

RETHINKING DESIGN

ETH Zurich Meets Davos during the World Economic Forum's Annual Meeting (22 – 25 January 2019)

Information, photographs, and video footage

Spectroplast – Every Designer's Dream

Zurich, 15 December 2018

The Next Revolution in Additive Manufacturing

Spectroplast AG, an ETH Zurich spinoff company, introduces the next revolution in digital fabrication: Silicone Additive Manufacturing that is flexible, safe, and potentially life-saving.

Nature inspires new manufacturing tech

Implementing the world's first silicone printing technology, Spectroplast is poised to make an impact on the manufacturing industry shifting the focus from rapid prototyping to additive manufacturing. Their ground-breaking material chemistry makes high precision 3D printing possible without a mould saving time, costs, and waste.

Until now, additive manufacturing has traditionally produced rigid objects made of metal, ceramic, or plastic. However, nature inspires materials that transform, morph, and self-heal. Compliant materials in nature adapt, interact, and conform to its environment. Spectroplast introduces Silicone to Additive Manufacturing to create flexible and biocompatible materials that allow for the mass customization of silicone materials from rigid to soft and stretchable.

Customized medical implants and more

Imagine customized wearables for nearly everything from anatomically precise models for the medical industry to body doubles for the film industry. ISO certified Spectroplast's materials are safe and customizable for patient-specific life-enhancing and life-saving medical applications. For example, customized hearing aids and ear protection, orthopaedic shoe insoles, ergonomic cushions, snoring remedies, dental prosthesis just to name a few. Spectroplast intends to offer a full range of tailor-made medical implants.

Background Information

Economical and resourceful

The disruptive Silicone Additive Manufacturing Technology (SAMT) enables direct fabrication of functional silicone products straight out of the 3D printer without the use of moulds. Since all of the materials can be recycled, the process is resource efficient while at the same time cutting cost and time.

“We believe industrial-scale silicone additive manufacturing will shift focus from rapid prototyping to mass customization of functional products that have a positive impact on our lives. Spectroplast satisfies emerging requirements in multiple industries by bringing industrial-scale silicone additive manufacturing to the mass market.”

- Manuel Schaffner, CEO Spectroplast AG

Bios

Bios for **Manuel Schaffner, Co-founder and CEO, Petar Stefanov, Co-Founder and CTO, and Co-Founders André Studart and Anil Sethi** can be found here: <https://www.spectroplast.com/team/>

References

3D-printed minifactories – ETH News article

<https://www.ethz.ch/en/news-and-events/eth-news/news/2017/12/3d-printed-minifactories.html>

3D printing of robotic soft actuators with programmable bioinspired architectures – Nature Communications

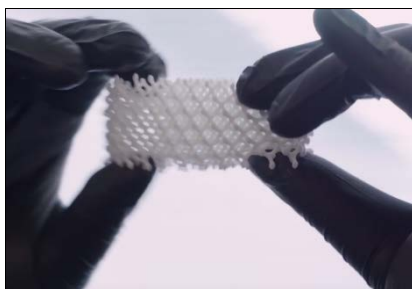
<https://www.nature.com/articles/s41467-018-03216-w>

Spectroplast website

<https://www.spectroplast.com/>

Images and video material

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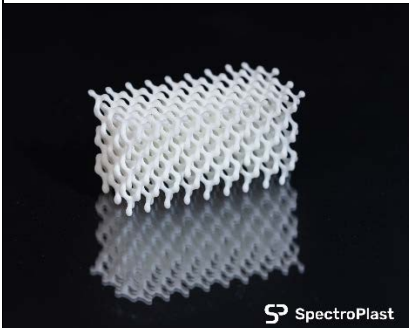
3D Printing of Soft Medical Implants (video)

ETH spin-off Spectroplast revolutionizes additive manufacturing and enables customized implants made from soft silicone.

<https://youtu.be/knKAeDrtLnA>

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Background Information

	<p>Silicone skulls ©Spectroplast</p>
	<p>Silicone lattice ©Spectroplast</p>

Additional image and video downloads:

<https://www.spectroplast.com/downloads/>

<https://polybox.ethz.ch/index.php/s/8h9ViWFpdQPKa2p>