



Patras, 11.02.2022

Ref. No.: 71976

Invitation for Expression of Interest:

Postdoctoral/Research Assignment on “Enabling Lightweight, multi-functional CVD graphene composites for Electromagnetic Interference (EMI) shielding applications”

The Institute of Chemical Engineering Sciences, Foundation of Research and Technology - Hellas, (FORTH/ICE-HT) is seeking applicants for one position of a postdoctoral / research assignment in the context of the research project “Graphene Flagship Core Project 3 – SGA 881603: Work Package 14 - Composites”, which is implemented under the Horizon 2020 Research Framework Program.

Job Description

To conduct research under a work or an employment contract in the aforementioned project “Graphene Flagship Core Project 3 – SGA 881603: Work Package 14 - Composites”. The aim of this research is the development and characterization of CVD graphene/polymer composites with nanolaminate architecture for application in electromagnetic interference (EMI) shielding. This includes the fabrication of graphene-related materials GRMs and 2D layered structures and characterization by a wide range experimental technique (microscopy, spectroscopy, mechanical testing etc.).

In particular, the job consists of the following main tasks:

- Fabrication, manipulation and characterization of multifunctional thin and ultra-thin films (i.e. neat thermoplastic polymers with and without graphene) by using several experimental techniques (such as Atomic Force Microscopy, Raman spectroscopy)
- Production of CVD graphene-based composites and coatings with laminate architecture
- Characterization of structural and functional properties of the produced materials using a wide range of experimental techniques (such as mechanical testing, electrical testing, Raman spectroscopy, Atomic Force Microscopy etc in conjunction with mechanical testing)
- Prepare the corresponding reports (technical and economical) for project’s evaluation.

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.

Location: FORTH/ICE-HT, Patras, Greece

Duration: up to 9 months with the potential of renewal or extension according to the needs of the project

Salary: up to 2.530 € per month depending on the qualifications (total cost of the employer, including social security and taxes)

Envisaged starting date: 01/04/2022

Requirements and Qualifications

Candidates are required to hold a degree in Materials Science, a Master’s Degree in Polymer Science and Technologies, and a PhD in Chemical Engineering, mainly on graphene-based composite with nanolaminate architecture, with experience in reporting, in tandem with a strong expertise in



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graphene composite and polymer ultra-thin films, characterization techniques such as Raman spectroscopy, Atomic Force Microscopy, mechanical testing. Moreover, the candidate must have a good knowledge of the Greek and English (level B2) language. The appropriate candidate should have:

- A proven strong expertise in the preparation and characterization of composite materials
- A proven expertise in the production and manipulation of polymeric ultra-thin films technology (must be capable to design and fabricate a wide range of ultra-thin films)
- A great scientific background in materials and their multifunctionality, especially in graphene based polymers and composites
- Strong know-how in the preparation and characterization of graphene (or related carbon based materials) and/or 2D related materials and/or nanomaterials

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

Qualifications	Weight	Evaluation criteria
Publications in refereed journals and conference proceedings	20	Number of relevant publications (4 points/publication, max 20pts)
PhD in Chemical Engineering	20	PhD relevance to composite materials (weak relevance: 10 points, strong relevance: 20 points)
Proven research and lab experience (minimum 3 years): (i) Characterization of Graphene and other 2D materials (ii) Fabrication of polymeric and non-polymeric ultra-thin films (iii) Mechanical characterization of composite materials and ultra-thin films (iv) Wide range of characterization techniques such as Raman and/or Brillouin Light Scattering spectroscopy and Atomic Force Microscopy, (v) Study of graphene or other 2D related materials or nanomaterials	15	Duration of proven research experience in research labs and projects (3 points/year, max 15 pts)
Experience in relevant projects	15	Duration of proven experience in relevant projects (5 points/year, max. 15 pts)
Degree in Materials Science	10	Degree grade X 1 points
Master in Polymer Science and Technologies	10	Master relevance to composite materials (weak relevance: 5 points, strong relevance: 10 points)
Interview	10	(a) Background in the objective of the assignment (2.5 points). (b) Organizational and communication skills (2.5 points). (c) Team-spirit and self-motivation (2.5 points). (d) Commitment to achieving the goals (2.5 points)
Overall	100	

Application Submission



Interested candidates who meet the aforementioned requirements should submit their applications, no later than 28/2/2022, 16:00h, 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 & foreign language certificate
- 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.

Selection Announcement

The result of the selection will be announced on the website of: FORTH/ICE-HT as well as on the website of "DIAVGEIA".

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, 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, 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.

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.

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

