

LANXESS at the Battery Show Europe 2021

- **Secure raw material supply chains for battery manufacturers in Europe**
- **Key raw materials for electrolytes and cathode materials**
- **Direct cooling fluids for batteries**
- **High-tech thermoplastics for electromobility**

Cologne, November 25, 2021 – For the second time, the specialty chemicals company LANXESS will be among the exhibitors at the Battery Show Europe, the biggest trade fair for cutting-edge battery technology and manufacture in Europe. At its stand, the company will focus on key precursors for cathode materials and electrolyte components, flame retardants and coolants as well as high-tech thermoplastics for components of batteries and electric powertrains. “As a manufacturer of numerous key materials for lithium-ion batteries, we want to contribute to the development of sustainable and dependable supply chains in Europe,” says Philipp Junge, who heads LANXESS’ initiative for electromobility and circular economy.

Electrolyte manufacture in Leverkusen

The boom in electromobility is currently driving major investment in the mass production of lithium-ion battery cells. For Europe, according to studies conducted by Benchmark Minerals Intelligence, there are plans for the construction of battery cell factories with an annual production capacity of around 1,000 gigawatt hours by 2030. “We want to benefit from this growth with value-generating business models covering all aspects of electromobility,” says Junge. One example is the partnership with Guangzhou Tinci Materials Technology Co. (Tinci), a leading manufacturer of lithium-ion battery materials. As early as 2022, the LANXESS subsidiary Saltigo in Leverkusen will be producing electrolyte formulations for lithium-ion batteries on behalf of the Chinese company. This will allow Tinci to supply European battery cell manufacturers locally.

LANXESS AG

Contact:
Michael Fahrig
Corporate Communications
Spokesperson Trade & Technical
Press
50569 Köln
Germany

Phone: +49 221 8885-5041
michael.fahrig@lanxess.com

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Key raw materials for conductive salt and cathode active materials

Lithium hexafluorophosphate (LiPF_6) is an important component in electrolyte formulations. The conductive salt is synthesized from hydrofluoric acid and phosphorus chemicals. LANXESS is one of the leading producers of these two key raw materials and operates an integrated plant network at its Leverkusen site. This enables the company to support the local production of conductive salt in Europe.

It's a similar situation with the cathode active material lithium iron phosphate (LFP), which has become a sustainable and cost-effective alternative to cobalt- and nickel-containing active materials. Synthetic iron oxides are precursors of LFP. At its Krefeld-Uerdingen site, LANXESS operates one of the world's biggest production plants for this product group and is among the world's leading manufacturers. So as a raw material supplier, LANXESS has sufficient capacity to reliably and sustainably cover the growing demand for LFP in Europe. The technical oxides marketed under the Bayoxide brand have proven themselves in this application.

Coolants for batteries

Fast-charging systems help to reduce charging time for electric vehicles. But they also generate a significant amount of heat, which needs to be dissipated from the battery. This can be done by means of direct liquid cooling – “immersion cooling” – for which LANXESS offers a range of coolants including phosphoric esters, which are highly flame resistant and significantly improve battery safety. Immersion cooling also enables faster charging times, and improves the cycle life of the battery systems. Immersion cooling is yet another exciting growth area in which the specialty chemicals company is seeking to expand its thermal management expertise.

Polyamides and polyesters for electromobility

Lithium-ion batteries, the electric powertrain and the charging infrastructure are key applications for the polyamides, polyesters and

LANXESS AG

Contact: Michael Fahrig
Corporate Communications
Spokesperson Trade & Technical
Press
50569 Köln
Germany

Phone: +49 221 8885-5041
michael.fahrig@lanxess.com

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fiber-reinforced composites marketed by LANXESS under the brands Durethan, Pocan resp. Tepex. For example, flame-retardant materials for battery components and thermally conductive materials for battery modules are in high demand in the field of thermal management. At the Battery Show, LANXESS will be showcasing highly stiff, orange-colored high-voltage connectors made from flame-retardant, halogen-free polyamide 6, but also cell frames and end plates for “pouch cells”. These are made from an extremely hydrolysis-resistant polyester compound Pocan, which is also highly flame-retardant and dimensionally stable. Julian Haspel, who heads the e-Powertrain team in the High Performance Materials (HPM) business unit, addresses yet another aspect of the company’s offering: “LANXESS supports project partners with a comprehensive range of services encompassing the entire development chain for plastic components for electromobility.”

The Battery Show Europe 2021 will take place from November 30 to December 2 at the exhibition and trade center in Stuttgart, Germany. Find LANXESS in Hall 4, booth 4-199.

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Contact: Michael Fahrig
Corporate Communications
Spokesperson Trade & Technical
Press
50569 Köln
Germany

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michael.fahrig@lanxess.com

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LANXESS AG

Contact: Michael Fahrig
Corporate Communications
Spokesperson Trade & Technical
Press
50569 Köln
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michael.fahrig@lanxess.com

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LANXESS is entering the world of battery chemicals. As early as next year, the Group will be producing electrolyte formulations for lithium-ion batteries on behalf of the Chinese company Tinci. LANXESS will be using a high-tech facility operated by its subsidiary Saltigo.

Photo: LANXESS



Connectors made from Durethan BKV30FN04 for the cable harnesses in the electric models produced by a European-US automotive manufacturer. The flame-retardant, halogen-free polyamide 6 can also be dyed in bright colors like orange (RAL 2003) and yellow and is characterized by its high strength and toughness.

Photo: LANXESS

LANXESS is a leading specialty chemicals company with sales of EUR 6.1 billion in 2020. The company currently has about 14,900 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

Forward-Looking Statements

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You can find further information concerning LANXESS chemistry in our WebMagazine at <http://webmagazine.lanxess.com>.

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