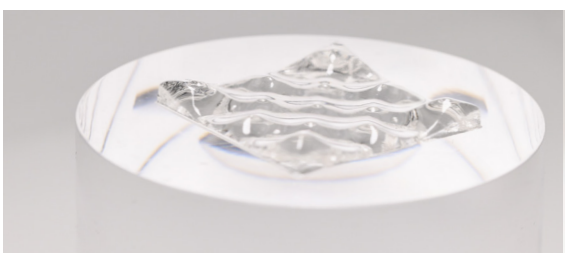
PRINTED OPTICS

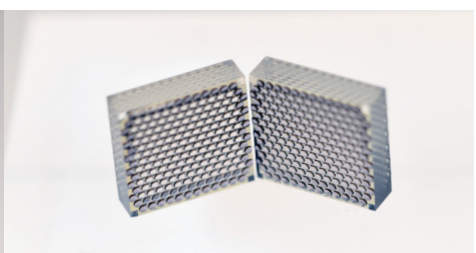
PRINTED OPTICS

OPTICAL QUALITY AND 3D-PRINTING is no contradiction at all. Printing non-spherical and complex refractive surfaces could enable a cost-effective, sustainable and individualized production beyond just prototyping. Moreover, 3D-printing allows the integration of additional features into or onto the printed components beyond the optical functionality.

MATERIAL INNOVATION The formation of complex optical surfaces is accomplished by either stereolithography or inkjet-printing. Particularly synthesized inks and an innovative process flow enable the formation of smooth and precise optical surfaces, which meet the requirements of illumination optics so far.

ORMOCER®s combine the favorable optical properties and stability of glasses with the processing opportunities of conventional polymers. Customizable properties are, e. g., refractive index, mechanical stability, optical absorption. Using additional inks or resins during the printing process allows supplementary functionalization. The aim is to achieve an all-printed optical system.





CONTACT: gerhard.domann@isc.fraunhofer.de

Fraunhofer ISC