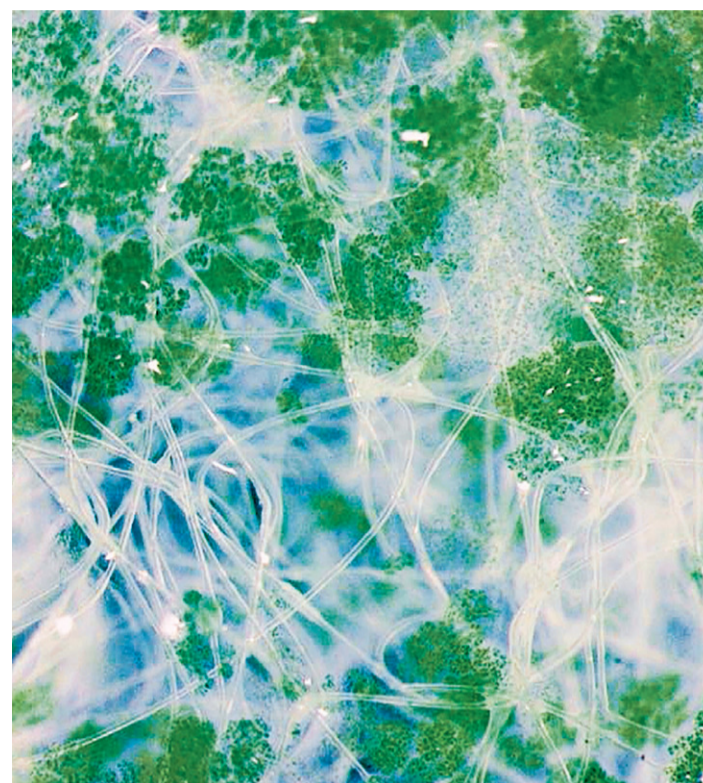


FASHION & BEAUTY



Clockwise from above: Dian-Jen Lin and Hannes Hulstaert, founders of Post Carbon Lab; a photosynthetic coated fabric viewed through a microscope; photosynthetic coated textile and jacket. Photos: Handouts



The fabric of science

Clothes that convert carbon dioxide to oxygen, kill viruses, help you relax, glow in the dark or store body heat – biotech could influence the future of fashion in countless ways

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What role can fashion play in tackling climate change? A slogan T-shirt here, a recycled swimsuit there? How about harnessing biotechnology to create clothes that suck in carbon dioxide and release oxygen?

That's the big idea behind Post Carbon Lab, an East London design research studio founded by Dian-Jen Lin and Hannes Hulstaert. Alongside their sustainability consultancy, they provide piloting services of microbial dyeing and a process they call photosynthetic coating, which uses algae and cyanobacteria to form a living layer on fabrics.

While it varies between items, the ballpark figure is that a T-shirt treated with this coating releases as much oxygen in six weeks as a six-year-old tree. But it's important to note this data only reflects the part Post Carbon Lab can measure – that is, when they are processing the item. Once it is in the hands of the wearer, it will vary according to the care routine.

"Depending on which statistics you use, some people say

fashion is the second most polluting industry [in the world], some people say it's the fourth," Lin says. "But it's relevant to anybody who dresses. In that sense, fashion influences almost every single homo sapiens. If you were to use this medium not for negative effects but for a positive one, imagine that scale of influence."

"So that's what we're trying to do."



What we can do is help brands go in a better direction

DIAN-JEN LIN, CO-FOUNDER OF POST CARBON LAB

Born in Taiwan, Lin studied fashion at Shih Chien University in Taipei and worked in various commercial roles. But she says, "it became increasingly obvious that whatever I was doing was not good for the planet, nor for the people."

That's when she decided to step back and explore her alternatives. She recalls how she wanted

to take a more artistic and experimental approach to fashion. Rather than pursuing fashion as a commodity – as a trend-led object to be traded – she started thinking about it as a medium for a message. "What would that look like? Then I did this master's degree, which was focused on sustainability within the fashion world."

That was London College of Fashion's MA in fashion futures. Since then, Lin has led workshops, lectured at top universities, collaborated with the Natural History Museum in London, and won a Kering Award for Sustainable Fashion. All in the hopes of answering the question: what is the ecological role of the fashion industry?

For many brands, the answer lies in switching to organic cotton or using recycled polyester – what Lin describes as mitigation. For others, the answer lies in embracing technology.

For Vollebak, a brand founded by twin brothers Steve and Nick Tidball, it's about creating clothes that acknowledge climate change. Whether it's their fireproof, windproof and water-repellent 100 Year Hoodie ("built for a world that's hard to predict"), or their



Nomad Hoodie and Carbon Fibre T-shirt from Vollebak.

solar-charged jacket, the British brand's take on sustainable fashion is more... apocalypse-ready.

"Most of the clothing we make is based on questions that haven't been asked of clothing before – like how are we going to sleep in space? Or can your clothes kill viruses? Or help you relax? Or light you up at night? Or store body heat?" CEO and co-founder Steve Tidball says.

"The Plant and Algae T-shirt is a great example. The idea is very simple. Grow the elements for a T-shirt in a lab and in a forest, so

of something truly new, you have to allow two to five years, which is what it takes to make most of our clothes."

Of course, not every brand has that sort of lead time. That's where Post Carbon Lab comes in. It provides a service, rather than selling its own clothes because, as Lin put it, the greenest option is not a new sustainable T-shirt. "It's the clothes in my wardrobe already!"

Yet as the millions of garment workers affected by the economic fallout of Covid-19 can attest, stopping all shopping is not the solution either.

"It is a much more systemic problem," Lin says. "What we can do is help brands go in a better direction. We see ourselves as a catalyst and facilitator for brands to make those transitions and adopt more sustainable innovations. Then that has a ripple effect in terms of how the users have to form a different relationship with the garment."

By "different relationship", Lin means that clothes with a photosynthetic coating, for example, will have to be looked after much like, well, a plant. You won't be able to just chuck them in the washing machine, but might have kept them somewhere airy with enough light and humidity. It's a shift in mindset from consumer to caretaker. But imagine the change if we applied that to our planet.

Luxury brands court young consumers on Chinese video platform



The "contrast look" on Bilibili blends retro, futuristic or surreal elements. Photo: Handout

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Even as Covid-19 closed retailers and stopped people showing off their latest outfits in public, the mainland's fashion industry proved more than resilient during the pandemic, thanks in part to video-streaming platform Bilibili.

According to a report in March that Bilibili released alongside Alibaba's Tmall and Alimama, interest in fashion content on the Chinese platform increased markedly in 2020 over 2019. Alibaba is the parent company of the *South China Morning Post*.

Views of fashion-related videos jumped by 130 per cent, while clips from fashion shows saw a viewership growth of 140 per cent. Overall, the number of monthly users consuming fashion content nearly doubled, up 80 per cent over 2019.

Bilibili is often described as the mainland's answer to YouTube. It also has a "bullet curtain" feature, where text commentary from viewers scrolls across the screen.

If there are lots of comments, it can engulf the video entirely, like a curtain of bullets.

Bilibili is home to the same type of quirky, mindless content found on many social media platforms: people playing video games, singing or eating. Now it has also become a place for people to set the latest fashion trends.

Louis Vuitton and Gucci are among the big names that have collaborated with or advertised on Bilibili, and Dior became the first luxury brand to open an account on the platform last year. Dior also produced a short film featuring Bilibili star and virtual influencer Xuefei Nova modelling in Paris and Shanghai.

The platform is riding a wave of increased spending among the mainland's Gen Z, which the report defines as those born between 1990 and 2009.

Overall, fashion spending has gone up by 91 per cent during the pandemic. Spending among Gen Z has grown even more, by 106 per cent. This helped push the amount spent on fashion products by the average young Chinese

person to 51,260 yuan (HK\$61,000), which represents 30 per cent of all spending in the Chinese market.

Finding ways to cultivate and appeal to this younger group of big spenders after the pandemic ends will be increasingly important for major brands.

China is on track to become the dominant player in global fashion – with its fashion industry poised to grow by 20 per cent annually, it is set to be the world's largest luxury goods market by 2025, according to consultants Bain & Company – and young people will be leading the way. By 2025, 55 per cent of all luxury spending is expected to come from young people, according to data analytics company QuestMobile.

Major luxury brands find appeal among this segment. About 10 per cent of Chinese Gen Zers said they had bought at least one product from brands Dior, Armani, Chanel, or Hong Kong-based jewellery company Chow Tai Fook last year, according to a March Vogue Business report.

Still, this group has its own tastes and preferences that are different from those of older generations, and Bilibili is a way to keep up with current Gen Z trends – last year, one in every two young people on the mainland was a monthly active user on the platform.

One current trend blends contemporary fashion with futuristic cyberpunk. Make-up that turns its wearer into a robotic android is now as popular as circle lenses and hair dye as fashion looks among the youth.

Views of cyberpunk-related fashion content more than doubled in 2020 over 2019, according to the Bilibili report. The aesthetic was also used as the theme of the short film *Dior* released last May on the platform.

Another even hotter trend on Bilibili is for minimalist style that emphasises durability – a move away from the flamboyant luxury brands typically associated with the mainland's fashion scene. Views for videos showcasing this "new classy look" increased by 240 per cent in 2020.