

# 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.

## CONTACT US

Martine CANTUEL, PhD  
+33(0)4 26 23 56 61  
Martine.cantuel@pulsalys.fr

## DESCRIPTION

A hybrid sol-gel coating titane dioxide ( $\text{TiO}_2$ ) 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

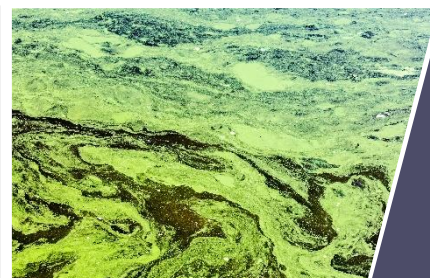
- Degradation of a large range of pollutants, including :
  - Pollutants hard to degrade with classical methods
  - Pathogenic biological pollutants : virus, bacteria, fungi
- Durability, high biological and chemical stability : no material degradation and release over time
- Low power consumption

## 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

[www.pulsalys.fr/entreprise/offres-technologies/](http://www.pulsalys.fr/entreprise/offres-technologies/)

PULSALYS SATT LYON ST ETIENNE:  
47 bd du 11 novembre 1918 - CS 90170  
69625 Villeurbanne Cedex  
FRANCE



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