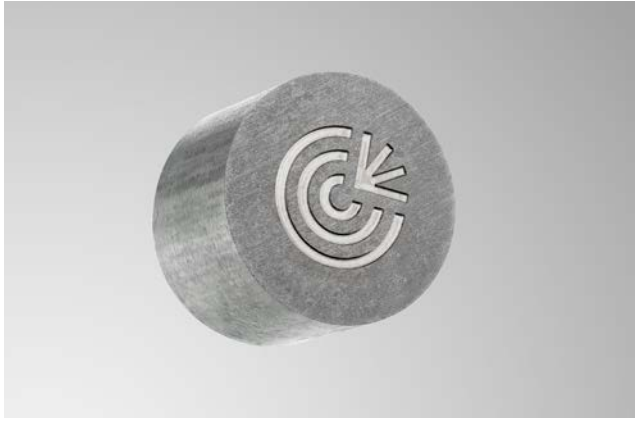


### Selective ablation



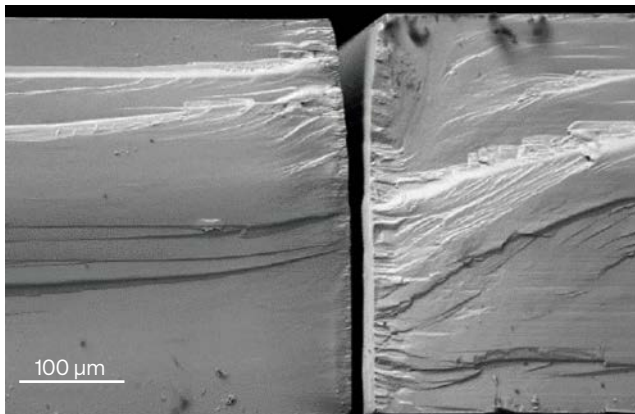
Selective ablation of tungsten carbide.

### High-contrast marking



High-contrast black-and-white marking on stainless steel using the BiBurst option.

### Brittle & highly thermal-sensitive material cutting



Multi-pass cadmium tungstate cutting. No cracks. All thermal trace effects eliminated.

Source: Micronanics Laser Solutions Centre

### Stainless steel stent cutting



Example of stent cut from stainless steel.

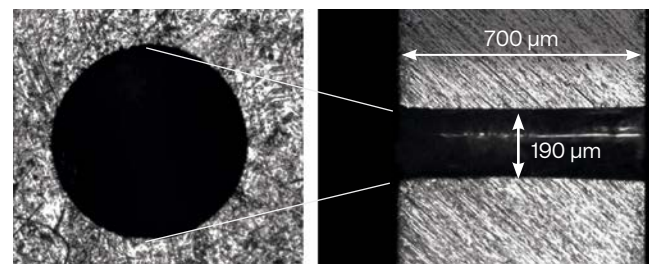
### Glass needle microdrilling



Glass needle microdrilling.

Source: Workshop of Photonics.

### Steel drilling



Taperless hole microdrilling in stainless steel alloys.

Source: Workshop of Photonics.

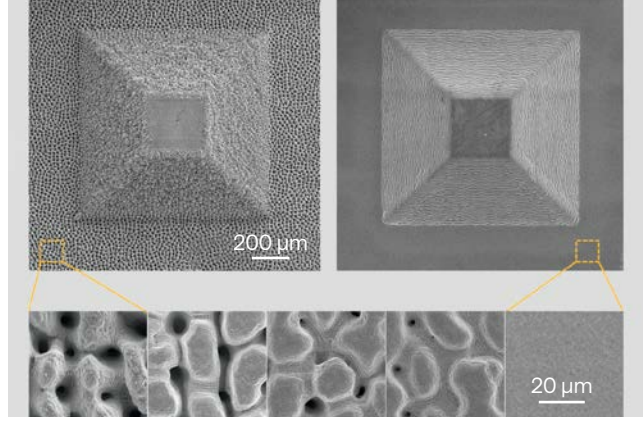
## Milling of complex 3D surfaces



3D milled sample in copper. Zoom-in SEM image.

Source: A.Žemaitis, et al. Scientific Reports (2019).

## Stainless steel polishing



SEM images of structures ablated in stainless steel, before and after polishing using GHz burst (from left to right).

Source: D.Metzner, et al. Applied Surface Science (2020).

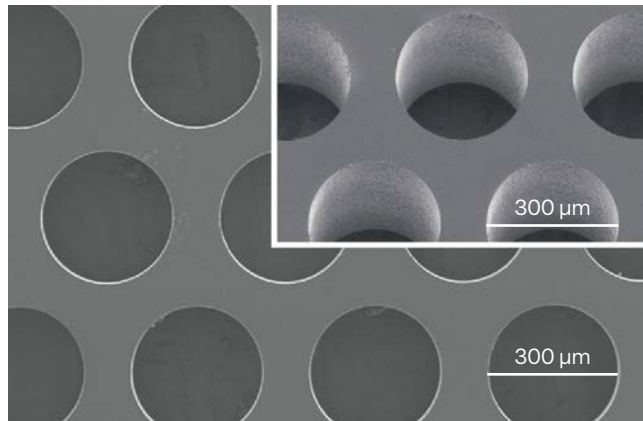
## Birefringent volume modification in glass



Form induced birefringence-retardance variation results in different colors in parallel polarized light.

Source: Workshop of Photonics.

## High precision glass drilling



Glass micro drilling, no taper

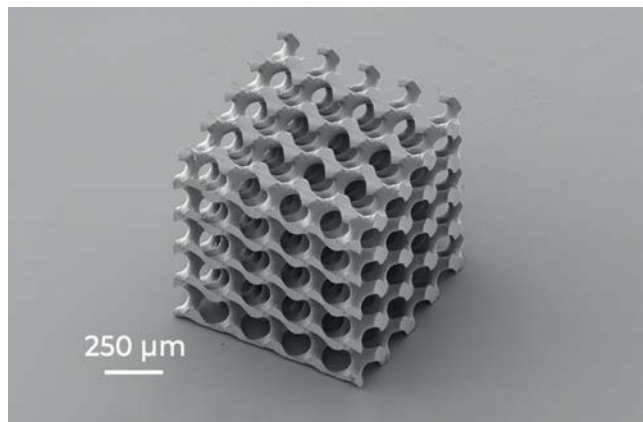
Source: Workshop of Photonics.

## 3D glass etching



Structure fabricated in fused silica.

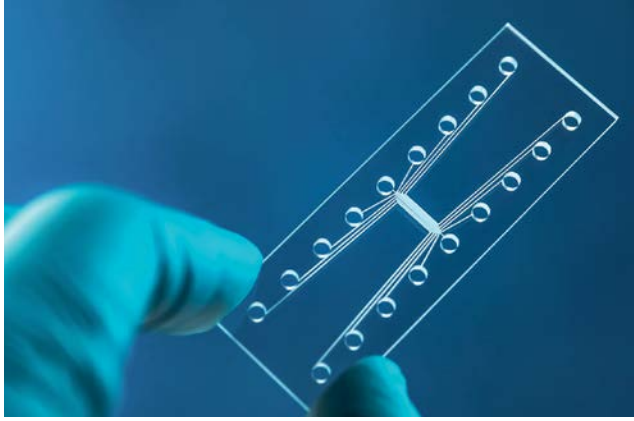
## 3D multiphoton polymerization



3D structure fabricated from SZ2080 polymer using multi-photon polymerization.

Source: Femtika.

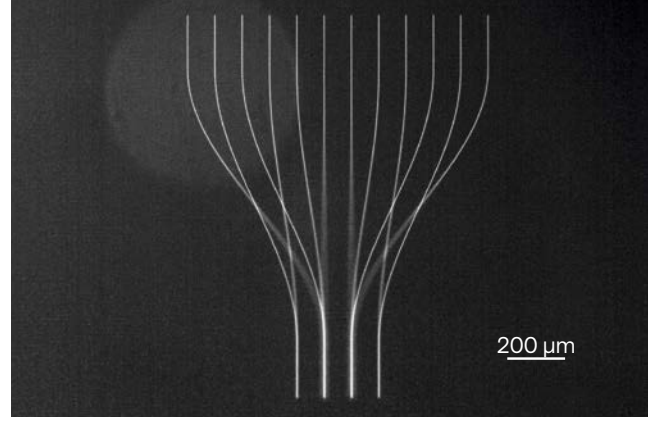
### Microfluidic channel ablation and welding



Microfluidic chip manufacturing with channel sealing.

Source: Workshop of Photonics.

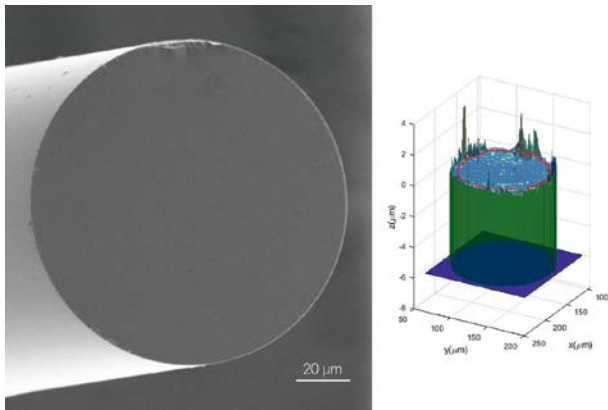
### 3D waveguides



3D waveguides fabricated in fused silica glass.

Source: Workshop of Photonics.

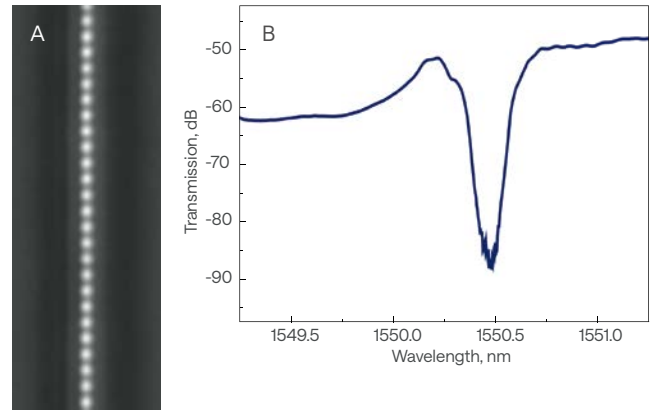
### Fiber cleaving



Fiber end face after laser-based scribing (left) and its surface profile (right).

Source: Swinburne University of Technology.

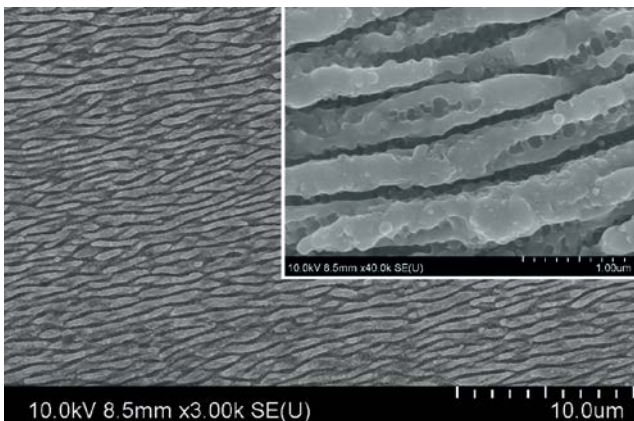
### Bragg grating waveguide (BGW) writing



First-order Bragg gratings inscribed in waveguide (a). Resonant spectral transmission of inscribed BGW (b).

Source: G.Zhang, et al. Photon. Res. (2019).

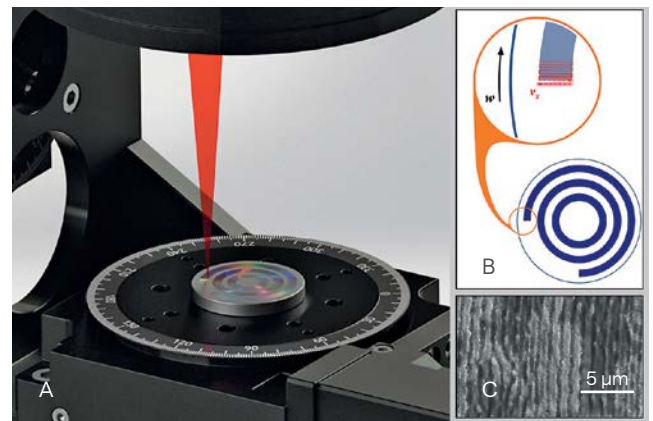
### SERS sensor fabrication



SEM image of the Ti-6Al-4V (TC4) surface after irradiation with progressive laser scan.

Source: L.Lu, et al. Nanomaterials (2019).

### Friction and wear reduction



Schematic of the laser treatment (a), laser patterning strategy (b), SEM image of induced LIPSS (c).

Source: I.Gnilitskiy, et al. Lubricants (2019). Nanomaterials (2019).

### Intraocular lens cutting



Laser-cut intraocular lens.

Source: LASEA.

### Silicon Carbide dicing



Single-pass (300 mm/s) dicing of 500  $\mu$ m thick 4H-SiC wafer.

### Cutting and welding



Cut and welded parts from brass using a single laser system.

### Silicon dicing



Precise dicing of a silicon wafer.

### Surface texturing



Moon-like surface texturing on a watch bezel.

Source: LASEA.

### Nozzle drilling



Precision drilling of the nozzle holes.

