

## New procedure for the preparation of aerogels with good mechanical properties and resistant to humidity. In a simple way and with multiple applications

CSIC has developed a new procedure for the preparation of hydrophobic aerogels, based on biopolymers, in a simpler and faster way than the techniques available up to now. It allows obtaining materials with good mechanical properties and highly resistant to humidity.

Aerogels are highly porous materials, which have a low density. The available processes for generating aerogels are complex, multi-stage processes that use expensive materials and / or polluting chemicals. Through this new procedure, it is possible to obtain hydrophobic aerogels with good mechanical properties in a simple way and using low-cost, renewable and biodegradable materials (since the cellulosic materials that compose them can be extracted from biomass residues).

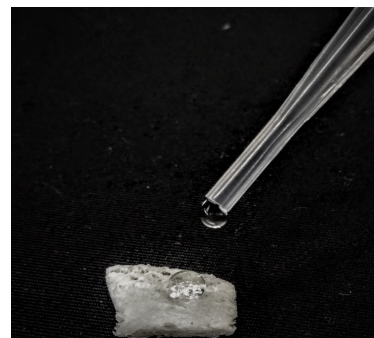
Industrial partners whose field of development of aerogels in uses such as cleaning oil spills in water, biomedicine, food packaging or insulation are being sought to collaborate through a patent licence agreement.

### *An offer for Patent Licensing*

#### Improved aerogel properties and easily adaptable to new uses

Through this new procedure, which is simple and fast compared to other available methods, we obtain aerogels with good mechanical properties and hydrophobic capacity.

In addition, as aerogels can be used for multiple uses, through this new procedure, new compounds (such as antioxidant extracts) can be incorporated into their composition to provide the material with the desired characteristics for that particular use.



Aerogel showing its hydrophobic capacity

#### Main innovations and advantages

- Procedure that significantly improves current methods for obtaining aerogels
- Uses low-cost, renewable and biodegradable materials to produce aerogels.
- Aerogels with good mechanical properties and resistant to humidity.
- It enables the incorporation of compounds to adapt the properties of the aerogel to different uses.
- Material with multiple applications, such as: prolonging the useful life of packaged foods, material with uses in biomedicine, acoustic and thermal insulation.
- Being a highly hydrophobic material with the capacity for selective sorption of oil in mixed media, it can be used for oil adsorption, with various applications, such as oil spills.

#### Patent Status

Patent filed in Europe

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