



The researchers are pioneering growing wood from plant cells | Photo source [Dineo Motau on Unsplash](#)

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UNIVERSITY TAKES FIRST STEPS IN PRODUCING LAB-GROWN WOOD

 AGRICULTURE & ENERGY

Cultured wood could be a more efficient and environmentally friendly alternative to logging, and fully developing the process could revolutionise the lumber industry

Spotted: A group of researchers at MIT university in the USA are pioneering growing wood from plant cells. The process is similar to how scientists are [growing meat](#) from animal cells. First, live cells are extracted from the leaves of a zinnia plant and placed into a nutrient solution that encourages them to grow and multiply. Then the cells are moved to a gel that is laced with two hormones. By adjusting the levels of those hormones, the researchers could control the production of lignin in the cells, which is what gives wood its characteristic firmness.

When the MIT researchers investigated the cells under a microscope, they observed that they had used the gel as scaffolding, forming rigid, wood-like structures. Not only does this demonstrate the possibility of growing wood in a lab, but it shows the potential to mold it in different shapes, based on the scaffolding. “Plant cells are similar to stem cells in the sense that they can become anything if they are induced to,” researcher [Luis Fernando Velásquez-García](#) said.

To make a real impact, the next step is to figure out both how the process can be scaled up to produce wood that’s of comparable quality to that of trees, and is economical to produce.

“The way we get these materials hasn’t changed in centuries and is very inefficient,” Velásquez-García [told MIT News](#). “This is a real chance to bypass all that inefficiency.

We are also yet to see whether the process for creating their lab-grown wood is actually better for the environment than logging.

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Takeaway:

A [2019 study](#) estimated that logging is one of the biggest producers of carbon emissions in the world. Some of these emissions come from the machinery used during the process, but trees also release carbon dioxide after they've been felled. Aside from polluting, traditional logging isn't very efficient, with many limbs of cut trees either burnt, or left behind to rot. Lab-grown wood could help overcome these issues.