STATE OF THE ART

Kayla Pantone
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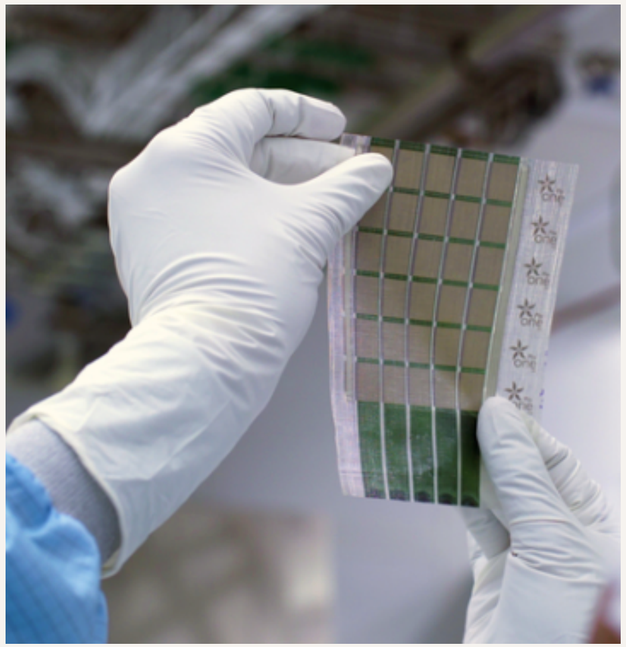
PAPER THIN SOLAR PANELS

Researchers have developed a scalable fabrication technique that produces ultra-thin and lightweight solar panels that can be seamlessly added to any surface.

MIT engineers have developed ultralight fabric solar cells that can quickly and easily turn any surface into a power source. These durable, flexible solar cells, which are much thinner than a human hair, are glued to a strong, lightweight fabric, making them easy to install onto a surface. They provide energy on the go as a wearable power fabric or they can be transported to remote locations for assistance in an emergency situation. They are 100th of the weight of conventional solar panels, they generate 18 times more power-per-kilogram, and are made from semiconducting inks using printing processes that can be scaled in the future to large-area manufacturing.

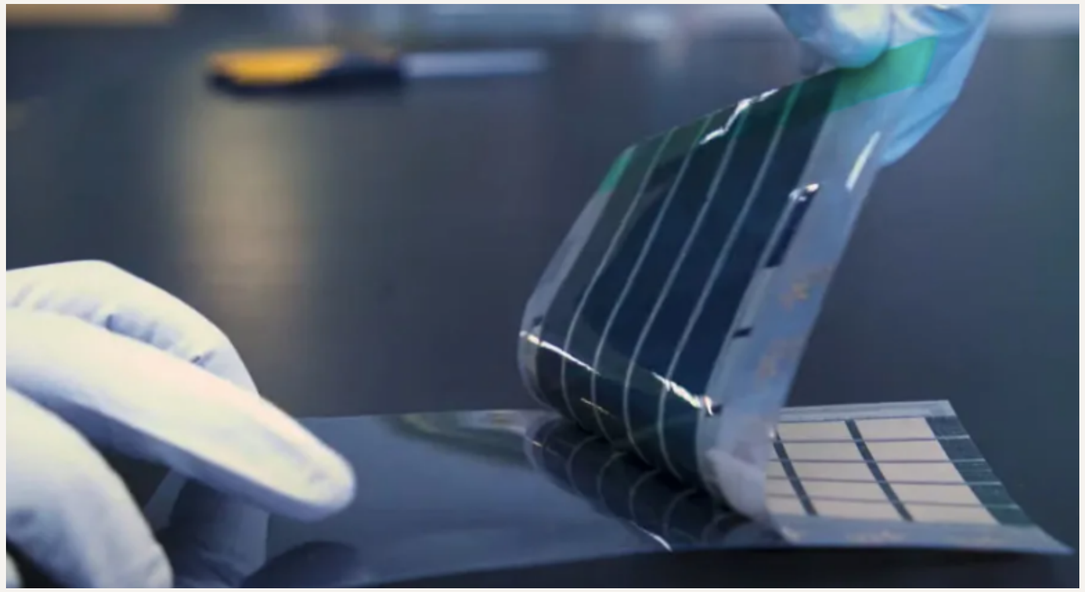
Because they are so thin and lightweight, these solar cells can be laminated onto many different surfaces. (Zewe, 2022)



https://youtu.be/TS9ADU0oc50

QUESTION

What surfaces/areas do you think would benefit from having this product?



THE GROASIS WATERBOX

The Groasis Waterboxx was created by Dutch flower exporter Pieter Hoff. The Groasis is a planting device that makes growing crops in the desert possible and resource-efficient. It consists of an “intelligent bucket” made from recycled paper, which can germinate seeds, incubate saplings, and water plants. It requires 90% less water than traditional growing methods and can be used in some of the most extreme climates on Earth.

It is an instrument that supports plants and trees in order to survive in difficult circumstances without using any groundwater or electricity. The instrument collects water by catching rainwater and producing and catching water from condensation. It subsequently distributes over a long(er) period the collected water to the tree placed in the centre of the waterboxx.

https://youtu.be/yHbwy2g5_1Q

QUESTION

Are there any locations you can think of that would benefit from this product being implemented into the environment?

REFERENCES

Zewe, A. (2022, December 9). Paper-thin solar cell can turn any surface into a power source. MIT News | Massachusetts Institute of Technology. https://news.mit.edu/2022/ultrathin-solar-cells-1209

Groasis Waterboxx: anti- desertification technology to plant trees in dry areas! (n.d.). Www.groasis.com. https://www.groasis.com/en