



Project Description

Air is the source of life, air pollution has become increasingly serious in China with haze occurring every year and cause long-term health impact among people. People, particularly vulnerable group such as babies, pregnant women, patients and the old are vulnerable to air pollution, and may develop diseases such as asthma, pharyngitis or conjunctivitis over time.

It is urgent and of great significance to improve air quality and bring fresh air back to every one, providing people with an environment which mimics that of nature.

This project solves the problem by designing an innovative air purifier-- *Window Purifier*. It involves background, research methods, concept development, prototype making and app interface design. Window is to room what lung is to body, it stops polluted air from entering the room and leaves people with a purified environment to work, study, entertain and live a healthy life.

Concept Description

Various concepts are developed at the first stage, with one embedded in the window, one combining the technology of bladeless fan, one portable, and one cleaning robot. Finally, I focused on the window one.

There were four versions of window purifier initially, which are traditional Chinese window, honeycomb window, and other two windows inspired by logos.

The honeycomb one is the final concept. It is powered by solar energy. The hexagonal patterns are solar panel and filters are in the frame from which air goes through. A few pieces of hexagons are made of transparent solar panel so that sun light can go through. Six small pieces of rotatable plates can be opened up at a certain angle in order not only to get more sunlight to charge the solar panel but also to cool down the room. A UV lamp is embedded in the frame for sterilization. The window can be controlled by an app so people can control it at any time and any where.

