

Photocatalytic material for water treatment systems

--- Cleantech / Material / Water treatment



REFERENCE

PHOTOCAL [L1057]

KEYWORDS

WATER TREATMENT /
PHOTOCATALYSIS / SOL-GEL
COATING / MICROPOLLUTANT /



APPLICATIONS

Water and wastewater treatment :

- Water decontamination and disinfection
- Pure and ultra pure water (UPW) systems / high-purity water systems



TARGET MARKETS

- Water and wastewater treatment services & equipments

Technology readiness level

--- TRL 4



INTELLECTUAL PROPERTY

Priority patent FR1353122, extended in EP, US, CA, JP & CN.

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DESCRIPTION

A hybrid sol-gel coating titane dioxide (TiO_2) semiconductor material, when deposited on a soft support (woven or non-woven textile, soft films...), is able to degrade micropollutants in water through a heterogeneous photocatalysis process. Pollutant degradation may take place either directly on the semiconductor surface, or indirectly by interaction with free radicals. The material offers promising durability and non degradation properties.

COMPETITIVE ADVANTAGES

- Degradation of a large range of pollutants, including :
 - Pollutants hard to degrade with classical methods
 - Pathogenic biological pollutants : virus, bacteria, fungi
- Durability, high biological and chemical stability : no material degradation and release over time
- Low power consumption

DEVELOPMENT STATUS

- Optimization of water treatment conditions with the coated support
- Coating on various types of supports: velvet, polymers, papers...

PARTNERSHIP

PULSALYS is looking for co-development or commercialization / licensing industrial partners.



OUR OPPORTUNITIES

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