



MycaNova leverages fungal mycelium to produce materials from biowaste | Photo source [Damir Omerović on Unsplash](#)

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INDUSTRIAL BIOWASTE TURNED INTO LEATHER, FABRIC, AND MORE

 FASHION & BEAUTY

A naturally occurring mycelium is used to make a new type of sustainable material

Spotted: Already expert in natural surface fermentation, Belgian company Citribel has created a way to use biowaste from its industrial citric acid production to create a new sustainable synthetic leather. One of the few companies in the world using sugar molasses (itself a side product from the refinement of sugar) for commercial production of citric acid, Citribel upcycles the waste it produces two times.

With a new brand, MycaNova, set up to manage the mycelium market, Citribel doubles the effectiveness of its production plants. First, citric acid is created as a byproduct of the mycelium that grows on fermenting sugar molasses. After the citric acid harvest, the mycelium is collected, dried, and ground into a powder.

The powder is mixed with binders and backing materials to create a range of possible uses for the material. It is particularly useful as a replacement for polyurethane-based synthetic leathers, and in initial studies, appears as flexible, soft, and dyable as other bio-based leathers yet without the environmental costs.

The additives used in the creation of MycaNova are available as natural or synthetic versions; buyers can choose which combination of materials they would like in the final mycelium fabric. Citribel is currently seeking new partners and ideas for applications of the material.

From [tableware](#) to [trainers](#), mycelium's versatility makes it likely that, in the near future, consumers will have a range of fungi-based products from which to choose.

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Takeaway:

Mycelium is an exciting area of research and development as a material and as a potential digester of hard-to-recycle materials. Fungi may be able to contribute significantly to tackling the global plastic problem. If other industrial plants, as Citribel has done, are able to create additional processes that make use of waste products, vast hectares of commercial space could become more valuable and efficient. Waste could be turned into something useful or used for new methods of recycling or composting, without requiring supplemental infrastructure.