MILLENNIUM NUCLEUS **OF NATURAL SCIENCES**

MILLENNIUM NUCLEUS MULTIFUNCTIONAL MATERIALS FOR **APPLIED SURFACE SCIENCE - MULTIMAT**





Area of Impact: Materials for new technologies Specialty: Nanotechnology

The main goal of our Millennium team in Multifunctional Materials for Applied Surface Science -MultiMat- is to nucleate a center of excellence in the field of nanostructured surface systems (NSS) with expertise in their modelling, growth and characterization, with primary research focus on lithium-ion batteries (LiB), a topic with a strong impact in energy and environment in Chile and worldwide relevance.

The phenomena occurring in LiB are complex and require the transdisciplinary efforts of many skilled scientist. This is the case of the MultiMat team with expertise in the growth, characterization and modeling of NSS systems.

Considering that NSS and LiB are high-cost research fields and advanced experimental facilities are mainly centralized in Santiago, the MultiMat alliance will allow sharing lab capabilities among scientists both located in Santiago and Regions, narrowing the infrastructure gap existing in our Country for the development of Nanotechnology.





This Millennium Nucleus was recently awarded. Soon we will highlight the achievements obtained by its researchers.

Judit Lisoni

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ACTIVE MILLENNIUM NUCLEUS CENTER From 2017 to 2020 The Millennium Nucleus Centers can be renewed after 3 years, reaching a maximum of 6 years. **METROPOLITANA REGION** LA ARAUCANÍA REGION LOS RÍOS REGION 6 METROPOLITANA REGION LA ARAUCANÍA REGION LOS RÍOS REGION

HOST INSTITUTIONS:





Conocimiento y Naturaleza

UNIVERSIDAD DE LA FRONTERA





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RESEARCHERS

Director Judit Lisoni (UACh)

Acting Director Fracisco Gracia

Associate Researchers Eduardo Cisternas Rodrigo Espinoza Marcos Flores Samuel Hevia

Young Associate Researchers Joseba Orive Loreto Troncoso

RESEARCH TOPICS

- NSS fabrication methodologies.
- Model systems for NSS.
- NSS for LiB.
- Modeling NSS behavior.

NOTED OUTREACH ACTIVITIES

- Judit Lisoni´s talk in Nerd Nite. (2017)
- Intervention of Judit Lisoni in Universidad de Chile (Santiago) and UACh (Valdivia) radio stations. (2017)