

The device removes 99,999% of bacteria in dirty water in just 20 minutes

This device can remove 99,999% of bacteria in the water within 20 minutes; the water collected is clean water. Part of bacteria, viruses in the water are completely removed and other toxic chemicals.

Currently around 663 million people in the world do not have access to clean water. In the future, this will be the nightmare of mankind. Therefore, finding a way to filter dirty water into clean water with cheap cost is a top priority for scientists.



About 663 million people around the world do not have access to clean water

We are using **solar sterilizers** , based on ultraviolet light - only 4% of all solar energy. But their microbial processing speed is very slow - up to 48 hours, limiting the amount of water that can be removed.

To solve this problem, researchers at the High Energy Physics Laboratory and Stanford University in California have developed new materials that can harvest sunlight better and increase the rate of energy filtration by energy. Sun. Bring great hope of a large number of people around the world when faced with **water pollution** .



This device is made from **Molybdenum disulfide** - an inorganic compound made up of molybdenum and sulfur elements.

Dr. Chong Liu, lead author of the study, said: " *Our device looks like a small, black rectangular film. We just need to put this device in the water and put it under the sun. At this time, the Sun will do all the rest.* "

This device is only half as thick as a postage stamp, has a thin line of straight lines and is called " **nanoflakes** " .

Molybdenum disulfide is often used as an **industrial lubricant** , but its properties vary depending on how many layers are inside the material. In this case, each film is only a few layers thick - enough to become a catalyst - speed up the reaction when exposed to light.

In addition, the researchers added a thin layer of copper to the film - playing a role to speed up the reaction.



The results were quite satisfactory when it was possible to remove 99,999% of bacteria in the water within 20 minutes; the water collected is clean water. **Part of bacteria, viruses in the water are completely removed and other toxic chemicals.**

However, according to Dr. Liu, although the equipment has not removed all 100% impurities, but this result is also worth hoping for solving the water pollution problem. Thereby, many people have access to clean water.

The study was published in Nature Nanotechnology.

You finished reading the article "**The device removes 99,999% of bacteria in dirty water in just 20 minutes**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.