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Future Fashion

A Biological Future for Fashion

Biofabricate is a pioneering team of material innovators who work with startups, consumer brands and investors to grow a sustainable future that is built with biology. Their exhibit as part of *Our Time on Earth* showcases how biology is replacing materials derived from animals or petrochemicals.

Fast and Slow Fashion

Fast Fashion – Inexpensive clothing produced rapidly by mass-market retailers in response to the latest trends.

Photo by Rio Lecatompessy on Unsplash

Slow Fashion – A positive antidote to fast fashion. It advocates for buying better-quality garments that will last longer, and values fair treatment of people, animals, and the planet along the way.

Bio-Custom Material

Scientists are working on a new way to make clothes that doesn’t pollute the planet.

Mushroom Jacket/Fish Trainer: Biofabricate 2022

Bio-Custom Material

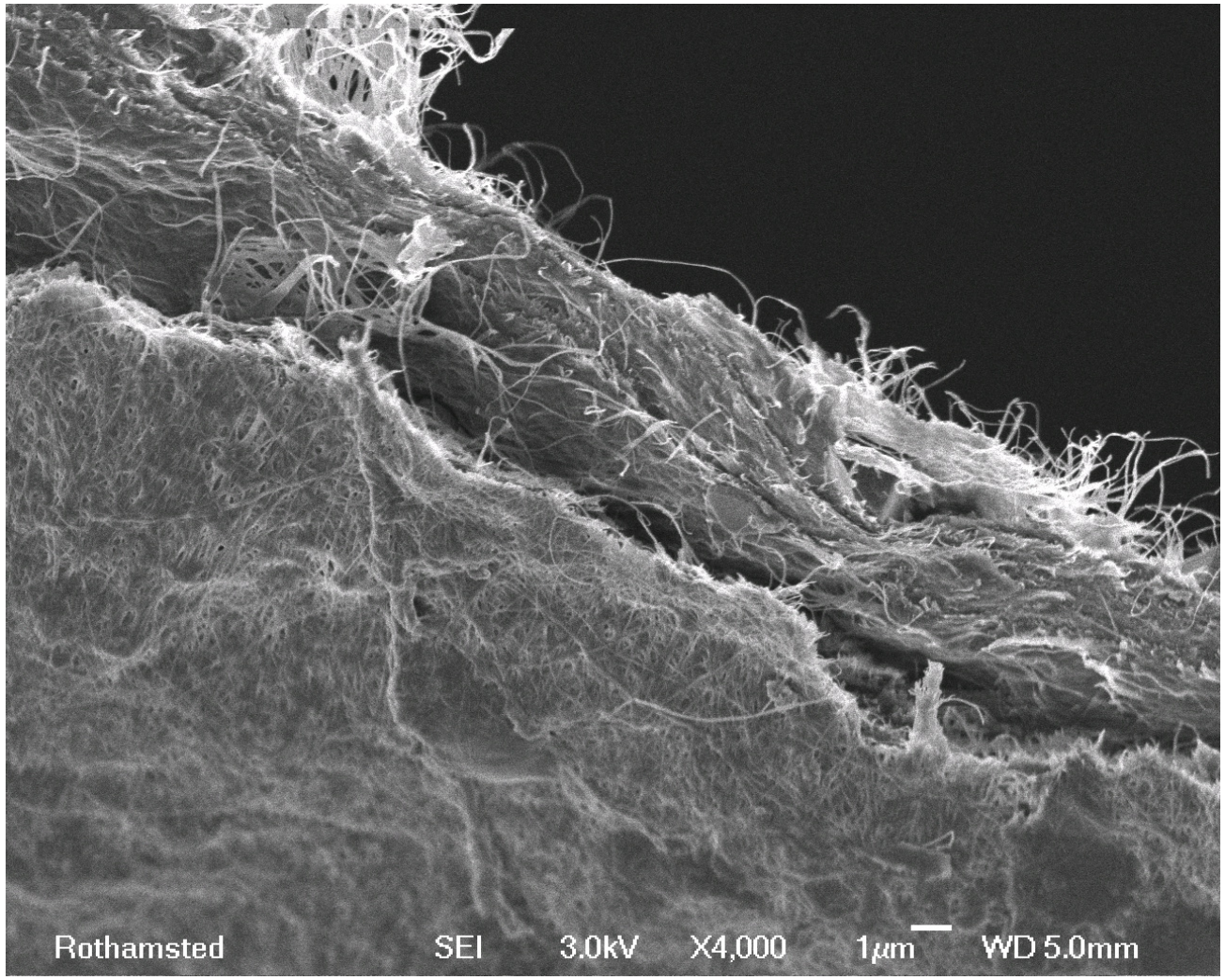
Instead of being manufactured from plant, animal, or petroleum-based resources, imagine that fabrics are grown in laboratories from living microbes. This is the biotechnology revolution, inspired by the living systems of the natural world.

Credit: Beetle Bag, Algae Sofa, Biofabricate 2022

Microbes

Microbes are all around us. They play a critical role in our health and that of the planet. Humans have been using biology to make things for thousands of years. Can you think of examples?

Biofabrication uses organisms such as yeast, bacteria, fungi, algae, and mammalian cells which are fermented, cultured, and engineered to synthesize nature's materials and have specific desired properties.



Credit: Courtesy of Biofabricate

Customise Living Organisms

What properties might you want in a bio-customisable fabric?

Think about movement, workability, texture, colour, durability, sustainability, source.

Credit image left: Photo by Louis Reed on Unsplash
Credit image right: Photo by Maite Oñate on Unsplash

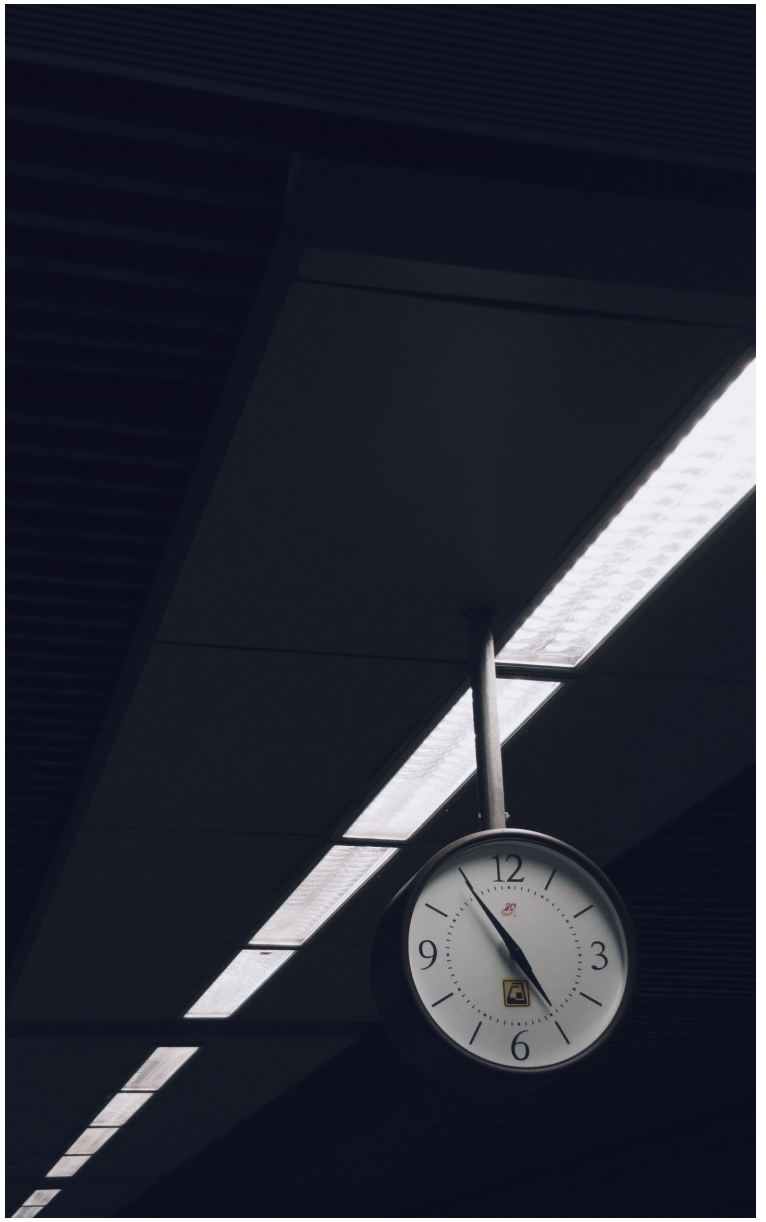
Circular Economy

Circular economies are all around us. A tree takes nutrients from the ground to grow, and when fruit and dead leaves fall and decompose in the soil, those nutrients go back in ground. Nature's systems are an inspiration for many new material innovators. Whether it's life on land or in the sea, biological life efficiently uses the resources all around in cycles of growth and decay. It's a regenerative, circular system.

Credit: Courtesy of Marshmallow Laser Feast

Temporalities

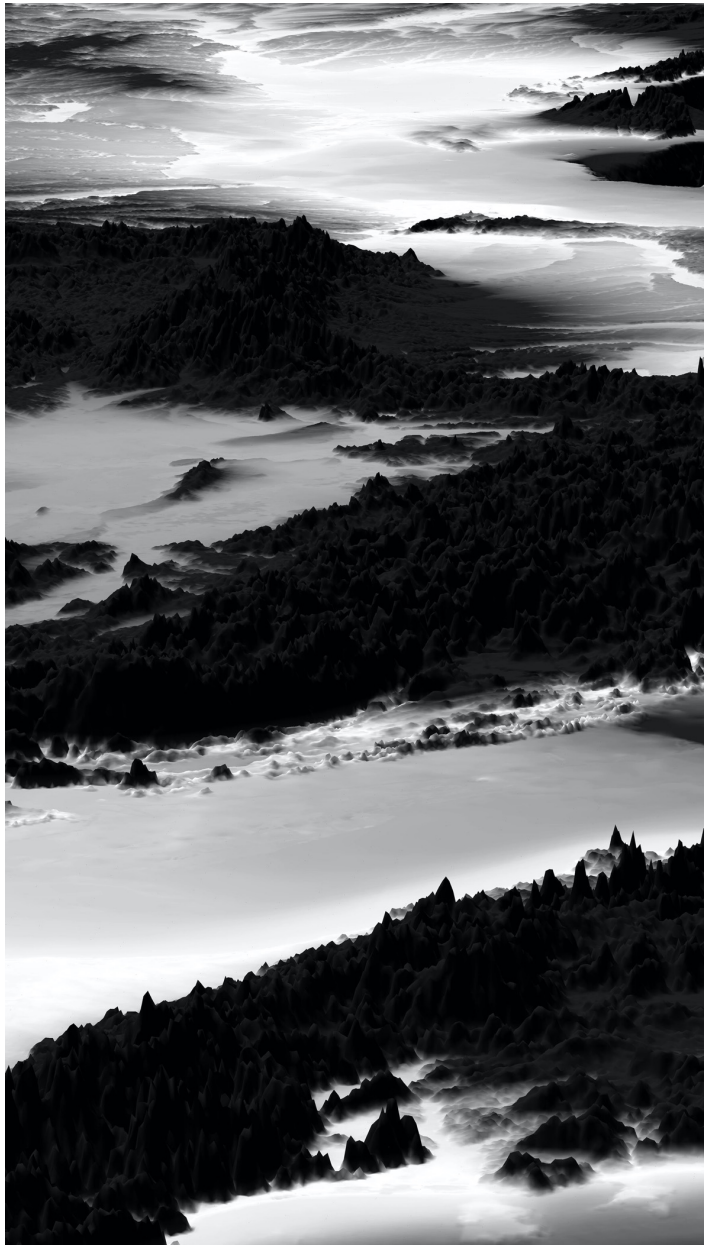
Nylon: 30-40 years
Polyester: 20-200 years
Foam plastic cups: 50 years
Plastic bags: 10-1000 years
Straws: 200 years
6 pack holders: 250 years
Plastic bottle: 450 years
Cotton t-shirt: 6 months
Vegetables: 2 weeks
Orange Peel: 2 months
Paper: 1 month



Credit: Courtesy of Territorial Agency

Redefining “Away”

When we say “throw it away” or “give it away”, what do we really mean? Thinking about temporality can help us see the impact of our consumption habits.



Redefining “Away”

Look around the room, what different temporalities can you see?

Think about any fruit or food in your vicinity, the chair you are sat on, what your building is made out of, what about your clothes?

Pick 3 different objects and draw a timeline to show how long each material will last before transforming and going back into the cycle of matter and energy.

Add the different material temporalities you have learned about today to your timeline.