

## PRESS RELEASE

**THIS PRESS RELEASE IS UNDER EMBARGO UNTIL WEDNESDAY 29 JANUARY AT 18.00 CET**

## Graphene Flagship publishes handbook of graphene manufacturing

- *Graphene Flagship comprehensive publication encompasses methods for producing and processing the creation graphene and up to 5,000 innovative layered materials.*
- *The review article, completely open access, was published in the latest issue of IOP Publishing 2D Materials.*
  - *Link to full paper (free): <http://bit.ly/graphenewhitebook>*
  - *Link to promotional video: <https://youtu.be/9LBNHE1Km84>*

Encompassing more than 1,500 references and the knowledge of 70 co-authors from EU-funded Graphene Flagship partners and associate members, the article aims to provide a single source of knowledge on graphene and related layered materials (GRMs).

Graphene is already being used in many commercial applications, with numerous new products on the horizon. However, lack of information on the correct preparation and processing is hindering its uptake. To tackle this challenge, Graphene Flagship researchers have produced a comprehensive guide entitled “[Production and Processing of Graphene and Related Materials](#)”, which has just been published by IOP Publishing in their journal **2D Materials**. The article is published under an open access licence, which makes it free to read for everyone who is interested and, moreover, removes all restrictions on use and reuse.

The article condenses the knowledge acquired and developed by the Graphene Flagship over the past six years. With this publication, the Graphene Flagship will make this knowledge public as part of its long-term goal to assist in the development of graphene and related layered materials.

Andrea C. Ferrari, Graphene Flagship Science and Technology Officer stated: “Graphene Flagship researchers have already shown that at least 1,800 different layered materials exist — and only a handful of those have been investigated to date. This authoritative guide will help researchers in academia and industry plan their large scale and reproducible production of graphene, drawing from the experience developed on graphene itself.”

The article provides a comprehensive guide on the techniques for production and processing GRMs, as well as the key characterisation procedures. It is aimed both at expert academics and beginners, as well as companies that would like to experiment with GRMs and incorporate them into their production lines and product design.

“The article encompasses the description of the most popular methods to produce GRMs,” explained Mar García-Hernández, who coordinated this comprehensive review. García-Hernández is a Research Professor at Graphene Flagship partner CSIC, Spain, and the Graphene Flagship Work Package Leader for ‘Enabling Materials’. “This publication also describes some of the technological problems users might encounter, such as the processing of inks and the transfer of materials, as well as the characterisation.”



## PRESS RELEASE

“Understanding this information is essential for users to be able to exploit GRMs effectively, as their characteristics are related to and can be tailored by the process used to make them. For scientists who want to study GRMs, or companies that want to mass produce these materials, this knowledge is vital,” concludes García-Hernández.

Alex Wotherspoon, publisher for 2D Materials, said: “We are delighted to have collaborated with the Graphene Flagship in publishing what is certain to become a key reference for the materials science community. Making it available to all on an open access basis additionally provides the widest possible dissemination for the benefit of researchers extending across both academia and industry.”

Synthesis of Graphene Production and Processing of Graphene and Related Materials has been produced and published by the Graphene Flagship, an EU funded research project for advanced materials. The article is available to download for free at: <http://bit.ly/graphenewhitebook>

### **About the Graphene Flagship**

The Graphene Flagship is research, innovation and collaboration.

Funded by the European Commission, the Graphene Flagship aims to secure a major role for Europe in the ongoing technological revolution, helping to bring graphene innovation out of the lab and into commercial applications by 2023. The Graphene Flagship gathers nearly 150 academic and industrial partners from 23 countries, all exploring different aspects of graphene and related materials. Bringing diverse competencies together, the Graphene Flagship facilitates cooperation between its partners, accelerating the timeline for industry acceptance of graphene technologies. The European Commission’s FET Flagships enable research projects on an unprecedented scale. With €1 billion budgets, the Graphene Flagship, Human Brain Project and Quantum Flagship serve as technology accelerators, helping Europe to compete with other global markets in research and innovation.

### **Contact information**

Dr. Fernando Gomollón-Bel  
Graphene Flagship Press and Communications Coordinator  
Phone: +44 1223 762391  
Mobile: +44 7305 707006  
Email: [press@graphene-flagship.eu](mailto:press@graphene-flagship.eu)  
Web: [www.graphene-flagship.eu](http://www.graphene-flagship.eu)

Follow the Graphene Flagship on [Twitter](#), [Facebook](#), [LinkedIn](#), [Instagram](#) and [Youtube](#)

