

## NEW MATERIALS FOR SENSORS AND ACTUATORS

[inamat@unavarra.es](mailto:inamat@unavarra.es)

[www.unavarra.es/inamat](http://www.unavarra.es/inamat)

Public University of Navarra (UPNa)

**UPNa :** 26 research groups in the area of Engineering and Technology  
33 in the area of Basic Sciences and Health  
21 in Economic and Legal Sciences and  
26 in the area of Human and Social Sciences.

## 4 University Research institutes:

ISC - Institute of Smart Cities

**INAMAT - Institute for Advanced Materials**

INARBE- Institute for Advanced Research in Business and Economics

ISFOOD – Research Institute for Innovation & Sustainable Development in Food Chain

# STRATEGIC Areas (Application)

Institute for Advanced  
Materials  
**INAMAT**

Energy

- Biofuels
- Hydrogen Economy
- Solar cells
- Energy Harvesting
- Revaluation of CO<sub>2</sub>

Health

- Bacterial biofilms
- Drug Synthesis
- Bio-medical Applications
- Food Quality Control

Environment

- Treatment-optimization  
of water resources.
- Solid Waste
- Chemical sensors
- Magnetic sensors
- Acoustics

Industry

- Surface treatments
- LIBS-Laser
- Sensors
- Data management
- Big Data
- Behavior in service

**Mathematical support** (group theory, differential equations, statistics, finite elements, Monte Carlo simulation etc.)



InaMat focuses its research activity in the following General Lines:

- Materials: Metals and Alloys, Magnetic Materials, Shape memory alloys, Polymers, Semiconductors, hybrid materials
- Magnetic devices, sensors and actuators. LIBS
- Catalysis, drugs synthesis and nanoparticle surface functionalization

# Human Resources and Production

40 Senior researchers

+

14 Junior researchers

- 1 Post-Doc
- 2 New Talent researchers
- 1+3 Incorporation Call Technologists NG

## *Main indicators (data for 2012-2016)*

Number of Departments	7
Number of Senior researchers	40
Number of Collaborators	14
Number of PhD students	3
Projects with public funding	76
Public financing through projects	6.304.232 €
R & D contracts with companies	47
Private financing through projects	276.991 €
TOTAL number projects	123
TOTAL funding	6.581.223 €
Publications WoS	343
Priority patents + extensions	8

## Objectives

- Promote inter and multidisciplinary research.
- Avoid excessive atomization (critical mass)
- **Make visible** a good part of the research that is developed in UPNa. Attract talent
- Simplify and facilitate the **marketing** activity of the research lines and the technological offer
- Facilitate the **management and use of resources** and shared infrastructures
- To facilitate, in the medium term, the evolution towards **stable structures**, with sufficient funding and resources



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9:30h	<b>Opening</b> Iñaki Pérez de Landazabal – Head of INAMAT Begoña Vicente–Directora de desarrollo de Negocio
9:45h	<i>Integrative approaches to Inorganic and hybrid Nanomaterials</i> <b>Clement Sanchez.</b> Laboratoire Chimie de la Matière Condensée de Paris UMR ,CNRS, France
10:30	<i>Chemistry of Novel 2D Materials Beyond Graphene</i> <b>Gonzalo Abellán.</b> Univ Erlangen Nurnberg, Department of Chemistry and Pharmacy, Erlangen, Germany
<b>11:15 11:30- Coffee break</b>	
11:30	<i>3D printing, a disruptive technology, challenging creativity</i> <b>Jan Van Humbeeck.</b> Department of Mechanical Engineering (MECH), KU Leuven, Belgium
12:15h	<i>Soft magnetic materials: from microsensors to cancer therapy</i> <b>Alfredo Garcia Arribas.</b> Electricity and Electronics Department. Basque Country University (UPV/EHU) and BC Materials, Leioa, Spain .
13:00	Closure
<b>Lunch &amp; networking</b>	

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