

Build safer, faster-charging rechargeable batteries with a new chemistry that goes beyond lithium




Chandler, AZ

B2B Hardware Minority Founder Energy

Highlights

- 1 Battery chemistry is non-flammable and resource-abundant
- 2 Co-development agreement signed with XR headset company and multiple LOIs are work-in-progress
- 3 PhD battery scientist with 14 yrs experience leading EV battery R&D
- 4 Built functional battery prototypes showing reversible behavior
- 5 Early tests show high cycle stability under elevated temp (80 degC)/rate
- 6 Designed for power- and safety-critical systems
- 7 Raising \$1M to build lab and engineer pouch cell samples

Featured Investor



Kyle Von Johnson
Syndicate Lead

Follow

Invested \$15,000

"As a corporate attorney handling complex litigation, I've seen firsthand what pitfalls can topple companies, even those built on solid technological foundations. I'm excited about InfiniCell because I've seen Tofazzel's work product and his dedication to making this technology the new normal for electric vehicles.

I've known Tofazzel for roughly half a decade while he was researching and testing batteries for Nikola Corporation. Batteries are what he does and has only ever done with his mate..."

[Read More](#)

Team



Tofazzel Hossain Founder and Lead Scientist

PhD in Materials Science, 14+ years in energy materials R&D, including at Nikola Motors. Inventor on a patent-pending battery safety AI model. Built early non-lithium cell prototype with high-rate cycling.



Tanveer Alam Chief Product Officer (CPO)

20+ years of product & systems leadership (Intel, deep-tech startups). Led product strategy and GTM for hardware/software platforms serving 200+ customers. Drives product-market fit, pilot readiness, and customer technical alignment.



Kamrul Hasan Shaon Chief Operating Officer (COO)

Former Meta & Amazon leader with 8+ years in GTM, partnerships, and commercialization. Built and scaled multi-million-dollar marketing systems across global teams. Leads go-to-market execution and company operations at InfiniCell.

linkedin.com



Asma Sharafi Strategic Advisor

Former CEO of PowerCo US (Volkswagen Group). Led battery cell industrialization from pilot scale to B-sample readiness, with deep expertise in manufacturing scale-up, supplier strategy, and OEM engagement across global markets.



Safer, ultra-fast-charging batteries for everyday devices — not EVs

Lithium Had Its Moment. The Next Battery Gold Rush Has Begun.

InfiniCell is building a non-flammable, ultra-fast-charging battery platform designed for power-critical consumer electronics, drones, tools, and off-grid energy systems — where lithium batteries struggle most.

We intentionally trade EV-grade energy density for safety, speed, and system simplicity — exactly what modern, non-EV markets need.

THE PROBLEM: Power Is the Bottleneck

Lithium Batteries Are Holding Products Back

Lithium-ion batteries were designed decades ago for energy density and long-range use. They work well for electric vehicles — but their limitations are increasingly visible in everyday products.

Today, lithium batteries cause:

- Fire risk in phones, power banks, and home energy systems
- Slow charging that limits uptime and user experience
- Overheating in compact devices like XR headsets and drones
- Complex cooling and safety systems that increase cost and certification friction

Battery fires, airline bans, product recalls, and tightening regulations show this isn't just an EV problem — it affects devices used indoors, near people, and close to critical infrastructure.

As products become more power-dense, lithium's safety and thermal limits increasingly dictate design — not performance.

Why Now?

Battery Demand Is Shifting — Fast

The fastest-growing energy demand today is *outside* electric vehicles.

On one side:

- XR headsets, AI devices, robotics, UAVs, and power tools require **high power and rapid recharge**

On the other:

- Solar, off-grid, and distributed energy storage systems must be **intrinsically safe**, reliable, and deployable near homes and people

At the same time:

- Safety regulations are tightening globally
- Products are becoming more compact and power-hungry
- Lithium batteries are approaching physical and regulatory limits

This creates a clear opportunity for **new battery chemistries designed for modern use cases — not vehicles.**

The Battery Trade-Off No One Escapes

Every battery chemistry is a trade-off.

Lithium batteries optimize:

- Energy density
- Long-range use cases

But they compromise on:

- Fast charging
- Thermal stability
- Intrinsic safety

InfiniCell intentionally optimizes the opposite. We focus on:

- Power delivery
- Ultra-fast charging
- Passive safety
- High-temperature stability

This makes us ideal for power- and safety-critical applications.

the
SOLUTION
AN INHERENTLY SAFER BATTERY CHEMISTRY

- Abundant Materials
- High Temp & High C Rate Resistant
- Faster Charging (5-8 min)
- Non-Flammable

The Future Needs a New Chemistry

Lithium can't meet the safety, speed, and scalability demands of tomorrow's world. At InfiniCell, we've gone back to the periodic table to design something fundamentally better—a battery system built from abundant materials, engineered for thermal safety, and capable of charging in minutes.

InfiniCell's Solution



**Aluminum-Ion
Battery**

OUR SOLUTION

A Power-First, Non-Flammable Battery Platform

InfiniCell is developing a patent-pending aluminum-ion battery system designed specifically for applications where lithium safety and thermal limits fail.

Our technology is built to deliver:

- Non-flammable performance by design
- Ultra-fast charging (minutes, not hours)
- High thermal stability
- No complex cooling systems
- Abundant, low-cost materials

We don't try to replace lithium everywhere.

We replace it where it breaks products.

TECHNOLOGY SNAPSHOT

Designed for Safety, Speed, and Simplicity

- Charge rates demonstrated up to 30–50C (1-2 minutes)
- Stable operation at temperatures up to 80°C without thermal runaway
- Energy density of ~100–130 Wh/kg, optimized for target markets
- Scalable voltage via pack architecture
- Compatible with existing manufacturing processes

Lower energy density than EV lithium — by design — in exchange for unmatched safety and fast charging.



Technical Validation & 12-Month Engineering Milestones

What Is Already Validated (Lab Proven)

- Reproducible working aluminum-ion pouch cell prototypes
- 30–50C charge demonstrated (~1–2 min)
- Stable operation up to 80°C
- No thermal runaway observed
- 100–130 Wh/kg achieved (first-gen prototype)
- Successful charge-discharge cycling

This proves:

- Core electrochemistry functions
- Fast-charge mechanism works
- Safety thesis validated

What This Funds Unlock (Engineering)

- Controlled environment lab (dry room/glovebox)
- Repeatability across batches
- Extended cycle life testing (500–1000+ cycles)
- 1–5 Ah engineered pouch cells (Sample A)
- BMS integration + pack validation
- Third-party validation testing

This de-risks:

- Manufacturing repeatability
- Reliability
- OEM qualification

Today: Core chemistry validated in lab prototypes
Next 12 months: Engineer repeatable, OEM-ready Sample A cells

What Makes Us Different

- This is **not another lithium startup**
- This is **not a minor cathode tweak**
- This is a reimagined battery architecture — built for a world that demands safer, faster, cheaper, and cleaner energy storage.

The regulations are coming (like China's new 2-hour containment rule). The consumer electronics, and energy storage industries are searching for alternatives. InfiniCell is built for that future.

Competition: Chemistry, Not Companies

Our competition is legacy battery assumptions embedded in modern systems.

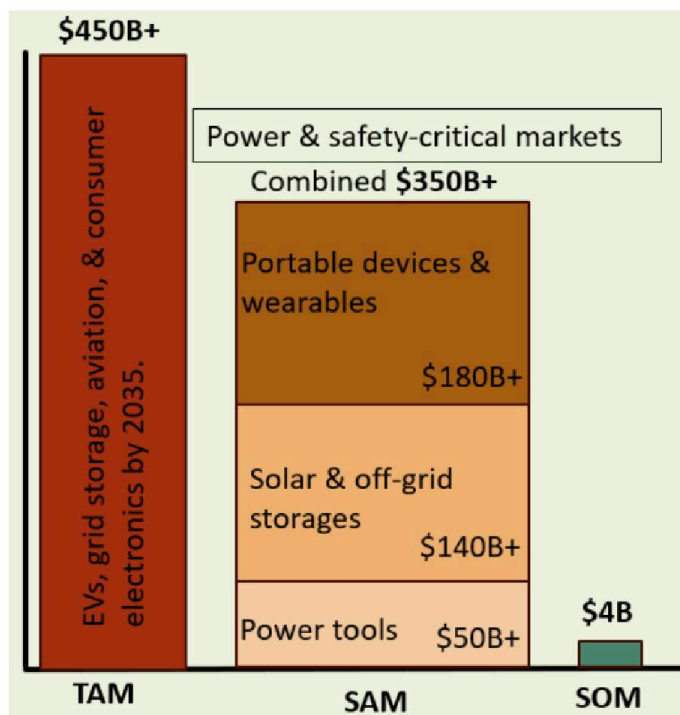
Metric	InfiniCell (Al-ion)	NMC Li-ion	LFP Li-ion	Sodium-ion
Energy density	Medium	High	Medium	Medium
Fast charging	Excellent	Limited	Limited	Limited
Thermal runaway risk	None	High	Moderate	Moderate
Cooling complexity	Low/Passive	High	High	Moderate
Safety certification	Simplified	Complex	Moderate	Moderate
System cost (incl. cooling)	Low	High	High	Moderate
Best use cases	Consumer, XR, UAV, tools, off-grid	EVs	EVs, ESS	ESS

= Strong advantage

= Acceptable / trade-off

Market Opportunity

- The global battery market is projected to exceed \$450 billion by 2035
- Capturing just 1% of that yields a potential \$4 billion in revenue



Initial Target Markets

We focus on markets where safety and power matter more than maximum range. We focus where lithium struggles the most.

Power Banks & Portable Power

- Airline safety concerns
- Long recharge times
- Heat buildup in compact enclosures

XR Headsets & Wearables

- Thermal throttling near the face
- High peak power demand
- Safety-critical indoor use

UAVs & Robotics

- Downtime from slow charging
- Power spikes limiting performance
- Heat restricting duty cycles

Solar & Off-Grid Energy Storage

- Fire risk near homes and infrastructure
- Over-engineered cooling systems
- Need for simple, safe, reliable storage

These markets value safety, power delivery, and uptime over maximum range.

HOW WE GO TO MARKET

Capital-Efficient by Design

We are **not** building a gigafactory.

Instead, we:


- Co-develop battery systems with **pack & BMS partners**
- License our chemistry to **qualified contract manufacturers**
- Use existing lithium-ion production lines with minimal retooling

This approach enables:

- Faster time to market
- Lower capital risk
- Early revenue
- Faster customer adoption

In the future, we selectively build **integrated battery packs** because customers don't buy cells — they buy **certified energy systems**.

Revenue Platform and Path to Scale



Revenue Platform & Path to Scale

High Volume Cell & Pack Supply (Core Engine) Revenue: <ul style="list-style-type: none">• Cell + pack ASP: \$15-800 per unit (application specifics)• Recurring OEM supply contracts Example in Primary Markets: <ul style="list-style-type: none">• Consumer & portable power: 4M units/year x \$15 = \$60M• XR headsets: 500k units/year x \$30 = \$15M• UAV drones: 500k units/year x \$60 = \$30M• Solar & off-grid energy storage systems: 50k systems/year x \$800 = \$40M <i>Cells produced via contract manufacturers and sold by InfiniCell</i>	Battery Platform Licensing Revenue: <ul style="list-style-type: none">• Up-front license fee: \$500k-\$1M per partner• Ongoing royalties: 5-10% revenue Example: <ul style="list-style-type: none">• 5 OEM partners x \$750k ASP = \$3.75M• 1-2 GWh combined output x \$7.5/kWh = \$7.5-15M <i>Licensed partners manufacture cell and packs, and sell directly into their own end markets</i>	Co-Development Revenue: <ul style="list-style-type: none">• Co-dev programs: \$250k - \$1M per partner• Exclusive supply contracts with volume commitments Example scale: <ul style="list-style-type: none">• 4 co-dev programs x \$500k ASP = \$2M• Follow-on production: 1M units/year x \$20 battery content ASP = \$20M
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

*Revenue projections assume phased market entry and **do not** require InfiniCell to build a gigafactory within the first 5 years.*

Base Case: \$75-90M ARR
Upside Case: \$100-150M ARR (5-Year Target)

Unit Economics & Margin Expansion Model

Phase 1 (1-3 yrs): Contract Cell Manufacturing
Cell ASP: \$95-100 / KWh
Contract COGS: \$65-70 / KWh
Gross Margin: 20-30%

Why this works:

- No gigafactory capex
- Early OEM validation
- Market entry with lower capital intensity

Phase 2 (3-5+ yrs): Integrated Pack Supply
Pack ASP: \$140 – 180 / KWh
Pack COGS:

- Cells: \$65 – 80 / KWh
- BMS & electronics: \$10 – 20
- Assembly & housing: \$10-15
- Total: \$85-110 / KWh

Gross Margin: 30-45%

Why margin improve:

- System-level differentiation
- Certification & integration value
- OEM lock-in

Phase 3: Licensing Model (Asset-light Scaling)
Licensed manufacturer:

- Manufacture cells: \$55-65 / KWh
- Sells: \$95-110 / KWh

InfiniCell royalty:

- 5-10% of revenue = \$5-10 / KWh
- Royalty revenue carries minimal COGS: **85-90% gross margin**

Why this works:

- Royalty does not break partner margins
- Partners still achieve 25-35% gross margin
- InfiniCell scales globally without capex

Margin expansion driven by system integration, certification values, and asset-light scaling.

Blended margin: 40-55% at scale

Early Traction:

Co-Development <ul style="list-style-type: none">GreenpointXR (signed)Battery pack and BMS development (expecting)	LOI <ul style="list-style-type: none">Skywells Energy - a solar company (received) – Potential paid pilotsZerooZen: electric auto rickshaw company in Bangladesh (received) – Potential paid pilots
--------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- Multiple pathways progressing toward paid pilot & production programs
- Early partners are co-designing systems around InfiniCell's operating envelope

WHY I'M BUILDING THIS

Founder Story

I'm Tofazzel Hossain, PhD in Materials Science with over 14 years of experience in battery technology.

I've built batteries in the lab and modeled them at the system level — including work at Nikola Motors and Peak Energy. I'm also the inventor of a **patent-pending AI model for thermal runaway prediction**.

Battery safety isn't theoretical to me — it's personal.

InfiniCell started as hands-on experimentation in a small lab and is now evolving into a platform designed to make energy systems safer, faster, and more practical for real-world use.

Join Us Early

InfiniCell is raising \$1M in our pre-seed round to:

- Build a controlled dry lab
- Validate our chemistry under standardized conditions
- Deliver engineering-grade Sample A pouch cells
- Convert early pilots into commercial programs

We believe safer, faster batteries will define the next generation of products.

If you believe that too — we'd love to have you join us.

Want to Learn More?

If you're an investor or technical reviewer and want to better understand the chemistry or prototype results, I'm happy to set up a video call to walk you through what we've built and why.

photos for yourself. I'm happy to set up a time with you to discuss how we can help you
this matters. Email us at tofa.hossain@infinicellenergy.com