

Yeast-grown synthetic spider silk could be the next luxury fabric

The elusive science behind crafting synthetic spider's silk is no longer elusive. In fact, it's scalable enough that customers can walk into a store, pick up a spider silk hat, and wear it on their walk home. Five years ago that would've been unthinkable. Spider silk is an ace of a material. It's soft, flexible, and strong as steel. But it's also a terror to produce en masse.



Hat woven using spider silk.

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Instead of harvesting silk directly from an arachnid, [biotech company] Bolt has figured out a way to brew it like beer. The scientists insert genes into yeast and then ferment the mixture with water and sugar. That solution is then purified into a silk protein powder and combined with a solvent so it takes on a molasses-like texture that can be squeezed through a die to make long, thin fibers. "It's spider silk without the spider," [Bolt founder Dan] Widmaier says.

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To the average consumer, the Cap of Courage will look and feel like a regular hat. Up close, you can see the dyed Rambouillet flecked with the white of Bolt's silk, but there's really no way to tell you're wearing a wild new material. Bolt claims its fiber makes the hat softer, fluffier, and lighter than the all-wool original.

Read full, original post: [This striped beanie shows the promise of synthetic spider silk](#)