



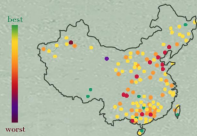
Puriflower

Table lamp air purifier

Product purpose: It can save indoor space. The product detects harmful air through sensors, and if harmful gases are detected, the lights will change color to remind users to purify the air. Users only need to press the product to sprinkle TiO_2 , which is then photocatalytic to purify the air.

BACKGROUND

The use of energy is irrational, with coal combustion reaching 75 per cent. Rapid industrial development, but relative technological backwardness.



Air Pollution in China: Real-time Air Quality Index Map

Air pollution has become one of the top problems, seriously endangering human health.



SURVY

From the survey, we found that most of participants are not aware of the common harmful substances in the air in their homes. However, they are not satisfied with the indoor air quality.



When faced with air problems in homes, more than half of the participate choose to use air purifier.en while 50 per cent of people choose to keep plants.

INTERVIEW

Song Yang / Age: 24



I usually do not use an air purifier because it is large and takes up a lot of space, so I will take it to the storage room. I will take out the air purifier on foggy days, but I will find it very troublesome.

Yunyang Liang / Age: 25

My father often smokes at home, but I really hate smelling smoke, so my house often has an air purifier on. The air purifier has been used for a long time and I need to replace the filter screen, which is very troublesome for me.



NANO TITANIUM DIOXIDE

Nano TiO_2 is the best catalyst for photocatalytic reactions, utilizing photocatalysis to degrade organic harmful substances in the air. It is non-toxic, has high catalytic activity, strong oxidation ability, and stable. Research has shown that the photocatalytic properties of nano TiO_2 photocatalyst materials are broad-spectrum and have the ability to treat almost all pollutants. They can effectively decompose low concentration organic pollutants in indoor air at room temperature, oxidize and remove NO_x , H_2S , volatile organic compounds (VOCs), and various odors in the air, and also eliminate bacteria and viruses in the air. And it can be applied indoors.



When light energy hits TiO_2 , it starts a chemical process that turns nearby oxygen and water vapor into two powerful cleaning agents (OH^{\cdot} and $\text{O}_2^{\cdot-}$)

CONCEPT



The leaves are neatly arranged and the flowers colour are often orange-red.

Clivia is the first of the five classic symbols of traditional Chinese culture.

Noble, gentle and courteous.

The flower not only purify the air, but also absorb the grey.

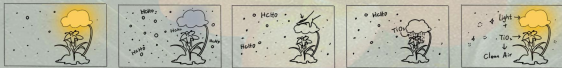
CONCEPT DEVELOPMENT



Users can press a button at the bottom of the cloud to turn on the light.

If harmful gases are detected, the light will change color to remind users to purify the air. Users only need to press the top of the cloud to sprinkle nano titanium dioxide, which is then purified through photocatalysis.

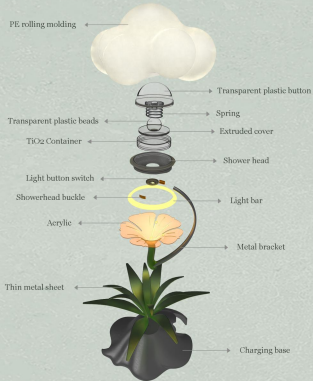
USING PROCESS



RENDERING



EXPLODED VIEW



DETAILS



USB type c charging

5200mAh lithium battery, One charge can last for a week, and the usage time is calculated based on 1-2 hours per day.



Solid state formaldehyde sensor

Using electrochemical batteries to monitor formaldehyde molecules can accurately detect formaldehyde concentration to 0.001mg/m³, as well as the types of harmful gases and particles that can be detected.



TiO₂ Container and Shower head

TiO₂ flows out of a millimeter gap at the bottom of the container by squeezing the lid, and then the liquid is sprayed out through a showerhead. The container and showerhead are screwed together in the cloud of the product, isolated from external air, and the pressure is low. Even if there is a gap at the bottom of the container, it will not flow out.



RENDERING

