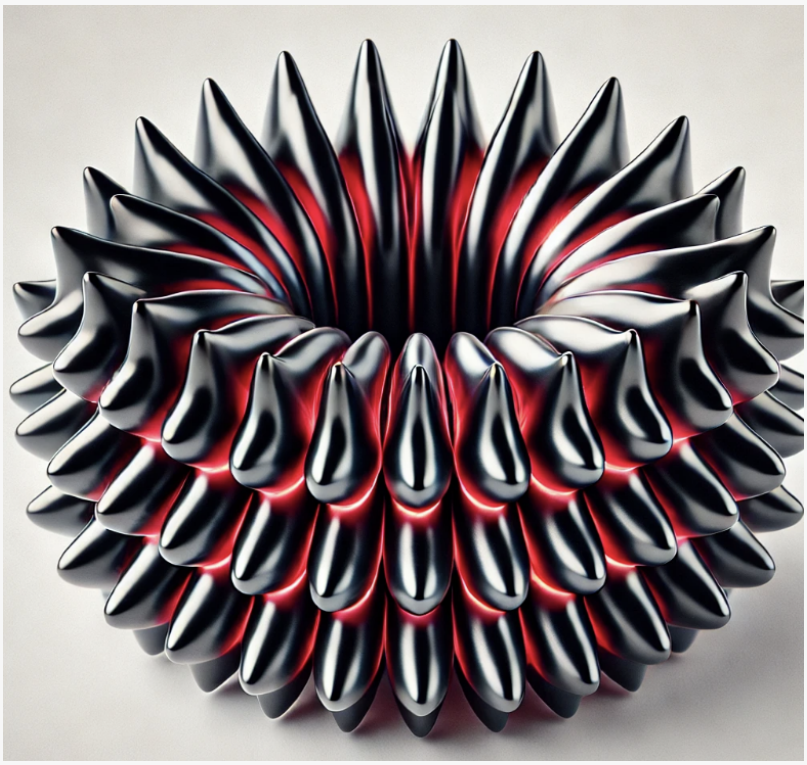
Salgenx Introduces Salponx: A Breakthrough in Adaptive Battery Chemistry for Saltwater Flow Batteries

Salgenx unveils Salponx, a breakthrough in adaptive battery chemistry for saltwater flow batteries, enhancing performance and efficiency.



Dynamic Electrode for Flow Battery

MADISON, WI, UNITED STATES, March 6, 2025 /EINPresswire.com/ -- Salgenx, a leader in sustainable energy storage solutions, announces the development of Salponx, a revolutionary advancement in battery technology that integrates coded materials and dynamic electrode formation. This innovation enhances the performance of the Salgenx Saltwater Flow Battery, providing a more efficient, adaptable, and eco-friendly energy storage solution.

A New Era in Battery Technology

Salponx introduces a fundamentally new approach to energy storage by utilizing programmable material interactions influenced by magnetism, electrostatics, harmonics, and frequency. Unlike conventional battery systems that rely on fixed electrodes, Salponx dynamically assembles and disassembles electrodes in real-time within the electrolyte solution, allowing for optimized energy storage and release based on demand.

The technology builds on the existing Salgenx Saltwater Flow Battery, which uses non-toxic and widely available materials to store and discharge energy efficiently using liquid electrolytes. The integration of Salponx-coded chemistry further enhances the system's efficiency, longevity, and sustainability.

Key Advantages of Salponx in Saltwater Flow Batteries

• Self-Assembling and Self-Healing Electrodes: Dynamic electrode formation reduces wear and extends battery lifespan.
• Improved Energy Efficiency: Reduced internal resistance and optimized ion movement enhance charge and discharge rates.
• Enhanced Recyclability: With no reliance on rare or hazardous materials, Salponx allows for a low-impact, fully recyclable battery system.


Pin Electrode for Flow Battery

• Adaptive Chemistry for Variable Energy Demand: The ability to adjust electrode structures in real-time allows for better load balancing and higher operational flexibility.
• Eco-Friendly and Scalable: Utilizing only widely available salts and metals, the Salgenx system offers a sustainable and cost-effective alternative to conventional batteries.

Advancing Sustainable Energy Storage
By integrating Salponx into the Salgenx Saltwater Flow Battery, the company is pioneering an energy storage solution that aligns with the future of sustainable power. This technology has the potential to increase grid stability, support renewable energy integration, and reduce dependence on lithium and other resource-intensive materials.

Eliminates Traditional Anode and Cathode Manufacturing Assembly Line
The introduction of Salponx technology in the Salgenx Saltwater Flow Battery eliminates the need for traditional anode and cathode manufacturing by dynamically forming and reforming electrodes on-demand within the electrolyte solution. Unlike conventional batteries that rely on pre-manufactured solid-state electrodes, Salponx utilizes coded materials and controlled electromagnetic interactions to assemble and disassemble electrode structures in real-time. This breakthrough removes the costly, resource-intensive processes of mining, refining, and fabricating electrodes, leading to a more sustainable, efficient, and adaptable battery system.

Availability and Next Steps
Salgenx is currently advancing research and development on Salponx technology and exploring partnership opportunities to further expand its applications. Initial prototypes are being tested in saltwater flow battery configurations, with plans for larger-scale implementation in grid energy storage and industrial applications.

About Salgenx

Salgenx is engineering next-generation energy storage solutions, pioneering safe, scalable, and sustainable alternatives to legacy technology. By integrating non-toxic materials, thermal storage, and self-healing electrodes, Salgenx is redefining the future of grid-scale energy storage.

Contact: Greg Giese / President TEL: +1-608-238-6001 (Chicago Time Zone) Email: greg@salgenx.com

Website: https://salgenx.com

Gregory Giese
Salgenx LLC
+1 608-238-6001
greg@salgenx.com
