

SOLAR PROGRESS VOL 2



Scientists make breakthrough while investigating potential of solar panels: 'We figured some other ways to capture more solar energy'

Making solar panels that are less burdensome to install could increase their adoption worldwide. May 1, 2024

Scientists have been hard at work figuring out ways to make solar cells — the part of the [solar panel](#) that actually absorbs light — work more

efficiently. However, a group of scientists working on that very issue recently stumbled across some potentially easier solutions to the problem.

The researchers from the Cavendish Laboratory at Cambridge and the Amsterdam-based AMOLF [found](#) that they could improve solar energy capture not by making the solar cells more efficient but by simply designing them to fit their surroundings better. TechXplore first [reported](#) on their findings.

"Making solar cells super-efficient turns out to be very difficult. So, instead of just trying to make solar cells better, we figured some other ways to capture more solar energy," [said](#) Dr. Tomi Baikie, the study's first author. "This could be really helpful for communities, giving them different options to think about instead of just focusing on making the cells more efficient with light."

The applications of the scientists' findings mean that, in the future, [solar panels](#) could flex or fold to fit into tricky spaces or be partially transparent to blend seamlessly into their surroundings. By making [solar panels](#) that are less burdensome to install, Dr. Baikie speculated that it could increase their adoption worldwide.

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Changes like these could be executed more easily than other changes to solar panels that focus on the underlying [technology](#).

That does not mean that the underlying [technology](#) isn't worth improving. Recent breakthroughs in that realm include solar panels made with a super-material called [perovskite](#), ones made with "[quantum material](#)" and "[quantum dot](#)" technology, and a [solar film](#) used by NASA.

Other recent advances in making solar panels work better without changing the underlying technology include [a device](#) that allows the panels to become self-cleaning, cutting down on maintenance costs.

These two types of advances are not mutually exclusive — each goes toward making solar panels work better, cheaper, and more efficiently, allowing us to move past outdated [dirty energy](#) sources.