

### **LANXESS wins ICIS Innovation Award for innovative LFP battery materials**

- **New iron oxide battery grades for the synthesis of cathode material**
- **Competitive and sustainable alternative to Asian supply chains**
- **LANXESS also examines production of iron phosphate as a precursor for LFP**

LANXESS Greater China  
Contact:

Fiona Yu  
Phone + 86 21 6109 6716  
fiona.yu@lanxess.com

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**Shanghai, October 15, 2024** – Specialty chemicals company LANXESS has developed new high-quality iron oxides for use in lithium iron phosphate (LFP) batteries and received the prestigious ICIS Innovation Award 2024. The award in the category “Best Product Innovation from a Large Company” recognizes LANXESS’ outstanding contribution to the development of value chains for LFP in the Western regions.



**LANXESS received the ICIS Innovation Award 2024 for its project to develop and produce lithium iron phosphate (LFP) as a battery cathode material. The award recognizes achievements in the development of Western value chains for LFP batteries.**

LFP batteries are a safe and cost-effective type of battery with high cycle and thermal stability. They are mainly used for electric cars and stationary energy storage systems. LANXESS offers high-quality iron oxide battery grades under the brand name Bayoxide, which serve as customized raw materials for the synthesis of the cathode material

LFP. These products are specifically tailored to the requirements of LFP manufacturers and enable high battery quality, performance and efficiency.

“This award confirms our innovative strength in the field of sustainable battery technology. With our Bayoxide battery grades, we are making a significant contribution to the electrification of mobility and the energy transition,” says Michael Ertl, head of the LANXESS Inorganic Pigments business unit. “Our goal is to offer our customers in Europe and North America a competitive and environmentally friendly alternative to the dominant Asian supply chains for LFP.”

### **Further precursor for LFP batteries**

LANXESS also plans to offer iron phosphate as a precursor for LFP. So far, there is hardly sufficient capacity in Europe for iron phosphate that can be used for the production of LFP. The company is currently examining the possibility of installing its own production capacities in the existing plant setup. LANXESS can draw on proven facilities at its German site, making it the only major producer in Europe and one of the few worldwide.

A feasibility study has shown that the technology is ready for large-scale production and offers an economical and sustainable alternative to the LFP production process currently used in China. The Chinese process is based on the use of iron sulfate and produces wastewater with a high salt content.

The LANXESS process, on the other hand, extracts the iron phosphate directly from iron and phosphoric acid. As a result, neither climate-damaging emissions of nitrogen and sulfur oxides nor wastewater with high salt loads are generated.

### **LFP: cost-effective alternative to lithium-ion batteries**

Automotive batteries with LFP cathodes are on the rise worldwide. Vehicle manufacturers are equipping more and more of their high-

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volume models with them. Compared to lithium-ion technology with cathodes based on nickel, manganese and cobalt (NMC) or nickel, cobalt and aluminum (NCA), LFP batteries are significantly more cost-effective in terms of the raw materials used and production. There is no need to mine expensive and rare heavy metals for their cells. This has a significant impact on vehicle costs, as the cathode material accounts for over 60 percent of the cell cost. LFP battery technology is also characterized by a high number of charging cycles and a long service life. At the same time, the batteries are thermally more stable and safer.

With its products, chemical know-how and decades of experience, LANXESS has all the prerequisites to play a leading role in the development of Western LFP value chains. Unlike start-ups or smaller companies, the company can utilize a chemical and logistical infrastructure that enables it to produce raw materials for cathode materials on an industrial scale with assured quality and very high sustainability standards.

### **Presentation at the Battery Show North America**

The products of the LANXESS Inorganic Pigments business unit will also be presented at the Battery Show North America in October.

More information about the product portfolio is available at

<https://lanxess.com/en/products-and-brands/brands/bayferrox/technical-applications>.

### **About the ICIS Innovation Awards**

The ICIS Innovation Awards have been presented annually since 2004 by ICIS Chemical Business magazine. They recognize companies that achieve significant developments in the chemical industry in the areas of products, processes and sustainability. The jury consists of independent experts from science, industry and the media.

### **About LANXESS**

**LANXESS Greater China  
Contact:**

Fiona Yu

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fiona.yu@lanxess.com

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## Press Release

LANXESS is a leading specialty chemicals company with sales of EUR 6.7 billion in 2023. The company currently has about 12,500 employees in 32 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives and consumer protection products. LANXESS is listed in the leading sustainability indices of the Dow Jones Sustainability Index (DJSI World and Europe).

### LANXESS China

On January 31, 2005, the company was initially listed on the Frankfurt Stock Exchange and LANXESS Chemical (China) Co., Ltd. officially started operations. LANXESS now has 13 subsidiaries, 5 R&D centers and 5 production sites in Greater China. LANXESS works closely with its local partners to develop market-oriented solutions that meet local market needs.

### Forward-Looking Statements

This company release contains certain forward-looking statements, including assumptions, opinions, expectations and views of the company or cited from third party sources. Various known and unknown risks, uncertainties and other factors could cause the actual results, financial position, development or performance of LANXESS AG to differ materially from the estimations expressed or implied herein. LANXESS AG does not guarantee that the assumptions underlying such forward-looking statements are free from errors, nor does it accept any responsibility for the future accuracy of the opinions expressed in this presentation or the actual occurrence of the forecast developments. No representation or warranty (expressed or implied) is made as to, and no reliance should be placed on, any information, estimates, targets and opinions, contained herein, and no liability whatsoever is accepted as to any errors, omissions or misstatements contained herein, and accordingly, no representative of LANXESS AG or any of its affiliated companies or any of such person's officers, directors or employees accept any liability whatsoever arising directly or indirectly from the use of this document.

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### LANXESS Greater China Contact:

Fiona Yu  
Phone + 86 21 6109 6716  
[fiona.yu@lanxess.com](mailto:fiona.yu@lanxess.com)

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