

Consumer Innovation Shout Out: Material Innovation Using Synthetic Spider Silk

by Sudarshan Nagaraj

Spider silk is known and revered in the fashion industry as a lightweight fabric with impressive attributes, such as strength and flexibility. Spider silk is also rare, as it is not possible to farm spiders to produce their silk at large scale. The German company [AMSilk](#) has been exploring new ways to develop spider silk.

AMSilk has established a process to produce spider silk proteins in bacteria, which are woven to create fibers of a material referred to as Biosteel. After the weaving process, the material is blended with traditional fabrics to create high-performance materials or even 100% vegan and biodegradable products. The possibilities with this creation are limitless, ranging from textiles to aerospace.

Even though AMSilk has been developing this material for the past several years, recent advances in biotechnology have allowed for the widespread creation of spider silk. Now, spider silk is starting to trickle into products that consumers can actually buy. This highly breathable fabric is being used by retail companies to create unique products to stand out from competitors. Luxury watch brand Omega now sells a [watch](#) with a strap made from spider silk proteins that are brewed by genetically-engineered bacteria. The watch currently ships to countries in Europe and will soon be available in the rest of the world. AMSilk has even partnered with Adidas to create a [sneaker](#) made of Biosteel.

The fashion industry is seeing a revolution as Biotechnology alters the way clothes are made. Many new generation companies around the world are already disrupting the fashion industry with biofabrication, reducing the amount of pollution the industry is responsible for.

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