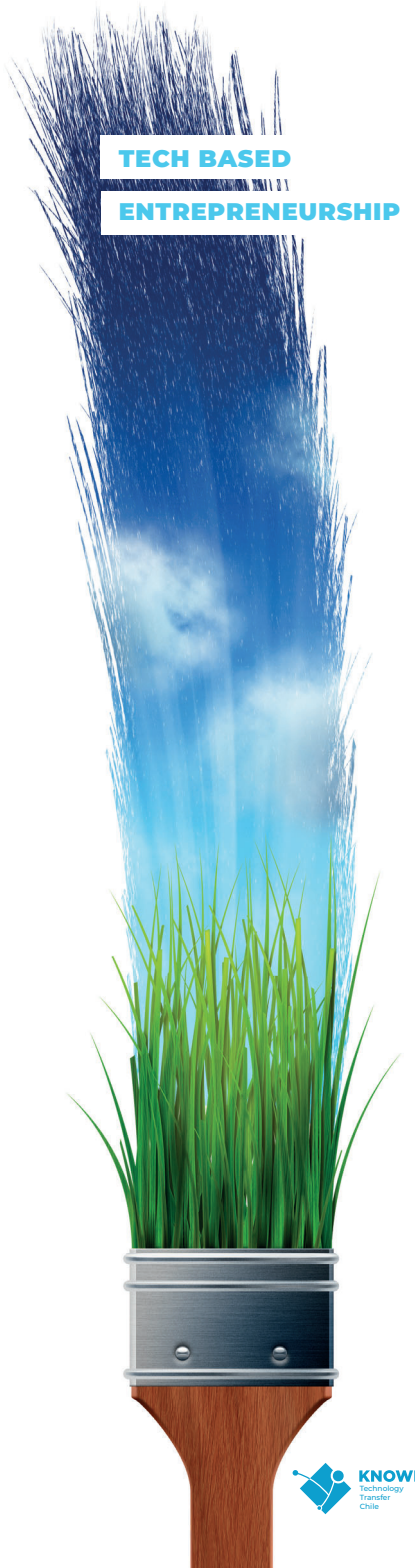
# PHOTIO: Additive for paints to act as environmental decontaminants




## DESCRIPTION

At present, one of the greatest problems facing cities is environmental pollution. According to data provided by the World Health Organisation, nine out of ten people in the world breathe polluted air, causing the premature death of more than seven million people. Specifically, Chile concentrates nine of the ten most polluted cities in Latin America. Photio, a technology developed by the company Fractal SpA, aims to contribute to the solution of this complex problem, converting surfaces -such as walls of houses and buildings- into environmental decontaminants.

Photio technology is a nanotechnological additive for paints (in liquid format) that promotes the degradation of a series of environmental pollutants through a photochemical process triggered by natural or artificial UV radiation.

## TECNOLOGY: TRL 8

Photio technology is at a TRL 8 development stage. It has experimental validation on a laboratory level and is in the industrial piloting stage. Currently, the team is working on the certification of its efficiency through pollutant removal tests in photoreactors.

## MARKET OPPORTUNITY

Market size: USD 205.6 billion (2018).
CAGR: 4,5%.
Segment: architectural coatings.
Expected market size: USD 267.7 billion (2026).

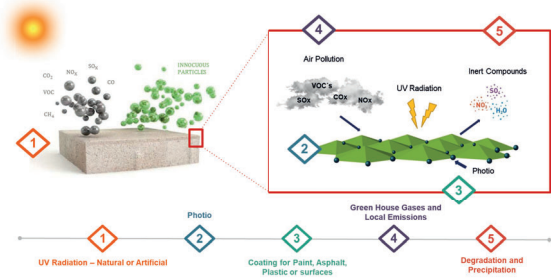
KNOWHUB
Technology Transfer Chile

The global market for paints and coatings is currently in a stage of growth. Demand for water-based and powder-based coatings free of Volatile Organic Compounds (VOCs) is expected to increase. This, principally, due to the increase in regulations regarding VOC compounds and other pollutants, as well as a greater awareness of the population on the adverse effects of solvent-based paints and coatings. The global market is tending to consolidate more efficient paints and coatings, favouring the introduction of environmentally friendly products.

## COMPETITIVE ADVANTAGES

- **Effectiveness:** able to degrade greenhouse gases (GHG) and local emissions in reduced reaction times. One square metre painted with Photio is equivalent to the decontamination performed by 3-4 trees by means of photosynthesis.
- **Aesthetics and drying:** it does not alter the physical properties of the paints to which it is added.
- **Anticorrosive:** Photio has also shown to have anticorrosive and self-cleaning properties.
- **Improved operational costs:** reduces expenses related to compliance with environmental regulations.

## Technology




## PROTECTION

At presente the company Fractal SpA is working on the drafting of an invention patent.

KNOWHUB
Technology Transfer Chile

Photio
Nanotechnology at the service of your health and the environment

Nanotechnology company created in 2019.

## TEAM



**MATÍAS MOYA**
**General Manager**



**JAIME ROVEGNO**
**Operations Manager**

## CONTACT

**Kritsye Leiva**
Technology Transfer Analyst
**kritsye.leiva@knowhub.cl**
**www.knowhub.cl**

**@KnowHubChile**