

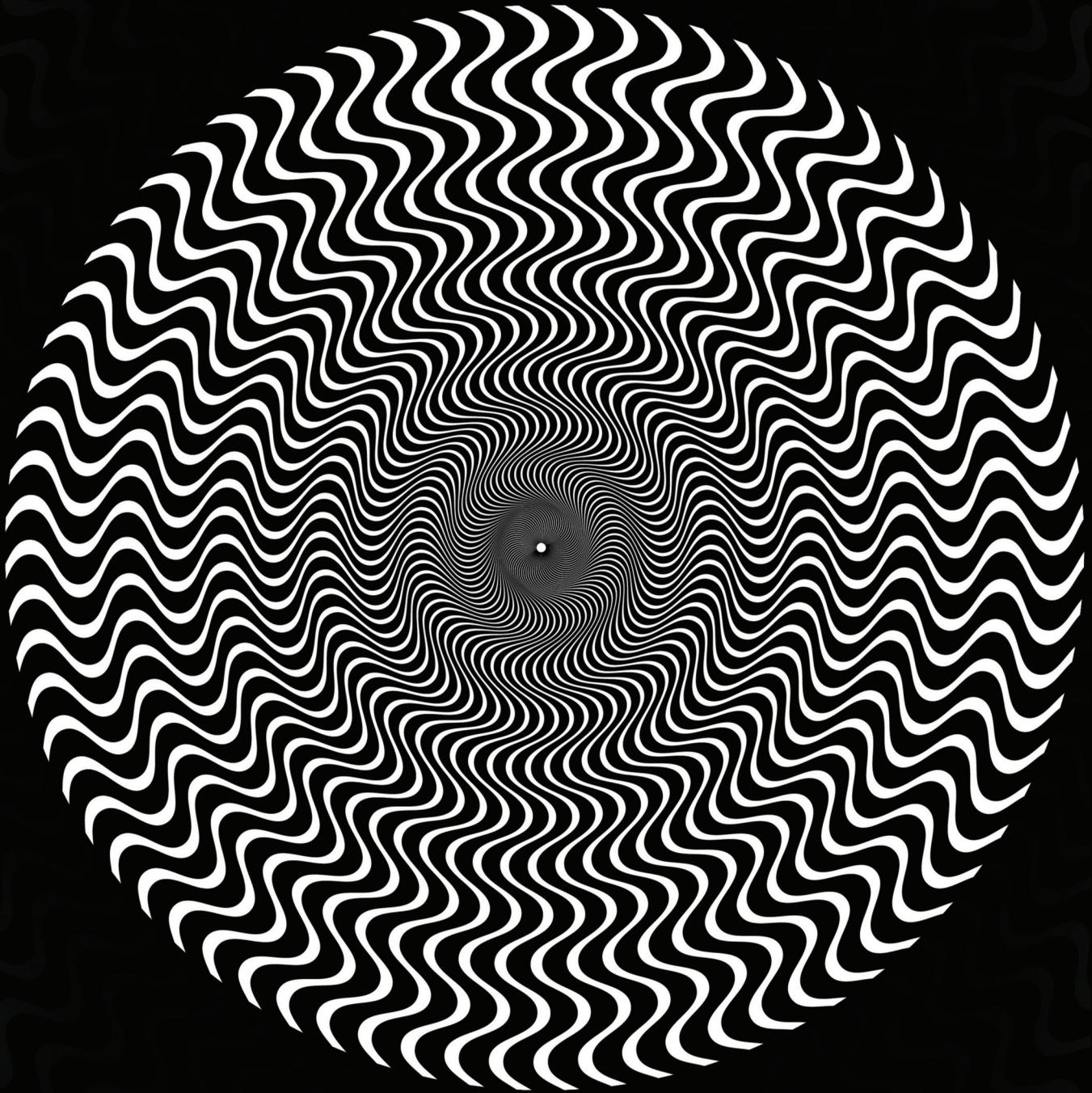
ECOTEXTILE

NEWS

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In a Spin

Centrifugal dyeing saves water



Falling foul

Western brands rank poor on China Index

Greenpeace speaks

Do we detect a new, softer approach to Detox?

How long is it?

The re-launch of String. Simplifying product traceability

Two minutes with...

Stacy Flynn,

CEO, and co-founder, Evrnu, SPC

Evrnu is making a serious name for itself through its R&D work which is helping to 'close the loop' in textiles. Could you tell us a little about the company.

Evrnu technology breaks down post-consumer cotton garment waste and converts it into a premium fibre for the creation of new textiles. Cotton garment waste is purified and converted into a pulp using a proprietary purification and solvent technology that is not rayon or lyocell. This would be a completely new generic fibre classification.

What kind of process are you using?

The process is a chemical and mechanical interface. The pulping and extrusion equipment is being redesigned to prevent off-gassing, re-use of solvents and management of the overall environmental impact in a closed vat system. We are currently commercialising our first solvent and have multiple technologies in development to chemically break down cellulose and polyester from post-consumer garment waste.

What is the background to Evrnu?

Myself and my business partner, Christopher Stanev, are textile professionals by education and trade and have worked for some of the largest textile companies, brands and retailers in the world. We wanted to use our career, connections and expertise to find solutions that work within the way clothing is currently made and distributed.

Our initial research found fibre resource extraction and garment waste to be of significant areas of negative environmental impact. We

have since begun developing technologies that break down garment waste and convert it into new fibre.

Is your technology patented?

In July 2015 a continuation-in-part patent application was filed to merge the cleaning technology and pulping technology. An additional provisional patent application was also filed for the pulping technology. In early September 2015 an additional provisional patent was filed for blended fibre separation. Trademark applications for registration of Evrnu have been filed in the US & EU. Additional mechanical provisional patent applications are scheduled for filing in 2016.

Does your process use solvents and chemicals?

We do not use organic solvents, we are using a chemistry that acts as a donor and receptor for the cellulose intermolecular hydrogen bond. We are engineering our system to minimise environmental by-hazards and we see a massive reduction in overall impact on our preliminary LCA.

Can the technology be brought to a commercial scale?

We have commissioned a report isolating all garment waste within a 500 mile radius of our first facility, conversations with waste brokers are underway, and we have broken down our first pre-production mixed feedstock in the South East USA. We are considering scaling partner(s) and have begun initial conversations. Fibre companies and vertical garment manufacturers have expressed interest and we are open to working with organisations that are actively seeking new methods of producing fibre to



Stacy Flynn

leverage the current distribution model as well as build localised capacity long term.

Would the Evrnu re-spin 'cotton VII' also be recyclable through the same process?

We have proven that Evrnu fibre can break down using the same process at least one time and are in development with several alternatives for re-use. We intend to take full responsibility for our product and guarantee Evrnu fibre can be taken back and broken down.

What about the properties of the 'new' cotton – eg of strength, abrasion, dyeability, dye fastness, staining propensity etc?

We see an increase in available dye sites and improved dyeability in both reactive and vat dyes, but we have much more work to do on QA; we have extruded fibre with finer denier than silk, with a strength profile stronger than cotton. We can engineer any cross section and are in development with this work now to demonstrate the full versatility of this fibre on behalf of our brand/retail early adopters.

How would the new fibre be branded?

Right now we are calling the process Evrnu; the FTC will determine the generic name. Any new fibres developed from post-consumer garment waste will be under the Evrnu brand promise. ■