

PRESS RELEASE

FOR IMMEDIATE RELEASE

December 22, 2022

An unparalleled success story – Our 150th MLA 150 Maskless Aligner installed

Heidelberg, Germany – We are happy to announce that one hundred and fifty MLA 150 Maskless Aligners have been successfully installed worldwide at our customers facilities. First launched to the market in 2015, the revolutionary maskless technology of the MLA 150 has become firmly established within the advanced microfabrication community.

The MLA 150 was the first and only tool that has become a true alternative to mask-based aligners, offering extremely high exposure speed, high frontside and backside alignment accuracies, warpage compensation, high resolution and high accuracy, and the ability to expose on any substrate size from pieces that are a few square millimeters up to full 8” wafers. Further adding to the flexibility, the non-contact exposure technique for the MLA150 in addition to the simple ease of use makes this the ideal tool in rapid prototyping environments, for low to mid-volume production, and for research and development. Common application areas include MEMS, electronics, micro-optics, micro-fluidics, sensors, and many more.

École Polytechnique Fédérale de Lausanne (EPFL) – Pioneer in maskless technology

The beta-version of the MLA 150 was installed in August 2014 at the Center of MicroNanoTechnology (CMi) of the renowned École Polytechnique Fédérale de Lausanne (EPFL) located in Switzerland, being one of Europe’s most vibrant and cosmopolitan science and technology centres. The CMi is a complex of clean rooms and processing equipment devoted to microtechnology made accessible to trained academic and industrial users. The CMi is at the same time one of the pioneers in maskless lithography.

In 2022, the CMi purchased their second MLA 150 Maskless Aligner, which was installed most recently. *“The MLA 150 is today one of the most important equipment in our facility, and there are many users that daily use the machine for printing. So, we wanted to have two of them”*, emphasizes Julien Dorsaz, the manager of the photolithography division of the CMi. To get insights into the work at the CMi, and to learn about the MLA 150 experience of the users, we conducted a 30-minute interview with Julien Dorsaz. Get the full interview on our [YouTube channel](#).

Today, the MLA 150 serves as a trusted, indispensable workhorse in many multi-user facilities, microfabrication labs, and research institutes. Since its market introduction, the MLA 150 has developed into one of our most important technologies in our company’s product portfolio. Setting the bar for state-of-the-art maskless lithography, the MLA 150 promises continuous market growth in the coming years.

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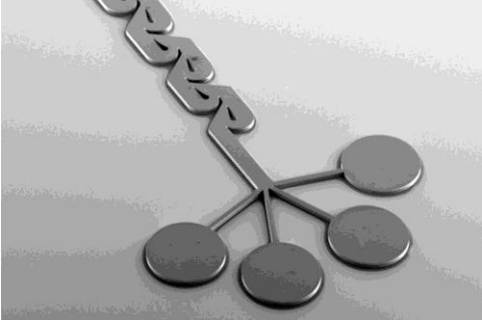
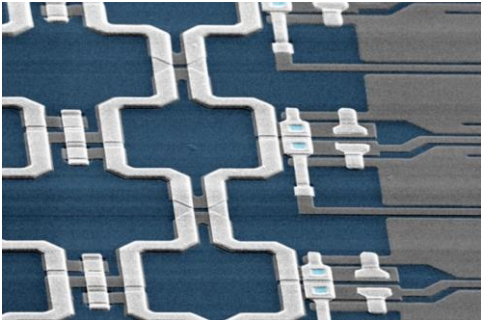
Further information

[heidelberg-instruments.com](https://www.heidelberg-instruments.com)

About Heidelberg Instruments Mikrotechnik GmbH:

With over 35 years of experience and well over 1,300 systems installed worldwide, Heidelberg Instruments is a world leader in the design, development and manufacture of high-precision laser lithography systems, maskless aligners and nanofabrication tools. Industry stakeholders as well as working groups of the most renowned universities and research institutes all over the world use Heidelberg Instruments systems for the advanced micro- and nanofabrication. Fields of applications include micro-optics and microsystems technology, photonics, electronics, semiconductors/advanced packaging, quantum computing, MEMS/NEMS, micro-mechanics, biomedical engineering, 2D material, IoT and many more. Heidelberg Instruments provides lithography solutions specifically tailored to meet the micro- and nanofabrication requirements of our global customers – no matter how challenging.

Selected images with captions –

 A white, industrial-grade maskless aligner machine with a red safety window and the Heidelberg logo on top.	<p>The MLA 150 Maskless Aligner for the advanced microfabrication: The fastest maskless aligner for R&D, rapid prototyping and low-volume production, designed for binary lithography.</p> <p>Source: Heidelberg Instruments Mikrotechnik GmbH, Germany.</p>
 A 3D CAD model of a microfluidic mixer master, showing a central channel branching into four circular chambers.	<p>A master for a microfluidic mixer to be transferred by soft lithography in PDMS. The structure is patterned in 100 μm Su-8 with the 375 nm laser wavelength of the MLA 150 Maskless Aligner.</p> <p>Courtesy of CMi EPFL Center of MicroNanotechnology, Lausanne/Switzerland</p>
 A close-up photograph of a SQUID magnetic flux sensor, showing a complex, interconnected circuit pattern on a blue substrate.	<p>A SQUID magnetic flux sensor for Quantum technology Application after an 18 layers process made with the MLA 150 Maskless Aligner.</p> <p>Courtesy of the Kirchhoff Institute for Physics, Heidelberg, Germany.</p>