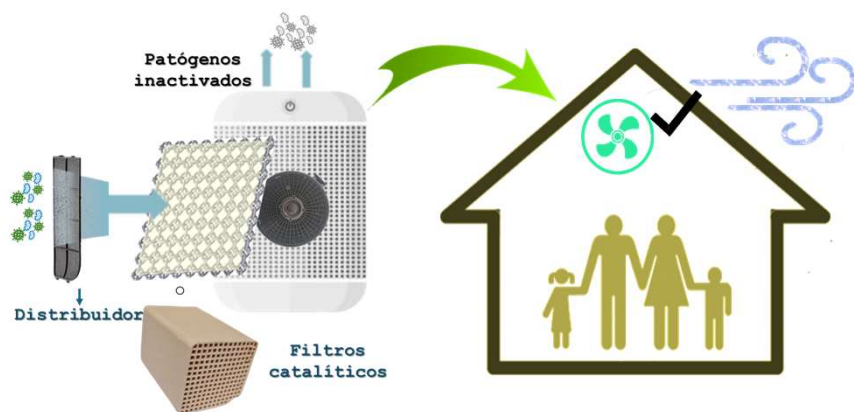


Technology Offer

CSIC/EG/129

Efficient biocidal material against airborne pathogens



Catalytic material effective in the inactivation of airborne pathogens and with virucidal, fungicidal and bactericidal properties.

Intellectual Property

Priority patent application

Stage of development

Laboratory tested

Intended Collaboration

Licensing and/or co-development

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Market need

Respiratory tract infections are the most deadly communicable disease in the world. The transmission of pathogens is more likely in enclosed spaces, where we spend more than 90% of our time. Therefore, there is a great need for technologies to inactivate pathogens to prevent their propagation. Nowadays there are different technologies (filters, UV radiation, reactive agents, non-localized heat treatment or photocatalytic systems, among others) with low efficiency and high energy consumption; in addition, the periodic replacement of filters is not sustainable and poses an environmental and health safety problem.



Proposed solution

A material that is useful for inactivating pathogens such as viruses, bacteria and fungi, without the need for the pathogen to be trapped, i.e. capable of transforming pathogens rather than retaining them, so that the material does not become saturated and does not need to be replaced. Then, it could be used for virtually an unlimited time and, since it does not release reactive species, it would not pose a biological or chemical risk. It would also be more energy efficient since only moderate heating (temperatures below 50 °C) would be required.

Competitive advantages

- It does not constitute a biological or chemical risk since it does not release reactive species.
- It does not saturate and therefore does not need to be replaced. It does not have to trap the pathogen to inactivate it.
- It can be impregnated by spraying, spraying, deposition or immersion in a broad variety of filters.