



Open call	CENIT 2010
Funding body	CDTI
Duration	2010-2013
Budget	€17,000,000
Partners	

PROJECT DESCRIPTION

Research into and generation of knowledge concerning ionic liquids, in order to develop technologies that could be applied industrially in the production of new metal coatings, as well as other applications in the transport (automotive and aviation), energy (solar and storage), environmental and biomedicine sectors. These mentioned processes are to significantly improve upon the technical and environmental sustainability requirements of the current processes.

SCOPE OF TR'S WORK

Purification and recovery of metals using ionic liquids

To develop a process using ionic liquids to selectively extract metals from industrial effluents which are of interest to technology – such as cobalt, nickel, indium, germanium and rare earths – from industrial effluents. Following the extraction process, electrophoretic deposition using the ionic liquid solutions is evaluated.

Storing energy in redox batteries

To use ionic liquids to formulate electrolytes with a greater potential window and safer handling. These ionic liquids would be employed in redox flow batteries for energy storage. The degree of breakdown of the active material must be determined, as well as the battery's failure mode.

Water purification and metal recovery processes

To do a fine-tuning process for purifying contaminated water and treating industrial effluents by extracting and recovering metals.