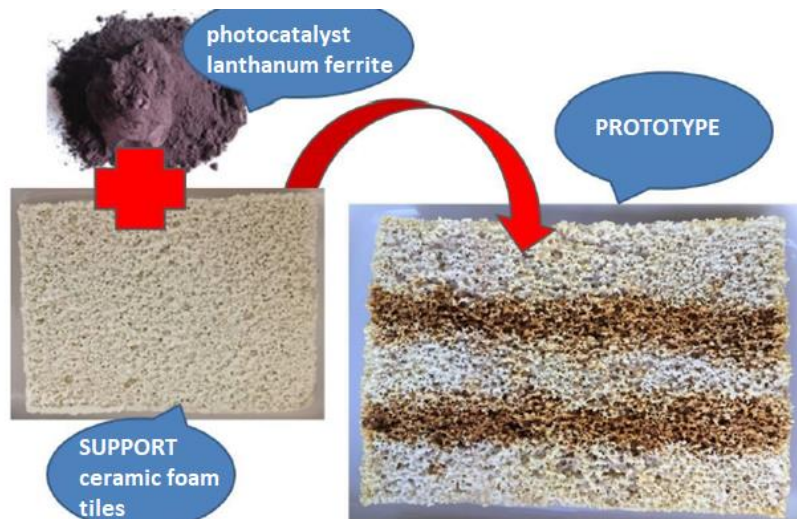


Photocatalytic ceramic foams for the removal of micro pollutants

The technology involves the design and fabrication of a prototype reactor which, thanks to the properties of an iron oxide and lanthanum photocatalyst, allows the degradation of micropollutants in aqueous effluents using light in the visible range or sunlight, possibly in synergy with other advanced oxidation techniques.



PRIORITY NUMBER

102020000011578

REGIONAL COVERAGE

Patent filed in Italy

INVENTOR

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DEVELOPMENT STAGE

Prototypal

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Photocatalytic ceramic foams for the removal of micro pollutants

DESCRIPTION

The present invention has, as its object, a process for the degradation of organic compounds including the use of a catalyst on a support represented by a ceramic foam of synthetic mullite, in the presence of an oxidizing agent in the presence of visible radiation. The process does not require the use of lamps emitting ultraviolet radiation, making the costs more sustainable. The technology in question effectively responds to an increasingly topical issue. New emerging contaminants (human or veterinary drugs, endocrine disruptors, biocides, plant protection, etc.) are gradually being detected in natural/potable waters.

ADVANTAGES

- Efficient and low-cost process for the removal of micro pollutants in water
- Modular technology that can be adapted to existing treatment systems

APPLICATIONS

- Waste water treatment plants

FIELDS OF APPLICATION

Pharmaceutical

Chemistry

Public authorities

KEYWORDS

- Degradation of organic compounds
- Photocatalytic Foam
- Photocatalysis
- Pollutant removal

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