

Our Team



Dr. COSTAS CHARITIDIS is a Professor at the School of Chemical Engineering of NTUA and Director of the Research Unit of Advanced, Composite, Nano Materials & Nanotechnology (R-NanoLab). Since 2018, he is president of the General Assembly of the Hellenic Foundation for Research and Innovation. He has extensive R&D experience through collaborations with international research centres and participation as a coordinator or partner in more than 60 European and National funded projects, in the fields of Materials Science & Nanotechnology, Carbon-based materials and Safety impacts of Nanotechnology. He is a referee in International scientific journals, evaluator & scientific advisor of R&D projects. He is the author of several scientific books, chapters and more than 240 scientific publications in peer reviewed international journals and conference proceedings with over 3200 citations by other researchers (h-index 31).

DR. DIMITRIOS FANTANAS is a highly-skilled technical product developer with an engineering background with over 7 years' experience in Research and Development (R&D), product management and design, process development and machine design. He has been involved in a variety of engineering and scientific projects with various printed electronics and automation related applications, most notably being a product leader in the Graphene Flagship and M3DL0C H2020 funded projects.

ELENI GKARTZOU holds a BSc in physics and MSc in Materials Science and Technology. Her research interests include the development of advanced engineering materials for Additive Manufacturing and AM process optimization based on application/material-specific criteria. She has been involved in various technical implementation activities related to European funded projects.

Main contact in the project:

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Additive Manufacturing of 3D Microfluidic MEMS for Lab-on-a-Chip applications.

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R-NANO



Research Unit of
Advanced Composite
Nano-Materials &
Nanotechnology



National Technical University of Athens
R-NanoLab

nanolab.chemeng.ntua.gr



Supported by the European Union under the
HORIZON2020 Framework Programme
Grant Agreement no. 760662

Who we are

The "Research Unit of Advanced, Composite, Nano Materials & Nanotechnology", R-NanoLab is situated at the School of Chemical Engineering (Department of Materials Science and Engineering) of National Technical University of Athens (NTUA). It is established since 2006; its research group has extensive experience in Design, Production and Characterization of Advanced-, Composite- and Nano- Materials.

R-NanoLab has a **strong presence in European Research Activities** in Materials Science, through participation in numerous EU and national funded projects. As part of the European Technological Community, R-NanoLab is an active member of several **Clusters**: European Materials Characterisation Council (EMCC), European Pilot Production Network (EPPN), European NanoSafety Cluster (NSC) tanking part in establishment of new **standard methodologies**, provide suitable background for **regulation and nanosafety**, and support **EC policy development**.



Continuus stabilization



Polymer Blending



Melt Spinning

By **up-scaling** our technology R-NanoLab has established three **Pilot Lines**:

- (1) A **Melt Spinning Line** for producing fibers,
- (2) a **Polymer Blending Line** for producing polymer blends, pellets, solid samples and **3D printing filament** and
- (3) a **Continuus Stabillization Line** with a 4 stages oven for stabillizing polymer fibers, the first part of **Carbon Fibre production**.

Our product & service

R-NanoLab, with a team of more than 35 Researchers with **complementary and multidisciplinary expertise**, and facilities at NTUA (Athens) and Lavrion Technological and Cultural Park - LTCP (Lavrion) can provide the following services:

- Development of polymeric materials and nanocomposites for Additive Manufacturing applications.
- Rapid-prototyping and design optimization through Additive manufacturing technologies
- Up-scaling production of carbon structures, composites/nanocomposites and integration of nanotechnology in existing products
- Access to pilot lines for testing upscaled production of specific polymers/composites/fibers and production of limited batches
- Access to tools for structural, chemical, thermal characterization for the produced polymer/composites
- Implementation of R&D projects for Automotive, Airtransport, Construction Industry and Companies
- Support in exploitation of technological assets and identification of industrial partners for the development of the technology
- Modeling & Design for applications on smart materials.

