

Collaboration contract at CERIC-ERIC – CECOMECE Project

08.02.2024

The Central European Research Infrastructure Consortium – CERIC-ERIC, is an integrated multidisciplinary Research Infrastructure open for basic and applied research in all fields of material and biomaterial sciences and nanotechnology. CERIC has been established by integrating advanced research facilities based in 8 countries (Austria, Croatia, Czech Republic, Hungary, Italy, Poland, Romania and Slovenia) into a unique European entity supporting the creation of basic and applied knowledge and promoting the mobility of researchers in an international multicultural scientific environment.

The position is open for the CERIC-ERIC research project **CECOMECE**. The abstract of CECOMECE is reported below.

The CECOMECE project (<https://cecomece.wordpress.com>) aims to investigate the influence of double doping on the electrochemical activity of ceria-based compounds that can act as catalysts for fuel electrodes in Solid Oxide Fuel Cells (SOFC)/Solid Oxide Electrolysis Cells (SOEC).

The studies will be based on structural characterization techniques at the microscope scale (XAS, XRD) and chemical characterizations coupled to ‘operando’ data collection. The research will be carried out as a collaboration between the LISA beamline (ESRF-Grenoble) and the Gdansk University of Technology (Gdansk Tech). The electrodes will be prepared and characterized from an electrochemical point of view in Gdansk whereas the structural characterizations will be carried out at ESRF (LISA beamline) and Jagiellonian University – National Synchrotron Radiation Centre SOLARIS (Krakow) with a resulting increased capability of materials characterization of the CERIC instruments.

Qualifications and Requirements

It is requested that the applicant have a degree in either chemistry, physics, materials science, engineering. He/she will perform the activities in collaboration with the scientists involved in the project in order to accomplish the experimental program of CECOMECE.

Specific responsibilities include:

- Preparation of electrodes and laboratory characterization at Gdansk Tech
- Realization of experiments of X-ray Absorption Spectroscopy and microscopy at the LISA and PolyX beamlines.
- Analysis of the experimental data.

- Design of in situ reaction cells in collaboration with the LISA and IOM staff.

He/she will spend part of the time in Gdansk University of Technology (GUT) for the sample preparation/characterization, part in Jagiellonian University – National Synchrotron Radiation Centre SOLARIS for nanoscale and microscale imaging and part at LISA beamline (ESRF) for the structural characterization and also contributing to define the procedures for a fast and easy setup of the XRD outstation at LISA that will become a routine technique at the beamline available for users.

Conditions

- the nature of the service requested falls within those provided for by art. 409, point 3, of the Italian code of civil procedure (“Other collaborative relationships that result in a continuous and coordinated provision of work, mainly personal, even if not subordinate”);
- the activities requested and performed will be autonomously organized by the collaborator, both with reference to the timing and to the place of work, without any relationship of subordination;
- Duration: 36 months;
- Expected starting date: March 2024;
- Annual Contract value (before taxes and contributions): 25.680 €, paid in twelve instalments.

The search will be opened until a suitable candidate is found. Applications should include a full CV, the names and contact information (including electronic mail) of at least two references.

The applications should be sent to the following e-mail address: hr@ceric-eric.eu, with the following subject: **Collaboration contract at CERIC-ERIC – CECOME**

For further information about the project please contact:

Dr. Francesco d’Acapito

c/o ESRF, 71 Avenue des Martyrs Grenoble (France)

E-mail: francesco.dacapito@cnr.it