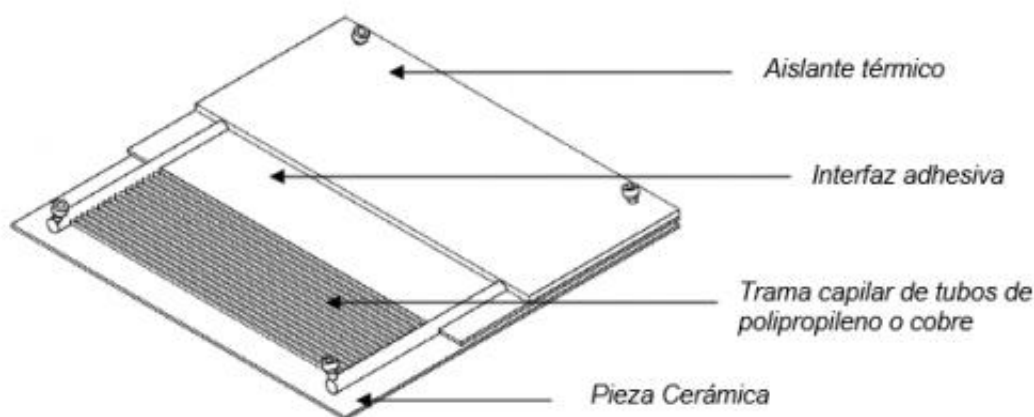


Researchers invent air conditioning system using ceramic panels

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Ceramic panels. Credit: UA

Researchers of the University of Alicante belonging to the UA Research Group on Technology and Sustainability in Architecture, along with the Spanish Association of Manufacturers of Ceramic Tiles and Pavements (ASCER) and the Institute for Ceramic Technology (ITC) have developed an innovative thermal conditioning panel of ceramic material, which can control the climate of any room easily, sustainably and energetically efficient.

The main innovation of this new HVAC system is the use of [ceramic material](#). The panel incorporates a capillary structure by which the water

flows on its hidden face and it heats or cools the room in which it is housed according to the water temperature.

This material had not been used so far in combination with a capillary system of water distribution", lecturer Víctor Echarri Iribarren, Director of the UA Research Group on Technology and Sustainability in Architecture explains.

"The system, based on fixed factory assembled panels, is made up of several layers and can be easily installed in ceilings and walls. It requires minimal maintenance and can be deployed across multiple designs and configurations, allowing the creation of panels of different sizes and formats", adds Victor Echarri.

"This innovative form of air conditioning is compatible for use in sustainable construction , as it is environmentally friendly for containing [ceramic](#) and polypropylene. The system, working with moderate water temperatures, allows the use of renewable solar, geothermal and biomass energy, both in summer and winter. Also, the material provides other advantages such as light weight, easy maintenance and the ability to set custom formats tailored to the needs of the architect", Victor Echarri states.

The technology has been successfully tested and allows systems without [air conditioning](#), forced or connective air, so it is of interest for ceramic manufacturing companies wishing to develop a line of products based on this technology.

Provided by Asociacion RUVID

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