



Window
Insulation

**PATENT
PENDING**

Solar Panel Enhancer (SpE) Photocatalyst

"The UK's sudden energy resource squeeze is seeing price increases on gas and electricity, and is creating a solar panel boom, too... up to a 1000% surge in orders in the past weeks for solar modules, as energy prices have reportedly trebled since 2001, with the average cost of domestic gas rising by 221%, compared to 193% for electricity, according to one market report." PV Magazine; 12th October 2021

Unique Market Solution Features to enhance solar panel efficiency

- Three versions:
 - Methanol binder.
 - Water based – Safe for global shipping, non-hazardous for confined space.
 - Water-based special.
- For Glass and Mirrors – enhancing clarity.
- Super Hydrophobic – creating non-stick, self-cleaning effect.
- Resistant to high temperatures with outstanding weather resistance.
- Removal of reflection – glass clarity while enhancing light passage during daylight hours.

*Anti-reflective properties enable over 90% of all available light to reach the PV semiconductor.



Water-based Special

- Anti-static – advanced non-stick characteristics.
- Changes the glass from insulating into conductive (Ohms) – removes the insulative energy loss through glass, enhancing energy passage.



SiO₂ (silicon dioxide) ⇒ super-hydrophilic effect

Silica makes the base material, and the functional materials adhere to each other. Using various types of silica, with different grain diameters and functional nanomaterials (between 5 and 15nm) unevenly aligned, provides a stronger hydrophilic effect is achieved according to the fractal theory.

SnO₂ (tin oxide) ⇒ anti-static effect

The coating uses SnO₂ as the anti-static material which prevents the build-up of sand and carbon. It minimises the adhesion and makes it easy to remove the contamination.

Pt (Platinum) ⇒ improves adhesion

grips the components to the glass, hardens the coating anti-static platinum is also used for its low reflecting characteristics.

TiO₂ (titanium oxide)

The photocatalyst properties of TiO₂ decomposes organic contamination, TiO₂ does not reduce the transmittance of light on the solar panel.

UA (silver oxide) ⇒ antibacterial effect

The inorganic coating is only a few Nm thick, and due to its hydrophilic characteristics, readily repels water and water-borne contamination. Rather than wetting the surface, water droplets form beads on the coating and roll-off at low angles. Solid contamination, such as dust and sand, is easily removed by wind or using minimal amounts of water.

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