

"Direct Write Lithography systems from Heidelberg Instruments"

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The versatility of using direct write lithography systems for micro and nano patterning has created the need for tools for a broad range of applications, all with different requirements in specifications and cost.

This talk will give an overview of requirements and solutions for research and industry applications. We will look at a selection of tools from Heidelberg Instruments portfolio.

The NanoFrazor uses a heated scanning probe for patterning in the nano scale with the ability of markerless overlay which has achieved sub 5nm accuracy. Applications for the NanoFrazor range from high quality metal contacting on 2D materials to nanofluidic devices and others.

We may also look at the MLA150 for maskless lithography and the MLA300, which builds on the success of the MLA150 providing industrial scale throughput for substrates up to 300mm in size.

For optical direct write applications where pattern placement accuracy and registration is important such semiconductor photomask production we will look at the ULTRA semiconductor photomask writer.

About Heidelberg Instruments:

With over 1000 installed worldwide, Heidelberg Instruments is the leading provider of Direct Write Lithography systems. Customers include leading universities, multi user facilities, government research laboratories and industrial organizations. The systems are utilized in various applications that include MEMS, Microfluidics, Micro optics, MOEMS, CMOS, Semiconductor Packaging, display technology and any other application that require micro patterning.

In 2018 Heidelberg Instruments joined forces with SwissLitho AG, adding the NanoFrazor's nanofabrication capabilities to their portfolio.