

BRAND ENGAGEMENT WITH NEXT-GEN MATERIALS 2023







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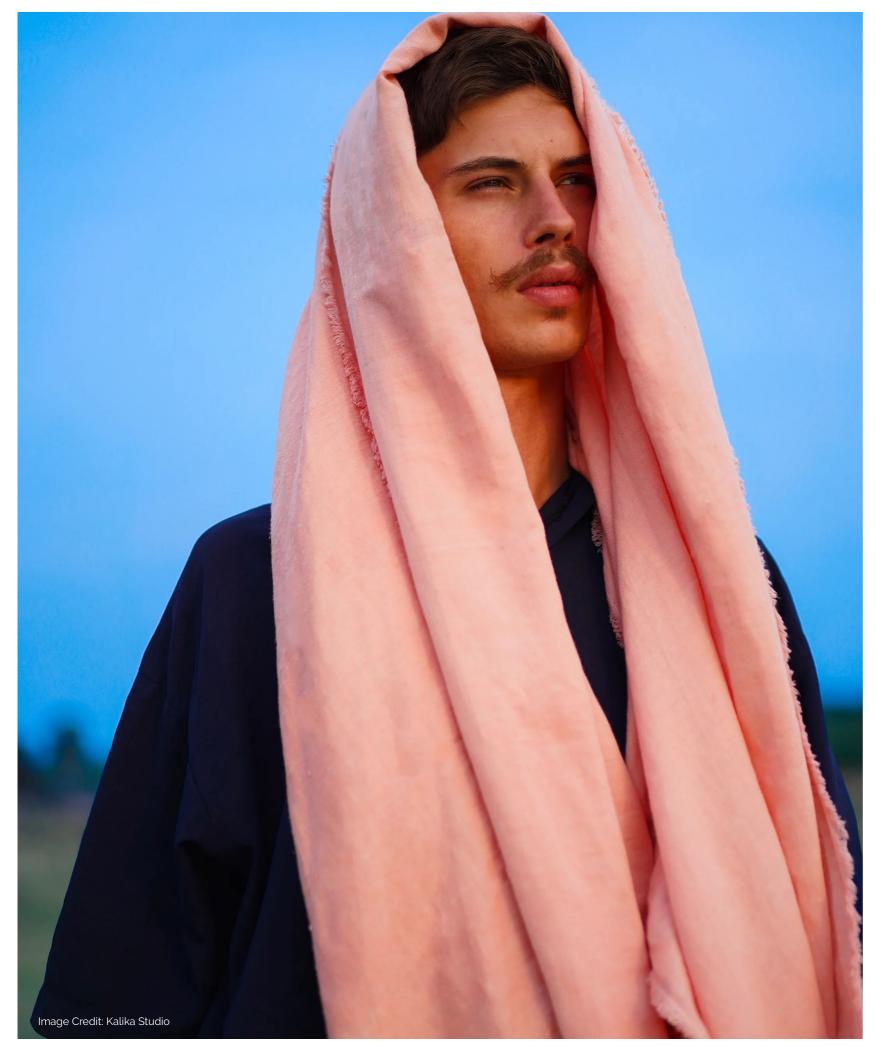


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This report contains highlights of significant brand collaborations using next-gen materials in 2023. It is not an exhaustive list of products using next-gen materials.



NEXT-GEN INNOVATORS

3m Adriano Di Marti Amadeu Materials Ananas Anam Asahi Kasei Atma Leather Beyond Leather **BioFluff** Bioleather Biophilica Bolt Threads Carbon Wave Circ CorkonLinen Coronet Covation Bio Devo Home Eastman Ecopel EcoSimple **Ecovative Forager** Ettitude Evrnu Faborg Flocus Fluff Stuff Fruitleather Rotterdam Gozen

Gucci

ISA TanTec

Keel Labs

Lenzing Lexus

Malai

Miko

MycaNova

NEFFA Nova Kaeru

Ohoskin

Oleatex

Orange Fiber

Mycotech Lab MycoWorks

KD New York

Kuraray Co. Ltd.

Mabel Industries

Modern Meadow Modern Synthesis

Natural Fiber Welding

PANGAIA Peel Lab Planet of the Grapes Polartec Polybion Ponda Portugalia Cork Primaloft Renewcell Save the Duck Spiber Spinnova Thermore Toray Vegea Volvo von Holzhausen





Puma pg. 72

PANGAIA pg. 30-32 Panthera pg. 55

Peet Dullaert pg. 50

Patrick McDowell pg. 25, 35

FOREWORD

The Next-Gen Material Revolution continues to build and strengthen! We saw more next-gen companies open factory doors and take production orders. We saw an explosion of collaborations between innovators working with both large and small brands around the globe.

Here is an overview of this year's collaborations.

Tory Burch re-launched their "Ella Bio Tote" using Modern Meadow's Bio-Alloy. Keenly aware how important color is to their customer, Modern Meadow's color capabilities were a big factor in the decision making process at the sampling stage for the Tory Burch team.

SCALED! Keel Labs, NFW, MycoWorks, and Ecovative are officially commercial and ready for partnerships.

Circ x Mara Hoffman broke our eyeballs this year with a vibrant dress that mimicked silk and shone a light on what the future can be for circular textiles and fashion.

NFW x Sage Automotive, manufacturer of automotive interior materials, tells us we're going to be sitting on a lot of plants-not-plastic car seats in the near future!

More and more red carpet statements are being made using environmentally preferred next-gen textiles. Creations from Zac Posen and Monique Lhuiller worked with Lenzing to bring sustainable glamour to the fore.

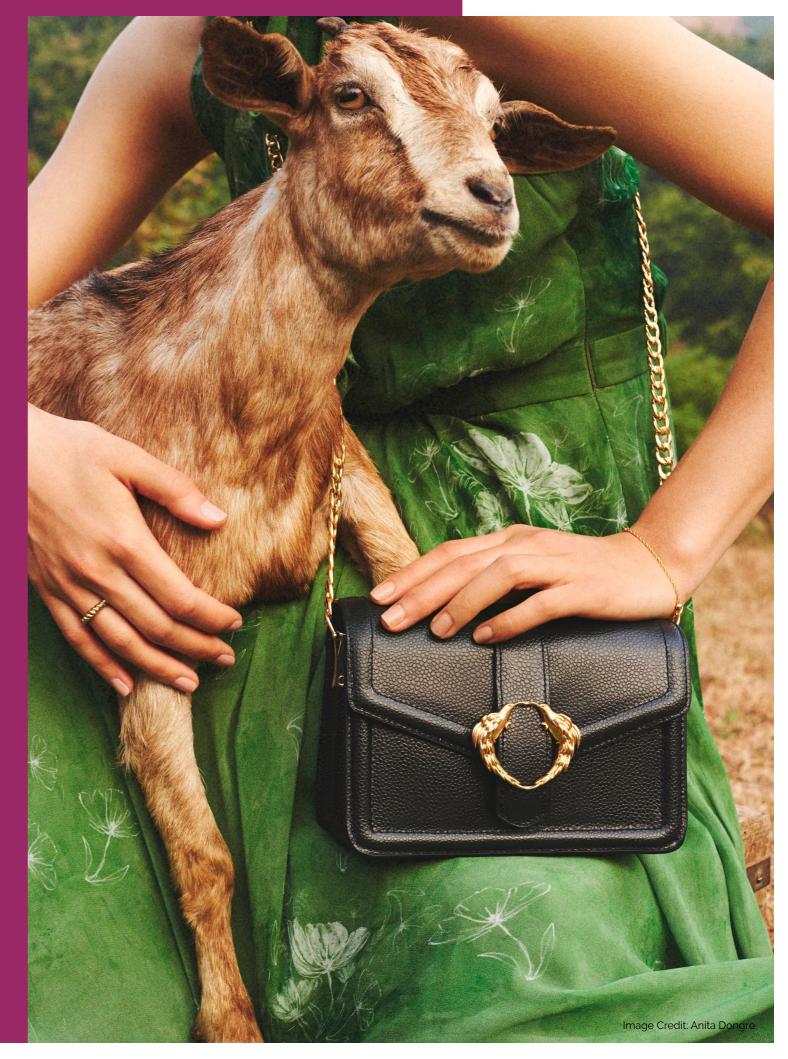
Gucci has always known the power and influence of celebrity models. Tapping Billie Eilish to promote their Demetra products was a big win for animal-free luxury.

Ganni leaned into sustainable next-gen materials all year long. Bravo!

Stella McCartney's tireless journey for ethical and responsible fashion crescendoed in 2023. She pulled off an outdoor fashion show alongside a sustainable market in the streets of Paris. The runway looks used multiple next-gen materials and fibers and the stalls showcased the actual innovators' wares. As if that wasn't applauseworthy enough, her second act was to set up shop at COP28 where she again put a spotlight on next-gen innovators: NFW, Keel Labs, Radiant Matter, and, for the first time, Savian, the plant based fur from BioFluff!

As always, a tip of the hat to the innovators and the brands helping to move the needle on environmentally preferred, animal-free textiles and materials.

Thomasine Dolan Dow
Director of Materials Innovation & Design
Material Innovation Initiative



BRAND ENGAGEMENT WITH NEXT-GEN MATERIALS 2023



METHODOLOGY

The research for this report was gathered from news articles and the websites and social media of next-gen innovators. Only collaborations/products featuring next-gen innovators from MII's Innovator Master List were included. Additionally, any products that were not from the year 2023, at least 30% bio-based, did not mimic an animal-derived material, or products blended with animalderived materials (including recycled) were not included in our

Once the research was completed, the collaborations were sorted by biomimicry material and product category (i.e. Apparel, Footwear, Automotive, etc.).









Image Credits: Reformation

REFORMATION X EASTMAN

The Reformation has collaborated with Eastman a multitude of times in the past year, featuring Naia™ in a number of their more formal dresses.









H&M X RABANNE X EASTMAN

For H&M's collaboration with luxury brand Paco Rabanne, the duo used Eastman's Naia[™] for the construction of multiple draped pieces.



GUCCI

For Gucci's Cruise 2024 Collection, they debuted a variety of accessories including bags and headwear featuring details made of Demetra.













Image Credits: Gucci

GUCCI





GUCCI X ADIDAS

For the second year in a row, Gucci and Adidas released a collection together. This year, their collaboration involved multiple colorways of the gazelle sneaker, which featured details made of Demetra.









NEXT-GEN SILK



MONIQUE LHUILLIER AND ZAC POSEN X LENZING

At the 95th Academy Awards, Monique Lhuillier and Zac Posen each designed bespoke gowns made from Lenzing's TENCEL™ LUXE and other branded fibers.



Image Credit: RCGD Global



Image Credit: tag-walk.com

SUPRIYA LELE X LENZING

For Supriya Lele's Spring/ Summer '24 collection, Lenzing's TENCEL™ LUXE was used throughout.

NEXT-GEN SILK



Multidisciplinary fashion designer Johannes Warnke utilized Lenzing's TENCEL™ LUXE on a number of looks in his "Murmelspiel" collection.



Image Credit: Reformation

REFORMATION X LENZING

Reformation released a mediterranean-inspired summer collection featuring Lenzing's TENCEL™ lycocell and modal fibers. Additionally, Lenzing and Reformation launched a co-branding campaign. This campaign sought to increase knowledge of TENCEL™ fibers for the average Reformation shopper, and included in-store displays, events, and educational messaging.



Patrick McDowell x Lenzing

For his collection titled "Cinderella Shall Go to the Football", Patrick McDowell used Lenzing's TENCEL™ LUXE for ten separate looks.

Image Credit: Lorenzo Bern



STELLA MCCARTNEY X NATURAL FIBER WELDING

For the second time this year, bags made from Mirum® appeared in a Stella McCartney runway show. At Stella's Summer '24 runway show, called "Stella's Sustainable Market", two new style iterations of the Falabella and Frayme bags in Mirum® debuted.



Image Credits: Stella McCartney



LEVI'S X NATURAL FIBER WELDING

In celebration of the 150th year anniversary of Levi's 501 jeans, the denim company released a plant-based version of the iconic patch. The jeans are 97% bio-based and include a patch made from Natural Fiber Welding's Mirum®.



Image Credit: Levi's x Natural Fiber Welding



Image Credit: Ralph Lauren

RALPH LAUREN X NATURAL FIBER WELDING

Ralph Lauren released The Polo® Mirum® Sneaker, with an upper made from Natural Fiber Welding's Mirum®.

LOST WOODS X NATURAL FIBER WELDING

Vegan brand Lost Woods launched this year, debuting their handmade bags and accessories made exclusively from Natural Fiber Welding's Mirum®.







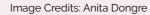


Image Credits: Lost Woods

ANITA DONGRE X NATURAL FIBER WELDING

Indian fashion brand Anita Dongre came out with a collection featuring two bags and belts made from Natural Fiber Welding's Mirum®.







NEXT-GEN DOWN

OUTERWEAR

PANGAIA X NATURAL FIBER WELDING

PANGAIA and Natural Fiber Welding have collaborated numerous times before, but their joint outerwear project is perhaps the most groundbreaking one to date. For the first time, PANGAIA and Natural Fiber Welding each incorporated their respective innovations into a single garment. The result is Air Gilet, a vest with an exterior made of a reformulated, thinner version of Natural Fiber Welding's Mirum®, with an insulation made from PANGAIA'S FLWRDWN.



NEXT-GEN DOWN

Image Credit: PANGAIA

PANGAIA

This year PANGAIA introduced FLWRFILL™— a more lightweight counterpart to FLWRDWN™, their original plant-based insulation. FLWRFILL™ was developed in collaboration with Imbotex, an Italian-based insulation manufacturer. Following the announcement of their new down alternative material, PANGAIA released their "Flower-Warmth" capsule, featuring jackets, gilets, and overshirts containing FLWRFILL™.

FRANK & OAK X PRIMALOFT

This year, Frank & Oak's entire outerwear collection contains Primaloft® Thermoplume™ insulation.



Image Credit: Save the Duck

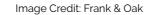
UNITED PETS X SAVE THE DUCK

Italian pet accessories brand United Pets and Save the Duck collaborated once again on a collection featuring the Rex Dog coat, filled with PLUMTECH® padding.



OS20 X THERMORE

Outdoor apparel brand OS20 developed their Oswald jacket made with Thermore® Ecodown® filling. This jacket is the winner of the ISPO 2023 award in the mountain textile category.



NEXT-GEN DOWN



FUTUREFEAR X 3M

New vegan streetwear brand FUTUREFEAR launched their debut product, the FUTUREPUFFER, featuring 3m™'s Thinsulate™ 100% Recycled Featherless Insulation.

Image Credit: FutureFear



NEXT-GEN FUR

GANNI X NICKLAS SKOVGAARD X BIOFLUFF

As part of the Global Fashion Agenda exhibit, Ganni and Danish designer Nicklas Skovgaard produced a jacket and hat made from BioFluff's plant-based fur alternative.



Image Credit: BioFluff

MANSUR GAVRIEL X APPARIS X ECOPEL

Mansur Gavriel and Apparis' capsule collection contained two coats, the Milly and Stella, made from Ecopel's KOBA® faux fur.





NEXT-GEN FUR







Image Credits: Apparis

APPARIS X ECOPEL

As part of their Fall/Winter '23 "Field Day" Collection, Apparis released two coat styles, the Milly and Mona, made from Ecopel's KOBA® faux fur.



MANSUR GAVRIEL X APPARIS X MABEL INDUSTRIES

As part of Mansur Gavriel and Apparis' capsule collection, the duo released a leather coat, "Liv", made from Mabel Industries' UppealTM.



FORCA STUDIO X AMADEU MATERIALS

Brazilian-based fashion brand Forca Studio used Amadeu Material's LaVeg™ in their Fall/Winter '23 collection, "Substructure".





DEADWOOD X MYCOWORKS

After debuting at Copenhagen Fashion Week, Deadwood and MycoWorks' released the first-ever ready-to-wear capsule collection made from MycoWorks' mycelium Reishi™ material. The collection includes a coat, jacket, vest, and bag and is made to order.



GANNI X POLYBION

As part of Ganni's Fabrics of the Future initiative, the fashion brand crafted a blazer made of Polybion's Celium™ bacterial cellulose leather alternative. The blazer is only a prototype, and was on display at Ganni's flagship store in Copenhagen in the month of June, during the Global Fashion Summit.





MATERIAL INNOVATION INITIATIVE

NEXT-GEN SILK

ZARA X CIRC

Zara collaborated with Circ on a four piece collection made from Circ's recycled lyocell material. The collection includes a blouse, halter top, shorts, and trousers.



OBJECT X EVRNU

Danish design brand Object released a three piece capsule collection with Evrnu, containing a matching shirt, dress, and pair of pants made from Nucycl®.







Image Credits: Object







NEXT-GEN SILK





NEXT-GEN WOOL

BRAVE GENTLEMAN X ECOSIMPLE

Brave Gentleman utilized EcoSimple's proprietary recycled fibers to create a faux-wool moto jacket available in four different prints. Each print was designed by Brave Gentleman's founder, Joshua Katcher.









Image Credits: Brave Gentleman



ACIÉN X ANANAS ANAM

Up and coming fashion designer ACIÉN created her collection, "Regenerative Folklore", using all plant-based knit materials, including Ananas Anam's Piñayarn®.



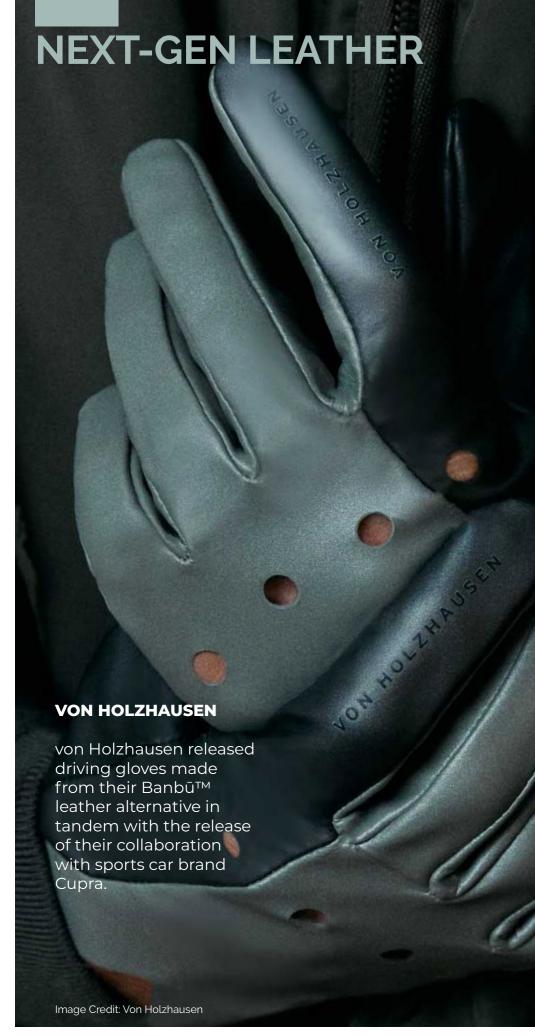
NEXT-GEN WOOL



NEXT-GEN FUR







HUBLOT X ADRIANO DI MARTI

Swiss luxury watch brand Hublot unveiled their new Big Bang Unico Titanium Green Ceramic watch with a strap made from Adriano di Marti's Desserto® cactus leather.



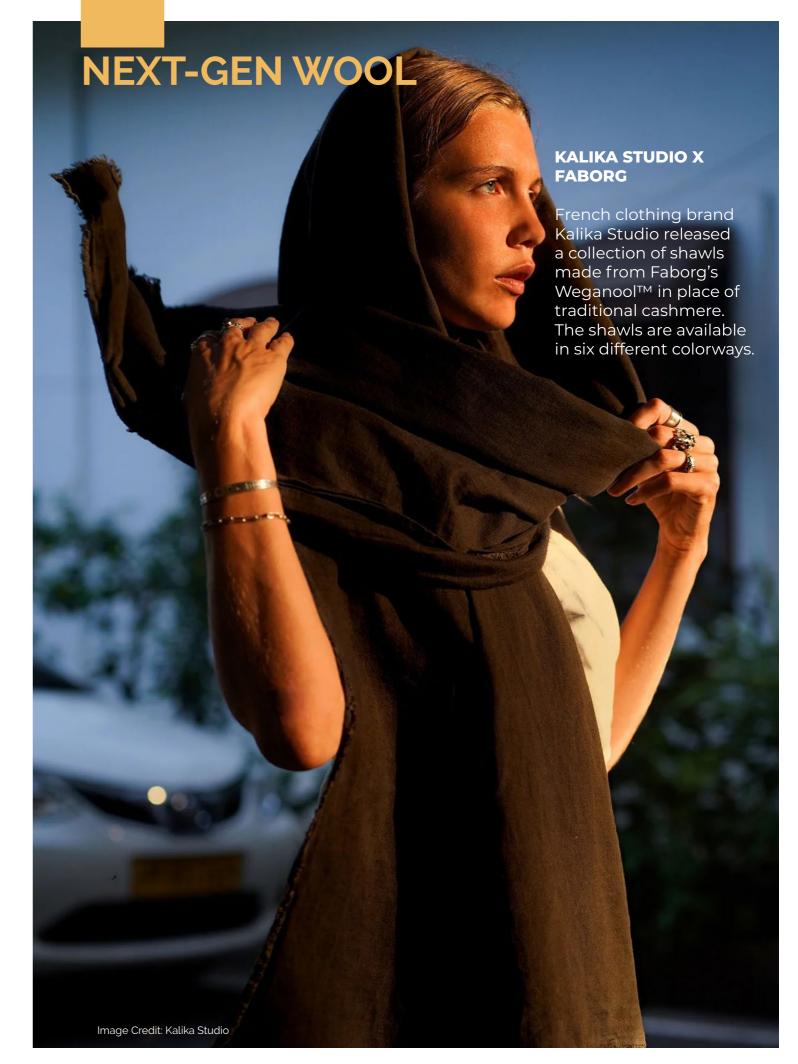




Image Credit: Tory Burch



RASHKI X ATMA LEATHER

Indian accessories brand Rashki debuted "India's first" banana leather handbags in a recent collaboration with Atma Leather. The collaboration includes 5 bags made from Atma's Banofi leather.





Image Credits: Rashki

CAROLINE HERRERA X ANANAS ANAM

Caroline Herrera created the Táchira bag from Ananas Anam's Piñatex® pineapple leather.

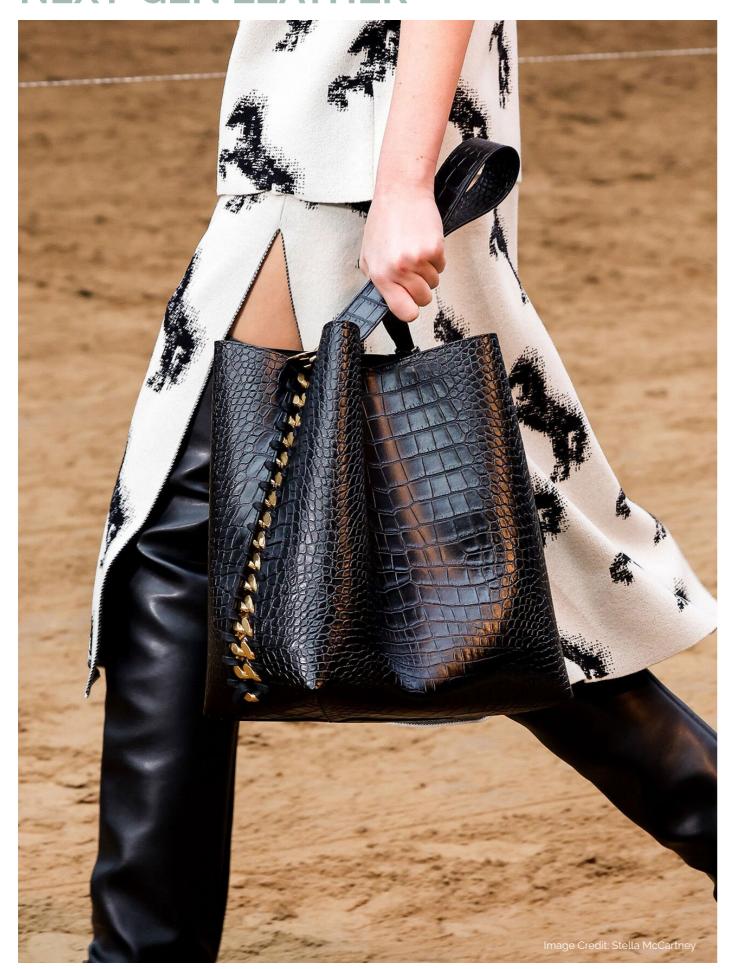
NEXT-GEN FUR



Image Credit: Mansur Gavriel

MANSUR GAVRIEL X APPARIS X ECOPEL

Mansur Gavriel and Apparis collaborated on a capsule collection of faux fur outerwear and coordinating bags, both made from Ecopel's Koba fur.



STELLA MCCARTNEY X MABEL INDUSTRIES

For their Winter '23 Fashion Show Stella McCartney debuted a tote bag, shoulder bag, and wallet, all crafted from Mabel Industries' Uppeal™ apple leather.







Image Credits: Stella McCartney

MANSUR GAVRIEL X APPARIS X APPLESKIN

As part of their capsule collection, Mansur Gavriel and Apparis released shoulder bags made from Uppeal™ apple leather. Called the Vegan Apple Mini Candy Bag, the bags are available in two colorways: blackberry and rhubarb.



Image Credits: Mansur Gavriel



Image Credit: Mansur Gavriel

MANSUR GAVRIEL X MABEL INDUSTRIES

Mansur Gavriel remade their iconic bucket bag with Mabel Industries' Uppeal™.



LIES MARTEN X MYCANOVA

Belgian accessories brand Lies Marten collaborated with Citribel on a capsule collection featuring three handbags made from Citribel's MycaNova® mycelium leather alternative.



GANNI X MODERN SYNTHESIS

At the Materials Matter fair (as part of London Design Festival), Modern Synthesis presented their newest collaboration with Scandinavian fashion brand Ganni. The collaboration included a remake of Ganni's Bou Bag in Modern Synthesis' proprietary bacterial cellulose leather alternative. Though the bag is just a prototype, the two companies have plans to launch the bag commercially in early 2025.



Image Credit: Modern Synthesis



Image Credit: Deadwood

DEADWOOD X MYCOWORKS

After debuting at Copenhagen Fashion Week, Deadwood and MycoWorks' released the first-ever ready-to-wear capsule collection made from MycoWorks' mycelium Reishi™ material. The collection includes a coat, jacket, vest, and bag and is made to order.



FOOTWEAR

CAMPERLAB X COVATION BIO, ISATANTEC, NATURAL FIBER WELDING

CAMPERLAB is the more experimental, creative sub-brand of Camper. As a result, CAMPERLAB tends to release unconventional footwear—this latest collaboration is no exception. CAMPERLAB's futuristic Tormenta sneaker is the result of a collaboration between multiple material innovators, including Covation Bio, IsaTanTec and Natrual Fiber Welding. The upper mesh of the sneaker is made from Covation Bio's Sorona®, with the remainder of the upper comprised of both IsaTanTec's HyphaliteTM and Natural Fiber Welding's Mirum®.

Image Credit: Camperlab





Image Credit: Koio

KOIO X MABEL INDUSTRIES

Koio worked together with Mabel Industries to design the Vegan 01, a sneaker made from Uppeal™. This launch is the first project to come to fruition from Pale Blue Dot, Koio's sub brand which focuses on vegan innovations and materials. The Vegan 01 is available in four different colorways.









Image Credits: Clae

CLAE X ADRIANO DI MARTI

In 2020, Clae came out with a shoe collection made from Adriano Di Marti's Desserto® cactus leather. This year, Clae sought to improve upon their original release, presenting their "Cactus 2.0" collection. This collection features three styles made from Desserto®: the Bradley, Malone, and Joshua. Clae claims that, together with Adriano Di Marti, they improved upon the softness, longevity, and material composition of the cactus leather used.

SAUCONY X ISATANTEC

For Saucony's Spring/Summer '23 collection, the brand recreated its 3D G.R.I.D. Hurricane, Shadow 5000, and Shadow 6000 sneakers with IsaTanTec's Hyphalite™. The sneakers also contain hemp fiber, recycled laces, and a cork footbed.







Image Credits: Saucony

PUMA X ISATANTEC

Inspired by fungi, Puma designed the CA Pro Lux RE:PLACE sneaker with IsaTanTec's HyphaLite™ used in the upper and overlays.



Image Credit: Puma

CAMPER X ISATANTEC

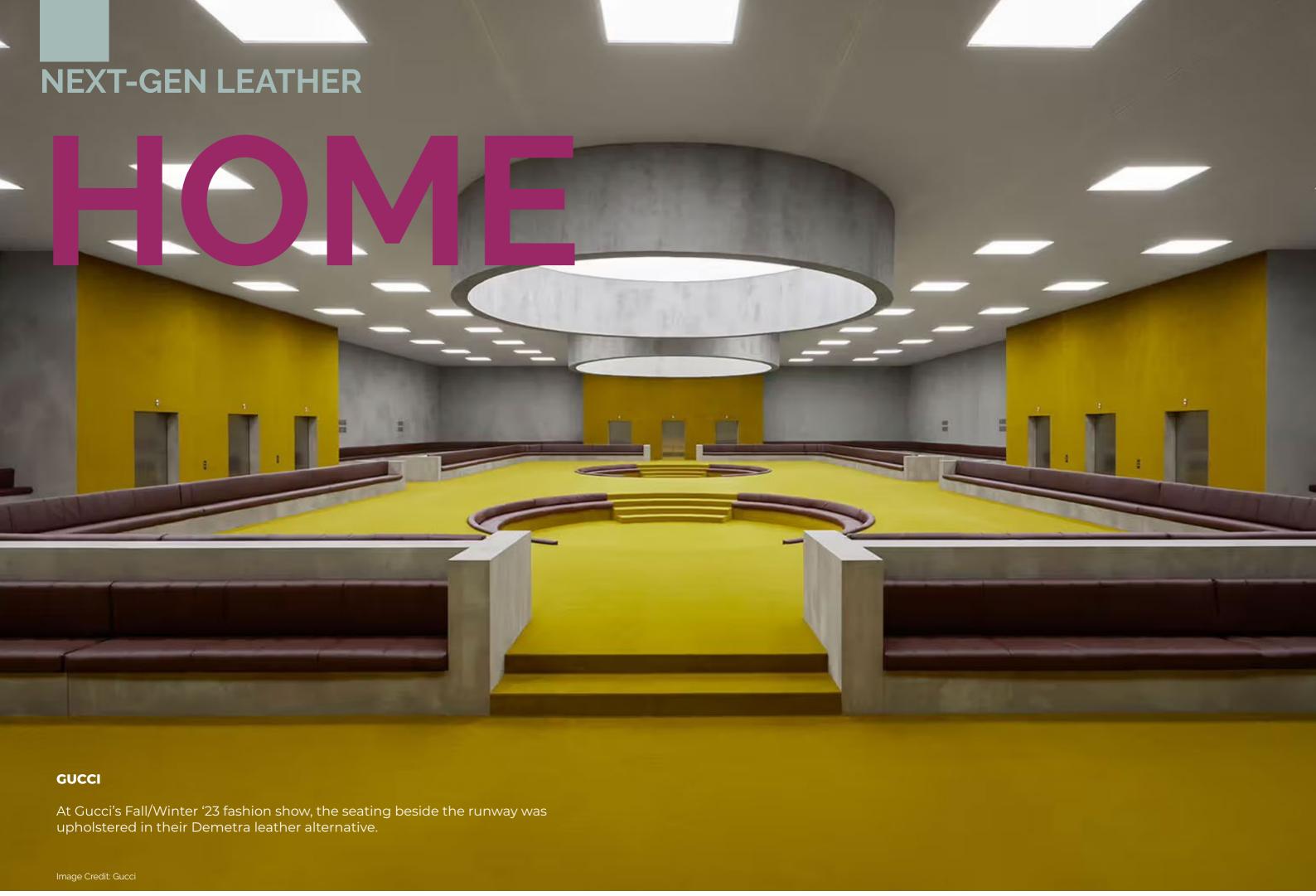
Camper partnered with IsaTanTec to recreate their popular Pelotas Flota sandals with a HyphaLiteTM upper.



Image Credit: Camper

NEXT-GEN DOWN









COCOCO HOME X PORTUGALIA CORK

Cococo Home chose Portugalia Cork's cork leather to upholster their Belmont chairs.

OKATERRA BY COMMON OBJECTS X NATURAL FIBER **WELDING**

At the International Contemporary Furniture Fair in New York City, Natural Fiber Welding and Okaterra by Common Objects revealed their collaboration. Natural Fiber Welding's Mirum® was used to upholster the Terra chair from Common Objects OkaTerra line.



Image Credit: OkaTerra by Common Objects



WARD VISSERS X FRUITLEATHER ROTTERDAM

Ward Vissers collaborated with Fruitleather Rotterdam on their "Imagine Change" desk, choosing to inlay Fruitleather Rotterdam's leather alternative on the surface of the desk.





2024

Image Credit: Moleskin

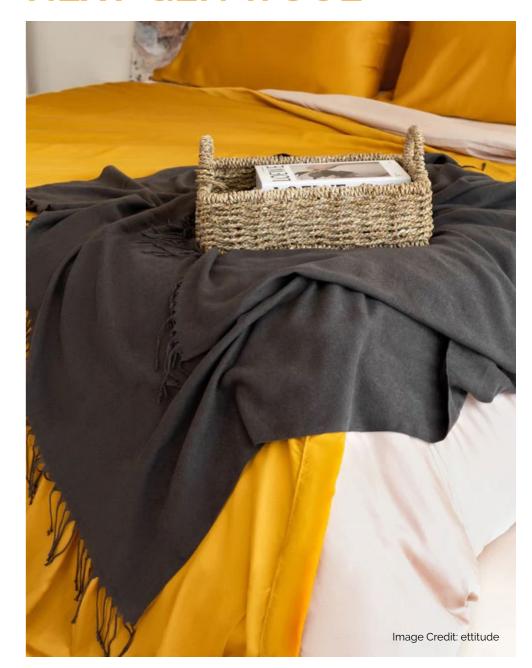
MOLESKIN X VEGEA

Luxury notebook brand Moleskin collaborated with VEGEA® on their new "Precious and Ethical Collection", featuring notebooks and planners with 100% VEGEA® leather alternative covers.



NEXT-GEN SILK ETTITUDE ettitude released two new colorways of their Signature Sateen Sheets (Taro and Butter) made from their proprietary CleanBamboo™ lyocell. Image Credit: ettitude

NEXT-GEN WOOL



ETTITUDE

Sustainable home brand ettitude released a Vegan Cashmere Throw made from their proprietary CleanBamboo™ lyocell material.





Image Credits: Ecco Leather and Meyers Manx



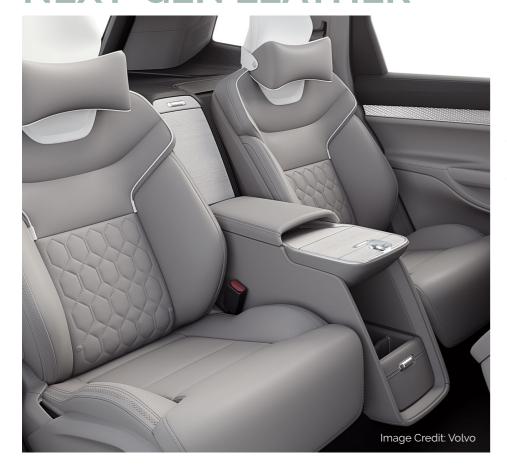
MEYERS MANX X ECOVATIVE FORAGER X ECCO LEATHER

Meyers Manx, in collaboration with Ecco Leather and Ecovative Forager, debuted the first car seat to be made from mycelium. These seats are only a prototype.



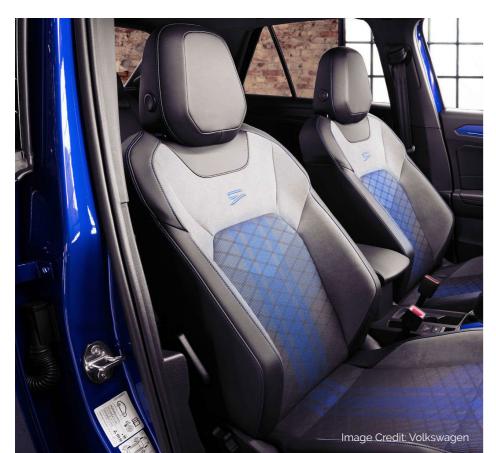
HYUNDAI X MYCOTECH LAB

At Hyundai's Cradle Day, Mycotech Lab was able to present a prototype of Hyundai's Ioniq 5 car seat reupholstered in their proprietary Mylea™ material.



VOLVO

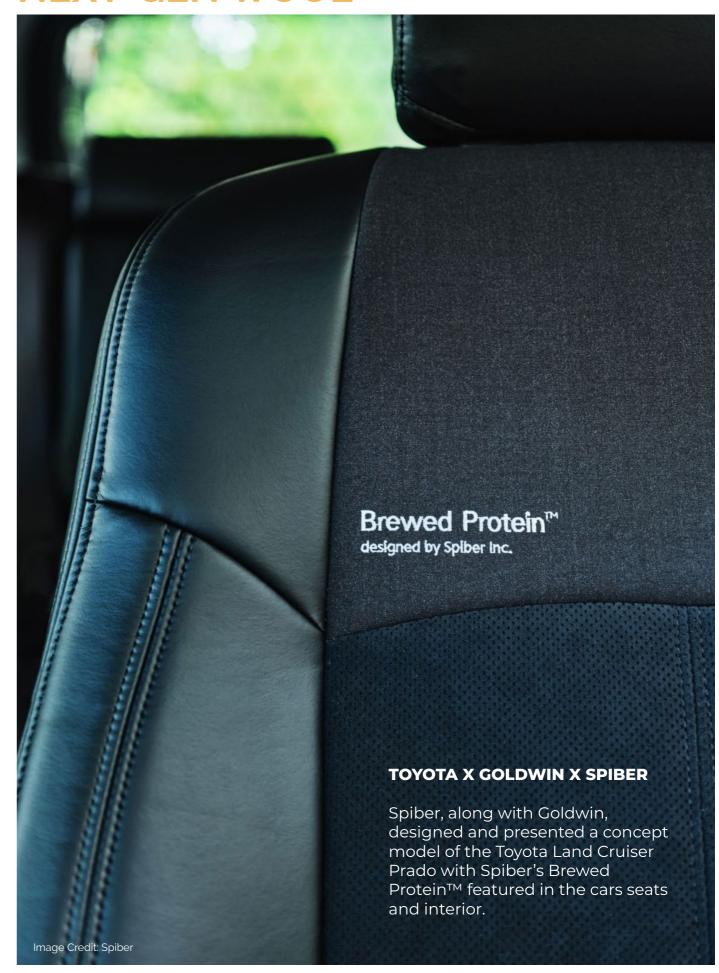
This year Volvo unveiled the premium, limited edition EX90 Excellence. A new all electric vehicle with upholstery available in Volvo's Nordico leather alternative.



VOLKSWAGEN X MIKO

Miko's Dinamica® microfiber appeared as an upholstery option for a number of Volkswagn models this year, including: the T-Cross, ID.7, ID.3, T-Roc, and T-Roc R.

NEXT-GEN WOOL



SUPPORT THE NEXT-GEN MOVEMENT

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We'd also like to thank the leading next-gen material companies, industry stakeholders, and investors for their generous input and support.

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Help drive material change year round by joining our family of donors and advocates.

About MII

The Material Innovation Initiative is a nonprofit think tank that accelerates the development of high-performance, animal-free, and environmentally preferred materials with a focus on replacing silk, wool, down, fur, and leather and their synthetic alternatives. We advance the next-gen materials revolution by connecting science and big ideas. We focus on research, knowledge-sharing, and fostering connections to fast-track the development of environmentally preferable and animal-free materials.

We work to cultivate a global market for next-gen materials across the fashion, automotive, and home goods industries. We work for materials that can do more while requiring less of the planet, animals, and people involved at every stage.

We imagine a circular future where the default choice for your sweater, sneaker, or seat is humane and sustainable. A future where animals are allowed to live free and thrive, the planet is saved from pollution and degradation, and workers are treated fairly and with respect.

Please consider a tax-deductible gift, or join us as a monthly-sustainer, and thank you.

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