

University of Lorraine
 Université de Lorraine-Ressources21
 Nancy, France



ABOUT

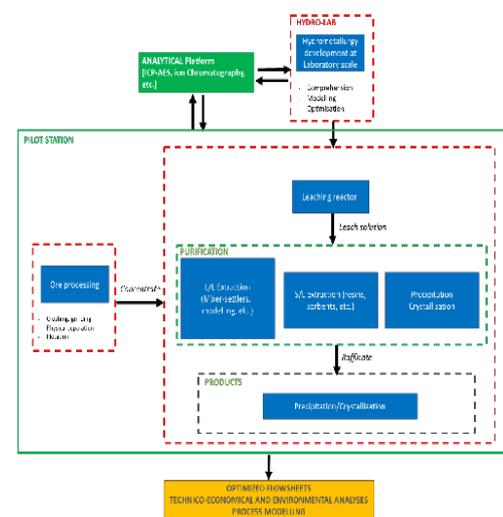
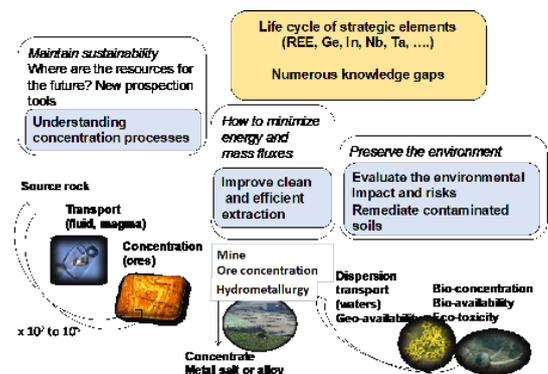
With more than 3,700 teaching and research faculty and approximately 54,000 students, including nearly 8,000 foreign students, the Université de Lorraine (UL) is one of France's largest multidisciplinary universities. Its location in the heart of Europe, with borders on three European member states (Germany, Belgium and Luxembourg) offers to UL a privileged position for strong international partnerships. The scientific activity of the Université de Lorraine is organized in 60 research laboratories located in 10 scientific centers and 6 research federations covering a wide range of disciplinary fields and topics. Université de Lorraine is particularly recognised for its research activities in the field of Applied Geology and the development of processes in extractive metallurgy as confirmed by the 19th position of Université de Lorraine in mineral processing in the Shanghai ranking in 2019 (University of Lorraine is also the first university ranked at the European level in this category before Imperial College).

EXPERTISE

Université de Lorraine has defined few priority topics in Research and Education in links with societal challenges of the 21st century including the sustainable management of raw materials and their valorisation. This topic mainly relies on fundings from European projects, KIC Raw Materials, industrial collaborations, national project (ADEME, ANR, etc.) and the Labex RESSOURCES21. Labex RESSOURCES21 is indeed interested in cross-disciplinary to interdisciplinary approaches applied to strategic metals associated with energy transition technologies: 1) understanding the natural cycles of strategic metals (Ni, REE, Li, Au) and ore systems; 2) development of innovative tools for better ore processing and better extraction of metals; 3) evaluation of the environmental impact of these metals, once dispersed throughout the ecosystem. In particular, field studies and laboratory work supported by modelling are developed to better understand the geochemical cycle of metals (behaviour of trivalent metals in mineral/organic/biological systems, role of discontinuous media in the redistribution of metals in space and time with application to Ni enrichment in saprolitic horizons of laterites). For the last five years, RESSOURCES21 aims at working on each part of the chain values (from raw material to the final product by including societal and economic issues while tackling development of recycling processes within the framework of energy transition with a special attention on lithium-ion battery recycling).

FACILITIES & SERVICES

Ressources21 gathers seven laboratories involved in geosciences, processes, environment and ecotoxicology studies, material science and economics. All of these laboratories allow an access to unique facilities to characterise ores and residues, model geological phenomena, develop processes involving all operations utilised in extractive metallurgy from lab scale to pilot scale, investigate Impact of processes and mining exploitation on environment, etc.



MORE INFORMATION

Website: <http://ressources21.univ-lorraine.fr>

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