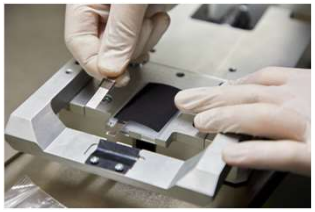

BOLD
AWARDS
BASQUEVOLT
The Safest and Most Competitive Solid-State Battery
Corporate Presentation
July 2022

Corporate Presentation



MISSION: To develop sustainably the best battery materials and cells that will make possible the mass deployment of electric transportation, stationary energy storage and advanced portable devices

AMBITION: To become the European leader in solid state batteries by leveraging its proprietary composite electrolyte that results from more than 10 years of research done by some of the world most successful solid state battery researchers at the CIC energiGUNE.

The company is a spin off of CIC energiGUNE and was incorporated in June 2022 in Vitoria (Spain), with active and committed shareholders.

IBERDROLA · CIE Automotive · enagas · EUSKO JAURLARITZA GOBIERNO VASCO · CIC energiGUNE · InnoEnergy · Co-funded by the European Union

DIFFERENTIATION: proprietary composite polymer electrolyte, a combination of polymer and inorganic materials that solves solid-state battery challenges. This **unique technology** brings lithium batteries beyond the state of the art.

Key technologies developed by Basquevolt:

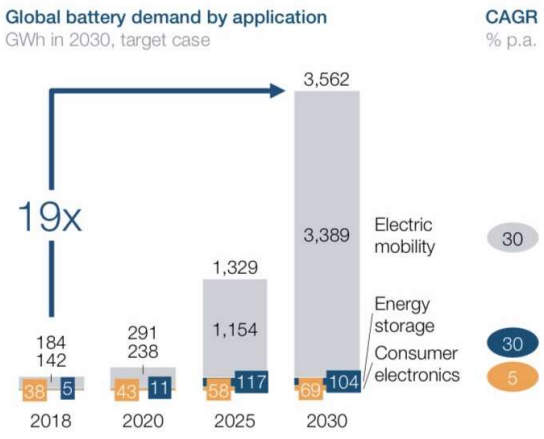
> Composite polymer solid electrolyte (combined with LFP and NMC cathodes)
> High Si content + Gr anode with semisolid electrolyte and NCA cathode

More than 10 patents covering the products and processes developed by Prof. Michel Armand and his team at CIC energiGUNE.

ROADMAP AND MILESTONES: The key company milestones are designed to minimize the risks and reassure investors and customers about the use of capital and the evolution of the technology:

> Phase 0: Establish its first prototype line (2023)
> Phase I: Pilot line to demonstrate the industrial scalability (2025)
> Phase II: Build the first production block of 13 GWh (2027)
> Phase III: Expand capacity to 40 GWh (2029)

Market and Product Description



World Economic Forum and Global Batteries Alliance, (McKinsey analysis, Sept 2019).

Lithium battery demand could reach the 3,500 GWh by 2030

> UN Climate Change targets is pushing the world to electrify

> Recent studies show a global 2030 market at 2.5 to 3.5 TWh

> In 2021 the market was about 250 GWh, at 86% dominated by Chinese and Korean players

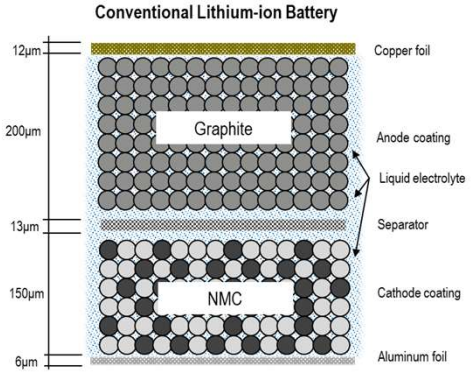
> Electric mobility takes 88% to 95% of the total demand

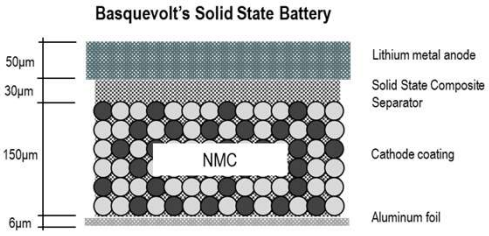
Current high energy lithium batteries still have major barriers preventing the mass market:

1.Safety: they are exposed to thermal runaway
2.Energy density: not enough to meet customers' needs
3.Cost: still too expensive vs customers' expectations

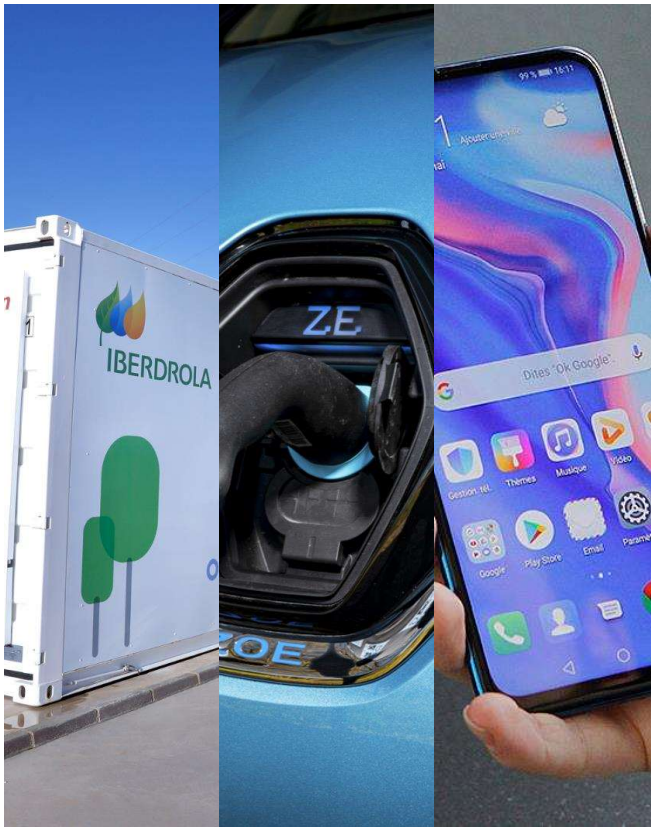
Basquevolt's **proprietary composite solid electrolyte** brings lithium batteries beyond the state of the art by:

> **Higher safety**, no fire, no exposure to toxic gases or materials.
> **High energy density** with up to 1,000 Wh/l (and 400 Wh/kg)
> **Lower cost potential**, 40% cheaper as no expensive materials in the electrolyte and a manufacturing process simple and less costly.





Why focus on solid state technology?



Current lithium batteries reached maturity and expected improvements are not enough to bring our society to the 100% electric.

1. COST

2. SAFETY

3. ENERGY DENSITY

Solid-state batteries are the next generation technology that aims to meet the needs of industry

Current Status of Development (composite electrolyte)

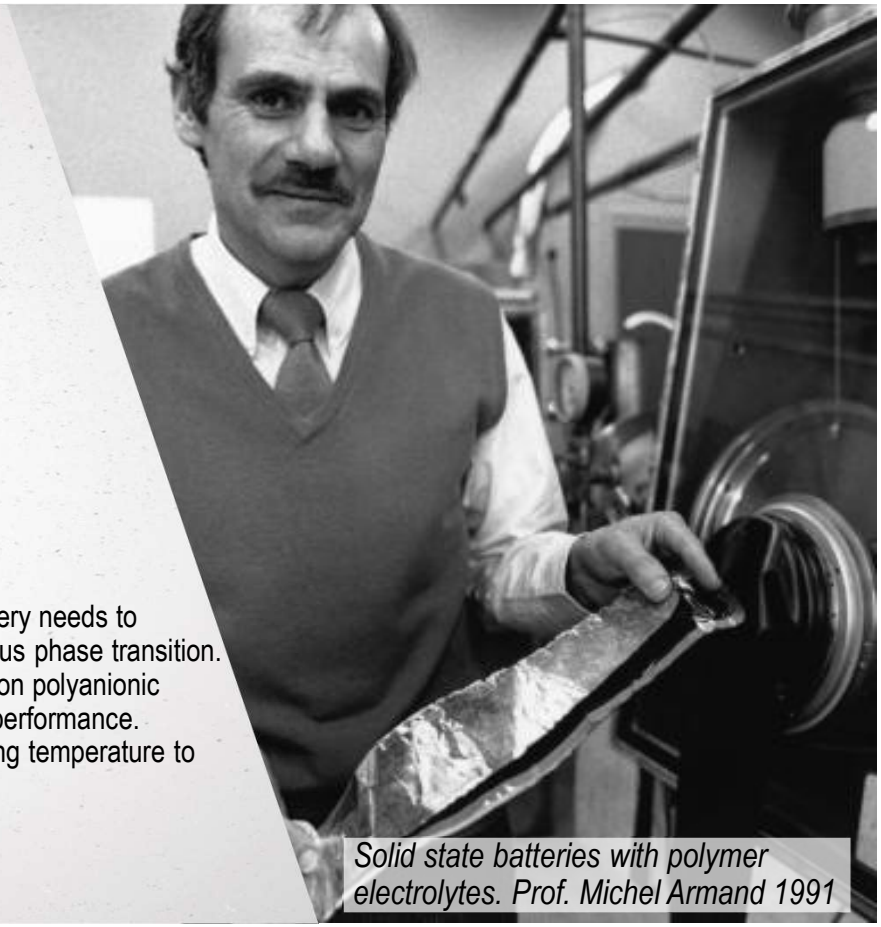
Strengths & Weakness of Solid State Polymer Electrolytes

- ➕ The safest solution, not flammable, no toxic gases
- ➕ Abundant and affordable raw materials for electrolyte
- ➕ Simplified manufacturing vs current lithium ion (less CAPEX and less energy intensive)

- ❓ High operating temperatures to reach high enough ionic conductivity (traditionally 70°C)
- ❓ Lifecycle at high C rates

Why are we confident in solving those challenges?

> Professor M. Armand is the father of “feasible” of solid-state batteries with polymer electrolyte (1978)
> The main drawback of PEO electrolytes is the low ionic conductivity (i.e. <10−5 Scm−1 at RT), the battery needs to operate above 70°C to reach acceptable values (i.e.10−3 Scm−1) thanks to the crystalline-to-amorphous phase transition.
> Since 2013, Prof. Armand has been working on a multifunctional single-ion polymer electrolyte, based on polyanionic block copolymers comprising polystyrene segments, demonstrated indeed an unprecedented level of performance.
> CIC energiGUNE researchers, under Prof. Armand leadership, have managed to decrease the operating temperature to below 50°C thanks to proprietary inorganic salts.



Solid state batteries with polymer electrolytes. Prof. Michel Armand 1991

Basquevolt's Technology Roadmap

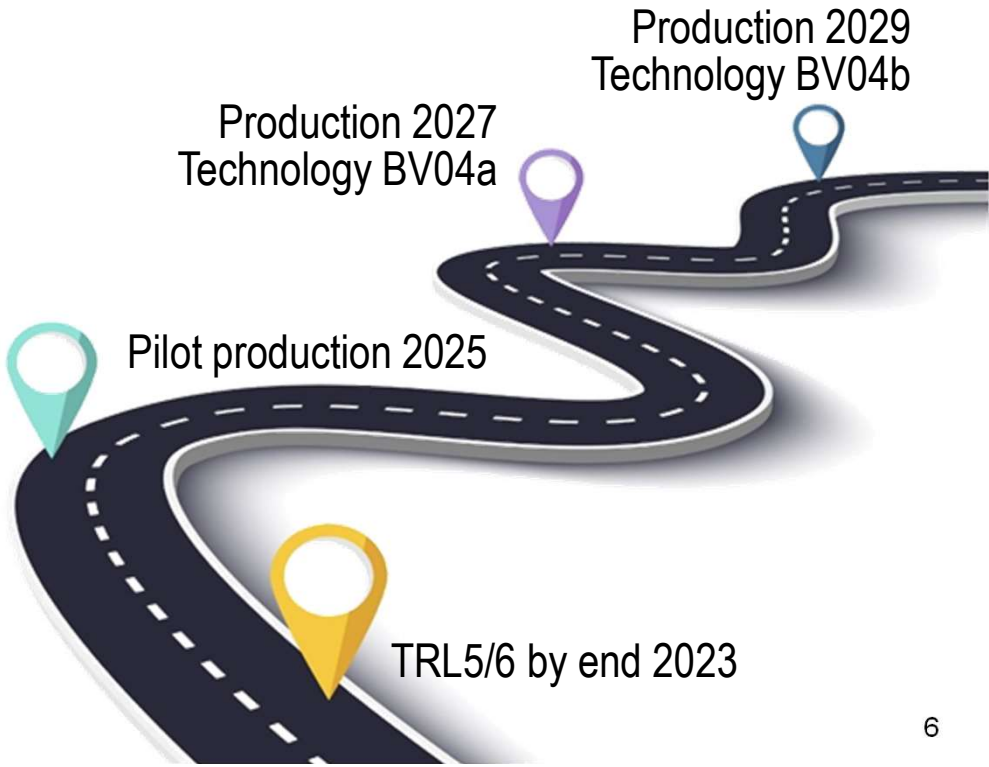
	BASQUEVOLT	
	NMC	LMFP
Energy Density (Wh/l)	1,000	>550
Energy Density (Wh/kg)	400	>280
Lifecycle (cycles to 80% SOH)	>1,000	>3,000
Fast Charge (minutes 10-80% SOC)	<15	<20

Our areas of differentiation are:

> Polymer composite electrolyte

> High Si content anode (30%)

Key milestones



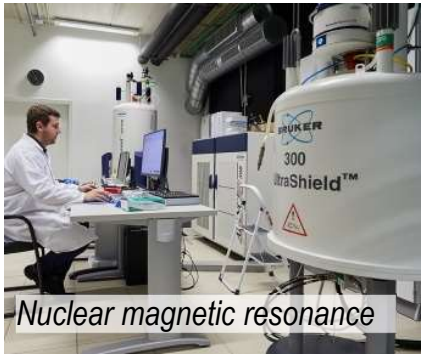
Our technology starting point

Facilities


Battery cells prototype line


Battery solid state material lab


Thermal analysis material



Nuclear magnetic resonance


Surface Analysis


Electrochemical testing lab


X Ray Diffraction


Electron microscopy

Pioneers in Solid State battery technology

HQ and location of the new R&D Center

Start of construction June 2022 and operational by Q4 2023.

BASQUEVOLT

tech by CIC energiGUNE

BASQUEVOLT

tech by CIC energiGUNE

THE SAFEST AND MOST COMPETITIVE SOLID-STATE BATTERY