ULiège announces participation to EU H2020 Raw Materials consortium for the recovery of Tungsten, Niobium and Tantalum as by-products in mining and processing waste streams

Liège, Belgium, June 11, 2019 – The University of Liège is pleased to announce its participation in the European consortium H2020 TARANTULA "Raw Materials consortium for the recovery of Tungsten, Niobium and Tantalum as by-products in mining and processing waste streams", a consortium of 16 partners comprising leading European industrial companies, research centers and universities which was awarded a 6.95M€ grant by the European Commission for the development of a project targeting the recovery of Tungsten, Niobium and Tantalum as by-products in mining and processing waste streams. The project will be developed under the leadership of Tecnalia Research and Innovation, a Spanish private, independent, non-profit applied research center of international excellence.

ULiège will lead the Pre-treatment work package and develop two specific innovative technologies, electro-dynamic fragmentation and biomimetic flotation.

Two high profile ULiège research centres involved

Two high profile ULiège research centres are involved in the project: the GeMMe (Minerals Engineering, Materials and Environment Research Group) and the GIGA (Interdisciplinary Cluster for Applied Genoproteomics).

GeMMe consists in a unique Belgian research group contributing to the development of innovative processes for an efficient management of mineral and metallic resources. The GeMMe provides unparalleled experience in urban ore characterization and processing (with a focus on innovative sorting techniques and hydrometallurgy) derived from a long research tradition in primary ores mining and processing.

GIGA is the interdisciplinary research institute in biomedical sciences of the University of Liège. Located within the University Hospital on the Sart Tilman campus of ULiège, GIGA has more than 600 scientists specialized in the development of health solutions for the benefit of patients. GIGA scientists include physicians, pharmacists, veterinarians, psychologists, molecular and cellular biologists, chemists, physicists, mathematicians and engineers. GIGA researchers are grouped into thematic units: systems (neurosciences, cancer, infection-inflammation-immunity, cardiovascular diseases) and methods (medical genomics, in silico medicine). The Molecular Biomimetic and Protein Engineering Laboratory (MBPEL) hosted within the GIGA, has been developing molecular biomimetics for the past 10 years for the design of materials with remarkable properties.

A development strategy put in place several years ago

The participation to a H2020 project focused on metals and mining represents a strategic milestone for ULiège and is the culmination of a development strategy put in place several years ago by Professor PIRARD's team.

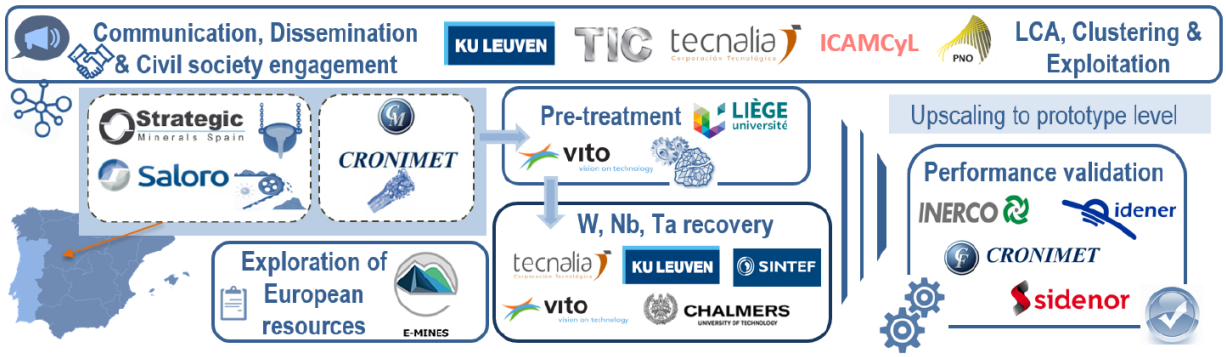
Dr. Eric Pirard, Professor of Georesources at ULiège, commented : "*We are really proud of this achievement which marks a significant turning point in our long term development plan with the GeMMe at ULiège. A few years ago, our objective was to accelerate the development of metal related applied research activities in line with the EU's Raw Material initiative. Back in 2013, ULiège and the GeMMe were first instrumental in developing « Reverse Metallurgy », a EUR 60 million major Belgian circular economy project focused on metals linking industrial and academic partners within a Regional*

Technological Innovation Partnership to improve the recovery of metals from end-of-life products and complex raw materials."

"Thereafter in 2014, we played a key role at the European level in the successful bid for the EITRawMaterials which brings together more than 100 partners from 20 EU Member States to research and develop solutions for sustainable exploration, extraction, processing, recycling and substitution. ULiège has been an EIT-KIC influential Core Partner ever since, notably as an active member of the Education Committee and the Western CLC (BE-NL-DE) and through its involvement in several KIC upscaling projects."

"*Being part of a successful H2020 consortium in 2018 represents the next step of a well-established development strategy targeting metals and raw materials and we look forward to a successful collaboration with all our EU partners in TARANTULA*."

TARANTULA Value and Partners Chain



The extraordinary properties of refractory metals, the unlikeliness of their future substitution and their use in booming industries will sustain a high EU demand for tungsten (W), niobium (Nb) and tantalum (Ta). Despite all three being classified as Critical Raw Materials (CRM) by the European Commission (EC), fractions of these indispensable metals are dissipated as by-products in mining waste streams as well as process scrap. To stimulate their recovery from such complex, low-grade resources, TARANTULA will develop a suite of cost-effective, scalable and eco-friendly – bio-, hydro-, iono-, solvo-, pyro-and electro-metallurgical – processes with high selectivity and recovery rates.

TARANTULA project activities will be carried out over 4-year time frame. Following systematic research and innovation activities at lab scale, the envisioned technologies will be brought to TRL3-5 and, based on performance, validated at prototype level by experienced industrial partners.

Contact

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TARANTULA was submitted within the framework of the Horizon 2020 Call H2020-SC5-2018-2019-2020 (Greening the economy in line with the Sustainable Development Goals) under the topic CE-SC5-06-2018.