

TURNING MUSHROOM INTO THE MYLEA ECO FRIENDLY LEATHER IN INDONESIA

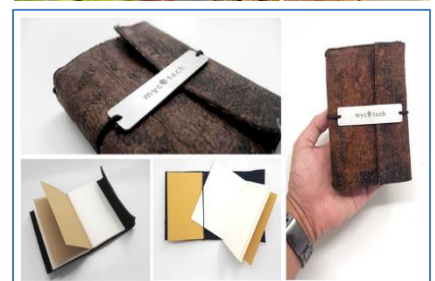
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[In March 2026 the Asia Media Center published an article presenting the latest results from the MYCL Mycotech-Lab on turning mushrooms into a leather substitute](#) that does not harm animals, uses no toxic chemicals, and generates only a small fraction of the carbon emissions associated with conventional hide.

Founded in Bandung, West Java, Indonesia, [MYCL Mycotech is a start-up company](#) that produces Mylea, an eco-friendly leather alternative made from mushroom mycelium grown on agricultural waste such as sawdust, sugarcane waste, and palm oil waste. By using agricultural waste Myotech provides farmers with an additional source of income and prevents the waste from being burned. With Mylea, MYCL aims to disrupt the animal and petroleum-based leather market by adopting a zero-chemical treatment process which is better for the environment. The objective is to create a fully bio-based sustainable alternative by growing a leather-like material that requires less time, water, and fewer resources, while producing a smaller carbon footprint than conventional leather. Mylea's applications range from haute couture, fashion goods, fashion accessories, and footwear, to even automotive interiors.

Mylea™ is fireproof, waterproof and flexible, and it can also be turned into a variety of leather designs. By processing more agricultural waste and partnering with local farmers, Mycelia has a positive social and environmental impact. MYCL is now a B-certified corporation for its environmental and social responsibility performance and has partnered with around 500 local farmers and 24 local suppliers. The biotech MYCL start-up, employs mycelium as a binding agent for agricultural waste, then develops it into a leather-like material called Mylea. By leveraging the natural growth cycle of mushroom mycelium, the company transforms agricultural waste into high-performance, carbon-sequestering materials. Its approach moves beyond simple sustainability, aiming for a truly circular economy where the “waste” of one industry becomes the high-value “raw material” for another.

Compared with leather, Mylea™ requires less time to grow into a leather-like substance and uses less water. In addition, Mylea™ uses no hazardous chemicals or heavy metals in its manufacturing process, resulting in much lower carbon emissions. This reduces the risk of harm to both the environment and human health. The company also uses natural dyes in



post-production instead of synthetic dyes. To create different colors, Mycotech uses natural dyes extracted from roots, leaves and food waste to colour its leather alternative. This process is far less polluting than traditional tanning processes used for real cowhide that leaves behind solid and liquid waste full of chromium and other hazardous compounds.

The Asia Media Center article presents MYCL's story. The company was founded in 2015 by Adi Reza Nugroho, an architecture graduate from the Bandung Institute of Technology. The original idea was inspired by the traditional use of fungal mycelium in [tempeh traditional fermentation technology](#), applying the same biological mechanism to bind agricultural waste into a durable, leather-like material. The company sells Mylea in sheet form to brands and manufacturers who convert it into finished goods: shoes, bags, wallets, watch straps, and car seats. In 2023, MYCL was shipping around 2,000 square feet of Mylea annually to customers — enough to produce approximately 600 pairs of shoes. The company employs only a few dozen people and has a production capacity of roughly 10,000 square feet per year.

[In 2019 Mylea was recognized at the SEED Low Carbon Awards](#), for its eco-inclusive impact. Managed by [UN Environment](#), [UNDP](#) and [IUCN](#), the Award recognized that Mycotech, a company aiming to move the fashion industry towards sustainability, contributes through Mylea to the circular economy in its manufacturing process. Mylea also includes local farmers in its value chain as agricultural waste suppliers and mushroom growers. This means more jobs and higher income for them. By contributing to a shift in the fashion industry towards green economy, Mycotech and Mylea attract many major fashion brands.

[In 2024 MYCL was also recognized as finalist by the Earthshot Prize in the Clean Our Air category](#). Indonesia is a significant contributor to air pollution because once the palm oil is extracted from the fruit, the leftover fibre and shells are usually burnt, sending chemicals and carbon into the air and creating severe air pollution that threatens the health and lives of people in nearby communities. The Prize recognized that by creating an innovative alternative to leather using mushrooms grown on agricultural waste and buying this crop waste before it is burnt, thereby giving farmers a source of extra income, MYCL helps to reduce severe air pollution.

[The SwitcsAsia Initiative](#) has produced and disseminated a brochure presenting the impactful work of MYCL-Mycotech company in Indonesia.

MYCL is still a small player in terms of the global fashion industry, but it is focused on bringing mycelium technology to a wider audience, with ambitions to expand into Japan and Singapore and then more widely across Asia and Europe by 2030. The company aims to turn 20,000 tonnes of crop waste into mycelium leather/year by 2030, cutting carbon emissions by around seven million tonnes/year compared to waste burning and traditional leather production. At the same time, it aims to produce 900 square meters of leather and achieve an associated sequestration of 4.6 million tCO_{2e}. Next year, its goal is to harvest mushrooms, disrupt leather production and save 430 tonnes of CO₂, 7,000 cows, and 1.5 million liters of water.

To explore the feasibility of market expansion and better understand market preferences, MYCL attended several global fashion events, including Hong Kong Fashion 2025, the Venice Biennale 2025, NextRise Seoul 2025 and London Climate Action Week 2025, and met with several prospective collaborators.



The mycelium technology developed by MYCL addresses two key issues: reducing agroforestry waste and creating sustainable materials that help revolutionize the world of fashion. It provides an effective way to manage the country's agricultural by-products, which are a significant source of greenhouse gas emissions.

To know more

[Mycl.bio website](#)

[Mycl.bio website About](#)

[Article in Asia Media Center](#)

[Mycotech in seed.uno website](#)

[Brochure in SwitchAsia in aceba.co](#)

[MYCL inearthshotprize.org](#)

[Mylea in hautematter.com](#)

[Mylea in beopenfuture.com](#)

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