

Device for vacuum sublimation

CSIC, through the Institute of Materials Science of Barcelona (ICMAB), and **ICREA** have developed a new device for vacuum sublimation. The sublimator allows the deposition of materials directly onto the desired substrate without using an intermediate surface or solvents, or other intermediate substances for the deposition.

Industrial partners are being sought to collaborate through a patent license agreement.

An offer for patent Licensing

Deposition of sublimated solids on the Surface of interest

Vacuum sublimation methods are used, on one hand, for the purification and recrystallization of molecules, and, on the other hand, to study the reactivity of materials on different substrates.

Current easy-to-use methods deposit crystalline materials in intermediate substrates, needing additional steps to deposit in the desired substrates. The existing direct methods may need ultra-high vacuum sublimation equipment, complex equipment, implying great difficulties in preparing the samples.

The new device allows an easy-to-use direct sublimation in surfaces, opening a wide range of possibilities about the nature of surfaces, including the possibility that the surface is a device on itself. With the new sublimator the distance between the material and the surface can be adjusted and sublimation parameters, such as temperature and pressure, can be optimized and controlled.



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Main innovations and advantages

- Direct deposition on the surface of interest.
- The device can be used in standard R+D laboratories.
- Adjustable distance between the substrate and the sample for a better control and reproducibility of the sublimation.
- Low-cost device with interchangeable pieces, easy to replace.
- Compatible with a huge number of surfaces of different nature, dimensions and functions, including final devices.

Patent Status

Patent application filed suitably of international extension

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