

Cutting-edge fashion: From bacteria-dyed fabric to algae-based textiles, green fashion is experiencing a technological boom

A crop of scientists and fashion tech pioneers are increasingly looking to nature for clues as to how to develop materials that can be broken down and reused more easily, and mitigate environmental harm. From developing yeast and bacteria to color fabric, to lab-grown fibers derived from algae and taking inspiration from the structure of mushrooms and spiderwebs, the intricate patterns and proteins found in organic materials remain a source of wonder, even to those well-versed in the use of such cutting-edge technology.

At the same time, the fashion industry is under increasing pressure to innovate and find sustainable alternatives in order to minimize its environmental impact — even pattern-cutting has become more strategic as designers look to cut down on cumulative wastage.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other ‘disruptive’ innovations. Subscribe to our newsletter.

[SIGN UP](#)

Still, new fabrics and technological innovations are just part of the equation — the thinking of consumers and brands is also something sustainability advocates say needs to change.

A 2021 Apparel Impact Institute report found that while scaleable next-generation materials could contribute 13% of the reductions needed for the fashion industry to reach net zero by 2050, larger contributions would come from phasing out coal and making gains in material efficiency, waste reduction and the usable life of garments.

[**This is an excerpt. Read the original post here**](#)