DEPARTMENT OF CHEMISTRY AND PHYSICS OF MATERIALS

ANNOUNCEMENT



Vortragsankündigung

Mittwoch, 17. Dezember 2025, 11.15 Uhr im SR I

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Montanuniversität Leoben

"Recycling strategies for lithium-ion batteries: Contributing to security of supply in the transition"

The presentation will address current and future recycling strategies for lithium-ion batteries and highlight their importance for security of supply in the context of the energy transition. Based on the expected increase in end-of-life batteries and technological diversification, the central challenges of recovering critical raw materials such as lithium, nickel, cobalt, and graphite are explained. The presentation describes the entire value chain from collection and pre-treatment to metallurgical processing and refinement, and compares pyrometallurgical, hydrometallurgical, and combined approaches. In addition, regulatory requirements and market forecasts that call for the expansion of flexible and efficient recycling processes are discussed. Finally, it shows how a closed battery cycle contributes to reducing geopolitical dependencies, lowering the carbon footprint, and strengthening industrial competitiveness.