dmass

To sow and to sew

Alternative, bio-based materialsinfashion—replacingtraditional, eco-unfriendly textiles like polyester — aren’t entirely brand-new.

Algae-based textile company Algaeing, for instance, won H&M’s Global Change

Award back in 2018, while mushroom-derived mycelium “leather” has already reached mass-production stage.

But as fashion month continues, the public is only getting hungrier for more alt-materials…

…and fashion brands are delivering the (organic) goods, with a slew of new fabrics made from bio-matter and organic waste.

Now, organic-matter-derived textiles aren't the only next-gen materials out there. Companies are also recycling mountains of plastic and transforming them into clothing, a la Tom Ford’s recycled ocean plastic watch and Rothy’s recycled plastic shoes.

But what makes materials made entirely from organic waste (potentially) better than those from recycled plastic? Answer: They eliminate the risk of **microfibers** entering our system.

- Microfibers are tiny, microscopic plastic shards which don’t break down. Just like the toxic PFA chemicals we covered in “The runoff from the runway” last week.
- They’re released by plastic-derived fabrics during every wash cycle.
- They’ve been found practically everywhere on the planet.
- They can stunt reproductive abilities and growth in marine wildlife.
- Once in our waterways, they attract toxins like pesticides, herbicides and heavy metals — which may (and often *do*) show up in our seafood.

In other organic matters…

Bio- and -plant-based materials aren’t only sprouting up in fashion (pun intended).

Our team wanted to dig up the latest, most exciting next-gen substances coming from the earth. The biomatter applications any organization — in any industry — could sow (or sew!) for inspiration.

To find those emerging innovations creating — or incorporating — bio-based materials in novel ways, we turned to **the dMASS AI**.

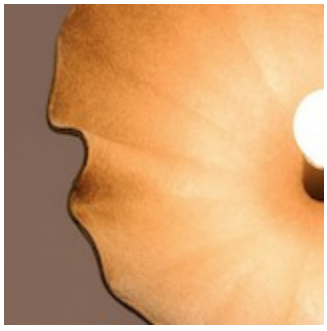
In case you didn't know, we developed an AI. The dMASS AI constantly scans the web, 24/7, to help you find potential solutions to your innovation challenges. Plus, it alerts you when new ones emerge.

Here's what the dMASS AI found:

The big corporate co-op: PVH & Bestseller to pilot new mushroom "hides"

Fashion conglomerates PVH and Bestseller are partnering with Ecovative to be the first to trial its 100% bio-based AirMycelium mushroom leather, which can be grown at scale in nine days. The alliance will help all of the companies involved improve their product development at an early stage.

Read all about it



The light from daily life: Biohm turns orange peels and coffee

into compostable lamps

Biohmcreated itsmade-to-order lamps with Orb, a compound that binds together agricultural and food bioproducts to create moldable sheets.

Read all about it

Dole turns its pineapple waste leaves into Piñatex fabric

Ananas Anam, a textile manufacturer,recentlypartneredwith cannedpineapple purveyor Dole to scale up its production of Piñatex: a vegan leather made from leftover pineapple leaves.

Read all about it

Sewn from the sea: Kelp yarn to be mass-produced

Unlike typical synthetic fibers made from oil, AlgiKnit's bio-yarns are nontoxic, carbon neutral, and formed out of kelp — a renewable and fast-growing algae. The company moved its facilities to North Carolina in the US to produce the yarn at scale.

Read all about it

Sustainable yet strong: Woody composite material is tough as bone

Researchers at MIT createda strong,plant-basedplasticalternativemade from cellulose fibers. The composite is stronger than Kevlar plastic, as tough and bone, and as hard as aluminum.

Read all about it

Bad to the bone (byproduct): Waste bones are being turned into light switches and electric outlets

The Elos electrical socket and switch collection is made out of inedible, waste bovine bones that would otherwise be incinerated or end up in landfills. The items, with their human-joint-inspired design, capitalize on the bones' natural thermal and electrical insulation properties.

Read all about it

Building with biology

Whether your organization crafts products from textiles, plastic, concrete, anything…

Are there bio-based materials that could perform just as well — and deliver just as

much value to your end customers — as the raw materials you're currently using?

And even if your organization has already embraced sustainability throughout its supply chain, how can you ensure you're remaining on the lookout for ever-greener solutions?

Get creative, get creating, and good luck.

All the best,

The dMASS team

Meet us at SXSW!

FYI: dMASS is going to SXSW in Austin, TX. We'll be at the **Startup Crawl for Capital Factory** – the center of Austin's startup community, to which we belong.

Coming to Austin on March 11? Let **Lisa Feierstein** know and you just might receive something special...

Stay tuned for more details.
