

# Science Fiction Clothing – Coming to Life



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In 1995, Science Fiction writer, Neal Stephenson wrote about nanofabric that stayed cleaned. He referred to fabricules as the self-cleaning fabric.

Now the U.S. Airforce has made Science Fiction come to life. There is a new technology which attaches nanoparticles to clothing fibers using microwaves. These chemicals will repel water, oil and bacteria, because they are directly bounded to the nanoparticles. These two elements combine to create a protective coating on the fibers of the material. This coating both kills bacteria, and forces liquids to bead and run off.

The U.S. Military spent more than 20 million to develop the fabric.

"During Desert Storm, most casualties were from bacterial infections – not accidents or friendly fire." Jeff Owens, one of the scientists who worked to develop the process said.

They treated underwear of soldiers who worn them for several weeks and it was found to stay hygienic. Not only did the underwear stay clean, but it was also reported that it cleared up some skin complaints.

In 1951, there was a film called, "The Man in the White Suit." This film had the general idea of clothes that never got dirty. In 1961, the Science Fiction writer, Stanislaw Lem, wrote about spray-on clothing, in his novel, "Return From the Stars." In the Utopian world of the novel, life's necessities are readily available to every one – including single-use, original clothing.

Once again the science world brought science fiction to true life.

Fabrican is fabric in a can – yes, it's true. Spray on a shirt or dress, right out of the can. The fabric looks similar to a thin cotton teeshirt, but it's very clingy. Fabrican is the creation of Manel Torres, a post-graduate from the Royal College of Art.

This cloud of non-woven cloth is made by spraying a chemical formula directly onto the skin. Thousands of fibers splatter against your skin. The fibers bind together to create disposable apparel. It's as tough as hemp for some uses, or soft as silk for others.

As the future comes to us at warp speed, another idea in a novel is coming to life. In William Gibson's 1984 novel, "Neuromancer," he writes: The Panther Modern leader, who introduced himself as Lupus Yonderboy, wore a polycarbon suit with a recording feature that allowed him to replay backgrounds at will.

A real-life polycarbon suit is the dream of Greg Sotzing of the University of Connecticut, in Storrs. He has developed threads of electrochromic polymers which change color in response to an applied electric field.

## **This is how it works:**

A mixture of differently colored threads would be knitted or woven into a teeshirt or blanket, along with a small number of thin metal wires connected to a battery pack and a micro-controller. The crisscrossing wires effectively divide the shirt into pixels. Each colored thread changes its state at different voltages, so by varying the voltage between different pairs of wires you can change the color of each pixel. By connecting the controller to a camera, it could even be made to switch the pixels to display a pattern matching your surroundings.

Electrochromic polymers are colored because the electrons in their chemical bonds can absorb light across a range of visible wavelengths. When a voltage is applied it changes the energy levels of these electrons, causing them to absorb light of a different wavelength, and changing the material's color. When the voltage is reversed, the electrons return to their usual energies and the original color returns.

This teeshirt is still in the process of being made, but they already have been successful in creating fibers which will turn from orange to blue, and from red to blue, according to "New Scientist" print edition.

**About the author:**

This article has been submitted in affiliation with <http://www.Facsimile.Com> which is a site for [Fax Machines](#).

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