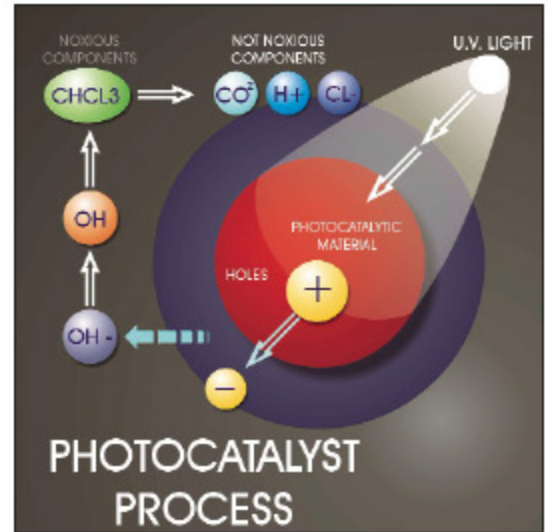


## Photocatalyst process

When a photocatalyst titanium dioxide ( $\text{TiO}_2$ ) captures ultraviolet light (UV), it forms activated oxygen from water or oxygen in the air. This process is similar to photosynthesis, in which chlorophyll captures sunlight to turn water and carbon dioxide into oxygen and glucose. The formed activated oxygen is strong enough to oxidize and decompose organic materials or smelling gas, and kill bacteria.



Recently, photocatalyst coating technology has made it possible for building materials to have advanced functions, that is, sterilizing, deodorizing, and anti-fouling properties. When the surface of photocatalytic film is exposed to light, the contact angle of the photocatalyst surface with water is reduced gradually.



After enough exposure to light, the surface reaches super-hydrophilicity. In other words, it does not repel water at all, so the water cannot exist in the shape of a drop, but spreads flatly on the surface of photocatalyst. The photo-catalytic super-hydrophilicity is important technology, because it has wider applications, including self-cleaning properties.

