

FLAG-ERA II

Deliverable D6.6

International collaboration funding opportunities for the Graphene Flagship

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Author		Watse Castelein	era-ict@aei.gob.es	
WP/Task leader		Watse Castelein	era-ict@aei.gob.es	
EC project officer		Jean-Marie Auger		
Description of content		This deliverable describes the activities of FLAG-ERA to identify opportunities for international cooperation activities relevant for the Graphene Flagship.		
Publishable abstract		International initiatives were identified, which provide opportunities for collaborations and synergies with the Graphene Flagship. Collaboration possibilities with M-ERA.NET, Euronanomed, and QuantERA have been explored. Projects of M-ERA.net calls have been contacted. Two projects have entered as PPs of the Graphene Flagship Core project.		
Keywords		Graphene, International Collaboration, Funding Opportunities		

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1 Introduction

The goal of task 6.4 is to identify funding opportunities for collaborations between the Graphene Flagship and other researchers that can contribute to the goals of the Graphene Flagship. International initiatives were identified, which provide opportunities for collaborations and synergies with the Graphene Flagship. This deliverable describes the international activities carried out as part of the FLAG-ERA II project.

2 International Collaboration Activities

To identify collaboration possibilities, that can provide opportunities for international research collaborations and synergies, two approaches were used.

1. Identify international collaboration initiatives where FLAG-ERA partners are involved and relevant research for the Graphene Flagship could be part of the strategic research agenda and included as research themes in calls for international research projects.
2. Identify international collaboration initiatives where projects are funded that could be relevant for the Graphene Flagship research agenda.

Include Graphene research in international collaboration initiatives

[ERANet-LAC](#), *the Network of the European Union (EU), Latin America and the Caribbean Countries (LAC), on Joint Innovation and Research Activities*, was contacted for discussing the possibility of a collaboration. However, there was no concrete interest from ERANet-LAC to include Graphene research in their joint programming activities. Priority was given to other research topics.

In a similar manner, collaboration with The European Interest Group [Concert-Japan](#) was explored, but there was no concrete interest in including Graphene research in their joint programming activities. Priority was given to other research topics.

Collaboration with the ERANET for research and innovation in materials [M-ERA.NET](#) resulted in an invitation to the Graphene Flagship to give a presentation at the Strategic Expert Group (SEG) Workshop in November 2017, where the priorities for M-ERA.NET Call 2018 were established. At the start of the workshop an introduction to Graphene Flagship activities was presented to the experts as input for their discussions to define the topics for the M-ERA.NET Calls.

Identify funded project in international collaboration initiatives relevant for the Graphene Flagship

To identify project in international collaboration initiatives relevant for the Graphene Flagship an analysis was made of projects funded in the frame of the Nanomedicine ERA-NET, [Euronanomed](#), the ERANET in Quantum Technology, [QuantERA](#) and [M-ERA.NET](#).

In QuantERA and Euronanomed no projects with potential interest in collaboration with the Graphene Flagship were identified.

In consultation with M-ERA.NET representatives some projects funded in the M-ERA.NET Calls were identified:

In the Call 2016 four projects were identified working with Graphene and/or 2D materials. They were presented to the partnering division of the Graphene Flagship and were considered as projects with potential for collaboration. The Principal Investigators of the projects were contacted and informed about the possibility and procedures to become Partnering Project of the Graphene Flagship. Further exchanges took place between the projects PIs and the Graphene Flagship Partnering Division directly. The same procedure was repeated two years later for the M-ERA.Net projects from Call 2018 and Call 2019. In the Call 2018 four projects were identified working with Graphene and/or 2D materials and in the Call 2019 two projects.

In total three projects have been formally associated to the Graphene Flagship as Partnering Project: NanoElm and UltraGraf from Call 2016 and 3D-Photocat from Call 2019. UltraGraf (that includes 4 associated member organisations) had some interactions with WP8 of the Graphene Flagship Core project to which they are associated. They were engaged in exchanges of materials and photodetector devices with WP8. For NanoElm no specific information is available. The 3D-Photocat is rather new and no interactions have been reported yet.

Other projects contacted showed interest, but didn't formalize their request to become a Partnering Project. Other project had already project partners involved in the Graphene Flagship. They didn't see the advantages to formally become a Partnering Project, as collaborations took already place.

3 Broadening of the activities / transition toward higher TRL

Owing to efficient interactions from FLAG-ERA and the EIC, all FLAG-ERA funded projects were considered eligible to the EIC Transition call.

As a consequence, the projects funded by FLAG-ERA were informed and 1 active Graphene Flagship partnering project funded under FLAG-ERA JTC 2017 sub-call dedicated to Graphene applied research and innovation did submit a proposal to the EIC Transition call 2021.

4 Conclusion

The role of FLAG-ERA in the International collaboration for the Graphene Flagship was supportive to the strategy set out by the Graphene Flagship Core project and European Commission. No specific interest was expressed from the Graphene Core project and the European Commission in developing in an active role for FLAG-ERA in developing funding schemes with partners outside Europe to jointly fund Graphene research. Therefore the focus has been on existing international collaboration initiatives where FLAG-ERA partners are already involved that can provide opportunities for international collaborations in Graphene research. Contacts have been established with various networks, but it has proven difficult to include Graphene as one of the research topics in their joint international calls. Priority was given to other research topics.

FLAG-ERA has been successful in Identifying projects in international collaboration initiatives with relevance for the Graphene Flagship. Particularly M-ERA.NET projects working with Graphene and/or 2D materials could be identified and contacted. This has resulted in the identification of ten projects and the formal association of three projects with Graphene Flagship as partnering projects. The information gathered and contacts established form a good basis to further support Flagships activities in international collaboration and expand the partnering environment of the Graphene Flagship.

Besides, the support of FLAG-ERA to the partnering projects goes beyond funding of the projects, as it appears efficient in the broadening of their activities and their path toward higher Technology Readiness levels by mean of the EIC Transition calls eligibility. This eligibility does thus impact positively the Graphene Flagship for further international activities and funding.