AGREEMENT

For Co-establishing
a Joint Laboratory on Graphene-Polymer Research and Application between partners of 734164-Graphene 3D project

The H2020-MSCA-RISE-2016-734164-Graphene3D network recognizes mutual interests to get an agreement to co-establish the Joint Laboratory on Graphene-Polymer Research and Application, hereinafter referred as JLab-GRAPHENE 3D, which will work as a platform to promote interests in research activities and technology transfer in the area of graphene-based polymer composites.

1. Parties

1. INSTITUTE OF MECHANICS (OLEM), Bulgarian Academy of Sciences, IMech-BAS, Sofia, Bulgaria (Coordinator)
2. CONSIGLIO NAZIONALE DELLE RICERCHE / Institute for Polymers, Composites and Biomaterials, CNR, Pozzuoli (NA), Italy
3. NARRANDO SRL, Salerno, Italy
4. UNIVERSITA' DEGLI STUDI DI SALERNO, UniSa, Salerno, Italy
5. RESEARCH AND DEVELOPMENT OF NANOMATERIALS AND NANOTECHNOLOGIES, NanoTechLab Ltd., Sofia, Bulgaria
6. ILIA VEKUA SOKHUMI INSTITUTE OF PHYSICS AND TECHNOLOGY, SIPT, Tbilisi, Georgia
7. UNIVERSITY OF EASTERN FINLAND, Kuopio, Finland
8. STATE KEY LABORATORY OF POLYMER MATERIALS ENGINEERING (SICHUAN UNIVERSITY) (SKLPME-SCU), Chengdu, China
9. UNIVERSIDADE PRESBITERIANA MACKENZIE (UPM) / INSTITUTO PRESBITERIANO MACKENZIE (IPM), São Paulo, Brasil
10. Individual Researchers co-opted into joining the Joint Laboratory as scientific advisors.

The parties, referred herewith as Partners are Organizations and Individual Researchers.

2. Background

Since 2017, all Partners are working together successfully within the project H2020-MSCA-RISE-2016-734164-Graphene3D "Multifunctional Graphene-based Nano-composites with Robust Electromagnetic and Thermal Properties for 3D-printing Application". The project has reached the

goal to design, develop, fabricate and validate two prototypes: (i) multifunctional graphene-based nanocomposite material with extraordinary properties, suitable for 3D printing (FDM) application, and (ii) 3D printed cellular structures with extraordinary properties, such as almost perfect electromagnetic absorbance in the range 1-100 GHz, high thermal and electrical conductivity, enhanced mechanical properties, low percolation threshold (<1 wt%) and lightweight. The obtained prototypes have strong potential for application in mechatronics, high power electronics and engineering.
Project results were published in about 80 papers in peer review and open access scientific journals. The excellent outcome of the project has activated the interest for this agreement to strengthen the collaboration beyond the funding period of the project.

3. Objectives

The main purposes of this agreement are the followings:

a) To strengthen the mutual cooperation between Partners;

b) To create world-class research achievements in the field of graphene & hybrid filler based composites by combining the research strength of participating Partners;

c) To develop new polymeric and graphene & hybrid filler based composite materials as well as new technologies for facing most relevant societal challenges;

e) To develop new polymer nanocomposite processing technologies, theories, and properties modelling.

f) To plan research cooperation outside the Joint Lab.

g) To offer services outside the Joint Lab.

4. Research Interests

The main research interests are:

a) Multi-functional and high performance polymer nanocomposites focused on graphene and its derivatives and exploring the potential of other emerging 2D nanofillers

b) New polymer processing technology, theories, and properties modelling.

c) New methods for characterization of nanocomposite structure and properties at macro, micro and nanoscale

d) Applications of the developed graphene & hybrid fillers polymer nanocomposites (e.g. 3D printing, electronics, mechatronics, energy, engineering …)

5. Activities

Whenever applicable, the activities of the Partners under this cooperation are:

a) To undertake joint research works to deepen the understanding of basic and technical fundamentals of advanced and multifunctional polymers, composites with the establishment of new processing technologies;

b) To promote or strength the link between research groups and companies and accelerate the technology transfer in the field of polymers and graphene based composites;

c) To share the research achievements, as well as complementary expertise and research resources and facilities;

d) To promote the exchange of academic and researcher staff and PhD students and Master students;

e) To have synergies with PhD student programs;

f) To render mutual assistance in raising the scientific qualifications of the academic staff, especially young scientists;

g) To jointly apply for international joint projects and networks, especially in the framework of the European programs;

h) To jointly apply for international patents and to publish papers especially in the top impact journals;

i) To organize symposia, workshops and conferences on polymeric composites research and technology issues.

6. Structure and Organization

6.1 Supervisory and Executive Board (SEB). Each Partner appoints one member as his representative. The SEB elects the Director with function of representation, scientific coordination and administrative management. The SEB is assisted by a Scientific Advisory Board (SAB) and a Technology Transfer Board (TTB).

6.2 Scientific Advisory Board (SAB). Each Partner appoints one member as his representative.

6.3 Technology Transfer Board (TTB). Each Partner appoints one member as his representative.

The three Boards will meet twice per year in regular meetings, organised by the Director.

7. Obligations

All Partners should comply with relevant state and local laws and regulations in the countries involved, comply with the relevant rules and bylaws of the Partner's institutes and organizations.

All Partners should comply with the Joint Laboratory's internal rules to be agreed on before the entry into force of the project, including intellectual property ownership and knowledge transfer.

Any doubts that might arise from this agreement should be solved administratively.

8. Miscellaneous

(1) Partners are entitled to propose amendments to be made to the current Agreement. In order to be validated, the amendments must be undersigned by all the Partners.

(2) The Agreement will be valid for 5 (five) years from the date of its signature, and may be extended by additive term by the Partners or terminated by its noncompliance unless one Partner notifies the other in writing of its wish to terminate the Agreement at least three months prior to the end of a calendar year provided that all existing obligations assumed in the terms of the Agreement will be fulfilled.

(3) The Supervisory and Executive Board (SEB) will agree how to maintain the Joint Lab for the next 5 years**.**

(4) The Agreement has been prepared in 10 original copies in English.

LIMITATION OF LIABILITY

The Partner's liability towards each other in connection with this Agreement shall not extend to claims for indirect or consequential loss or damage. On no account shall a Partner's liability under this Agreement exceed the total amount of EUR ten thousand (10,000) on aggregate, except to the extent that such liability should arise as a result of gross negligence, fraud or willful misconduct of a Partner.

DISPUTE RESOLUTION

In the event of any controversy, claim or dispute arising out of or relating to any provision of this Agreement, the Partners shall try to settle those conflicts amicably between themselves within ninety (90) days as of either Partner's request for amicable settlement negotiations. Should the Partner's fail to settle their differences, the matter in dispute shall be finally and exclusively settled by binding arbitration according to the Rules of Arbitration of the International Chamber of Commerce ("ICC") with the composition of one arbitrator. The language of the arbitral proceedings shall be English.

Section SIGNATURES:

[Institute of Mechanics, Bulgarian Academy of Sciences] By: Open Laboratory of Experimental Micro & Nano Mechanics (OLEM) Name: Rumiana Kotsilkova, Prof. DSc. Title: Coordinator of 734164 Graphene 3D / OLEM Representative/ Date: 18.05.2022	Signature: 

[Company's full legal name]

By: CONSIGLIO NAZIONALE DELLE RICERCHE/

Institute for Polymers, Composites and Biomaterials

Name: Luigi Ambrosio

Title: Director

Date: 18/05/2022

Signature:

[Company's full legal name]

By: NARRANDO Srl

Name: Paolo Ciambelli

Title: CEO

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NARRANDO
P. IVA C. F. 05165790659
Via Giovanni Paolo II, 132
84084 Fisciano Salerno IT

Date: 16 May, 2022

Signature:

[Host Institution] By: UNIVERSITA' DEGLI STUDI DI SALERNO Name: Prof. Patrizia LAMBERTI Title: Legal signatory and Team Leader Date: May 23, 2022	Signature: UNIVERSITA' DEGLI STUDI DI SALERNO DIPARTIMENTO DI INGEGNERIA DELL'INFORMAZIONE ED ELETTRICA E MATEMATICA APPLICATA DIEM Facoltà di Ingegneria

NanoTech Lab Ltd.

By: Partner of 734164-Graphene3D

Name: Evgeni Ivanov

Title: CEO at "NanoTechLab" Ltd

Date: 15.05.2022, Sofia

Signature:

НАНОТЕХНОЛОГИЧНИ И НАНОМАТЕРИАЛИ ЗА РАЗНООБРАЗНИ ПРИЛОЖЕНИЯ
Нано Тех Лаб
Nano Tech Lab

[Company's full legal name]

By: LEPL Ilia Vekua Sukhumi Institute of Physics and Technology

Name: Ekaterine Sanaia

Title: Deputy Director

Date: 19/05/2022

Signature:

[Host Institution]

By: University of Eastern Finland (UEF)

Name: Kari Lehtinen

Title: Dean

Date: 31.5.2022

Signature:

[Host Institution] By: STATE KEY LABORATORY OF POLYMER MATERIALS ENGINEERING (SICHUAN UNIVERSITY) Name: Hesheng Xia Title: Deputy Director Date: 16/05/2022	Signature:

[Host Institution]

By: UNIVERSIDADE PRESBITERIANA MACKENZIE

Name: Prof. Dr. Marco Tullio de Castro Vasconcelos

Title: Legal Signatory

Date: May 27, 2022

Signature: DocuSigned by: Marco Tullio de Castro Vasconcelos 31545BC2E779494...

[Individual Researcher] Name: Philippe Lambin Title: Professor Emeritus Date: May 16, 2022	Signature: