Industrial PhD Position

CIC Energigune is looking for a highly motivated candidate for an industrial PhD position.
The candidate must hold a university degree on Chemical Engineering, Chemistry, Materials Science or related areas
The PhD offer is aimed at students currently completing or who have already completed a master degree in subjects related to materials and/or electrochemistry

Candidates must show initiative, independent thinking as well as capability to work in collaborative environments. He/she will be part of a multidisciplinary international research team. Good English level is highly recommended.

- Research line: Ceramic Electrolyte
- Project Title: INORGANIC-RICH COMPOSITE ELECTROLYTES FOR HIGH VOLTAGE SOLID-STATE BATTERIES
- Topic: The research project will focus on the development of ceramic and composite electrolyte materials and their integration into battery devices. The main objective of the PhD project is to demonstrate the proof of concept of a solid-state Li-ion battery based on the developed solid electrolytes.
- Expected starting date: January 2018

PhD description:

Solid state electrolytes are a promising alternative to replace flammable organic liquid electrolytes in Li ion batteries, improving safety as well as boosting battery performances such as voltage, energy density and lifetime. However, existing solid electrolytes (i.e. ceramics, polymers and their composites) do not yet fulfil the requirements for practical applications.
In this project, existing solid electrolytes will be combined to yield novel ceramic-rich composites with fast ion conductivity and good mechanical and interfacial properties. The student will develop the experimental approach to process the materials. The structure-properties relationships of the resultant composite membranes will be characterized. Finally, the student will integrate selected membranes into solid state Li batteries and perform electrochemical testing.