

Press release Innosuisse

The Swiss Innovation Agency is funding an innovative project for the bio-assisted recovery of critical metals. This project will be conducted by the laboratory of microbiology at the university of Neuchâtel (LAMUN) in cooperation with Belenos Clean Power Holding Ltd in Biel (BE).

Making our energy supply more sustainable and less carbon-intensive is a priority task in our times. To achieve this, Belenos is developing a vanadium (V) based battery that is considered to be a more sustainable alternative to fossil fuels. However, the extraction of this metal from natural sources still has a big ecological impact.

Innovative approach

This project aims at designing a bio-assisted system using fungi and bacteria for the sustainable extraction and recovery of vanadium from ores and other vanadium containing matrices (end-of-life products).

To accomplish this, the project will develop methods in the field of biomining to make the extraction of V less carbon-intensive and costly, decrease the amount of wastewater and recover non-renewable metals from non-conventional sources.

Alliance between science and industry

The funding of innovation by Innosuisse is based on the cooperation between universities and companies in the private sector to promote science-based innovation in the interest of industry and society in Switzerland. In this case, Dr. Saskia Bindschedler (Project leader) and Prof. Pilar Junier from the laboratory of microbiology at the university of Neuchâtel are starting a two-year cooperation with Belenos Clean Power Holding Ltd.

The university will develop the scientific methods while Belenos will provide expertise concerning the mining and application to batteries and further analyses of applicability, carbon-footprint and costs of the new methods.

Grant details

The project will start in March 2021 and end in March 2023. The total amount of funding is 903'630 CHF, with 506'579 CHF provided by Innosuisse for the laboratory of microbiology and 456'866 CHF investment by Belenos.

Project partners:

Université de Neuchâtel, laboratory of microbiology (LAMUN): Dr. Saskia Bindschedler (Project leader); Patrick Hilpisch (Scientific collaborator); Prof. Pilar Junier (head of the LAMUN).

Belenos Clean Power Holding Ltd: Felipe Hilário (Process Development Manager); Cédric Pitteloud (CSO).