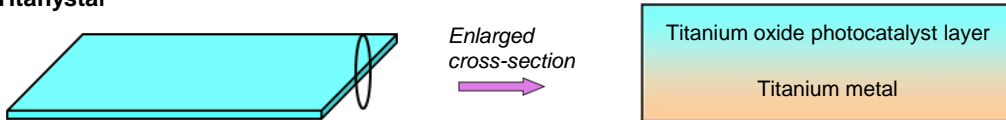


Titanystar®, a titanium oxide photocatalyst

Photocatalyst characterized by high photocatalyst performance and stability that enables permanent use
Patented in Japan and the United States

Features

Titanystar



- We produce photocatalyst film by conducting surface oxidation treatment on pure titanium metal.
- The film is free of impurities and highly activated without interfacial boundaries, and the film generated is extremely durable.
- The base material of pure titanium is available in a variety of shapes such as sheets, wires, tubes and meshes, all of which can be formed into 3-D shapes.
- Our products form a Titanystar series that includes gas-phase reaction and liquid-phase reaction types, being capable of serving a wide variety of environmental cleaning purposes.

Conventional technology (coating type)



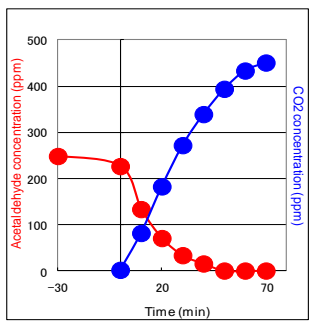
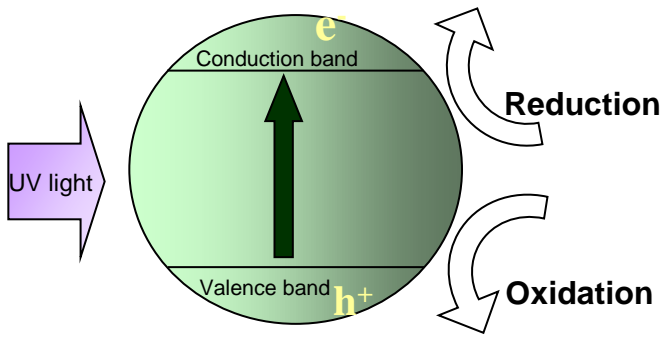
- Titanium oxide comes off or is buried, with the performance not exhibited.
- The binder film is fragile and lacks durability.

Photocatalyst of a coating type is not suitable for water treatment, being used in a limited range of applications.

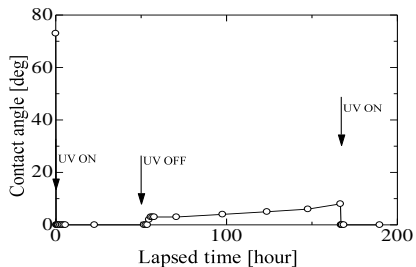
Overview (Technical principle, operation, etc.)

○ What is titanium oxide photocatalyst?

When the surface of titanium oxide photocatalyst is exposed to light (UV light), reactive oxygen species are generated on the surface and then oxidize and decompose harmful substances in contact with the species. The oxidizing potential then is stronger than that of ozone, chlorine or hydrogen peroxide, making most substances harmless. These excellent features enable titanium oxide photocatalyst to be used in a wide range of environmental cleaning applications such as antimicrobial applications and air and water purification. There are two basic functions: oxidative decomposition and super hydrophilicity.



Performance of oxidative decomposition by Titanystar



Super hydrophilicity performance of Titanystar

Track record of use

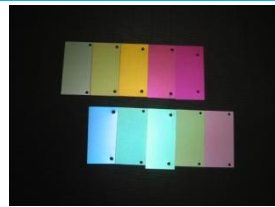
Titanystar series

Titanystar MI-O/ Decorativeness-oriented type
Monuments, signboards, accessories, etc.

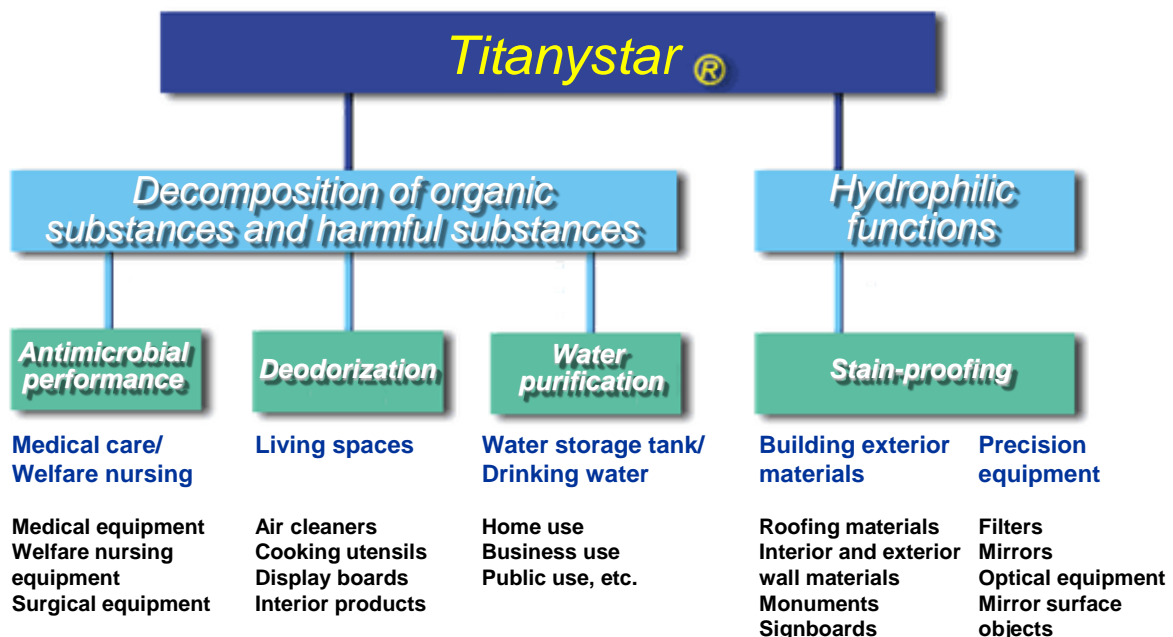
* Decorative color producing mechanism
A mechanism based on the interference that produces different colors due to the difference in film thickness despite the transparency of the film; through this mechanism, chromatic colors of bubbles other than white, black and crimson can be produced.

Titanystar MI-W/ Gas-phase-reaction type
Odor-neutralizing units, air cleaners, etc.

Titanystar MO-C/ Liquid-phase-reaction type
Water purification units, functional water sanitary storage units, etc.



Effects



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