



### Invitation for Expression of Interest:

#### Postdoctoral research work “Development of graphene-based thin coatings of high mechanical performance for the protection of cultural artifacts”

The Institute of Chemical Engineering Sciences, Foundation of Research and Technology - Hellas, (FORTH/ICE-HT) is seeking applicants for one position for postdoctoral research work in the context of the research project **HORIZON 2020 “Active & intelligent Packaging materials and display cases as a tool for preventive conservation of Cultural Heritage (APACHE), GA: 814496**.

#### Job Description

To conduct research in the development, characterization and testing of composite polymer/graphene coatings in the aforementioned project “**Active & intelligent Packaging materials and display cases as a tool for preventive conservation of Cultural Heritage (APACHE), GA: 814496**”. The aim of this job is the creation of mechanically robust graphene-based composites for their use as protective materials against environmental effects. In particular, the job consists in the following main tasks:

- Preparation and characterization of graphene-based composite coatings for packaging materials and display cases as a tool for preventive conservation of Cultural Heritage using spectroscopic techniques.
- Prepare the corresponding reports (technical and economical) for project’s evaluation.
- Research activities related to graphene and to other 2D related materials, such development of conductive coatings and study of mechanical properties with nano-indentation.

The potential candidate should be also responsible for the following main tasks:

- Organization of activities and national and international meetings.
- Identification of requirements for the research and develop tactics for future challenges.
- Scientific supervision of potential master and/or PhD thesis.
- Production and characterization of graphene and other 2D related materials, using techniques such as Raman spectroscopy, Atomic Force Microscopy etc in conjunction with mechanical testing.

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

**Duration:** 6 months with the potential of renewal

**Salary:** up to 3.000 € per month (total cost of the employer, including social security and taxes) depending on the qualifications

**Envisaged starting date:** 01/02/2019

#### Requirements and Qualifications

The candidates are required to hold an Engineering Diploma and a PhD in Materials Science and Engineering, preferably on 2D materials, with experience in reporting, in tandem with a strong



expertise in mechanical deformation of composite materials and characterization techniques such as Raman spectroscopy. Moreover, the candidates must be fluent in Greek and English in order to meet working conditions. The appropriate candidate should have:

- a) Strong expertise in the preparation and characterization of composite materials
- b) Previous experience in the use of graphene for the protection of precious artifacts
- c) Be able to lead teams
- d) A great scientific background in materials, especially in polymers and composites
- e) Strong know-how in the preparation and characterization of graphene (or related carbon based materials) and/or 2D related materials and/or nanomaterials
- f) Analytical thinking
- g) Strong personality and good communication skills
- h) Be a flexible and reliable person
- i) Be capable of autonomous working

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

Qualifications	Weight	Evaluation criteria
Diploma in Engineering	10	Diploma Grade, courses in polymer and/or composite materials
PhD in Materials Science and Engineering	25	PhD Dissertation relevant to composite materials or nanomaterials or nanoscience
Post-doc experience of at least 2 years and strong publication record in multi-disciplinary journals	25	Duration of proven experience
Proven research and lab experience (minimum 4 years): (i) Mechanical characterization of materials (ii) Characterization techniques such as Raman spectroscopy and/or Atomic Force Microscope (iii) Study of graphene or other 2D related materials or nanomaterials (iv) Investigation of physical properties of polymers and/ or composites	30	Duration of proven research experience in research groups and projects. Quality and number of publications in refereed journals and conference proceedings
Research interests	10	Relevance, plans and potential

### Application Submission

Interested candidates who meet the aforementioned requirements should submit their applications, no later than 8 January 2019, 16:00h, by email to Kleantchi 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
- Statement of research interests

**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.

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

### **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 Professor Costas Galiotis, tel: +30 2610 965255, e-mail: [c.galiotis@iceht.forth.gr](mailto:c.galiotis@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,

Vasilis Burganos  
Director

