

Post-doctoral fellowship

Metal ion separation from used batteries

The Lepmi laboratory (Laboratoire d'Electrochimie et de Physico-chimie des Matériaux et des Interfaces UMR 5279) is recruiting a PhD fellow for 12 months within the frame of "BatRE ARES" project funded by ERA-MIN network. The recruited person will work at the University Campus of Saint Martin d' Hères(Grenoble).

BatRE ARES project deals with the recovery of rare earth elements (REE) from NiMH batteries recycling. In this project two French laboratories (LEPMI and GSCOP), one French recycling company (Récupyl) and one Portuguese laboratory (CICECO-UA) are working together to contribute to the elaboration of an innovative, original and low impact recycling process. The main originality of this project lies in the fact that the developed hydrometallurgical processes are based on alternative solvents, namely ionic liquids and ionic liquid-based aqueous biphasic systems, so-called ABS, yielding a potential process in line with the principles of sustainable chemistry that will go beyond the state of the art of REE recycling. As a recycling process cannot be proposed without a thorough study on its environmental impact, the latter will be carried out within the project.

The post-doctoral fellow will be in charge of developing all steps of the process, namely leaching, extraction/separation of metals using liquid-liquid extraction techniques and recovery of the metal ions after extraction. He/she will have the opportunity of working with a PhD student who started its PhD on the same subject in October 2015 and with four permanent members involved in the project.

Candidate profile:

- PhD diploma mandatory preferentially in physical chemistry
- Less than 2 years' experience post-PhD diploma (candidates with longer experiences cannot be retained)
- Recommended (but not mandatory) skills :
 - experimental skills in solution chemistry
 - ionic liquids
 - liquid-liquid extraction
 - team work
 - knowledge in ABS is a plus
 - chemical engineering or industrial chemistry is a plus

Starting date : January – March 2017

Contact persons:

Nicolas Papaiconomou : Nicolas.papaiconomou@lepmi.grenoble-inp.fr

Lenka Svecova: lenka.svecova@lepmi.grenoble-inp.fr