

# 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. STEFANOS KOUTSOUMPIS** is a Post-Doctoral Researcher with a background in polymer physics and expertise on Nanomaterials. His research focuses on thermal, mechanical and electrical properties of composite materials. In the field of Additive Manufacturing, he addresses the need for development of polymeric materials with tailored rheological properties, high mechanical yield and increased resistance to thermal processes.

**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.

[www.m3dloc.eu](http://www.m3dloc.eu)



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[nanolab.chemeng.ntua.gr](http://nanolab.chemeng.ntua.gr)



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# 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 fillament** and
- (3) a **Continuus Stabillization Line** with a 4 stages oven for stabillizing polymer fibers, the first part of **Carbon Fibre production**.

# Our product & services



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

