

**DISIT**

DIPARTIMENTO DI SCIENZE E INNOVAZIONE TECNOLOGICA

# SEMINARI RICERCA E FORMAZIONE

Martedì 17 Febbraio 2026 - Aula 205

Giovedì 19 Febbraio 2026 - Aula 203

Venerdì 20 Febbraio 2026 - Aula 205

ore 10:00-12:00

SEMINARIO/CORSO APERTO A:  
Docenti, Assegnisti, Dottorandi,  
Borsisti, Studenti

SEMINARIO/CORSO IN LINGUA:  
Inglese

*Martedì 17 Febbraio 2026 - Aula 205*

## Aerogels design and preparation

*Giovedì 19 Febbraio 2026 - Aula 203*

## Structural characterization of aerogels centered on application

*Venerdì 20 Febbraio 2026 - Aula 205*

## Relationship between hydration induced structural changes and altered compressive strength of aerogels

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When aerogels are designed to be used in aqueous media, e.g. in biomedical or environmental applications, it is essential to understand the mechanism of the hydration of the backbone and the consequent modification of the aerogel structure. The most important questions are the following. 1) Does the extensive hydration of the backbone cause the erosion of the aerogel monolith? 2) Is the microscopic morphology of the aerogel the same in the dry and in the hydrated states? 3) Are the pores of the aerogel permeable in water, or does the porous structure collapse due to the extensive deformation of the hydrated backbone? Evidently, the answers to these questions are indispensable for understanding the properties of hydrated aerogels related to mass transport, adsorption-desorption phenomena, suspension stability and biocompatibility. Results from NMR spectroscopy (diffusiometry, relaxometry, cryo-porometry, MAS NMR) and SANS will be presented.

*Il seminario è promosso dal Prof. Geo Paul*

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al tuo calendario  
<https://u.garr.it/Q440c>

