



HELLENIC REPUBLIC  
MINISTRY OF DEVELOPMENT  
GENERAL SECRETARIAT FOR RESEARCH & INNOVATION



**FORTH**

FOUNDATION FOR RESEARCH & TECHNOLOGY - HELLAS  
INSTITUTE OF CHEMICAL ENGINEERING SCIENCES

Patras, 18.4.2024

Ref. No.: 138789



Co-funded by  
the European Union

### Invitation for Expression of Interest:

**Postdoctoral Research Assignment “Development of mathematical models/simulation of electrochemical impedance spectra for the experimental investigation of the occurring processes in Solid Oxide Cells under reversible operation (reversible SOCs)”**

The Institute of Chemical Engineering Sciences, Foundation of Research and Technology - Hellas, (FORTH/ICE- HT) is seeking applicants for one postdoctoral research assignment in the context of the research project “Reversible SOEC/SOFC System For A Zero Emissions Network Energy System \_ Project acronym: 24\_7 ZEN \_ P. No 101101418”, which is implemented under the Horizon Europe Research Framework Programme and is financially supported by the Clean Hydrogen Partnership and its members Hydrogen Europe and Hydrogen Europe Research under grant agreement No 101101418. Funded by the European Union and the Swiss State Secretariat for Education Research and Innovation (SERI).

### Job Description

To conduct research under a work assignment or a fixed-term employment contract in the framework of the aforementioned project “Reversible SOEC/SOFC System For A Zero Emissions Network Energy System \_ Project acronym: 24\_7 ZEN \_ P. No 101101418”. The aim of this research is to understand the degradation and lifetime operation fundamentals of new-developed fuel Solid Oxide Cell (SOC) electrodes under the high (750 – 900 °C) temperature reversible H<sub>2</sub>O electrolysis/fuel cell operation.

**Location:** FORTH/ICE-HT, Patras, Greece

**Duration:** up to 12 months, with the potential of renewal or extension according to the needs of the project

**Fellowship:** up to approximately 2.300,00 Euros per month depending on qualifications (total cost of the employer, including social security and taxes)

**Envisaged starting date:** 1/06/2024

### Requirements and Qualifications

Applicants should possess the following qualifications:



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- Holder of a Diploma in Chemical Engineering or Electrical Engineering
- PhD Thesis in the subject of mathematical modeling of electrochemical processes
- Research experience (of at least 12 months) in the modeling/simulation of electrochemical processes and reactors engineering for high temperature fuel cells/electrolysis cells by using CAE computing packages (COMSOL Multiphysics, Matlab, Mathematica)
- Scientific publications (at least 2) in international peer-reviewed journals, relative to the subject of the research assignment
- Knowledge of the English language at least at B2 level

The evaluation of the candidacies will be based on the following criteria and qualifications:

Qualifications	Weight	Evaluation criteria
Research experience in the modeling/simulation of electrochemical processes and reactors engineering for high temperature fuel cells/electrolysis cells by using CAE computing packages (COMSOL Multiphysics, Matlab, Mathematica)	25	5 points / semester, with maximum of 25 points
Relevance of the PhD Thesis with the subject of the Research Assignment	25	Low relevance = 10 points, Intermediate relevance= 15 points, High relevance = 25 points
Degree of Diploma	20	Diploma degree X 2,0 points
Scientific publications in international peer-reviewed journals, relative to the subject of the research assignment	20	5 points/publication, with maximum of 20 points
Knowledge level of English Language	10	(C1 = 8.5 points, C2: 10 points)
<b>TOTAL</b>	<b>100</b>	

### Application Submission

Interested candidates who meet the aforementioned requirements should submit their applications, no later than 29/4/2024, 16:00, by email to Kleanthi Zacharopoulou: [kleanthi@iceht.forth.gr](mailto:kleanthi@iceht.forth.gr).

In order to be considered, the application must include:

- Application letter
- CV
- Scanned copies of academic titles & English language certificate
- Copies of the publications in international peer-reviewed journals
- Copy of PhD thesis
- Employer's certificate of the work experience and any other official document to certify the aforementioned required qualifications

**Any application received after the deadline will not be considered for the selection.**

### Selection Procedure

Applications that are received on time will be evaluated by a scientific committee using the criteria mentioned above. If necessary, certain candidates will be invited to a personal interview with the committee.

Interview Criteria:

(a) Background in the objective of the assignment (5 points). (b) Organizational and communication skills (5 points). (c) Team-spirit and self-motivation (5 points). (d) Commitment to achieving the goals (5 points)

The outcome of the selection will be announced on the website of FORTH/ICE-HT as well as on the website of “DIAVGEIA”.

In case of titles and qualifications awarded by foreign Higher Education Institutions, the provisions of the Law 55/2023 (article 36) and 4957/2022 (article 304) are implemented.

### Selection Announcement

The result of the selection will be announced on the website of FORTH/ICE-HT.

Candidates have the right to appeal the selection decision, by addressing their written objection to the FORTH/ICE-HT Research Secretariat, e-mail: [kleanthi@iceht.forth.gr](mailto:kleanthi@iceht.forth.gr), within five (5) days after the results announcement on the web.

### Contact

For information and questions regarding the application and selection procedure, candidates are asked to contact the FORTH/ICE-HT Research Secretariat, e-mail: [kleanthi@iceht.forth.gr](mailto:kleanthi@iceht.forth.gr), tel.: +30 2610 965278.

For information and questions about the advertised position and the research activity of the group or the Institute, candidates are asked to contact Dr. Dimitris Niakolas, tel: +30 2610 969540, e-mail: [niakolas@iceht.forth.gr](mailto:niakolas@iceht.forth.gr).

### General Protection Data Regulation

FORTH is compliant with all legal procedures for the processing of personal data as defined by the Regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data.

FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law.

FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one's legitimate legal rights' as defined in the Regulation EU/2016/679 and/or in national law.

We inform you that under the Regulation EU/2016/679 you have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided by applicable regulation and national laws.

We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at [dpo@admin.forth.gr](mailto:dpo@admin.forth.gr). You have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data.

For FORTH/ICE-HT,  
Theophilos Ioannides, Director



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