



Patras, 18/10/17

Ref. No.: 2561

Invitation for Expression of Interest:**Postdoctoral/Research Assignment “Production, application and evaluation of wafer-size CVD graphene on the surface of model materials adopted in contemporary artworks and nano-graphene materials as additives in paints and coatings”**

The Institute of Chemical Engineering Sciences, Foundation of Research and Technology - Hellas, (FORTH/ICE-HT), according to the 362/27-6/12.10.2017 decision of the Board of Directors of FORTH, is seeking applicants for one postdoctoral/research assignment in the context of the research project **“GRAPHENART: Graphene as effective anti-fading agent for the protection of artworks Proposal, Number: 779985”**. The project is implemented under the ERC Proof of Concept Grant 2017 – Horizon2020.

Job Description

To conduct research in the framework of the aforementioned project **“ERC-PoC (Proof of Concept Grant), Proposal Number: 779985 - GRAPHENART: Graphene as effective anti-fading agent for the protection of artworks”**. The aim of this research is to develop innovative, multi-functional graphene-based products (graphene ‘veils’ and inclusions) that provide UV shielding, de-acidification, oxygen and humidity barriers for the protection of old and modern paintings and artworks. In particular, the project is focusing on the understanding of the mechanical integrity of large graphene membranes as well as of innovative graphene-transfer processes. Two different classes of products are envisaged; Chemical Vapor Deposition (CVD) graphene membranes directly deposited to artworks for which transparency is required and graphene flakes that will be dispersed to color paints and varnishes so as to bestow enhanced UV, oxidation and humidity resistance. On the characterization of the samples, their behavior under accelerated environmental aging using environmental climate chambers (UV light, temperature and relative humidity) will play very crucial role.

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

- a) Conduct research activities related to graphene, such as development of graphene-based materials for the conservation of “classic” art works and modern inks and dyes, and, characterization and assessing their properties using techniques such as Raman spectroscopy, environmental accelerated aging, atomic force microscopy etc in conjunction with mechanical testing
- b) Manage the day to day business in the research group and program management, by designing and establishing a full process development roadmap
- c) Work in collaboration with the other research and industrial partners of the project for accomplishing the corresponding tasks and subtasks
- d) Identify requirements for the research and develop tactics for future challenges
- e) Prepare the corresponding reports (technical and economical) for project’s evaluation
- f) Scientific supervision of potential master and/or PhD thesis



Location: FORTH/ICE-HT, Patras, Greece

Duration: 15 months with the potential of renewal

Salary: 2.660 € per month (VAT excluded)

Envisaged starting date: 01/12/2017

Requirements and Qualifications

The candidates are required to hold a Materials Science Diploma, a Master's Degree in Materials Science, and a PhD in Environmental and Natural Resources Management, specialized in environmental accelerated aging. Moreover, the candidates must be fluent in Greek and English, in order to meet working conditions. The appropriate candidate should have:

- a) Experience in the preparation of graphene related materials
- b) Be able to lead teams
- c) A great scientific background in materials, especially in nanomaterials
- d) Analytical thinking
- e) Strong personality and good communication skills
- f) Be a flexible and reliable person

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

Qualifications	Weight	Evaluation criteria
Diploma in Materials Science	15	Diploma Grade,
Master of Materials Science	20	Master of Science Grade, courses in polymer and carbon-based composite materials
PhD in Environmental and Natural Resources Management	30	PhD in Environmental and Natural Resources Management, Dissertation relevant to environmental accelerated aging measurements, nanomaterials synthesis, humidified materials and UV light interaction with humidified materials
Proven lab experience (minimum 1.5 years) in : (i) Study of graphene related materials (ii) Synthesis of graphene related materials	25	Duration of proven research experience in research groups. Quality of related publications in refereed journals.
Research interests	10	Relevance, plans and potential

Application Submission

Interested candidates who meet the aforementioned requirements should submit their applications, no later than November 1st, 2017, 14:00h, by email to Kleanthi Zacharopoulou: 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".

The selected candidate will be notified and asked to accept the position within three (3) working days and to present all relevant documents that should match the submitted ones.

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, 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.

For FORTH/ICE-HT,

Vasilis Burganos
Director

