BATTERY STREAK

CHARGE LIGHTNING FAST

NAATBatt Introduction
February 2022

Our patented material has created **a compelling new lithium-ion battery**

6x more power

10x faster charging

long battery life

*compared to the widely used Panasonic lithium–ion 18650 battery

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The BATTERY STREAK Difference

We store energy as a surface charge instead of through a chemical change

Our technology has:

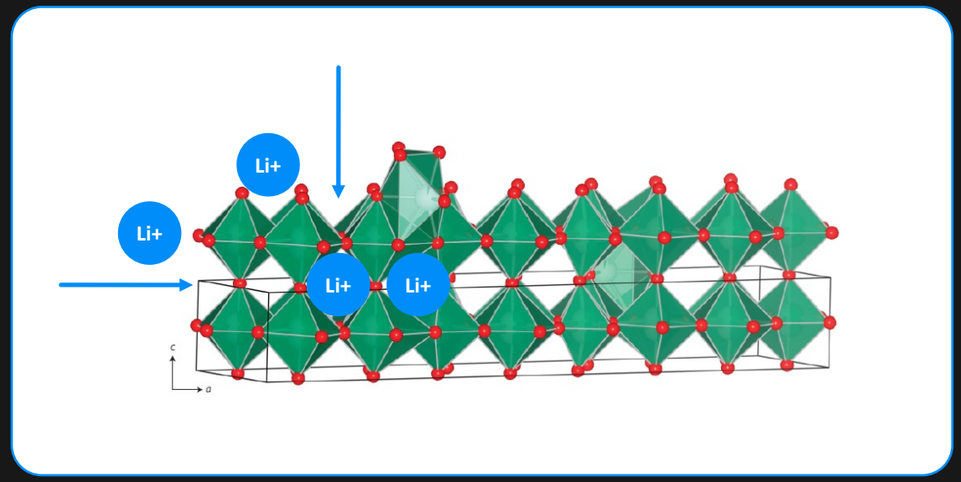
- Sponge-like mesoporous materials, 20-50 nm, and
- A very large surface area per unit volume

Which means:

- Energy storage like a capacitor (surface charge instead of a chemical change) and
- Heat generation and electrode material wear are minimal

Best of all:

- They are a drop-in replacement for existing batteries that
- Are manufactured on Industry standard equipment for both materials and batteries



Nanostructure enables lithium diffusion without phase transition

V Augustyn, J Come, MA Lowe, JW Kim, PL Taberna… - Nature materials, 2013

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High Power

(Fast discharge)

Ultra-fast discharge outperforms today's lithium-ion batteries

- 4C Discharge
- 60% discharge in 10 minutes
- 6x the discharge power of widely used Panasonic battery[1]

Fast without the heat

- With less than 8°C/15°F increase versus ambient temp

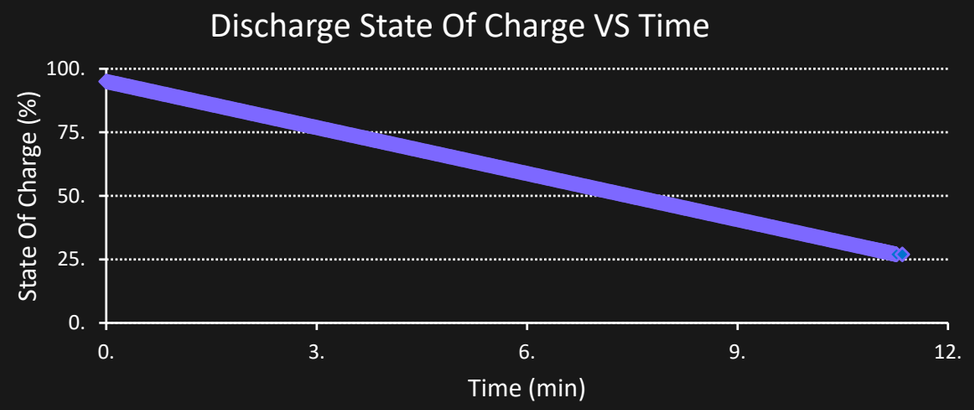
Ultra-Fast Charge

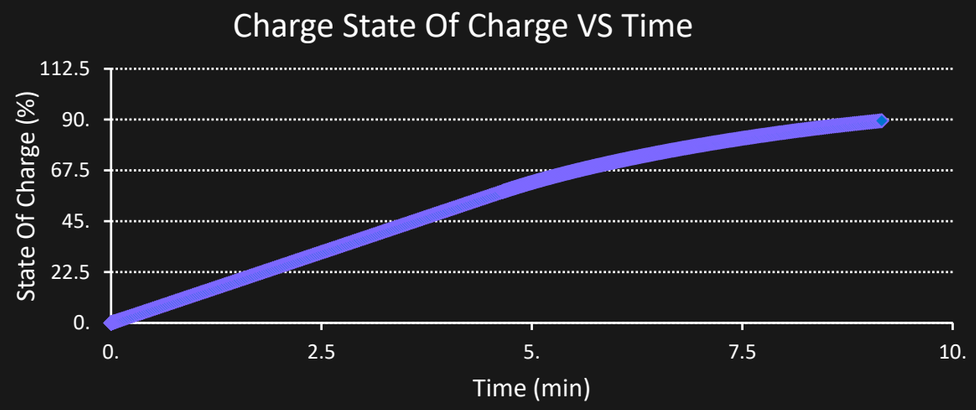
Ultra-fast charge outperforms today's lithium-ion batteries

- 8C Charge
- 50% charge in 3.5 minutes
- 90% charge in 9 minutes
- 10x faster[2]

Fast charge without the heat

- Less than 8°C/15°F increase versus ambient temp





[1] 8000 W/L in Battery Streak compared to 1360 W/L for Panasonic 18650 LCO/Graphite
[2] 9 minutes for Battery Streak compared to 120 minutes for Panasonic 18650 LCO/Graphite

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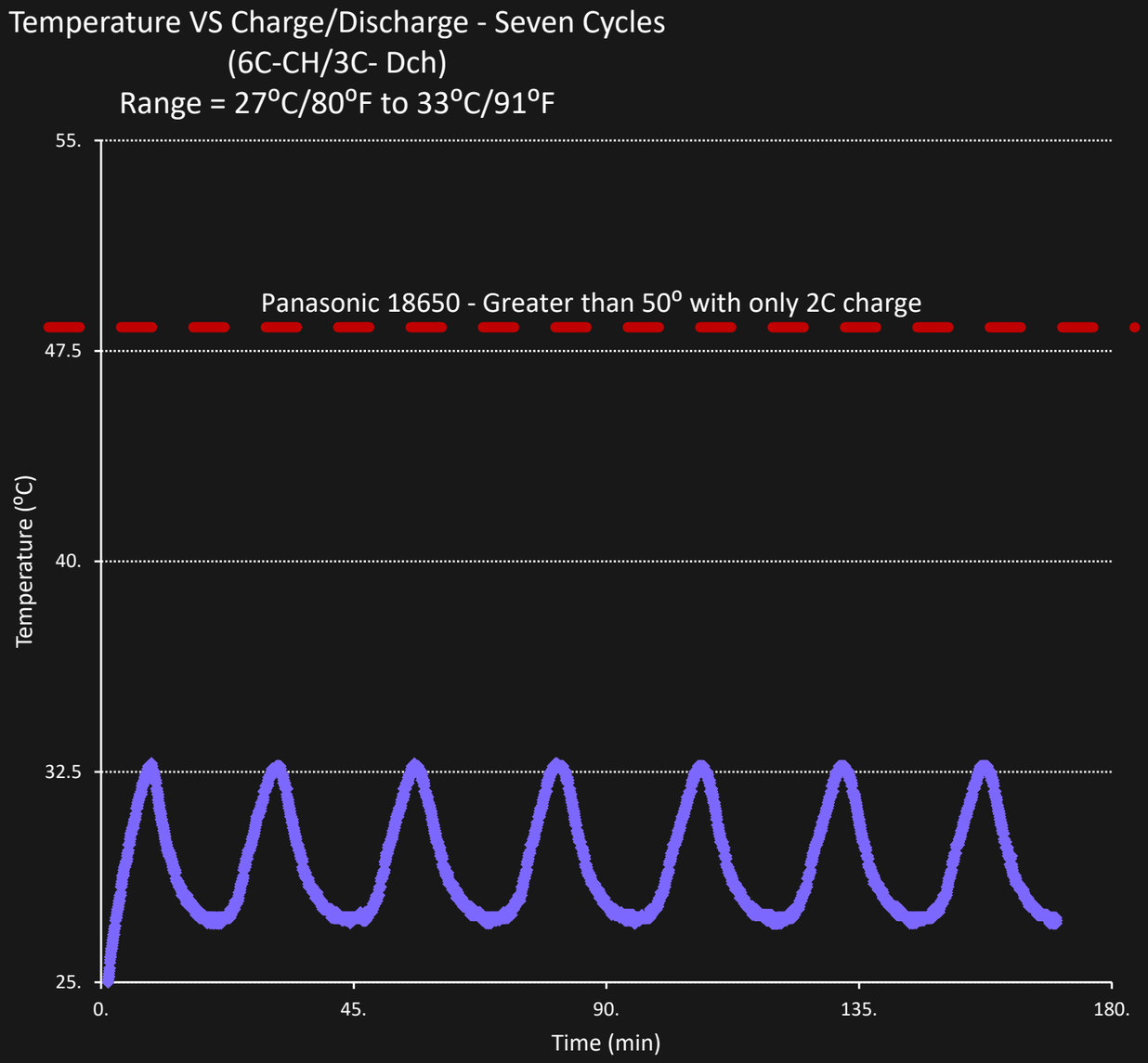
Without the Heat

Only 8°C/14°F increase above ambient temp while fast charging or discharging

- 25°C/77°F ambient temperature
- 6 Amp charge, 4 Amp discharge
- Max temp = 33°C/91°F
- **Less than 8°C /14°F change**
- Similar results when starting at higher ambient temperature



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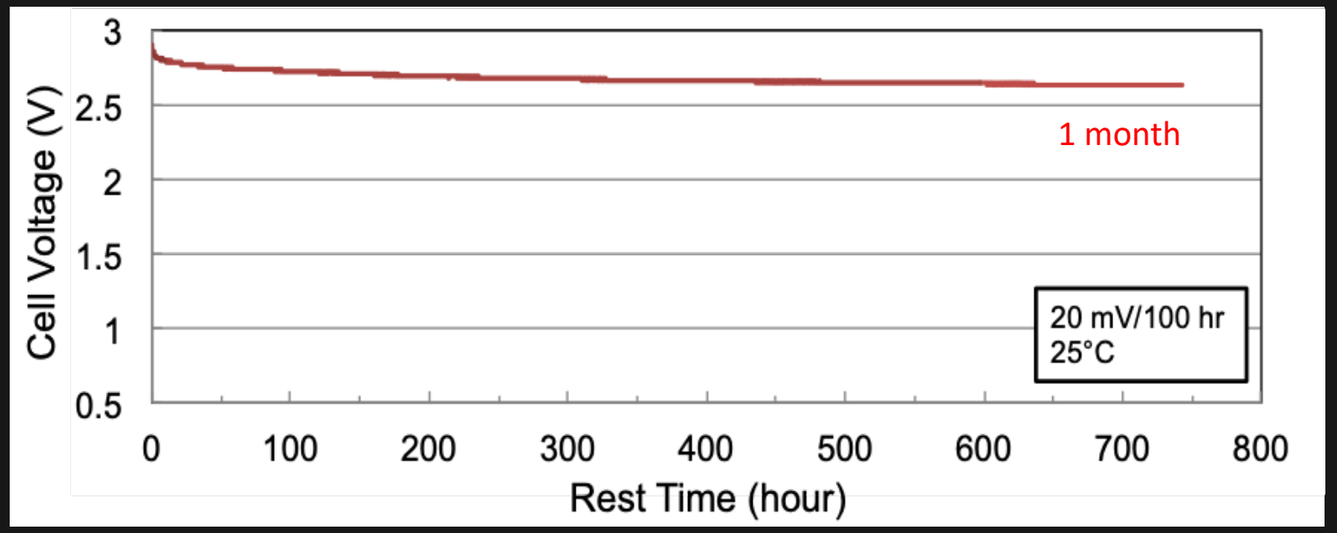
Shelf Stable



Less than 20 mV loss after 100 Hours

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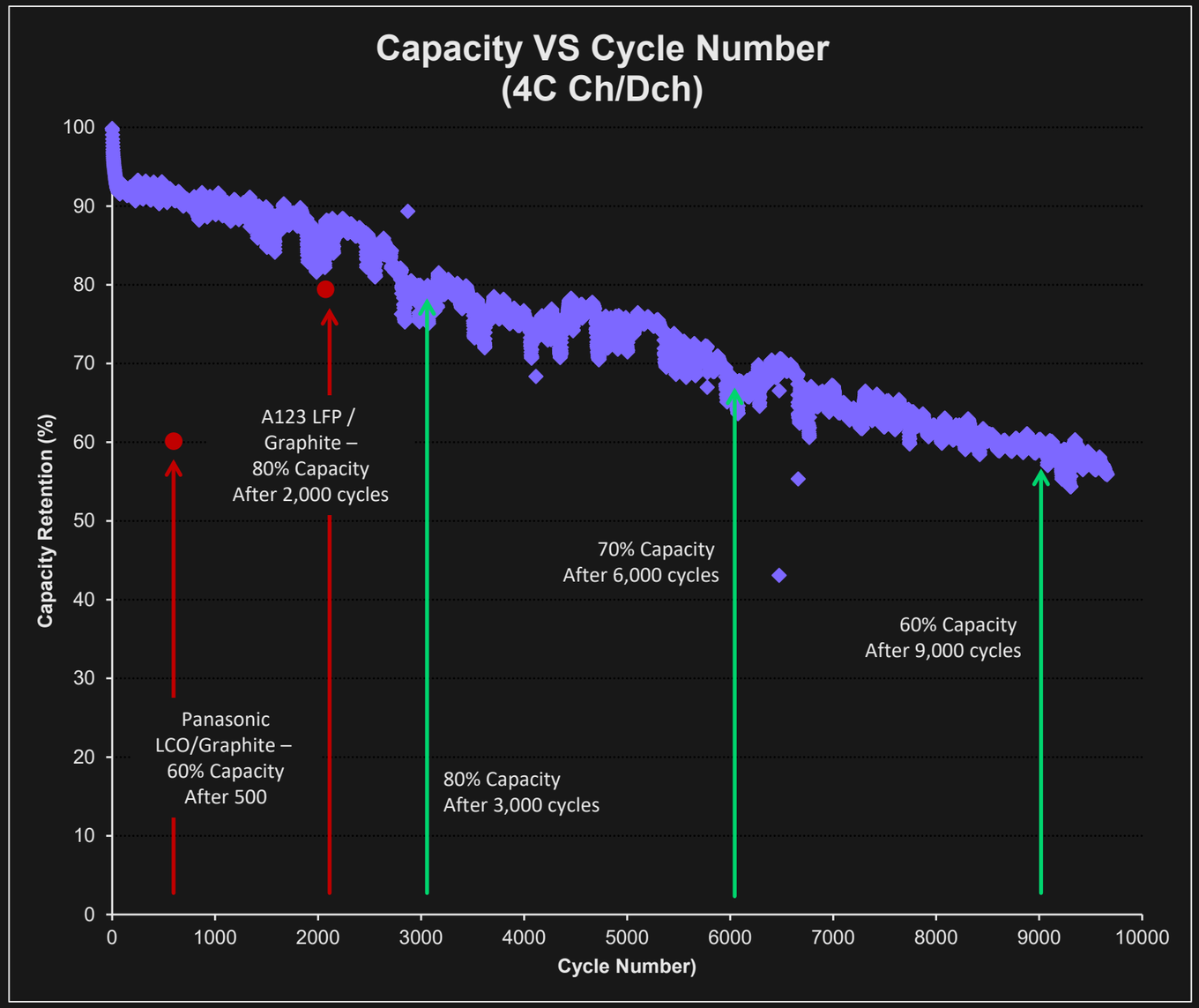
Maintaining Long Usable Life

While consistently delivering high power and fast charge

- 20% capacity loss after 3,000 cycles
- 30% capacity loss after 6,000 cycles

- Typical cell
  - <1,000 cycles is considered very good with slow charge
  - Cannot sustain a single fast charge



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Competitive Landscape

White/Blue= Chemistry
Yellow = In Development

Green = Cell

Cathode/Anode	Nominal voltage (V)	Operating Range (V)	Gravimetric Energy Density (Wh/kg)	Volumetric Energy Density (Wh/L)	Charge time (min)	Discharge power (W/L)	Charge power (W/L)	Format
LCO/Graphite	3.6	3.0 – 4.2	367	1327	120	676	338	Cylindrical
LFP/Graphite	3.3	2.5-3.65	374	1097	15	240	960	Cylindrical
LVPF/TNO	2.7	1.5 – 3.2	288	933	<10	-	-	-
NCA/TNO	2.3	1.0 – 3.2	262	1124	<10	1040	1600	Pouch
NMC/LTO	2.4	1.8 – 2.85	180	702	6	850	850	Pouch

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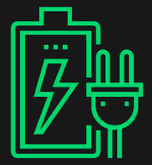
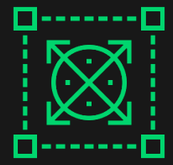
Summary



Huge market
for next-generation batteries that can deliver high power or fast charge times **SAFELY**!

Patented material
of nanostructured pores with no chemical phase change that allows high power and fast charging while maintaining long life cycles

Capital efficient
technology and business model



Early prototypes
in customer hands; ready to scale materials production

Fast – Without the Heat

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Thank You For Your Time

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