



**Area of Impact: Materials for new technologies**

**Especialidad: -**

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.



MAIN ACHIEVEMENTS

- Decentralize infrastructure capabilities and training of human resources in Chile in nanotechnology topics.
- Committed on producing a high-tech research line in Chile, relying on a multidisciplinary professional and scientific team; Physicists, Engineers, Chemists, among others.

CONTACT INFORMATION

DIRECTOR: **Judit Lisoni**  
ACTING DIRECTOR: **Rodrigo García**



Judit Lisoni



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

## RESEARCHERS

### Director

Judit Lisoni (UACH)

### Deputy Director

Francisco 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)
- Marcos Flores talk about Nanotechnology for the general public in *Casa Central Universidad de Chile*. (2017)
- Judit Lisoni interview in *Diario Austral de Valdivia*. (2017)
- Outreach program for the advanced materials manufacture industry in Chile. (2018)



### ACTIVE MILLENNIUM NUCLEUS CENTER

From 2017 to 2020

The Millennium Nucleus Centers can be renewed after 3 years, reaching a maximum of 6 years.



### PRESENCE

METROPOLITANA REGION  
LA ARAUCANÍA REGION (IX)  
LOS RÍOS REGION (XIV)



## HOST INSTITUTIONS:

