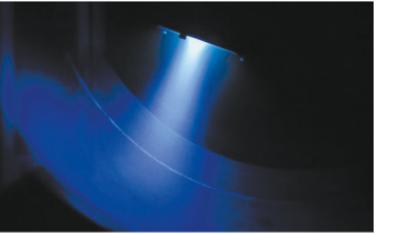


OUR TECHNOLOGIES

SOL-GEL & Wet Surface Deposition

Use of liquid deposition methods to obtain layers of nanometric and micrometric thicknesses on various substrates to make them multifunctional. The coating process varies depending on whether the surface is flat or three-dimensional.

- **Galvanoplasty – Electroplating,**
- **Sol-Gel Process,**
- **Spraying & Coating of Paint, Varnish, Ink...**



Dry Surface Deposition

Dry Surface Deposition techniques aim at modifying the surface of an object to improve its properties.

• Vacuum Plasma Deposition PVD or PECVD

Vacuum Plasma Deposition technologies enable to add a layer or a stack of layers of different types (metal, alloys, oxides, nitrides, carbides, plasma polymer coatings etc.).

• Thermal Sublimation

Thermal evaporation is a process performed in a vacuum chamber to deposit thin films on a substrate.

• Atmospheric Plasma Torch Deposition

Microwave plasma torches generate a plasma outside the torch directly in contact with the substrate to be treated.

• Atomic Layer Deposition (ALD)

Atomic Layer Deposition (ALD) allows the deposition of atomic layers at low temperatures, the deposition of conformal layers on complex structures with precise thickness control and uniformity at the monolayer level and dense films without defects (pinholes).

ABOUT MATERIA NOVA

Materia Nova is recognized as a technological accelerator of sustainable innovations in the field of new materials and processes.

The R&D center offers five different services:

- Materials and Processes conception and innovation
- Equipment Design and Process Upscaling
- Analysis and Characterization
- Life Cycle Thinking
- Project Development and Management

The approach of Materia Nova is based on an open and collaborative innovation.

From the understanding of the problems and requirements of our customers, we jointly select the best scientific and technical solutions which are then tested on a pilot-scale before industrialization. The development and the service provided are always unique and customized and give effective solutions as well as a major competitive advantage to our customers.

OUR TECHNOLOGIES AND SOLUTIONS

Our expertise in **surface coatings and treatments**, in **polymers and composites** and in **biotechnology** is fertile ground for:

- developing new functional performances of materials,
- taking up the energy and environmental challenges of our society,
- protecting and promoting the health sector.

OUR STRENGTHS

- A multidisciplinary team of experts
- A wide range of cutting-edge equipment
- An open and collaborative innovation strategy at national and international level
- Innovative projects for and with industrial companies
- Collaborations with R&D centers and universities worldwide
- A strong network of companies, spin offs and start-ups (B-SENS, ESIX, IONICS)

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UMONS
Innovation Center

MATERIA NOVA
Materials R&D Center

MULTIFUNCTIONAL MATERIALS AND COATINGS



THE TECHNOLOGICAL ACCELERATOR
OF RESPONSIBLE INNOVATIONS IN
MATERIALS AND PROCESSES

