

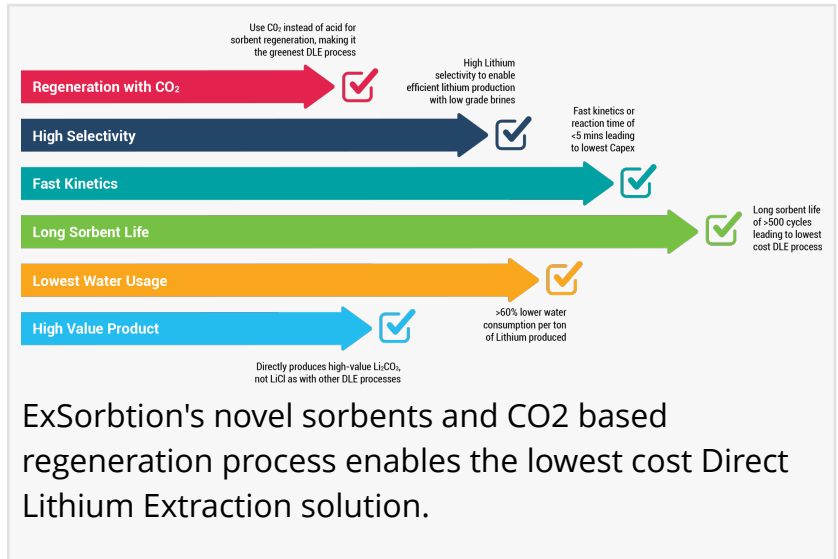
# ExSorbtion Secures Investment from Partner Sun Specialty Products to Commercialize Direct Lithium Extraction Solution

*This funding will be used to expand manufacturing capabilities, and build and deploy its pilot Direct Lithium Extraction system to accelerate commercialization.*

SUNNYVALE, CA, UNITED STATES,  
November 21, 2024 /

EINPresswire.com/ -- [ExSorbtion Inc.](#), a fundamentally different, low-cost Direct Lithium Extraction (DLE) solution provider, announced today that it has secured a strategic equity investment from its manufacturing partner, [Sun Specialty Products](#).

This funding will enable ExSorbtion to expand its manufacturing capabilities, build and deploy its pilot DLE system, and advance its solution toward full commercialization.



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ExSorbtion has developed a process to make their novel manganese-based DLE sorbents last for hundreds of cycles to enable the lowest-cost Direct Lithium Extraction solution.”

*Douglas Heller, CEO of Sun Specialty Products*

Sun Specialty Products is a leading manufacturer of advanced specialty products for the energy industry. Sun recognizes ExSorbtion's extraordinary potential to revolutionize the field of critical minerals recovery with its proprietary technologies that enable the lowest cost Direct Lithium Extraction solution. Sun has had firsthand experience with ExSorbtion's pioneering technology as a manufacturing partner and is enthusiastic about deepening its involvement as both an investor and its sorbent manufacturing partner.

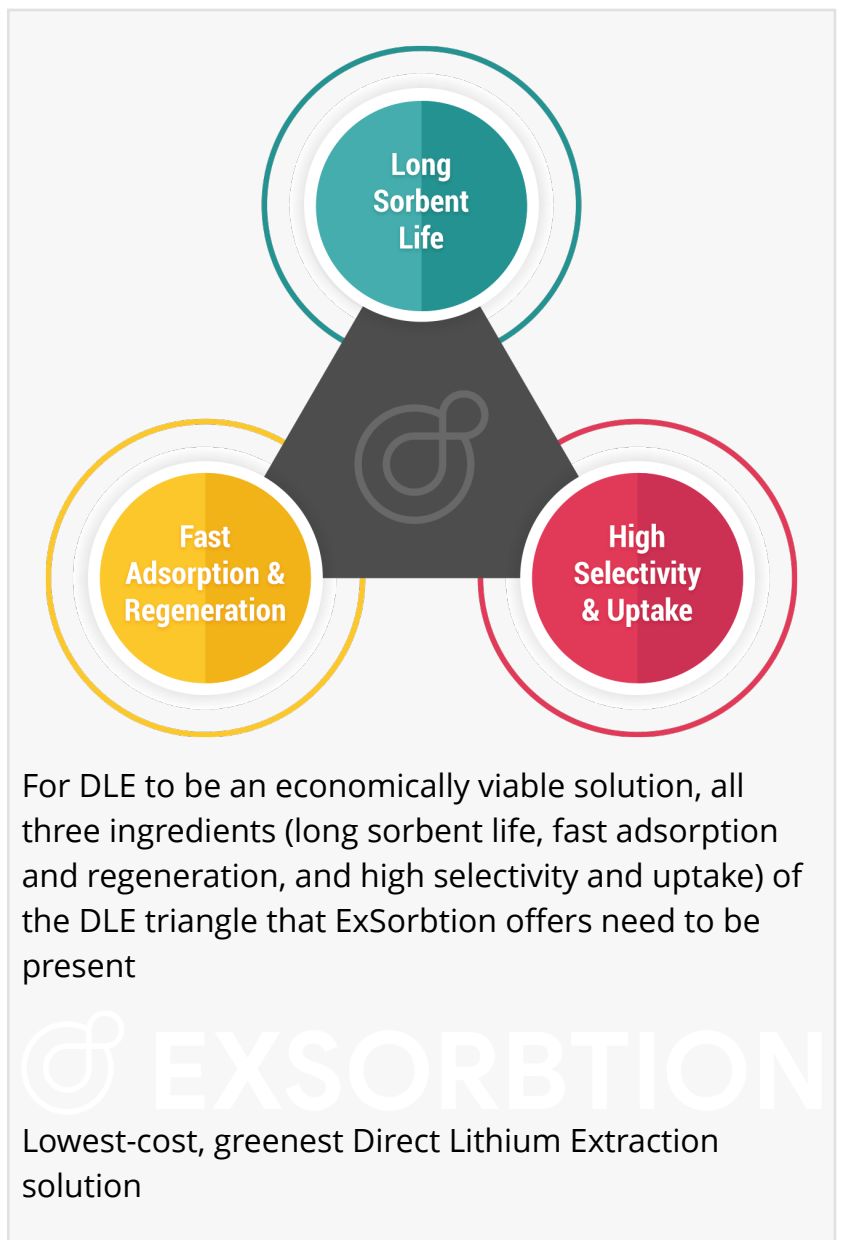
A Game-Changing DLE Solution for Efficient Lithium

Extraction

ExSorbtion's proprietary manganese-based sorbents represent a breakthrough in lithium

extraction technology and are designed to address ongoing performance and unit-economics challenges associated with competing technologies. "ExSorbtion's technology and approach address some of the most critical challenges involving efficient lithium extraction processes today.

While other DLE companies are focused on using less-effective aluminum-, titanium- and zirconium-based sorbents, ExSorbtion's technology provides the ideal manganese-based DLE sorbents engineered to last significantly longer and make them more economically viable; ExSorbtion has developed a process to make their novel manganese-based DLE sorbents last for hundreds of cycles while providing the highest lithium uptake, fastest reaction time and highest selectivity to enable the lowest-cost Direct Lithium Extraction solution" said Douglas Heller, CEO of Sun Specialty Products. "Their truly novel solution, developed by their talented team makes ExSorbtion an ideal partner and investment for us. We believe ExSorbtion has the vision and expertise needed to profoundly impact the cleantech space by providing the highest value lithium extraction solution."



### Strategic Partnership to Drive U.S. Manufacturing of Lithium Extraction Sorbent

ExSorbtion's President Anupam Ghildyal emphasized the importance of this partnership: "Our collaboration with Sun Specialty Products goes beyond funding. Sun has been a part of our team for several years and has been instrumental in developing and manufacturing scale-up of our novel metal-ion imprinted polymers. Their technical depth, industry knowledge, resources, and support as a manufacturing leader will help ExSorbtion quickly scale up manufacturing of its sorbents in the United States, unlike most DLE companies that rely on foreign manufacturing for their sorbents. Sun Specialty Products' confidence in ExSorbtion is a testament to the company's capabilities, leadership, and fundamentally different technology."

## ExSorbtion's DLE Solution: Unmatched Unit Economics

ExSorbtion's sorbents are based on nanoparticles comprising a porous particle composite and a metal ion imprinted polymer, acting both as a carrier for the metal ion sieve particles and as sites for selective metal ion exchange.

The metal ion sieve provides lithium-ion selectivity, while the imprinted binder provides additional sites for lithium-ion adsorption within an overall porous structure, permitting fluid transport within and throughout the particle. Combining the two systems provides for both efficient lithium-ion uptake (i.e., high lithium uptake and fast kinetics) and effective lithium-ion separation from competing ions. This combination is unique compared to any other sorbent-based DLE technologies, which rely on only one active sorbent system, with the carrier, if any, having only a passive role. Furthermore, ExSorbtion's patented regeneration process uses Carbon Dioxide gas instead of acid, extending sorbent life over 10-fold compared to conventional manganese- and titanium sorbents, cutting operating costs, and creating a carbon-negative process with minimal water usage.

## Empowering U.S. Lithium Production for a Greener Future

The equity investment from Sun Specialty Products will support ExSorbtion's plan to make and deploy its Direct Lithium Extraction solution in the United States to support domestic production of lithium for batteries that would continue driving the electrification of everything.

### About ExSorbtion:

ExSorbtion's mission is to become the highest-value supplier of lithium to enable the electrification of everything. ExSorbtion has acquired and is commercializing a technology developed by SRI International for Direct Lithium Extraction (DLE). This technology portfolio includes patented sorbents that have demonstrated very high lithium selectivity and fast reaction time to adsorb lithium from the brine and to remove lithium from the sorbent. The patented regeneration process uses carbon dioxide gas instead of acid (used by all other DLE companies) to extract the adsorbed lithium from the sorbents. By using gas instead of acid, ExSorbtion's sorbents last more than 10 times longer than competing manganese- and titanium-based sorbents – which is essential since the cost of the sorbent is over 30% of the overall cost of goods sold for the DLE process, enabling ExSorbtion to offer potentially the lowest operating cost compared to other DLE processes. Additionally, since the process uses carbon dioxide gas for regeneration, the process acts as a carbon sink, making it the greenest DLE process while consuming a significantly lower amount of fresh water than competing DLE processes.

### About SUN Specialty Products:

For over 50 years, Sun Specialty Products has delivered advanced, cost-effective polymeric and specialty chemical solutions to enhance industry performance. Sun Specialty Products has a long and successful history of scaling and commercializing numerous cost-effective, value-added technologies in the energy sector to benefit its customers and partners. Sun's manufacturing

and technical expertise were explicitly developed for and are centered around highly engineered nano-composite polymeric material systems. Specifically, the company specializes in nano-scale dispersion systems and suspension polymerization manufacturing techniques, allowing it to produce millions of pounds of high-value polymeric beads for various critical applications.

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