

January 2018

In this issue we present 3D printing solutions for biomedical challenges as well as valuable new software features of our 3D printer Photonic Professional *GT* that ease the realization even of very advanced applications, e.g., in photonics, life sciences or micro robotics. Some of them will be presented by our customers at BiOS and Photonics West in San Francisco.

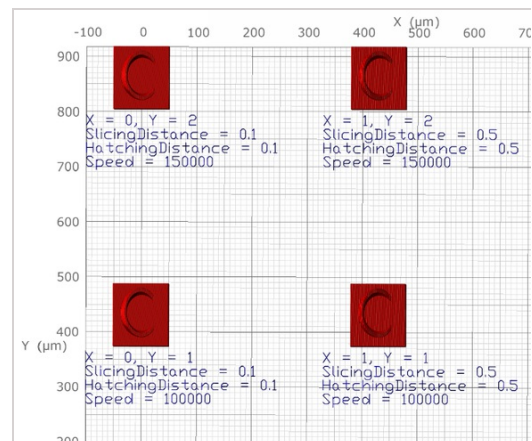
Also, Nanoscribe celebrates its 10th anniversary these days. We started little but thanks to a lot of energy and hard work, we have become the world leader in high precision 3D printing. Thank you for your trust, loyalty, and excellent cooperation during the last 10 years!

*Best regards,
Your Nanoscribe team*

New Software Features For Advanced STL Processing

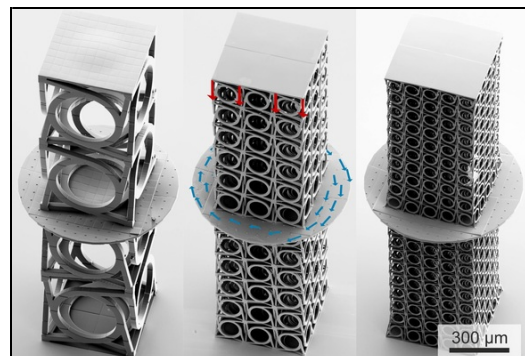
Nanoscribe's latest software release DeScribe (2.5) offers new valuable features for handling CAD designs in STL data format improving the user experience with ready-to-use tools, reliable routines and fast workflows. A parameter search tool and quick STL batch processing ease the development of e.g. novel applications or materials. [More](#)

"We like the software because it's very user-friendly. In DeScribe for example, I like that I can program my structure very individually and get a preview of the 3D design. So I immediately see if I did something wrong"
Emely Harnisch, Fraunhofer Institute for Production Technology (Aachen, Germany)



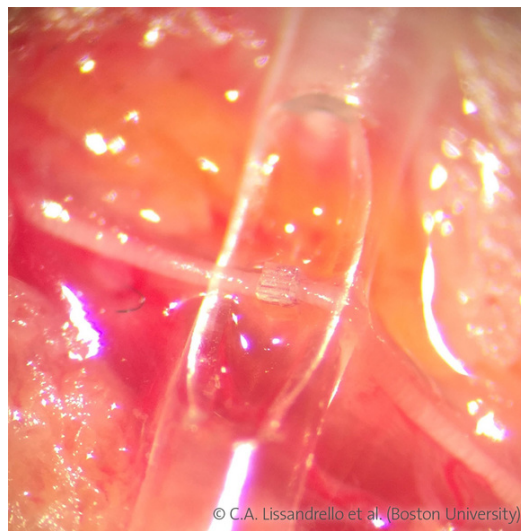
Metamaterials With a Twist on the Cover of Science Magazine

Pressing on an elastic bar can make it expand or bend in the orthogonal directions. However, a twist has not been observed in ordinary materials. Our customers at the Karlsruhe Institute of Technology and the Université de Bourgogne Franche-Comté have created a new 3D metamaterial that twists under compression. [More](#)



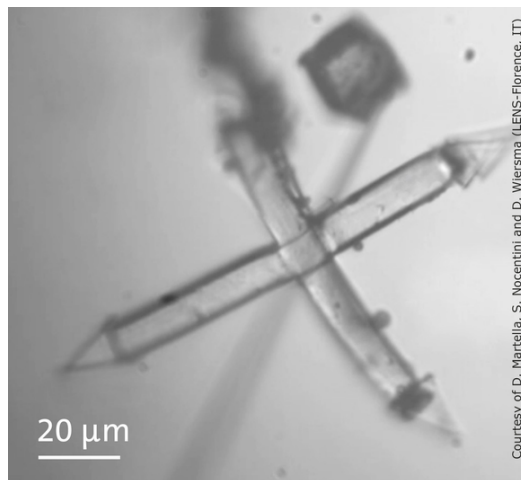
Biocompatible 3D Micro Devices

3D microprinting opens doors to applications where ultra-precise tools are needed. But can this technology be suitable for creating devices that can be accepted by living cells and organisms? Basic research in photoreceptor scaffolds for cell regeneration and printable nanoclips as nerve interfaces exemplifies how 3D printed parts can solve previously insurmountable challenges in biomedical engineering. [More](#)



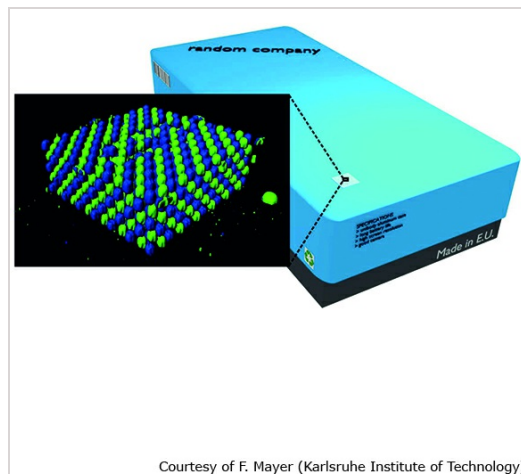
3D Printed Micro Hand Actuated By Light

Have you already heard of 3D printed micro parts moved by light? As presented in this article, researchers at the European Laboratory of Non-Linear Spectroscopy (LENS, Italy) have developed a flexible soft micro hand that is capable to bend its fingers powered by light and grab particles. You will find this light-actuated micro hand as well as other 3D printed microrobots in our new application section on "Micromachines". [More](#)



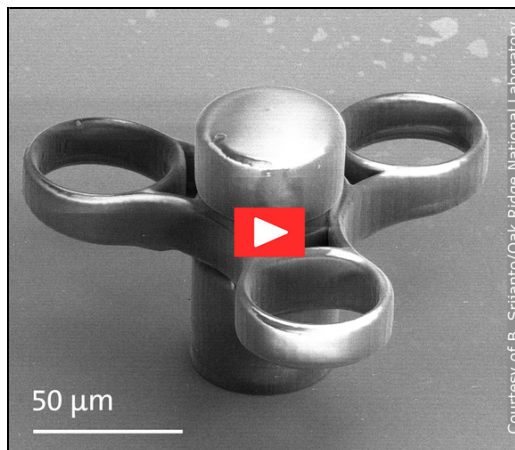
3D Security Features

Scientists from the group of Prof. Dr. Martin Wegener at the Karlsruhe Institute of Technology (KIT) and the company ZEISS developed new counterfeit security features using Nanoscribe's 3D microprinters. They are composed of a nonfluorescent 3D cross-grid scaffold and fluorescent markers which can be arranged freely on the grid in all three dimensions. Due to the individual and complex 3D design, this security microstructure is hard to copy for counterfeiters. [More](#)



World's Smallest Fidget Spinner

Do you know [the movie](#) of the world's smallest fidget spinner? Our customers at the Oak Ridge National Laboratory's Center for Nanophase Materials Sciences (CNMS) printed the tiniest fidget spinner ever made using Nanoscribe's 3D microprinter. They fabricated the entire fidget spinner on a silicon substrate in one single printing step.



+++ COMPANY NEWS +++

10 Years of Nanoscribe

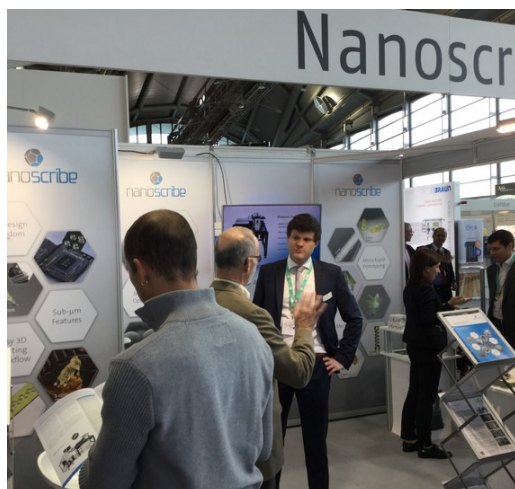
These days we celebrate the 10th anniversary of Nanoscribe. With the company's foundation on December 12, 2007, the technology of two-photon polymerization (2PP) was taken out of a research niche and made available as off-the-shelf product to laboratories worldwide. [More](#)



Meet us at BiOS and Photonics West

Additive manufacturing on the microscale helps to create precise, complex and individualized 3D micro-devices to address biomedical challenges. Our customers' published work on micro scaffolds for cell regeneration, implants for nerve stimulation, and micromotors for assisted fertilization are few of the many examples in this field.

Do not hesitate to meet us personally at **BiOS (booth 8544)** and **Photonics West (booth 4368)** in San Francisco (CA, USA) from **January 27 - February 2, 2018** and to make an appointment in advance (sales@nanoscribe.com). A list of talks given by users of Nanoscribe systems can be found [here](#).



For free access to the trade fair, you can register at spie.org/PW/registration/

SPIE. PHOTONICS WEST

Upcoming Exhibitions

Micronarc Alpine

Meeting

Villars-sur-Ollon (CH)

Feb 04 - 06

Booth: 3

29. Internationales

Kolloquium

Kunststofftechnik

Aachen (DE)

Feb 28- March 01

Booth: 33

LASER China

Shanghai (CN)

March 14 - 16

Booth: 1604 (W1)

Send us an [e-mail](#) and tell us what challenges you face! We are happy to support you.



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