

New Recyclable Fiberboard to Cut Landfill Waste

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Researchers at the University of Leicester in the U.K. have developed a type of pressed wood that could lead to more recycling. Photo: Flickr/John Loo

If you've ever purchased cheap furniture or worked in an office or retail space, chances are you've encountered medium-density fiberboard (MDF), an engineered wood product similar to particleboard. MDF is used worldwide in homes and businesses because it is inexpensive to produce, but it also comes with some drawbacks. These boards are made of wood fibers and are held together with adhesives that contain formaldehyde-emitting resins, which may be harmful to human health, [according to the EPA](#). Because of these resins, MDF must be disposed of in landfills or incinerated.

Professor Andrew Abbott of the University of Leicester in the United Kingdom recently developed a way to make a recyclable wood product similar to MDF that doesn't use typical resins. Instead, the boards are held together using starch from sources like potatoes. For his work, Professor Abbott won the Royal Society Brian Mercer Award for Innovation to help turn his findings into a marketable product.

"It is impressive to see someone take a material that is commonplace in all of our homes and solve its key limitations," Professor Anthony Cheetham, vice president and treasurer of the Royal Society, [said in a press release](#). "Professor Abbott has managed to reinvent MDF,

transforming it into a product that has much more relevance in an environmentally conscious society.”

MDF is frequently used in the retail sector in display units and other items made for short-term use. If MDF were manufactured using safe, natural resins, this material could be recycled or composted, according to [a statement](#) from the University of Leicester. The U.K. alone produces almost 1 million tons of this material annually, so these innovations could help keep a significant amount of waste out of landfills.

The next step for Professor Abbott’s team is to develop a system for producing this new MDF on a larger scale so industries that regularly use the material can have more eco-friendly options.
