



Summary

CHASM's NTeC[®]-E CNT additives batteries provide high quality carbon nanotubes that are a drop-in replacement for industry-standard CNTs. With CNTs becoming essential for today's batteries in EVs and AI Data Centers, CHASM is uniquely positioned to support surging demand with exceptional performance and breakthrough technology that enables low cost, scalable and sustainable production for crucial local supply of CNTs in emerging regions developing their battery supply chains.



Benefits

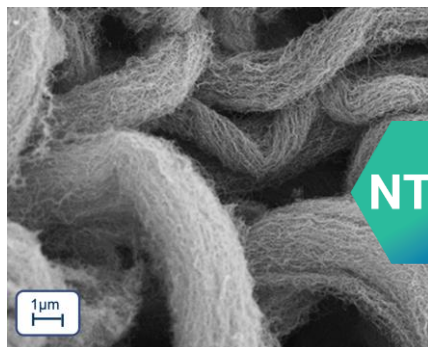
- ✓ Drop-in replacement CNTs for Li-ion batteries
- ✓ Lowest cost, most scalable, sustainable production
- ✓ High purity, using iron-free catalyst
- ✓ Tailored CNT structure for low loadings and easy dispersion



Exceptional Performance

- ✓ CNT quality ≥ leading CNT suppliers based in Asia

Property	Typical Value	Test Method
CNT Purity (wt %)	> 98	TGA
Iron Content (ppm)	< 10	ICP
Median Outer Diameter (nm)	10	TEM
Median Length (μm)	> 10	SEM
Specific Surface Area (m ² /g)	>300	BET
Intensity Ratio of G/D band (I _G /I _D)	> 1.4	Raman



High aspect ratio, high purity CNTs tailored for Li-ion batteries



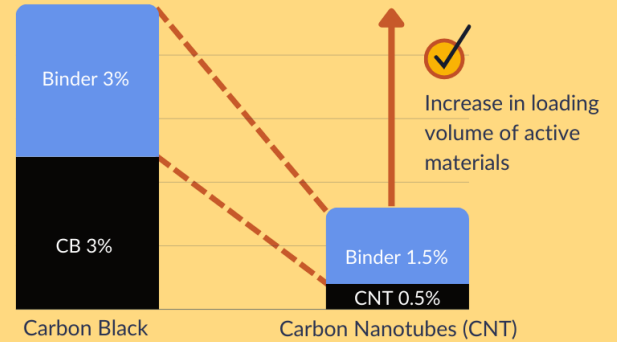
Dispersions are available, aqueous or solvent, with or without binder



Why Carbon Nanotubes (CNTs)?

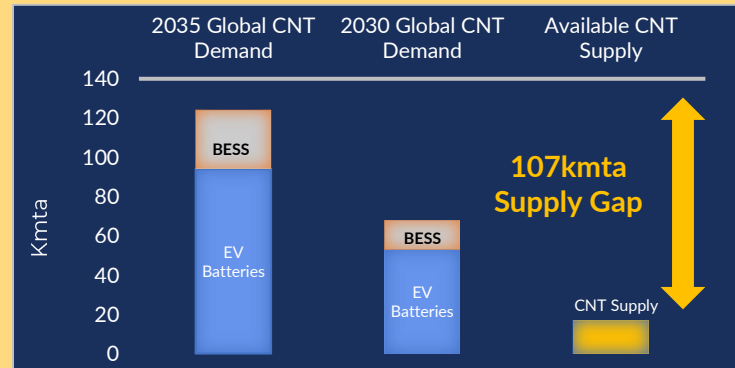
Carbon nanotubes are critical for batteries in EVs and AI-accelerated Battery Energy Storage System (BESS), offering benefits over other conductive carbon additives, including longer life cycle, improved charge rate performance and increased energy storage capacity.

Cathode Composition: Effect of Using Carbon Black vs. CNT



Surging Demand for CNTs

Global CNT demand for the Li-ion battery market is projected to reach nearly 124,000 metric tons by 2035. With current capacity at only about 17,000 metric tons in 2025, this leaves a supply gap of roughly **107,000 tons per year** that must be filled to meet future demand



Japan Battery Industry Challenges

- 1 Scaling local production of high-purity, battery-grade CNT
- 2 Industrializing CNT-enabled material innovations in Japan



CHASM Approach to Meet Demand

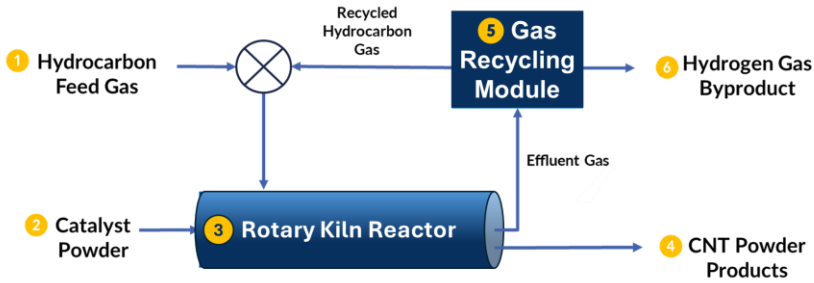


Manufacture CNTs in collaboration with strategic partners and provide **licenses for global production**



Low-Cost, Scalable CNT Production

CHASM's new CNT production platform offers the most scalable, cost-efficient and sustainable approach for mass production of high-quality CNTs tailored for Li-ion batteries.

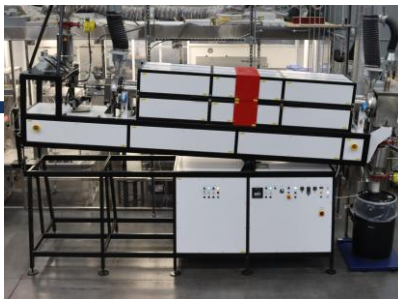


Cost and scalability advantages result from the combination of CHASM's unique catalyst and rotary kiln reactor technologies for CNT synthesis. The combination enables a smaller reactor footprint, iron-free CNT production and sustainable separation and recycling of reactor output.



World's Largest Production Platform

CHASM is building the world's largest CNT production platform, on track for 2026 deployment in the USA.



2022

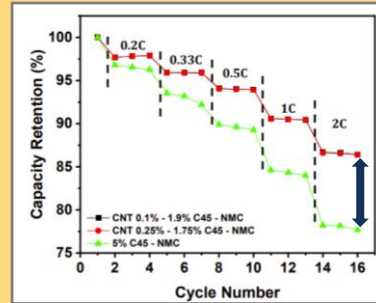
Generation 3
Capacity: 50 MTA
Norman, OK, USA

2027

Generation 4
World's Largest CNT Reactor
Capacity: 1,500 MTA

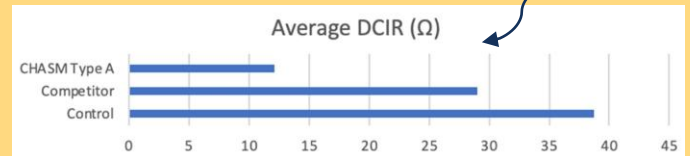


Independent 3rd Party Lab Validation



Argonne National Lab used CNT/NMP dispersions made at CHASM for making cathode slurry to create NMC cathodes.

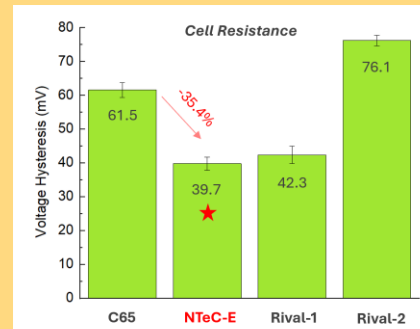
AUDIANCE used two types of CNT/NMP dispersions made at CHASM for making slurries to create NMC cathodes.



View more details about third-party validation test results [here](#).



Drop-in CNT with Better Performance



Lowers cell resistance by **35%**, outperforming carbon black and top MWCNT rivals.

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Samples Available!

- ⚡ Powder and dispersion samples available.
- 💧 Custom dispersions for aqueous and NMP solutions.

Seeking collaboration with:

- ✓ Offtake partners: Battery OEMs and dispersion houses
- ✓ CNT Manufacturing licensees
- ✓ Innovation partners: Fast-tracking joint development to market