



### **GrapheneCore1 - Graphene-based disruptive technologies**

This project is the second in the series of EC-financed parts of the Graphene Flagship. The Graphene Flagship is a 10 year research and innovation endeavour with a total project cost of 1,000,000,000 euros, funded jointly by the European Commission and member states and associated countries. The first part of the Flagship was a 30-month Collaborative Project, Coordination and Support Action (CP-CSA) under the 7th framework program (2013-2016), while this and the following parts are implemented as Core Projects under the Horizon 2020 framework.

The mission of the Graphene Flagship is to take graphene and related layered materials from a state of raw potential to a point where they can revolutionise multiple industries. This will bring a new dimension to future technology – a faster, thinner, stronger, flexible, and broadband revolution. Our program will put Europe firmly at the heart of the process, with a manifold return on the EU investment, both in terms of technological innovation and economic growth.

To realise this vision, we have brought together a larger European consortium with about 150 partners in 23 countries. The partners represent academia, research institutes and industries, which work closely together in 15 technical work packages and five supporting work packages covering the entire value chain from materials to components and systems. As time progresses, the centre of gravity of the Flagship moves towards applications, which is reflected in the increasing importance of the higher - system - levels of the value chain. In this first core project the main focus is on components and initial system level tasks.

The first core project is divided into 4 divisions, which in turn comprise 3 to 5 work packages on related topics. A fifth, external division acts as a link to the parts of the Flagship that are funded by the member states and associated countries, or by other funding sources. This creates a collaborative framework for the entire Flagship.

**UNIPD Team Leader:** Vito Di Noto

**Department:** Industrial Engineering

**Coordinator:** Chalmers Tekniska Högskola Ab (Sweden)

**Other Participants:**

Consiglio Nazionale Delle Ricerche- CNR (Italy)

Rijksuniversiteit Groningen (Netherlands)

Agencia Estatal Consejo Superior de Investigaciones Cientificas (Spain)

Universität Basel (Switzerland)

The University of Manchester (United Kingdom)

Fundacio Institut Català de Nanociència i Nanotecnologia (Spain)



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

H2020  
PROJECTS FUNDED AT THE UNIVERSITY OF PADOVA

Université Catholique de Louvain (Belgium)

Universität Regensburg (Germany)

Rheinisch-Westfaelische Technische Hochschule Aachen (Germany)

Commissariat à l'énergie atomique et aux énergies alternatives (France)

Aixtron Limited (United Kingdom)

Gesellschaft für Angewandte Mikro und Optoelektronik mit Beschränkterhaftung Amo GmbH (Germany)

Alcatel-Lucent Deutschland AG (Germany)

Aalto-Korkeakoulusäätö (Finland)

Politecnico di Milano (Italy)

Université des Sciences et Technologies de Lille - Lille I (France)

Centre National de la Recherche Scientifique (France)

Thales SA (France)

Universitat Autònoma de Barcelona (Spain)

Danmarks Tekniske Universitet (Denmark)

Nokia Oyj (Finland)

STMicroelectronics Srl (Italy)

Teknologian Tutkimuskeskus Vtt Oy (Finland)

VARTA Micro Innovation GmbH (Austria)

Graphenea S.A. (Spain)

Université de Strasbourg (France)

The Chancellor, Masters and Scholars of the University of Cambridge (United Kingdom)

Max Planck Gesellschaft zur Förderung der Wissenschaften E.V. (Germany)

Foundation for Research and Technology Hellas (Greece)

Avanzare Innovacion Tecnologica SI (Spain)

Technische Universität Hamburg-Harburg (Germany)

Politecnico di Torino (Italy)



Albert-Ludwigs-Universität Freiburg (Germany)

Airbus Operations SI (Spain)

Technological Educational Institute of Crete (Greece)

The Chancellor, Masters and Scholars of the University of Oxford (United Kingdom)

Fondazione Istituto Italiano di Tecnologia (Italy)

Centro de Investigación Cooperativa de Energías Alternativas Fundación (Spain)

Repsol SA (Spain)

Sabanci University (Turkey)

Umeå Universitet (Sweden)

Fondazione Bruno Kessler (Italy)

Technische Universität Dresden (Germany)

Stichting Katholieke Universiteit (Netherlands)

The Provost, Fellows, Foundation Scholars & the Other Members of Board of the College of The Holy & Undivided Trinity of Queen Elizabeth Near Dublin (Ireland)

Linköpings Universitet (Sweden)

Universität Zürich (Switzerland)

Technische Universität Chemnitz (Germany)

Friedrich-Alexander-Universität Erlangen Nürnberg (Germany)

Instytut Technologii Materialów Elektronicznych (Poland)

Università degli Studi di Trieste (Italy)

Universität Bremen (Germany)

Universidad de Castilla - La Mancha (Spain)

Karolinska Institutet (Sweden)

Eidgenössische Materialprüfungs- und Forschungsanstalt (Switzerland)

University College Dublin, National University of Ireland, Dublin (Ireland)

Université de Geneve (Switzerland)



Technische Universiteit Delft (Netherlands)

Eidgenössische Technische Hochschule Zürich (Switzerland)

NPL Management Limited (United Kingdom)

Oxford Instruments Nanotechnology Tools Limited (United Kingdom)

Lancaster University (United Kingdom)

Universität Hamburg (Germany)

Nokia R&D (Uk) Limited (United Kingdom)

Stiftelsen Chalmers Industriteknik (Sweden)

Grupo Antolin-Ingenieria Sa (Spain)

Fundacio Institut de Ciències Fotoniques (Spain)

Technische Universität Wien (Austria)

Asociacion - Centro de Investigacion Cooperativa en Nanociencias - Cic Nanogune (Spain)

Universidade do Minho (Portugal)

Panepistimio Ioanninon (University of Ioannina) (Greece)

Christian-Albrechts-Universität Zu Kiel (Germany)

Technische Universität Muenchen (Germany)

Fundacion Imdea Nanociencia (Spain)

Fondation Européenne de la Science (France)

Scuola Internazionale Superiore di Studi Avanzati di Trieste (Italy)

Université de Montpellier (France)

Universidad de Zaragoza (Spain)

Laboratoire National de Métrologie et d'essais (France)

Horiba Jobin Yvon S.A.S. (France)

Facultés Universitaires Notre-Dame de la Paix de Namur (Belgium)

Karlsruher Institut für Technologie (Germany)

Friedrich-Schiller-Universität Jena (Germany)



Pixium Vision (France)

Université Pierre et Marie Curie - Paris 6 (France)

Centro de Investigación Biomédica en Red (Spain)

Guger Technologies Og (Austria)

Consorci Institut d'investigacions Biomediques August Pi i Sunyer (Spain)

Universität Bielefeld (Germany)

Universität Ulm (Germany)

BASF Se (Germany)

CNM Technologies Gmbh (Germany)

Fundacion Tecnalía Research & Innovation (Spain)

Polymem S.A. (France)

University College London (United Kingdom)

Imperial College of Science Technology and Medicine (United Kingdom)

Amalyst Limited (United Kingdom)

Uniwersytet Warszawski (Poland)

Breton Spa (Italy)

Technische Universiteit Eindhoven (Netherlands)

Dsm Ahead BV (Netherlands)

Ecole Polytechnique Fédérale de Lausanne (Switzerland)

Università degli Studi di Roma Torvergata (Italy)

Ustav Fyzikální Chemie J. Heyrovského Av Cr, V. V. I. (Czech Republic)

G24 Power Limited (United Kingdom)

Italcementi Fabbriche Riunite Cemento Spa (Italy)

Alma Mater Studiorum - Università di Bologna (Italy)

Technion - Israel Institute Of Technology (Israel)

Atherm (France)



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

H2020  
PROJECTS FUNDED AT THE UNIVERSITY OF PADOVA

Université Libre de Bruxelles (Belgium)

Selex Es Spa (Italy)

Fraunhofer-Gesellschaft zur Förderung der Angewandten Forschung E.V (Germany)

Epcos Ag (Germany)

The University of Nottingham (United Kingdom)

The University of Sheffield (United Kingdom)

Asociacion Centro de Investigacion Cooperativa en Biomateriales- Cic Biomagune (Spain)

Università di Pisa (Italy)

Istituto Nazionale di Fisica Nucleare (Italy)

Magyar Tudományos Akadémia Energiatudományi Kutatóközpont (Hungary)

Panepistimio Kritis (University of Crete) (Greece)

Institute of Mechanics, Bulgarian Academy of Sciences (Bulgaria)

Belarusian State University (Belarus)

Università degli Studi di Salerno (Italy)

Itä-Suomen Yliopisto (Finland)

Research and Development of Nanomaterials and Nanotechnology Nano Techlab Ltd (Bulgaria)

Queen Mary University of London (United Kingdom)

Prognomics Ltd (United Kingdom)

Interuniversitair Micro-Electronica Centrum Imec Vzw (Belgium)

Ericsson Ab (Sweden)

Consorzio Nazionale Interuniversitario per le Telecomunicazioni (Italy)

Libre Società a Responsabilità Limitata (Italy)

Grinp Srl (Italy)

Dyesol Italia Srl (Italy)

Tartu Ülikool (Estonia)

N Vision Systems and Technologies SI (Spain)



Universität Augsburg (Germany)

University of Sunderland (United Kingdom)

Centro Ricerche Fiat S.C.p.a. (Italy)

Instituto de Tecnologias Emergentes de La Rioja (Spain)

Nanesa Srl (Italy)

Delta Tech Spa (Italy)

Abb Ab (Sweden)

Internacional de Composites Sa (Spain)

Alcatel-Lucent Italia S.P.A. (Italy)

Fundación para la Investigación, Desarrollo y Aplicación de Materiales Compuestos (Spain)

FlexEnable Limited (United Kingdom)

Infineon Technologies AG (Germany)

M-Solv Ltd (United Kingdom)

Nanosc Ab (Sweden)

Novalia Limited (United Kingdom)

GlaxoSmithKline Research and Development Ltd (United Kingdom)

Finmeccanica - Società per Azioni (Italy)

Institut für Korrosionsschutz Dresden GmbH (Germany)

Robert Bosch GmbH (Germany)

Emberion Oy (Finland)

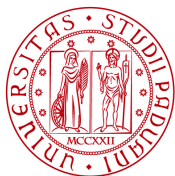
Emberion Ltd (United Kingdom)

Nokia Solutions and Networks Uk Limited (United Kingdom)

Università degli Studi di Padova (Italy)

**Total EU Contribution:** Euro 89.000.000,00

**Call ID:** H2020-Adhoc-2014-20



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

H2020  
PROJECTS FUNDED AT THE UNIVERSITY OF PADOVA

**Project Duration in months: 24**

**Start Date: 01/04/2016**

**End Date: 31/03/2018**

**Find out more: <https://graphene-flagship.eu/>**