Dear BLB+ Community,

As the year comes to an end, a lot has happened—both on a technical and political level. In this summary, we've compiled the most important updates for you. We wish you a Merry Christmas and a successful start to the new year!

Funding of €73 million secured for new research building (CPC). On December 4, 2024, the Budget and Finance Committee of the Lower Saxony State Parliament approved the financing plan for the new building. Over 150 scientists will conduct research at the CPC, focusing on circular production of energy storage systems. Read more

**Strong plea for continued national battery research funding.** Prof. Christoph Herrmann, BLB Board Member, warned the Committee for Education, Research, and Technology Assessment about the consequences of stopping federal funding for battery research. Batteries are crucial as a key technology for e-mobility and the energy transition in Germany. Read more

**Summer School 2024: Fuel Cells & Batteries.** The 15th Lower Saxony Summer School for Fuel Cells and Batteries attracted over 40 participants to BLB. Renowned experts from academia and industry explained electrochemical fundamentals, underlying technologies, practical applications, and future developments during a diverse Summer School week. <u>Read more</u>

**Bachelor's program "Battery and Hydrogen Technology" launched.** This new program, starting this semester, focuses on the key technologies of the energy transition. It complements the engineering programs at Technische Universität Braunschweig with an independent and sustainability-oriented profile. Read more

**German-French collaboration for high-performance solid-state batteries initiated.** The HiPoBat (High Power Batteries) project was officially launched with a two-day event in Paris. More than 90 participants met at the renowned Collège de France in Paris to exchange ideas, present initial results, and discuss visions for this highly collaborative project. Read more

Over 260 attendees at the 7th International Battery Production Conference (IBPC) 2024. With 50 presentations, 7 keynotes, and 76 posters, the IBPC once again fostered a productive exchange this year. The IBPC 2025 is planned to take place from November 5–7, 2025, at the Steigenberger Parkhotel in Braunschweig. Read more

**87** scientific publications on battery research released in **2024**. This brings the number of publications by BLB researchers to over 850 since the official founding of BLB in 2015. We especially recommend there 3 publications as holiday reading:

- > Cost modeling for the GWh-scale production of modern lithium-ion battery cells (Nature Communications Engineering): This detailed, publicly accessible cost model for battery cell production enables comparative analysis of different geometries, chemistries, and production processes, supported by case studies and current data. Read the publication
- > Recycling of solid-state batteries (Nature Energy): This review evaluates recycling strategies for solid-state batteries, including indirect approaches like re-synthesis and direct methods like refurbishment, which require specific pre-treatment and mechanical or metallurgical processes depending on the type of solid electrolyte. Read the publication
- > Circular battery production in the EU: Insights from integrating life cycle assessment into system dynamics modeling on recycled content and environmental impacts (Industrial Ecology): This study examines the environmental impact of the EU Battery Regulation under dynamic market conditions. It highlights that, in addition to recycling, improvements in production processes and material extraction are crucial to achieving environmental benefits and avoiding disincentives. Read the publication

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