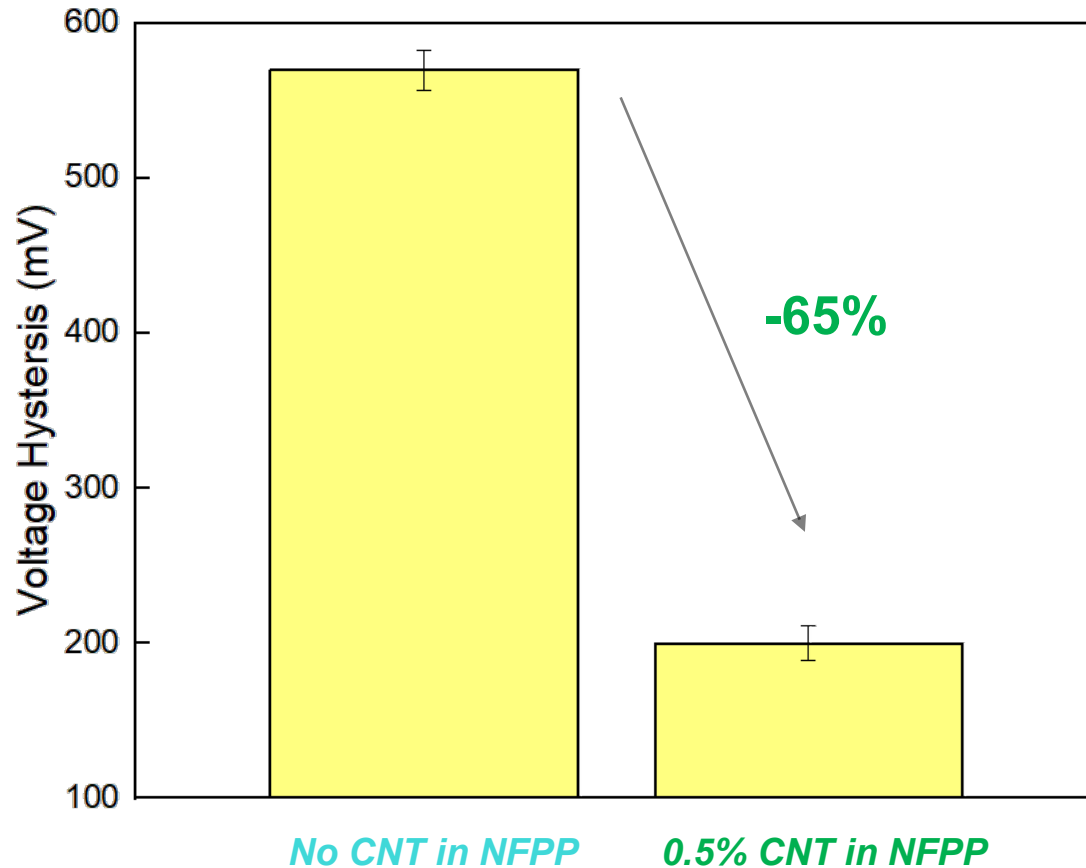
# Ingevity Hard Carbon EChem



✓ Superior Rate Capability

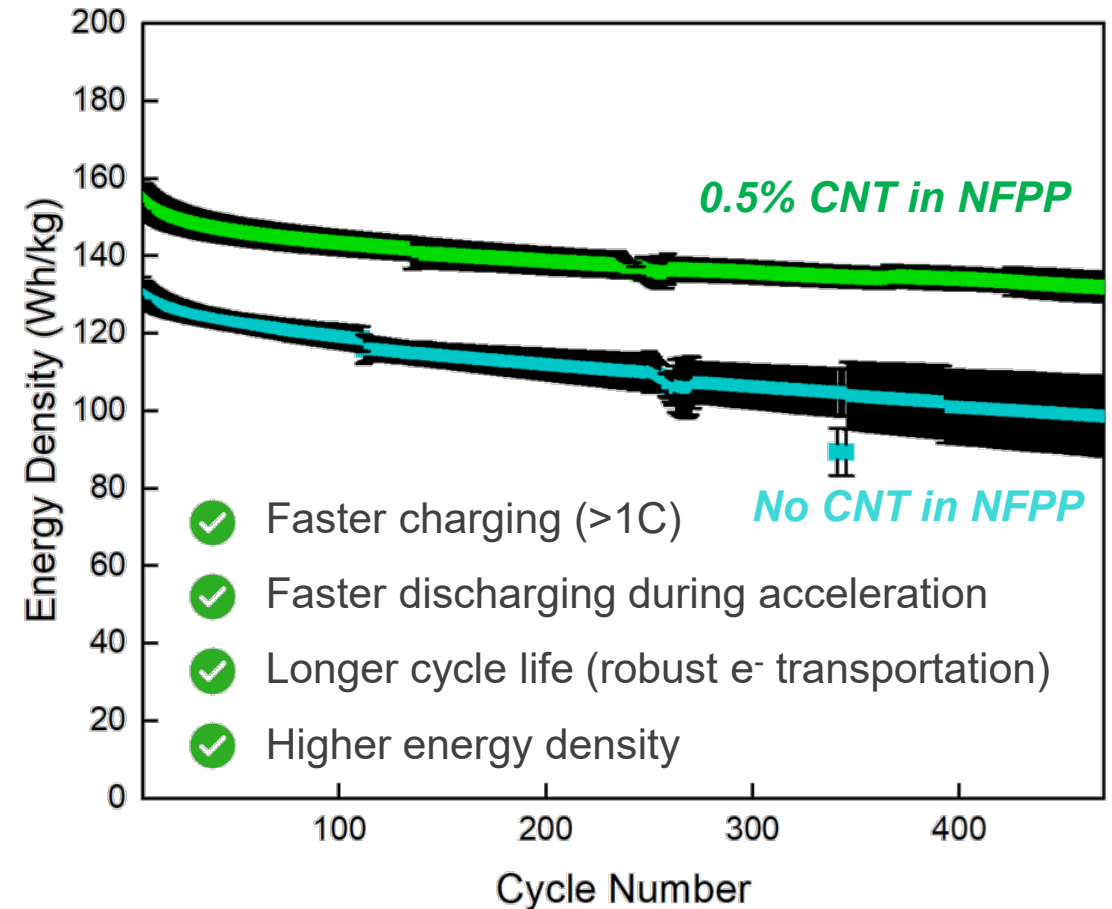
# Ingevity Carbon Nanotubes in NFPP Cathode

Cell Resistance



\*Voltage hysteresis: avg. charge vol – avg. discharge vol

C-Rate: 2C



\*Energy Density calculated based on cathode + anode weight



Lower cell resistance



# Sampling of Hard Carbon and Carbon Nanotubes



**Hard Carbon samples can be provided for initial testing and product evaluation**

- Gen-1 (>300 mAh/g; >89.5%)
- Gen-2 (>305 mAh/g; >93.0%)
- Gen-3 (>370 mAh/g; >89.0%)



**MWCNT samples can be provided for initial testing and product evaluation**

- NMP Dispersion, 3.3 wt.% (cathode electrode)
- Aqueous Dispersion, 2.0 wt.% (anode electrode)
- High-purity Carbon Nanotube Powder (NTeC®-E)





***Purifying, Protecting and  
Enhancing the World Around Us***

Hui Dong (Technical Manager), [hui.dong@ingevity.com](mailto:hui.dong@ingevity.com)

BP Holbrook (Business Manager), [billypaul.Holbrook@ingevity.com](mailto:billypaul.Holbrook@ingevity.com)