



# NanoZone Solution

—— CLEANING & SANITISING SYSTEM ——



## CLEAR & CLEAN |

Take a deep breath and sit on the floor and play with your children and pets. *NanoZone solution* makes everyday life safer and more comfortable.

We provide our customers with the utmost *photo-catalysts coating* application, technique, partnership opportunities, and above all, our environmental harmonious technology.





Office



Shop



School



Const-  
ruction  
site



Medical  
facility



Public  
transport

## AGAINST BACTERIA & VIRUS |

*Super Nano Titanium Dioxide* and *photo-catalysis technology* can be expected to have excellent effects in various scenes. It keeps the effects for a long period of time and totally harmless to the human body.



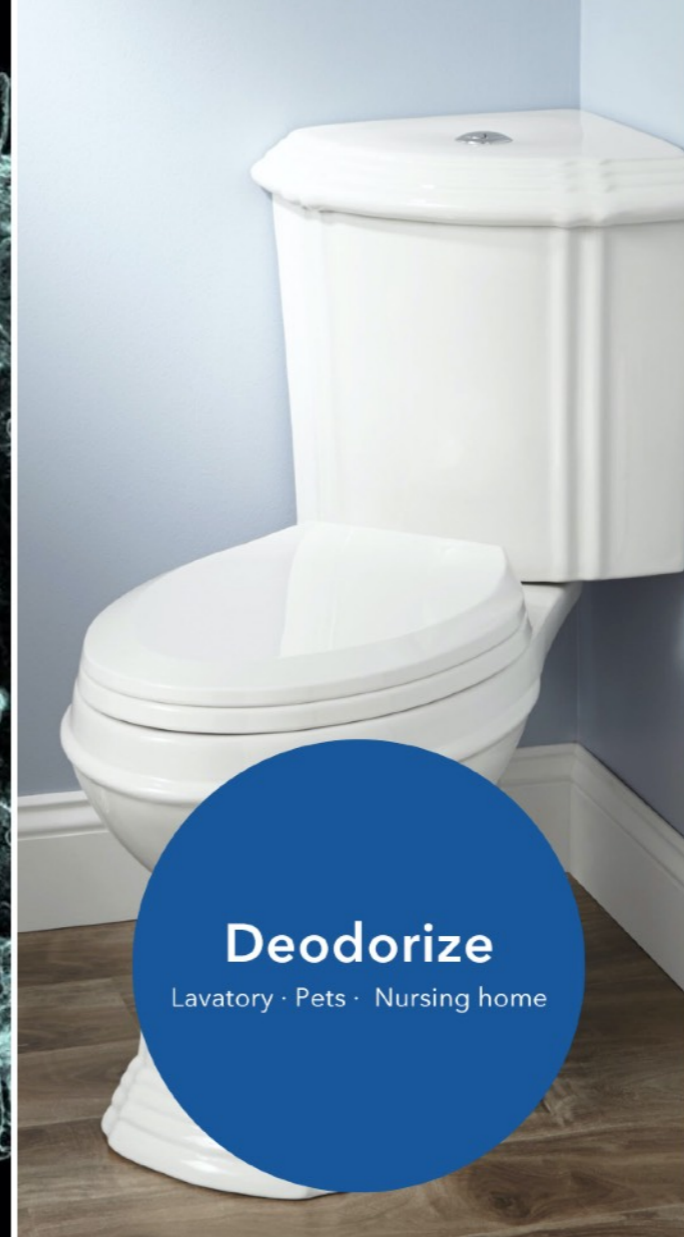
## Decomposition

Pollen · PM 2.5 · Formaldehyde



## Antibacterial

Norovirus · Influenza



## Deodorize

Lavatory · Pets · Nursing home



## Antifouling

Exterior wall · Aquarium

## APPLICATION FIELDS |



Photo-catalysis coating in its super-small state, exhibits unusual properties that carry powerful photocatalytic effects.



Operation



Before the operation

**22.268 ATP**



An Hour after

**8.145 ATP**



10 days after

**548 ATP**

## EFFECTIVITY |

The ATP test is a process of rapidly measuring actively growing microorganisms through detection of adenosine triphosphate, or ATP.

Generally, the surgery room is required under 200 ATP.



## **CASES 1** | Temple in Thailand

1 year after the operation



Before operation



4 months after



1 year and 8 months after

## CASES 2 | Load map in UK

1 year and 8 months after the operation



Before operation



After operation



About 7 years after

## **CASES 3** | Garden brock in Japan

Around 7 years after the operation



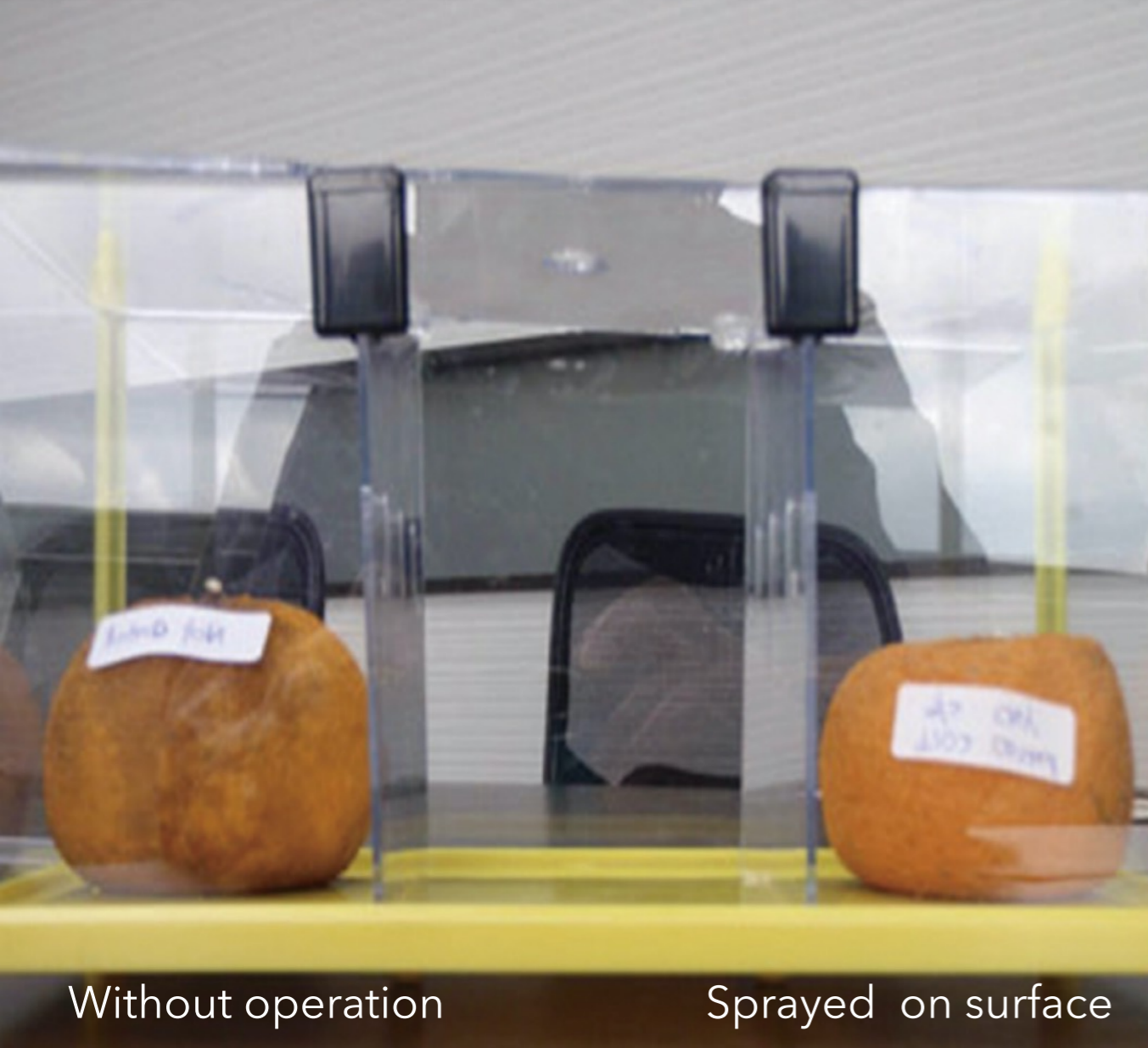
Right after operation



1 years after

## CASES 4 | Poultry in Singapore

1 year after the operation



## CASES 5 | Anti-decomposition test (Ethylene gas decomposition)

3 weeks after the operation



Aluminum



Plastic

## **CASES 6** | Outer wall of an exhibition hall in Bangkok Thailand

Right after the operation

## NANOZONE SOLUTION | Offers

- ☒ No pretreatment or primer installation is required.
- ☒ It effects immediately after operation
- ☒ It does not change the texture or color of the construction surface.
- ☒ Prevents infection by contact
- ☒ Improves indoor air cleanliness.

# NANOZONE SOLUTION | Innovation

## Ultra-fine particles

The size of titanium oxide is the world's smallest ultra-fine particles of 2-3 nm. Which has no physical weight and is therefore no longer affected by gravity. In such a 2 nanometer-sized world, the properties of matter do not depend on Newtonian laws, It depends on the quantum mechanical law.

## Invention

We have solved the contradiction of a major issue for titanium oxide photocatalyst products which has been investigated over the last half century. Our solution is that avoid to use binder (adhesive) which covers the active surface of titanium oxide. This increases dynamically the efficiency of the photocatalytic effect and it's theoretically achieved.

## Harmless

Ultra-fine particle titanium oxide in aqueous solution is nontoxic and safe.

## High potential energy

Ultra-fine particles move at high speed in water, since it has a great opportunity to absorb light energy. It diverts extremely high photocatalytic activity. (A wide range of light energy from 200 to 500 nm)

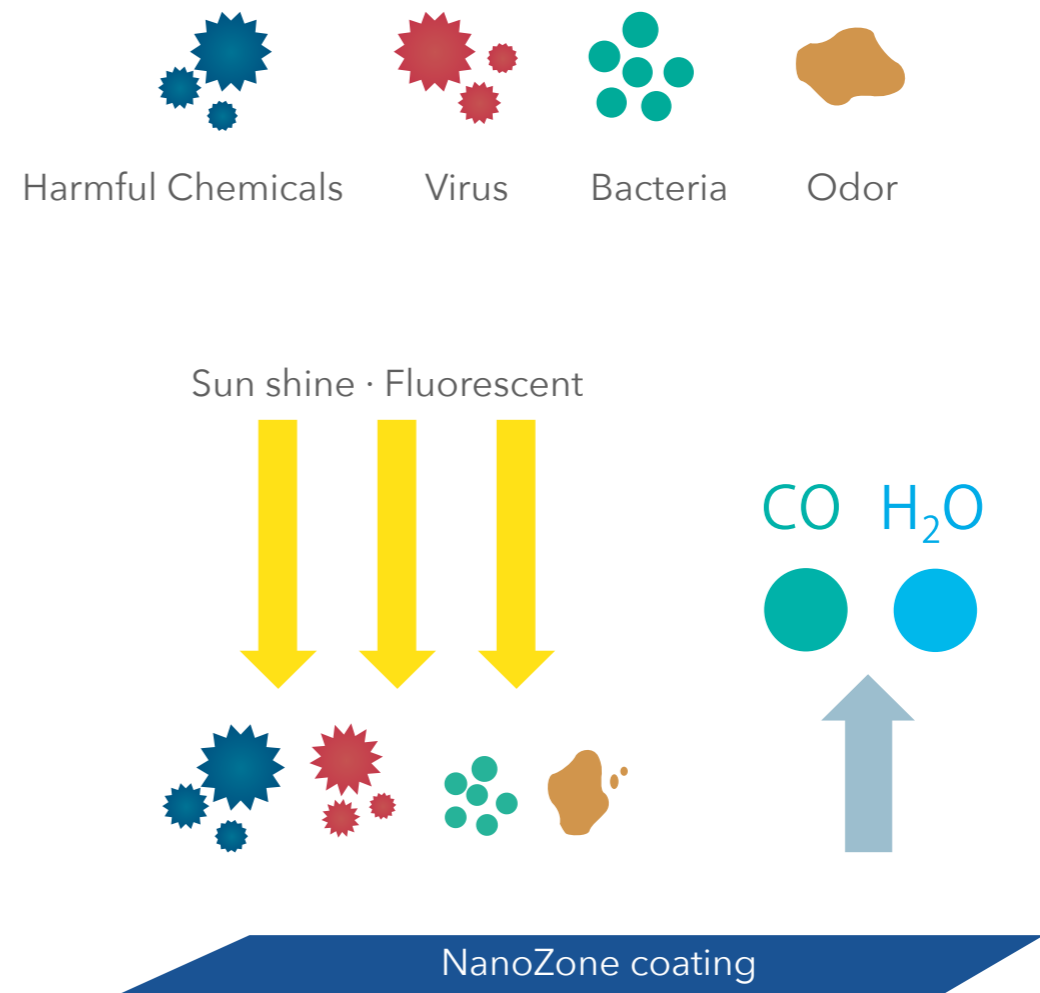
Ultrafine particle titanium oxide in an aqueous solution adheres and bonds to the surface of any substance by the quantum physical force of the particle itself due to the intermolecular force. After construction, if the water evaporates, the titanium oxide particles themselves will bond strongly to all surfaces for a long time.

# NANOZONE SOLUTION | Photocatalysis technology

## World-class environmental technology

Titanium oxide in NanoZone Solution absorbs light from sunlight, fluorescent lamps, LEDs, etc. and exerts a strong photocatalytic action. Light energy is converted in ultra-fine particles of titanium oxide, and that energy generates superoxide ( $O^-$ ) on the surface of  $O_2$  particles in the air, and in water, it generates hydroxy radicals ( $OH^-$ ).

Microorganisms such as mold and bacteria, and viruses are oxidized on the surface of titanium oxide particles and are killed or decomposed and reduced. VOCs (volatile organic compounds) such as formaldehyde, benzene, toluene and methane are oxidatively decomposed on the surface of titanium oxide particles to produce harmless  $CO_2$  and  $H_2O$ .



# NANOZONE SOLUTION | Compared to other competitive products

## We solved the deficiency of conventional titanium oxide product.

Conventional titanium oxide has a large particle size and the coating is unable to stay on the surface by itself. It needs an adhesive to stay on the surface but the adhesive inhibits to exert its intended effect. Another disadvantage of the conventional titanium oxide has small surface area of the particle, it means that needs strong sunlight to exert its effect.

Our product: *NanoZone solution* is consists of the world smallest nano particle (2 nano) and does not need adhesive to stick on the surface. The all titanium oxide particles are actively provide an exerting optimum performance, and the particles stick each other and stay on the surface with intermolecular force.



- Adhesive
- Active particles
- Inactive particles
- Ground



- Active particles
- Ground

# NANOZONE SOLUTION | Reference movies



0:30

Hospital



0:59

Hair salon



0:23

Food industry



3:22

Office



0:19

Ambulance



2:26

Hotel



0:34

Police car

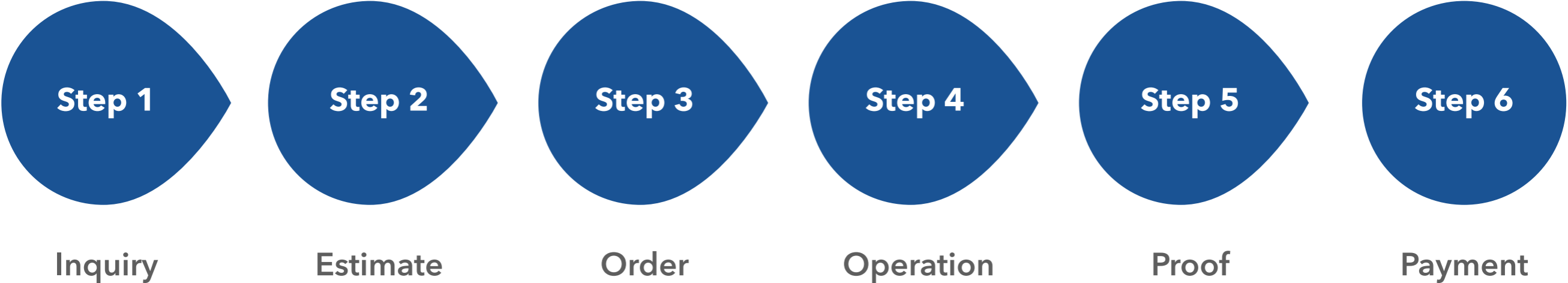


2:13

Visible test



NANOZONE SOLUTION | Flow



一般社団法人



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THANK YOU FOR YOUR ENQUIRY!