



**FOTOSAN** is a **water dispersion** of **Nanometric Silver** with antibacterial properties, in combination with **Titanium Dioxide functionalised with photocatalytic properties**. The combination of both substances results in an anti-mould and purifying effect.

**FOTOSAN** is a **state-of-the-art**, perfectly **transparent nanotechnological** solution of Titanium Dioxide and Nanometric Silver.

**It confers the following properties:**

- A reduction of harmful substances (pollutants)
- Anti-dirt
- Anti-bacterial
- Elimination of odours
- Eliminates smog

GREEN

# photocatalysis

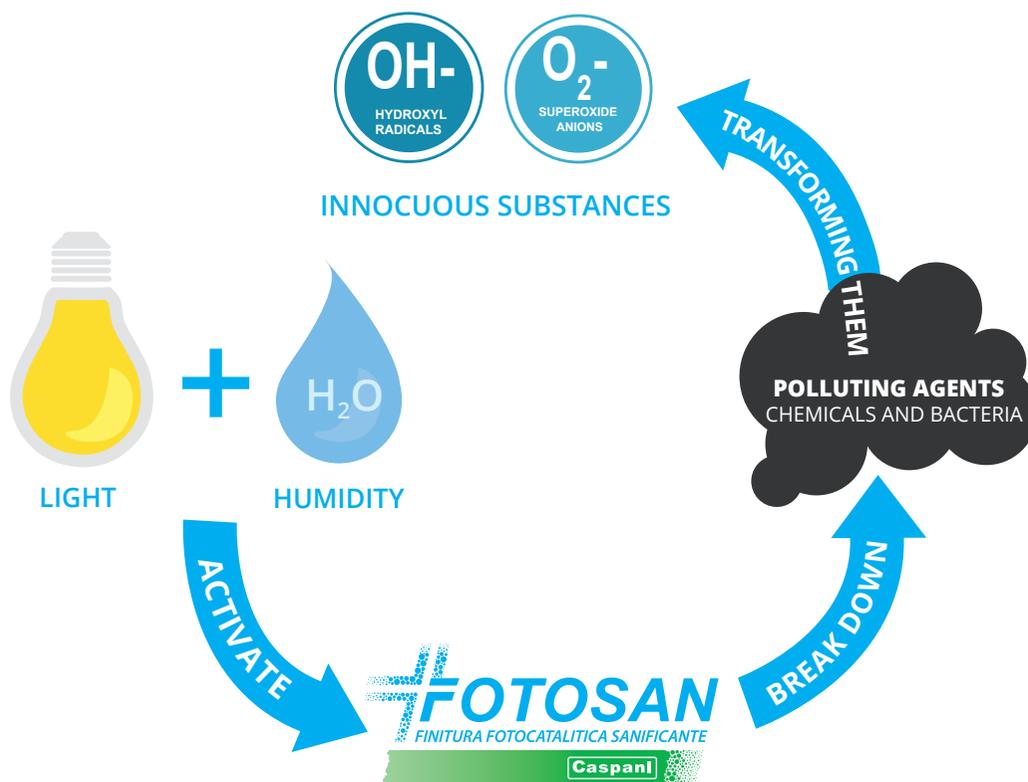
**Photocatalysis** is a **natural phenomenon** involving a substance, referred to as a photocatalyst, which changes the speed of a chemical reaction through the action of light (natural or produced by bulbs).

In the presence of air and light, a strong **oxidising process** is activated, leading to the decomposition of organic and inorganic polluting substances which come into contact with such surfaces. Process functioning **imitates photosynthesis (transforming substances harmful to people into inert substances)**.

Upon coming into contact with any coated surface, two elements - light and air - favour the activation of reaction and consequent decomposition of organic substances, microbes, nitrogen oxides, Polycyclic aromatic hydrocarbons, benzene, sulphur dioxide, carbon monoxide, formaldehyde, methanol, ethanol, ethylbenzene, nitrogen monoxide and dioxide.

Polluting and toxic substances are transformed into:

- Sodium nitrate ( $\text{NaNO}_3$ ),
- Sodium carbonates ( $\text{Na}_2\text{CO}_3$ )
- Calcium carbonate ( $\text{CaCO}_3$ )



How does Photoactive **TiO<sub>2</sub> FOTOSAN** work?

Upon exposure to UVA radiation, anatase titanium dioxide absorbs and converts the UVA part of light energy into electrons and electron holes. TiO<sub>2</sub> reacts with water (humidity in air) to create hydroxyl radicals (expressed as OH) and oxygen, to create superoxide anions (O<sub>2</sub><sup>-</sup>).

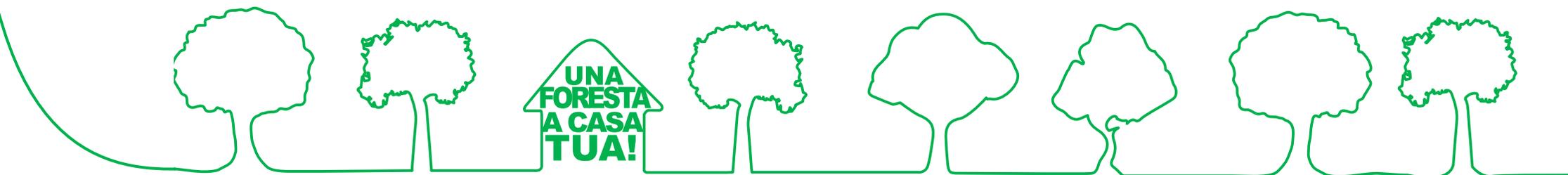
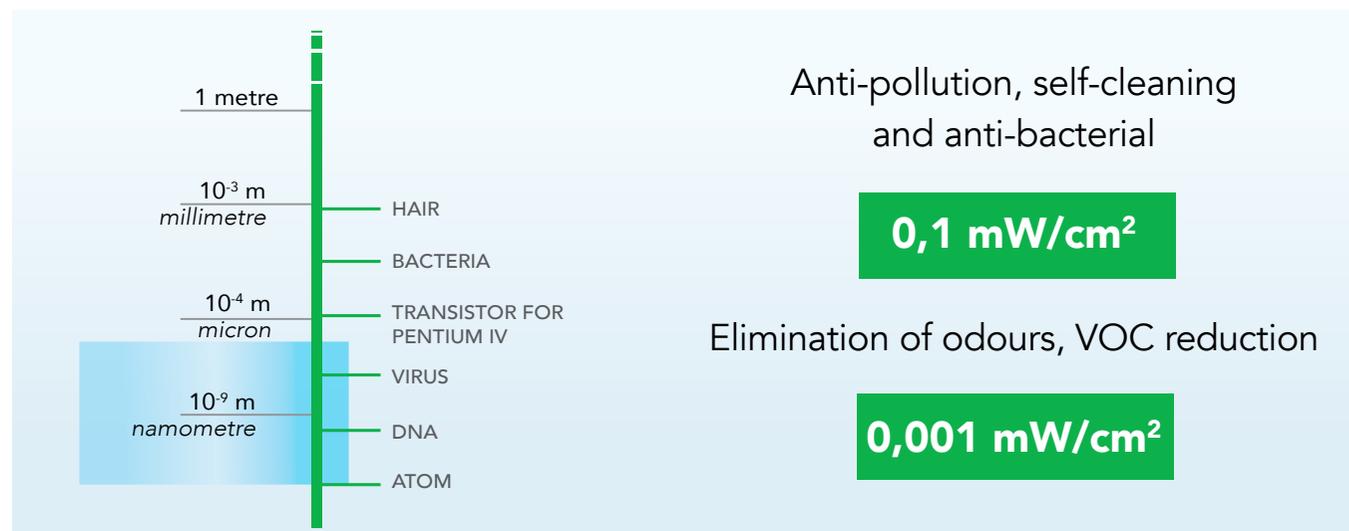
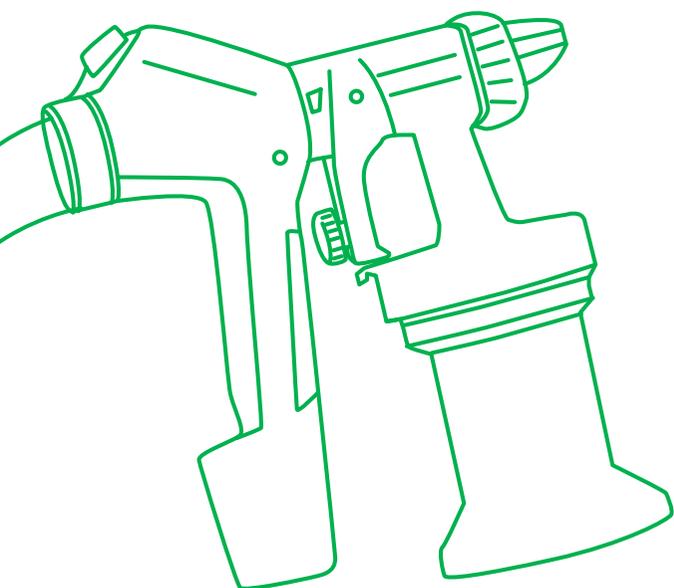
Billions of these highly oxidising substances are created in one billionth of a second, working to break down organic material at a molecular level.

Photocatalysts do not lose their property over time because they only serve to activate the process, they do not bond with polluting agents and remain available for new photocatalysis cycles.

## Nanotechnology in a water based solution of nanometric silver and photocatalyst, state-of-the-art titanium dioxide.

- Stronger – Works with less light
- Maximum adhesion
- Long-lasting

- Safe, easy to apply
- Totally transparent
- Anti-bacterial and anti-microbial





## Real and immediate advantages:

- Anti-pollution
- Self-cleaning
- Antibacterial

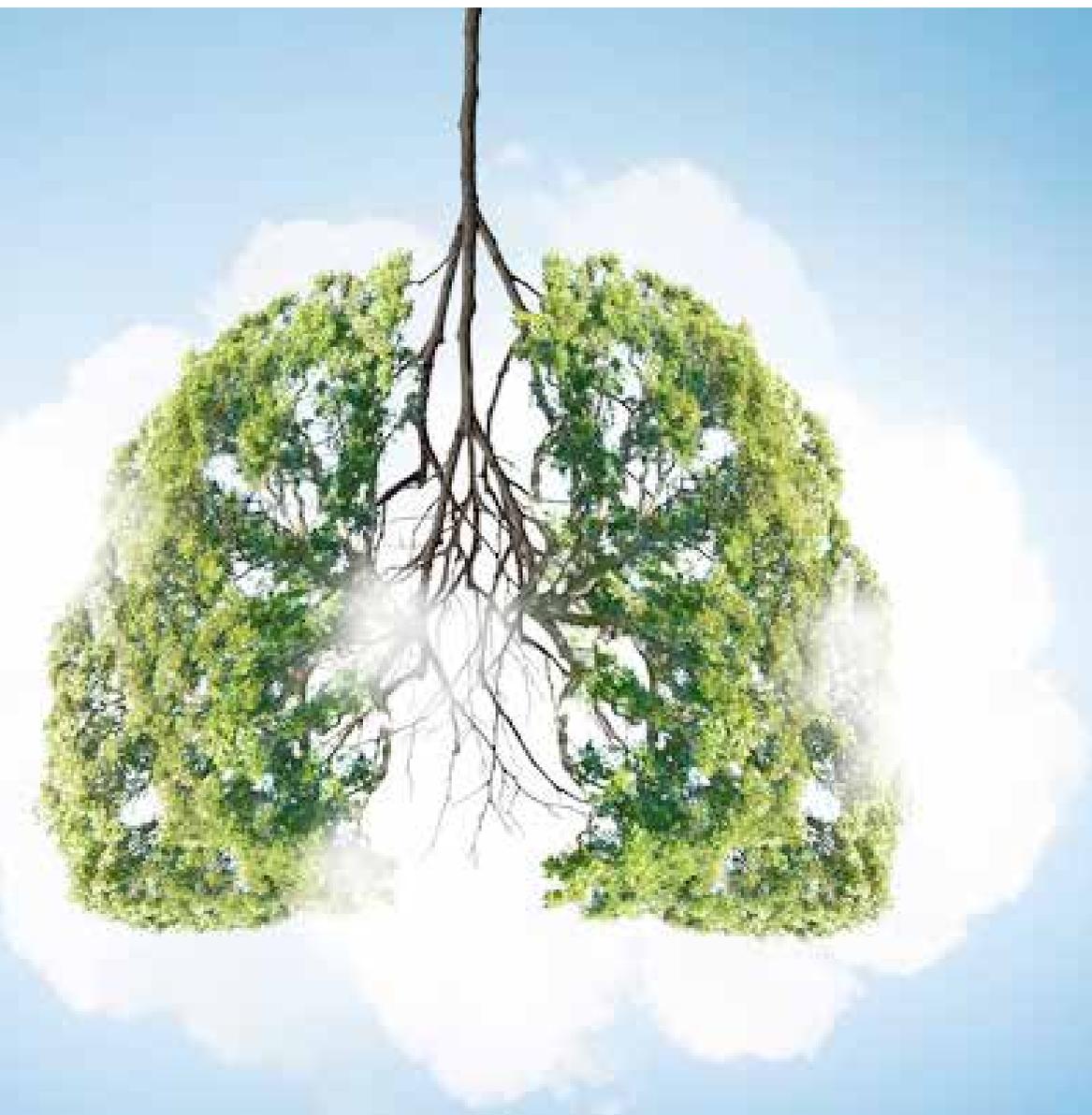
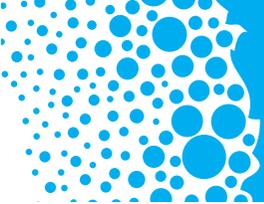
These properties simply derive from **the oxidation of substances** which come **into contact** with a **photocatalytic surface**.

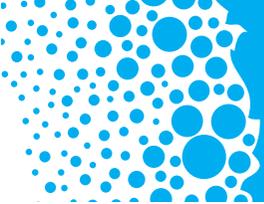
- If said substances are **pollutants** (nitrogen dioxide, sulphur dioxide, carbon monoxide, fine particles) then we speak of **anti-pollution reaction**;
- If said substances are **staining substance** (soot, colourants) we speak of **self-cleaning reaction**;
- If they are **bacteria, moulds, fungi and micro-organisms**, we speak of **antibacterial reaction**.

# benefits of Fotosan

**FOTOSAN** transforms any surface into a **self-cleaning and eco-sustainable** material which pro-actively eliminates the build up of dirt and biofilms, improves air quality and eliminates organic odours. Formulated with the most advanced photocatalytic oxidation technology available today, in an advanced water-based solution, **FOTOSAN** uses light, not chemical products, to benefit the environment.

- Actively reduces smog levels if applied onto outdoor surfaces such as cement and building façades
- Eliminates unpleasant odours
- Formation of a super-hydrophilic surface which enables the easy elimination of dirt.
- Applicable to all surfaces, including: cement, stone, ceramic tiles, painted walls, plastic and metal
- Maximum effectiveness
- Long-lasting





# benefits of Fotosan

## NO<sub>x</sub>

(nitrogen oxides present in atmospheric pollution)

**- 80% in just 2 hours**

10 m<sup>2</sup> = 3 medium-sized trees

1 m<sup>2</sup> purifies 50 m<sup>3</sup> of air per hour



distributed by



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