JOANNEUM RESEARCH MATERIALS

Femtosecond Laser Micromachining

3D Microstructures – Written with Light

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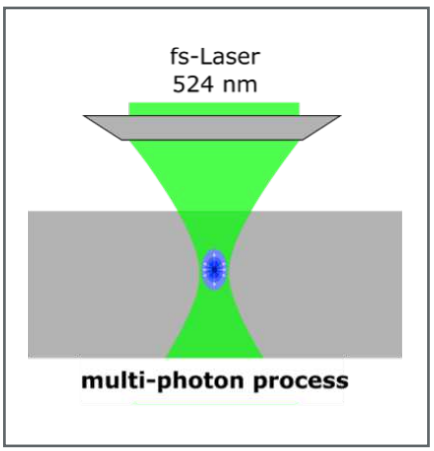
We use **ultrashort laser pulses** to create precise 3D structures inside transparent materials like glass. This powerful method enables **high-resolution fabrication** of waveguides, microchannels, and custom optical components – without masks, chemicals, or cleanrooms.

- **Sub-micron precision**
- **True 3D structuring inside the material**
- **Fast, flexible prototyping**
- **Additive, subtractive & modifying processes**
- **For optics, quantum tech, microfluidics & more**



Our laser systems offer:

- Pulse durations down to **210 fs**
- Speeds up to **30 m/s**
- Processing areas up to **400 × 400 mm**

From concept to structure – written directly into glass.

Wavetailor

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FFG Promoting Innovation.

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