



Jolt: A Breakthrough in the Limiting Layer of Critical, Existing Industry

Barcelona, Catalonia, Spain

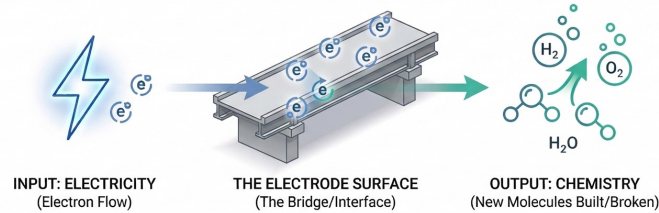
1. The Physical Economy Relies on Electrochemistry

Electrochemistry underpins nearly all modern industrial production but, for now, is **not well-understood** by investors or policymakers.

History's greatest venture premiums have belonged to those who understood the science before the market understood the economics.

Consider the clean drinking water in our homes, the food on our tables, the wires in our electrical cables, and the microchips in our phones, cars, medical devices, and data centers. These **everyday essentials** rely on a single, fundamental process to alter physical matter.

That often-overlooked process is *electrochemistry*: the science of using electricity to physically rearrange atoms and break chemical bonds, **turning raw materials into high-value molecules and metals.**



Without electrochemistry, modern manufacturing would grind to a halt. Remarkably, this entire global economic engine depends completely on a **single piece of hardware**: the *electrode*.

2. Electrodes are the Bridge of Electrochemistry

Simply put, an *electrode* is the **metal bridge that allows electricity to transform molecules** into whatever chemical form is needed by society.

Whoever supplies the most efficient electrode owns the market across several mega-industries and each of their recurring replacement cycles.

The **electrode's performance** – its speed, savings, and durability – directly **dictates the economic viability** of the below industries:



See next page for details on how these industries use electrodes.

These industries are racing to meet unprecedented modern demand, yet they share a **critical blind spot**: the electrode itself.

They treat this hardware as a static commodity because incumbent suppliers stopped innovating decades ago, leaving the entire global supply chain **trapped in an electrode bottleneck.**

3. Incumbent Electrode Technology Has Stagnated

The most decisive market shifts occur when monopolies optimize for their past while challengers engineer the future.

Just as IBM, Intel, and Boeing fatally protected their legacy architectures and lost the future to Apple, Nvidia, and SpaceX, **incumbent electrode monopolies** are fiercely defending a 20th-century model of electrode production that **cannot meet the coming industrial demand wave.**

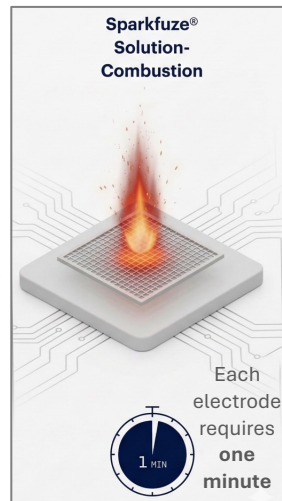
- **Stuck in the 1960s:** Legacy “paint-and-bake” methods rely on manual, multi-day batch processes that are fundamentally incapable of meeting modern scale.
- **Sunk-Costs:** Incumbents cling to 2D meshes to avoid writing off massive investments in legacy cell architectures and production lines.
- **Unscalable:** Expanding capacity is brutally slow and capital-intensive; adding just 200,000m² requires €40M and five years.
- **Fragile:** Legacy electrodes degrade under fluctuating renewable power, rely on toxic solvents, and due to heavier precious metal loadings, are susceptible to price volatility.



4. JOLT Has Broken Through the Bottleneck

The Institut Català d'Investigació Química (ICIQ) recently unlocked the first generational shift in electrochemical physics since the 1960s.

JOLT is the largest spinoff of **ICIQ**, a Tarragona, Spain-based research institute ranked among the **world's top five chemistry specialists.** Our team of world-class electrochemists has created **Sparkfuze®**, a breakthrough electrode production platform that moves beyond the slow, manual methods of incumbent and creates a **truly scalable hardware process for electrode production.**



- **Precision:** We coat high-surface-area 3D structures – not flat meshes – to dramatically boost performance.
- **Efficiency:** Our production machinery and automations cut production time from three days to one minute.
- **Savings:** Our electrodes enable system-level energy savings of ~48 kWh/kg, beating the incumbents.
- **Longevity:** Our electrodes remain stable under intermittent power loads, outlasting legacy coatings that flake and degrade with power fluctuations.
- **Decoupling:** Our material intensity is 35-50% lower, protecting against price volatility in platinum group metals.