#### PHOTOCATALYTIC TECHNOLOGY

Acrylic paint for indoor applications





## Problem

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High pollution in high traffic density **road tunnels.** 

Pollution in traffic tunnels is often higher due to poor

air circulation.

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HARMFUL VOLATILE SUBSTANCES, BENZENE, FORMALDEHYDE

Long paint maintenance cycle in high traffic areas such as road tunnels, underground stations and indoor parking spaces



### Solution

In collaboration with the start-up company PCN Materials spin-off the Foundation for Research and Technology – Hellas (FORTH), **Vitex** created an **innovative depolluting and self-cleaning paint** that reduces indoor pollutants.

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An innovative wet paint with additive, **an active modified titania photocatalyst**, for indoor depollution and improved quality of life.

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COVERAGE 12m²/L for one coat



## Mechanism

Based on the unique depollution and self-cleaning properties of the established photocatalysis technology, painted surfaces immidiately transform into **active air cleaning agents.** 

Photocatalytic NO removal rate under visible light of **55,3%** in lab tests and of **61,7%** in demo houses which is equivalent to cleaning 9000 m<sup>3</sup> of air per hour for every 1m<sup>2</sup> of plaster coating.

> Results of the certified laboratory of ENVIRONMENTAL RESEARCH of the "Demokritos" (EN 16980-1-2021)



TRANSFORMATION INTO HARMLESS NITRATE SALTS THROUGH LIGHT

#### With visible light,

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i.e. diffused daylight or safe common indoor-lighting sources including LED lamps without the requirement of UV radiation, it rids the air of common inorganic and organic gaseous pollutants such as **NOx** and **VOCs**, and **harmful substances** such as Formaldehyde, toluene and unpleasant odors.

## Advantages



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#### Self-cleaning paint / Protective coating.

It maintains its whiteness and dramatically reduces the need for maintenance, cleaning and lighting **Energy saving** due to improved indoor visibility

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Activation mechanism with both diffused **day ligh**t and / or **visible night light** 



## >80%

Improving indoor air quality in Urban environments

## Application field

It is particularly recommended for areas where artificial light is available such as **road tunnels**, **underground metro**, **parking spaces and** other spaces such as classrooms, offices, hotel corridors etc.

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## FACT

Environmental footprint: Covering with a photocatalytic paint a surface of 1000 m<sup>2</sup> is equivalent to planting **70** poplar big trees in the same space

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### Painting of the tunnels of **Olympia Odos** with **Vitex FOS**

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Infrastructure Project

> OLYMPIA ODOS

> > >23 tunnels & semi-covered structures with a total surface area of over 125,000 m² on the Corinth-Patras section of the highway







Infrastructure Project



Interior painting at the **"Panormou"** metro station

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Infrastructure Project

> Metaxa Hospitality Group

Interior painting / offices of the **Metaxas Hospitality Group**, Crete

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