

PRECILUM[®]
SPECIAL LED LIGHTING SOLUTIONS

FN[®]
NANO

**FN[®] NANO
COATING**

UV-A HYBRID LIGHT

○ Multi-Functional Nano Coating

- FN[®] NANO is a coating technology designed for maximum effectiveness in converting harmful pollutants and microbes into clean, safe air. This is done by exploiting the natural catalyst properties of Titanium Dioxide (TiO₂) nanocrystals with sunlight.

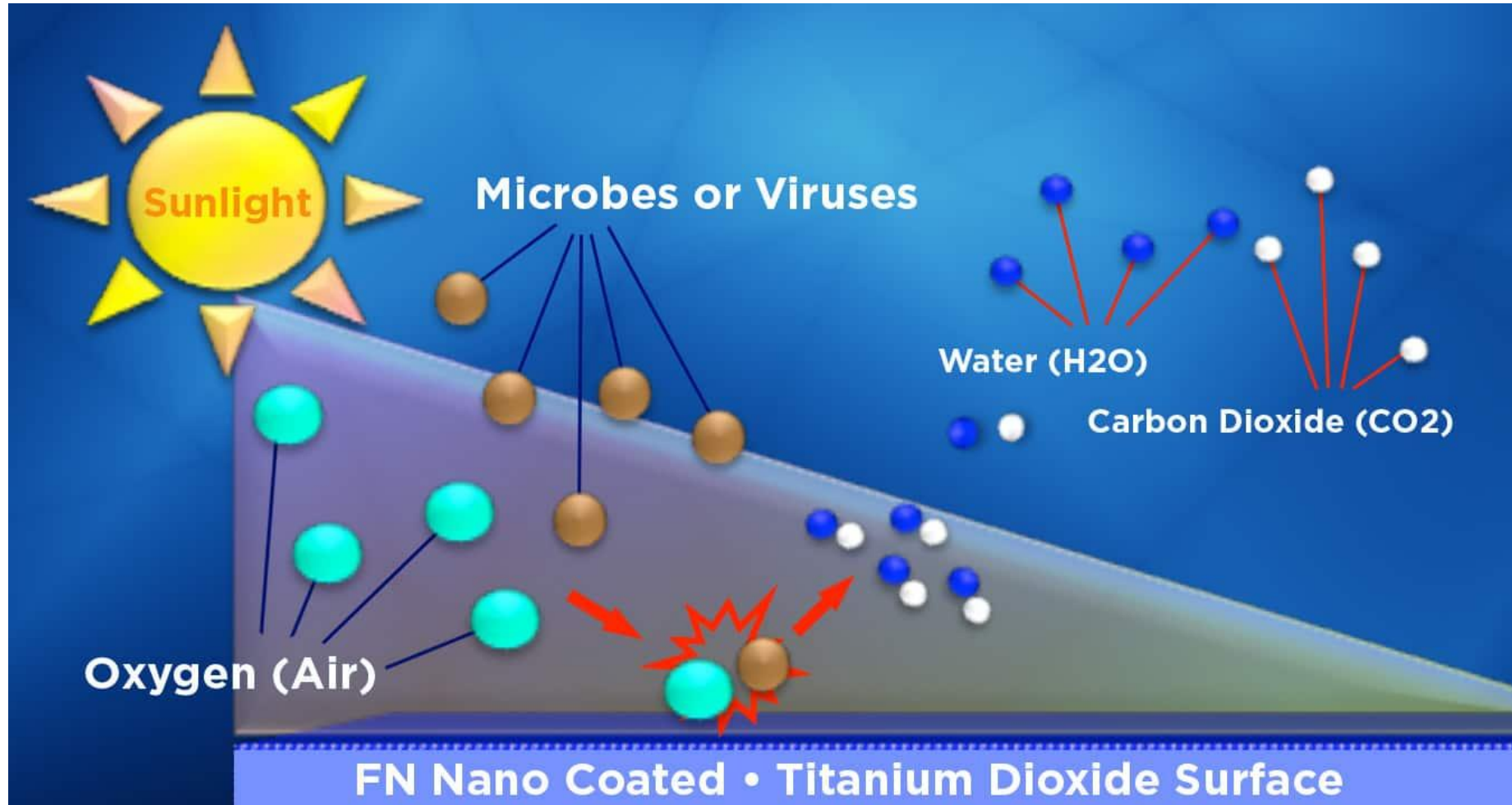


○ How does it work?

- The ultraviolet energy spectrum of normal sunlight is transformed into a photocatalytic effect. The titanium dioxide in our coating absorbs the UV light energy, resulting in free electrons and electron holes on the surface of the photocatalyst. This direct interaction of electrons and electron holes with molecules of the surrounding environment very effectively decomposes a wide range of harmful, organic molecules such as dirt, odors, oil, soot. Additionally it prevents the establishment and growth of microorganisms. (bacteria, viruses, algae, mold, fungi). As a result of this photocatalytic effect, the molecules of virtually all organic molecules are broken down into water (H₂O) and Carbon Dioxide (CO₂).



○ How does it work?



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- The FN[®] coatings are water composites of photoactive titanium dioxide and inorganic binders. The applied coating creates a thin layer of 0.005–0.05 mm. This layer with a high oxidative potential (higher than on chlorine) cleans the air, decomposes organic and inorganic substances and shows self-cleaning properties.

The FN[®] coating transforms a room into a highly effective, low-energy, reliable, and maintenance-free air cleaner.

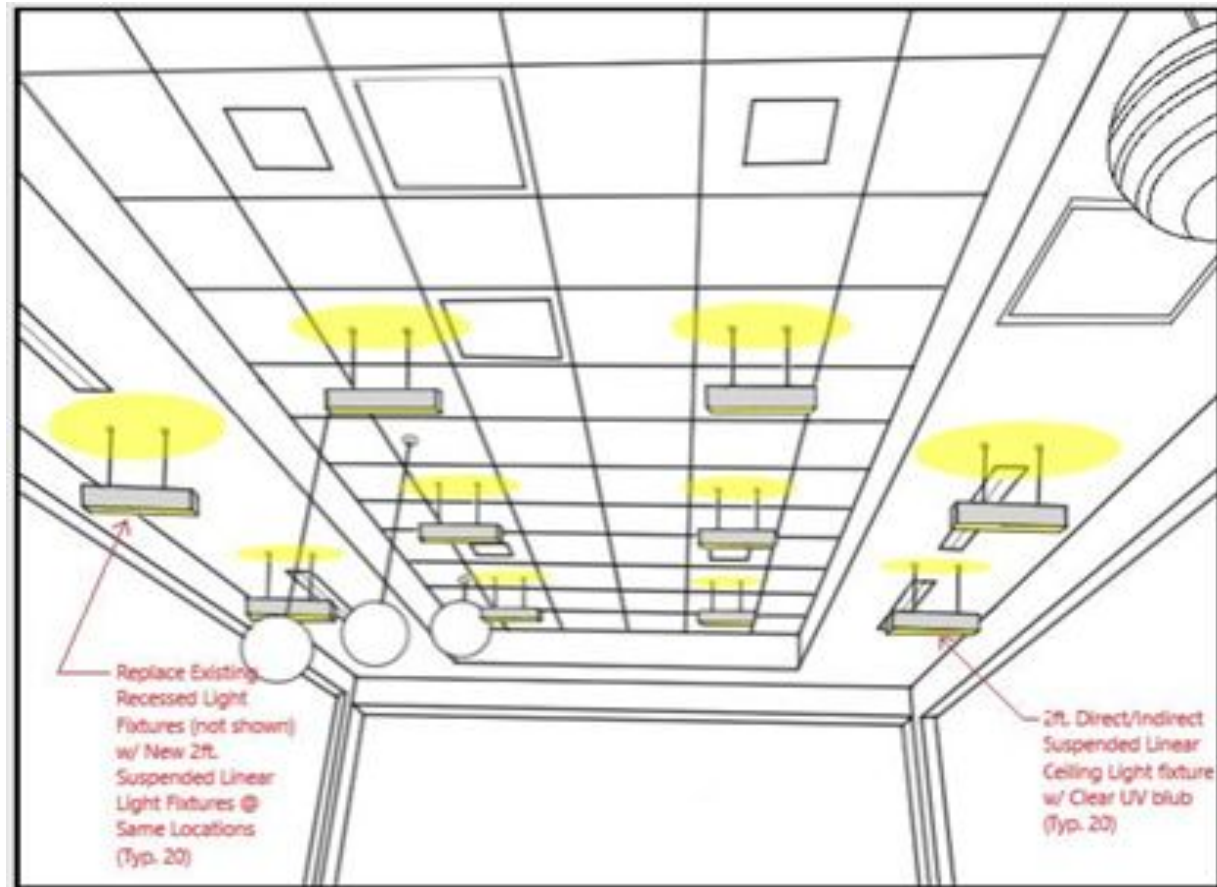
- **The cleaning process is activated by ultraviolet light UV-A**, a natural component of the day light. In dark areas, UV-A light source must be provided.





UV-A light usecase

- The optimal intensity of UVA is $20\mu\text{W}/\text{cm}^2$
- FN NANO coating absorbing 99% of the UV intensity



○ UV-A light use case



PRECILUM
MADE IN CZECH REPUBLIC



○ UV-A light usecase



*clever design never
ages*

