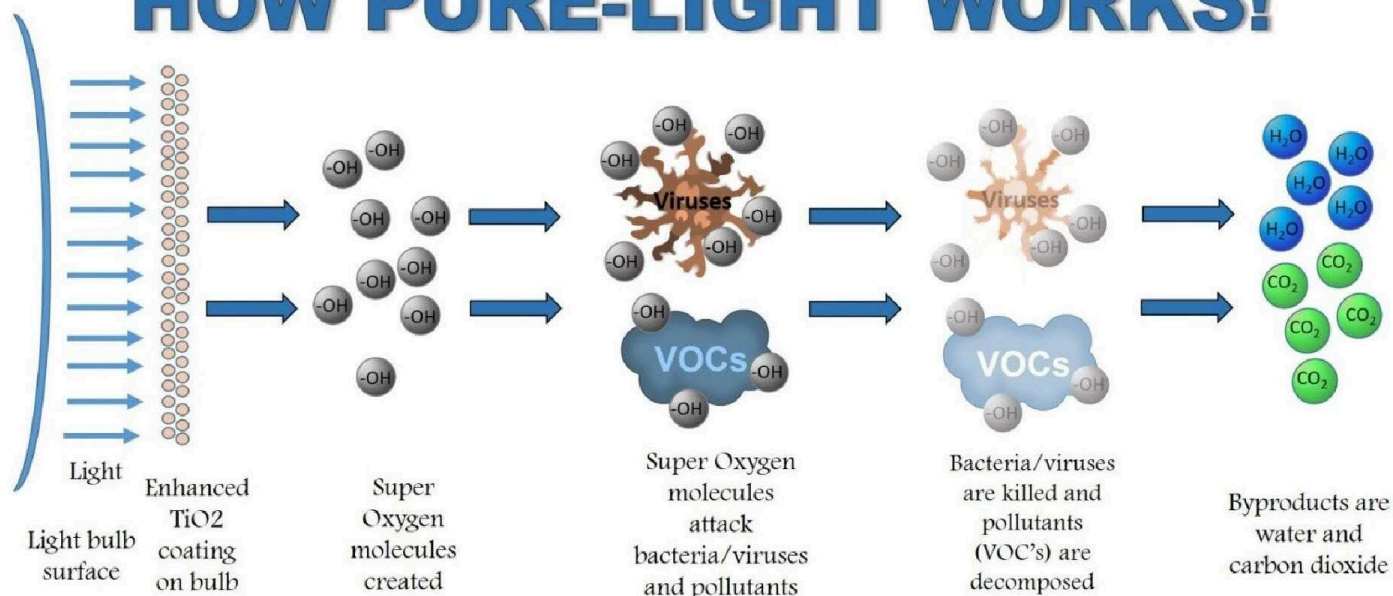


HOW PURE-LIGHT WORKS!



The Science

Nature uses a process called **Titanium Dioxide Photocatalysis** where sunlight causes Titanium Dioxide to produce excited electrons that then almost immediately combine with water molecules into super oxygen molecules that clean the air of deadly pathogens and toxic pollutions. This natural process is what keeps the earth's atmosphere from being overpowered by disease and pollution. NASA is currently using a version of this technology to purify and clean the air on the International Space Station.

PURE-LIGHT TECHNOLOGIES®, has taken the Nature/ NASA technology, improved it, made it last longer, and has adapted it to specially prepared light bulbs that can be used indoors or outdoors. We call it PURE-LIGHT SUPER OXYGEN TECHNOLOGY®.

Specifically, PURE-LIGHT TECHNOLOGIES®, using a new patent-pending process that PLT developed, coats a light bulb with an ultra-thin, transparent coating of a new proprietary enhanced Titanium Dioxide formula (ZZ-TiO_2) that reacts with light to produce super oxygen molecules that work against viruses, bacteria, mold and breaks down toxic VOCs (Volatile Organic Compounds). Titanium Dioxide (TiO_2) is one of the more common elements in the world and is rated as inert and non-toxic (MSDS rating). Because it is non-toxic, TiO_2 is used in a large variety of items including vitamins, cosmetics, food coloring, paint, and sunscreens.

As air comes near the PURE-LIGHT coated light bulbs (approximately 8ft—12 ft) it gets cleansed of these bacteria, viruses, mold, and pollutants. The air also gets deodorized as well since almost all odors are an organic compound. There is also a secondary PURE-LIGHT effect on the surfaces of items near the light bulb, such as kitchen/bathroom counters, dishes, stoves, cutting boards, doorknobs, etc.

The two special super oxygen molecules Pure-Light bulbs produce are called SUPEROXIDE (O_2^-) and HYDROXYL ION (OH^-). These two super oxygen molecules provide a triple "action"... two actions against viruses and bacteria, and another "action" against VOCs.

SUPEROXIDE (O_2^-), or **SUPER OXYGEN**, is actually produced in the human body in large quantities by white blood cells and is used by the immune system to kill invading microorganisms. Superoxide (O_2^-) inside the body, or in the air, combines with a microorganism giving it essentially a boost of oxygen. Good cells thrive with the extra oxygen while viruses and bacteria are killed by the extra oxygen. Superoxides are also used in firefighters' oxygen tanks and divers rebreather systems in order to provide a readily available source of oxygen.

The HYDROXYL ION (OH^-) is often referred to as the "detergent" of the atmosphere because it reacts with many pollutants called VOCs (Volatile Organic Compounds), often acting as the first step to their removal. It is much more effective at this action than ozone. Hydroxyl radicals also attack the porous cell walls of bacteria and viruses, which destroy them through the process known as cell lysing. Human, animal, and plant cells are designed to be in the sunlight and have cell walls that are less porous and are not harmed by atmospheric hydroxyl radicals.

For more details and studies on the technology behind the PURE-LIGHT SUPER OXYGEN LIGHT TECHNOLOGY see the [Science/Studies](#) of this website. Additionally, there are ongoing field studies that are currently being conducted in a number of areas under independent testing groups.

For More Information

[Independent Research Studies](#)

[Pure-Light Technologies FAQ](#)