Code B_2749

Department	Mechanical, Chemical and Material Engineering
UniCa reference person	Michele Mascia
Project title in English	Recent advances in electrochemical technologies for hydrogen production
Project title in Italian	Sviluppi recenti nelle tecnologie elettrochimiche per la produzione di idrogeno
Subject area of reference (World University Ranking)	ENGINEERING AND TECHNOLOGY
Project summary and VPS' profile	When powered by renewable energy source, efficient and low-cost water electrolysis may be a sustainable way to produce green H2, making it competitive with respect to grey H2 from fossil fuels. In the present project the state-of the art and recent progress in the scientific field will be the subject of lectures addressed to master and PhD students. In the context of the courses for master's degrees in Chemical and Energy engineering, the most promising technologies will be presented, including Microbial electrolysis cells and Anion Exchange Membrane Water Electrolysis (AEMWE), which has been indicated as a new generation technique where the advantages of Alkaline (AWE) and Proton Exchange Membrane (PEM) Water Electrolysis (WE) could be joined. The combination of lectures and practice will be used to effectively present the topics of recent investigation, and possible future developments. The ideal candidate for the VP position is a Ph doctor with experience in centres or institution of technology transfer, with proved skills and experience on technology development on the topics of the electrochemical engineering, including design and testing of electrochemical devices such as electrolysers and fuel cells.
Proposed length of stay	Short visit of 10 days
Expected period of activity	March-June 2024
Academic position of the VPS'	Researcher
Course of Study	Dottorato di ricerca (PhD Course)
Language of instruction	Italian or English