

### **Ion exchange resins for persuasive answers to a wide range of challenges**

- **LANXESS at IFAT, May 13–17, 2024, Munich, Hall A2, Stand 326**
- **Solutions for PFAS removal, battery recycling and “PEM” electrolysis for hydrogen production**
- **Further Lewatit Scopeblue ion exchange resin available**
- **LewaPlus: new module for mixed-bed resins**
- **Lectures and “Lunch & Learn” sessions**

**Cologne, April 30, 2024** – Ion exchange resins from the Lewatit product family and adsorbents from the Bayoxide brand provide the basis for convincing answers to a wide range of challenges wherever water and aqueous solutions are involved. This is illustrated by the appearance of the specialty chemicals group LANXESS at this year’s IFAT. The world’s leading trade fair for water, sewage, waste and raw materials management will take place in Munich from May 13 to 17, 2024.

“Everyone is talking about climate change, the energy transition and the ongoing electrification of our everyday lives – especially in the area of mobility – and the opportunities and challenges they present. We are proud that we can make a significant contribution to solving today’s challenges with our products. An international trade fair such as IFAT, which is dedicated to these key issues of our time, is an excellent platform to present our solutions and innovative contributions and to discuss them with customers and interested parties. That’s why we’re here,” explains Michael Rockel, who has headed the Liquid Purification Technologies business unit at LANXESS since February 2024.

LANXESS will also be offering several “Lunch & Learn” sessions at IFAT between 11 a.m. and 2 p.m. on the three days of the fair, May 14, 15 and 16, which are specifically designed to promote technical dialog with customers. The program is available at [www.lewatit.com](http://www.lewatit.com).

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Prior registration is possible and is requested for organizational reasons.

### **Resins for hydrogen production and battery recycling**

“Green” hydrogen, i.e. hydrogen produced using renewable energy, is becoming a cornerstone of the energy transition. Splitting water in an electrolyzer with a proton exchange membrane (PEM) produces hydrogen and oxygen with efficiencies of over 60 percent.

Demineralized ultrapure water (UPW) is used. During electrolysis, traces of impurities pass into the water, which must be removed so that they do not impair the process and in particular the sensitive PEM. In a process proposed by LANXESS, partial flows of the process water and the feed water required to supplement it are therefore continuously purified. The Lewatit UltraPure resins used for this purpose were developed specifically for such tasks.

Hans-Juergen Wedemeyer’s presentation entitled “Effective Process Water Treatment for Proton Exchange Membrane (PEM) Electrolysis Installations with Lewatit Ultrapure Ion Exchange Resins” will provide detailed information on this on May 15, 2024, at 10:35 a.m. on the “Hydrogen Stage” in Hall A4 at IFAT.

Lewatit exchange resins can also be used to advantage in the recycling of lithium-ion batteries to reliably remove impurities in the ppm range, such as zinc, copper, aluminum and iron, after acid digestion of the black mass. The valuable metals nickel, cobalt, manganese and lithium can then be recovered and recycled.

### **No more trace of PFAS in the water**

The removal of PFAS (per- and polyfluoroalkyl substances) from surface, ground and drinking water with the aid of ion exchange resins is currently the focus of attention due to the worldwide spread of environmental contamination with these fluoroorganic compounds. On May 14, 2024, at 1:30 p.m. on the “Green Stage” in Hall C4 at

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IFAT, Dr. Dirk Steinhilber will be presenting in detail how tailor-made resins can be used to reduce the concentration of PFAS of different chain lengths down to the detection limit in the ppt range. His presentation is entitled “The Use of Selective Lewatit Ion Exchange Resins for the Removal of Emerging Contaminants: PFAS and Beyond.”

### **Further Scopeblue resin for drinking water treatment**

In addition to three weakly acidic acrylate-based ion exchange resins, the strongly acidic polystyrene-based cation exchange resin Lewatit S 1567 now also meets the requirements for Scopeblue products. This is primarily due to the styrene used as a monomer in the mass balance process, which is obtained from renewable or waste-based raw materials, namely tall oil fatty acids. In this way, it is possible – compared to conventionally produced resin – to substitute more than 90 percent of fossil raw materials and reduce the carbon footprint by up to 76 percent. The resin is produced at the Bitterfeld site in Saxony-Anhalt, which, like Leverkusen, has recently been certified in accordance with the ISCC PLUS standard (International Sustainability & Carbon Certification). The same applies to the method used for mass balancing.

The Scopeblue sustainability umbrella brand identifies LANXESS products of which more than 50 percent is based on renewable raw materials or whose carbon footprint is less than half that of the corresponding product made from conventional raw materials. “This allows our customers to act in a more sustainable way,” emphasizes Dr. Stefan Neufeind, Head of Technical Marketing in the Liquid Purification Technologies business unit at LANXESS.

The monodisperse Lewatit S 1567 can be used in cartridges as well as in large-scale drinking water treatment and is characterized by favorable kinetics and high operating capacity. It is chemically and mechanically very stable and can be disinfected very effectively.

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### **Design software LewaPlus extended once again**

The functional scope of the free-to-use LewaPlus design software has grown continuously over the years and covers all important areas of application for Lewatit ion exchange resins, from large power plants to drinking water and wastewater treatment and applications in the food industry.

A new addition is a module for simulating ready-to-use mixed beds. It allows precise hydraulic design and calculations depending on the feed and required product water quality. Ready-to-use mixed beds are used in industry for the production of everything from demineralized to ultrapure water.

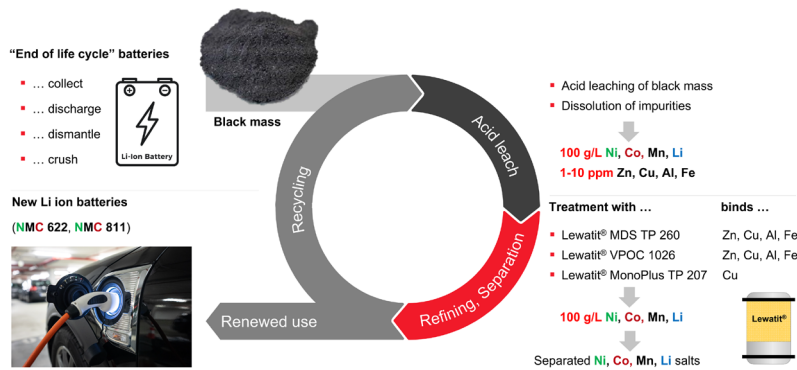
You can find more detailed information about products from the Liquid Purification Technologies business unit on the website at [www.lewatit.com](http://www.lewatit.com).

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## Images



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Lewatit ion exchange resins allow numerous impurities to be removed after the black mass has been broken down during the recycling of used batteries, thus enabling the metals nickel, cobalt, manganese and lithium to be recycled.

Image: LANXESS



The new Scopeblue product Lewatit S 1567 is produced at the ISCC PLUS-certified plant of IAB Ionenaustauscher Bitterfeld GmbH in Saxony-Anhalt in a mass-balanced manner.

Photo: LANXESS

LANXESS is a leading specialty chemicals company with sales of EUR 6.7 billion in 2023. The company currently has about 12,800 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 index of the Dow Jones Sustainability Index (DJSI World and Europe).

### Forward-Looking Statements

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You can find further information concerning LANXESS chemistry at <https://lanxess.com/en/Media/Stories>.

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