

# Stellantis Invests in Lyten's Breakthrough Lithium-Sulfur EV Battery Technology



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BY [STELLANTIS](#)

- Lyten is a Silicon Valley-based pioneer of tunable three-dimensional graphene, which has demonstrated significant reductions in greenhouse gas emissions and will advance the transition to sustainable mobility
- Stellantis and Lyten to develop applications for advanced Lithium-Sulfur based EV batteries, vehicle lightweighting, and enhanced vehicle sensing solutions
- Lithium-Sulfur batteries have the potential to deliver more than twice the energy density of lithium-ion and represent an alternative, non-nickel-manganese-cobalt cathode solution
- Stellantis exploring all battery technology to meet the diverse needs of its broad customer base and ensure clean, safe and affordable mobility

AMSTERDAM / SAN JOSE, California – Stellantis N.V. and Lyten, Inc. announced today that Stellantis Ventures, the corporate venture fund of Stellantis, invested in Lyten to accelerate the commercialization of Lyten 3D Graphene™ applications for the mobility industry, including the LytCell™ Lithium-Sulfur EV battery, lightweighting composites, and novel on-board sensing. Lyten, a pioneer of three-dimensional (3D) Graphene, will leverage the unique tunability of the material to enable enhanced vehicle performance and customer experience while decarbonizing the transportation sector.

Lyten's tunable materials platform has demonstrated significant reductions in greenhouse gas emissions and will advance the transition to sustainable mobility.

Unlike traditional lithium-ion batteries, Lyten's Lithium-Sulfur batteries do not use nickel, cobalt, or manganese, resulting in an estimated

60% lower carbon footprint than today's best-in-class batteries and a pathway to achieve the lowest emissions EV battery on the global market. Raw materials for Lithium-Sulfur batteries have the potential to be sourced and produced locally, in North America or Europe, enhancing regional supply sovereignty. This technology will meet the needs of industries seeking lightweight and energy-dense batteries that are free from supply chain disruptions.

Stellantis launched Stellantis Ventures in 2022 as a venture capital fund committed to investing in early and later-stage startup companies developing innovative and sustainable technologies within the automotive and mobility sectors. Stellantis Ventures, powered by an initial €300 million in funding, is a key component of the Company's Dare Forward 2030 strategic plan, which sets out core targets for Stellantis, including deep emission cuts to slash CO<sub>2</sub> in half by 2030, benchmarking the 2021 metrics, and achieving carbon net zero by 2038 with single-digit percentage compensation of the remaining emissions.

We are delighted that Stellantis Ventures, as the venture investment arm of a global automotive innovator, has demonstrated a strong belief in our company and our Lyten 3D Graphene™ decarbonizing supermaterials," said Dan Cook, president and CEO of Lyten. "Among the automotive product innovations being transformed by Lyten 3D Graphene™ are Lithium-Sulfur batteries with the potential to deliver more than twice the energy density of lithium-ion, payload-improving lightweighted vehicle composites, and new modes of sensing that do not require chips, batteries or wires. We are committed to advancing each of these applications to Stellantis and the automotive market.

Cook continued:

Unlike two-dimensional forms of graphene, the production of our tunable Lyten 3D Graphene™ has been independently verified to be carbon neutral at scale. We are converting greenhouse gases into a new class of high-performance, high-value carbon materials and are incorporating these tuned materials into applications that will decarbonize the hardest to abate sectors on the planet.

Having recently visited Lyten together with our CTO Ned Curic

and our head of Stellantis Ventures, Adam Bazih, we walked away impressed by the potential of this technology to help drive clean, safe and affordable mobility,” said Carlos Tavares, Stellantis CEO. “Lyten’s materials platform is a key investment for Stellantis Ventures, in line with our Dare Forward 2030 goal to accelerate deployment of innovative, customer-centric technologies. Specifically, Lyten’s Lithium-Sulfur battery has the potential to be a key ingredient in enabling mass-market EV adoption globally, and their material technology is equally well positioned to help reduce vehicle weight, which is all necessary for our industry to achieve carbon net zero goals.

With traditional lithium-ion battery materials in critically short supply for EV manufacturing, Lyten’s Lithium-Sulfur battery will offer an alternative, non-nickel-manganese-cobalt cathode solution that supports the global transition to electric vehicles at mass market scale. Lyten’s goal is to provide a secure supply of performance-based and environmentally sustainable products to its customers, while also enabling auto manufacturers to take advantage of growing U.S. and European policy incentives, such as those referenced in the Inflation Reduction Act.

Lyten’s Lithium-Sulfur battery, composites, and sensor technologies are initially being produced on its 145,000 square foot campus in Silicon Valley. Apart from producing EV batteries, Lyten is working with previous customers to start delivering Lithium-Sulfur batteries and 3D Graphene-infused composites for specialty markets in 2023. Lyten is collaborating with its strategic investors from across multiple industries to apply Lyten 3D Graphene materials to decarbonize additional, carbon intensive sectors beyond transportation, with more announcements planned for later this year.

Lyten 3D Graphene™ is a proprietary, tunable decarbonization supermaterial engineered from natural gas. Lyten’s 3D Graphene is similar to two-dimensional graphene in many of its valuable properties, however, 3D Graphene can be orders of magnitude more chemically and electrically reactive while also being highly tunable due to its three-dimensional morphology. The processes and equipment to engineer three-dimensional graphene materials are proprietary technological inventions patented by Lyten. Lyten will scale its initial output from its San Jose, California facility and will soon explore locations for a second phase of output capacity.

## About LytCell EV™ Lithium-Sulfur battery

LytCell™ is Lyten's proprietary Lithium-Sulfur battery that uses Lyten 3D Graphene™ to address the polysulfide shuttle challenges associated with sulfur, leading to a higher-performance battery that will have more than twice the energy density, and enables extended driving range compared to conventional EV batteries. Unlike lithium-ion and solid-state batteries, LytCell™ does not use expensive and scarce nickel or cobalt, will have an estimated 60+ percent lower carbon footprint than best-in-class lithium-ion, and an estimated 40 percent lower carbon footprint than solid state. The LytCell will be domestically and sustainably sourced, liberating manufacturers and consumers from supply chain risks and environmentally unsound mining issues associated with nickel-manganese-cobalt oxide (NMC) materials.

LytR™ is Lyten's unique thermoplastic formulation – infused with Lyten 3D Graphene™ – that reduces up to half the weight and materials required while maintaining or improving strength and performance. When Lyten 3D Graphene™ is tuned for dispersion into polyethylene, as with the LytR™ material, it significantly strengthens the thermoplastics' chemical and physical properties, thereby requiring less polyethylene material and reducing the carbon footprint by up to 55%.

Lyten is a materials innovation and applications company and the pioneer of the Lyten 3D Graphene™ materials platform. Lyten's decarbonization supermaterials are being tuned for a wide range of applications, including the next-generation Lithium-Sulfur batteries for use in the automotive, aerospace, defense, and other markets; a next-generation LytR™ polymer composite that can reduce the amount of plastic used by up to half while maintaining structural and impact strength; and next-generation sensor arrays that significantly increase detection sensitivity and selectivity for use in automotive, industrial, health, and safety applications.

Lyten is led by a group of experienced executives from across Automotive, Energy, Batteries, Semiconductors, Manufacturing and Defense, lists more than 300 patent matters, and is currently manufacturing Lyten 3D Graphene material, as well as its LytCell™ EV batteries, in San Jose, California. Lyten was founded in 2015. For press kit: [lyten.com/media-kit/](https://lyten.com/media-kit/)

Established with an initial investment of €300 million, Stellantis Venture is the first Stellantis corporate venture fund. It targets early and later-stage startup companies that are developing cutting-edge technologies for the automotive and mobility sectors and are focused on improving outcomes for individual customers and society as a whole. The fund has a unique dual mandate that requires portfolio companies to have strong, sustainable growth prospects as well as a high potential for technological adoption within Stellantis' products and operations. Backed by one of the world's leading automakers and mobility providers, Stellantis Ventures is uniquely positioned to drive value quickly and effectively for portfolio members.

Stellantis N.V. (NYSE: STLA / Euronext Milan: STLAM / Euronext Paris: STLAP) is one of the world's leading automakers and mobility providers. Its storied and iconic brands embody the passion of their visionary founders and today's customers in their innovative products and services, including Abarth, Alfa Romeo, Chrysler, Citroën, Dodge, DS Automobiles, Fiat, Jeep®, Lancia, Maserati, Opel, Peugeot, Ram, Vauxhall, Free2move and Leasys. Powered by our diversity, we lead the way the world moves – aspiring to become the greatest sustainable mobility tech company, not the biggest, while creating added value for all stakeholders as well as the communities in which it operates. For more information, visit [www.stellantis.com](http://www.stellantis.com).

## STELLANTIS FORWARD-LOOKING STATEMENTS

This communication contains forward-looking statements. In particular, statements regarding future events and anticipated results of operations, business strategies, the anticipated benefits of the proposed transaction, future financial and operating results, the anticipated closing date for the proposed transaction and other anticipated aspects of our operations or operating results are forward-looking statements. These statements may include terms such as “may”, “will”, “expect”, “could”, “should”, “intend”, “estimate”, “anticipate”, “believe”, “remain”, “on track”, “design”, “target”, “objective”, “goal”, “forecast”, “projection”, “outlook”, “prospects”, “plan”, or similar terms. Forward-looking statements are not guarantees of future performance. Rather, they are based on Stellantis' current state of knowledge, future expectations and projections about future events and are by their nature, subject to inherent risks and uncertainties. They relate to events and depend on circumstances that may or may not occur or exist in the future and, as

such, undue reliance should not be placed on them.

Actual results may differ materially from those expressed in forward-looking statements as a result of a variety of factors, including: the impact of the COVID-19 pandemic, the ability of Stellantis to launch new products successfully and to maintain vehicle shipment volumes; changes in the global financial markets, general economic environment and changes in demand for automotive products, which is subject to cyclicalities; changes in local economic and political conditions, changes in trade policy and the imposition of global and regional tariffs or tariffs targeted to the automotive industry, the enactment of tax reforms or other changes in tax laws and regulations; Stellantis' ability to expand certain of their brands globally; its ability to offer innovative, attractive products; its ability to develop, manufacture and sell vehicles with advanced features including enhanced electrification, connectivity and autonomous-driving characteristics; various types of claims, lawsuits, governmental investigations and other contingencies, including product liability and warranty claims and environmental claims, investigations and lawsuits; material operating expenditures in relation to compliance with environmental, health and safety regulations; the intense level of competition in the automotive industry, which may increase due to consolidation; exposure to shortfalls in the funding of Stellantis' defined benefit pension plans; the ability to provide or arrange for access to adequate financing for dealers and retail customers and associated risks related to the establishment and operations of financial services companies; the ability to access funding to execute Stellantis' business plans and improve its businesses, financial condition and results of operations; a significant malfunction, disruption or security breach compromising information technology systems or the electronic control systems contained in Stellantis' vehicles; Stellantis' ability to realize anticipated benefits from joint venture arrangements; disruptions arising from political, social and economic instability; risks associated with our relationships with employees, dealers and suppliers; increases in costs, disruptions of supply or shortages of raw materials, parts, components and systems used in Stellantis' vehicles; developments in labor and industrial relations and developments in applicable labor laws; exchange rate fluctuations, interest rate changes, credit risk and other market risks; political and civil unrest; earthquakes or other disasters; risks and other items described in the Company's Annual Report on Form 20-F for the year ended December 31, 2022 and Current Reports on Form

6-K and amendments thereto filed with the SEC; and other risks and uncertainties.

Any forward-looking statements contained in this communication speak only as of the date of this document and Stellantis disclaims any obligation to update or revise publicly forward-looking statements. Further information concerning Stellantis and its businesses, including factors that could materially affect Stellantis' financial results, is included in Stellantis' reports and filings with the U.S. Securities and Exchange Commission and AFM.

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