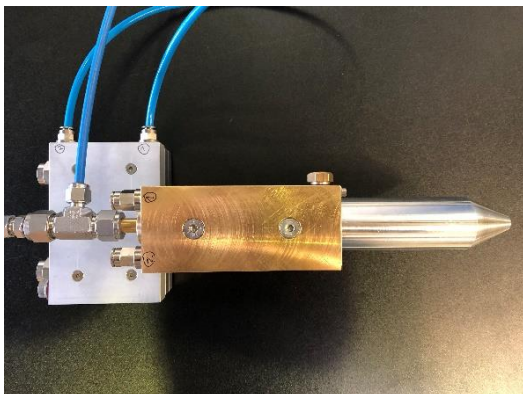
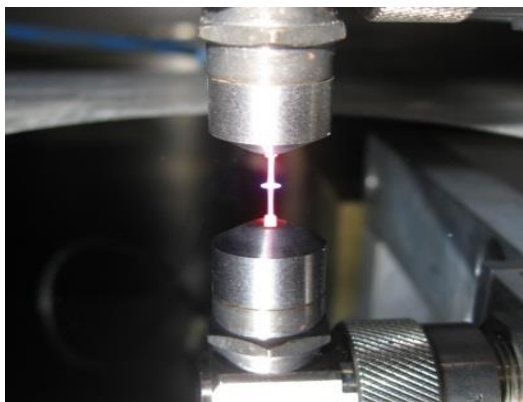


REACTIVE PLASMA JET SOURCES



- Development of reactive atmospheric pressure plasma jet sources excited by microwaves or RF
- Scalable tool functions (FWHM 0.2-10 mm, MRR 0.01-20 mm³/min)
- Application: Plasma Jet Machining and plasma polishing, surface cleaning and activation



THE INSTITUTE



The Leibniz Institute of Surface Engineering (IOM) is well known for its competence and excellence in engineering surfaces and thin films by ion beam, electron, laser and plasma techniques. The institute performs application-oriented basic research by aiming for scientific knowledge gain related to the physical and chemical mechanisms in the preparation, synthesis and modification of insulating, metallic, semiconducting and polymeric surfaces and thin films. One of the main objectives of the institute is to transfer its scientific understanding to product- and method-oriented applications useful to industrial partners who wish to use engineered materials and surfaces in economically relevant and forward-looking technology fields.

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figuring with plasmas and ions

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IOM

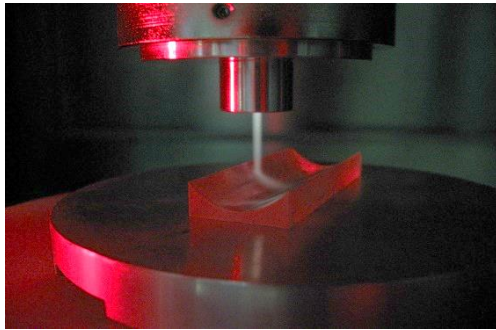
Leibniz Institute of
Surface Engineering

IOM APPLICATION CENTER: PLASMA AND ION BEAM TECHNOLOGIES FOR SURFACE FIGURING

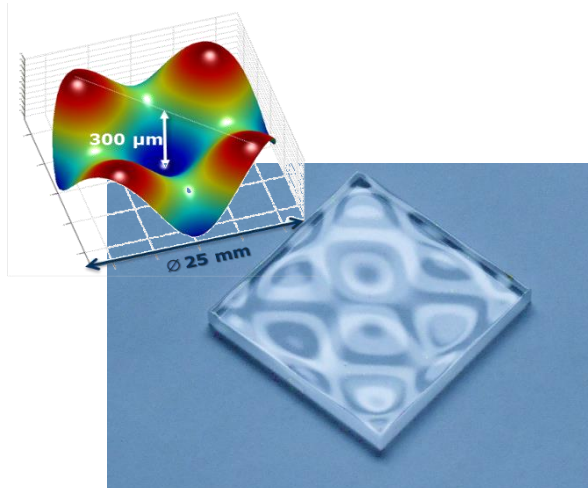


TAILORED SURFACES

PLASMA JET MACHINING



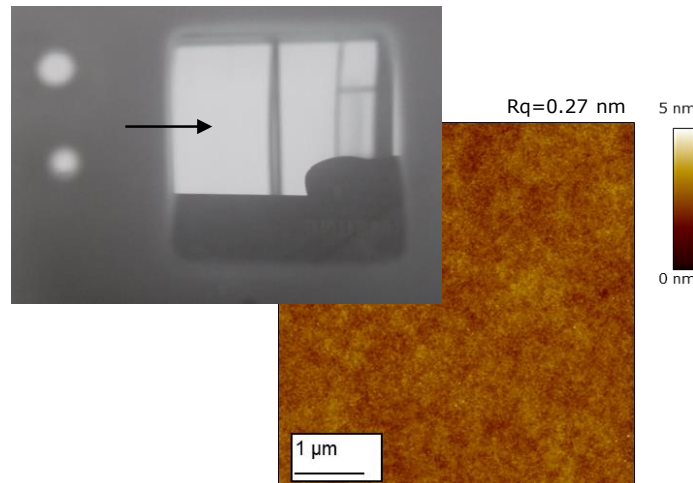
- Application of chemically reactive plasma jets for high rate surface figuring and nanometer figure error correction
- Development and optimization of methods and process chains for surface figuring using plasma jets and robot polishing
- Tested materials: Si, SiO₂, SiC, Ge, ULE, ZERODUR, metals, etc.



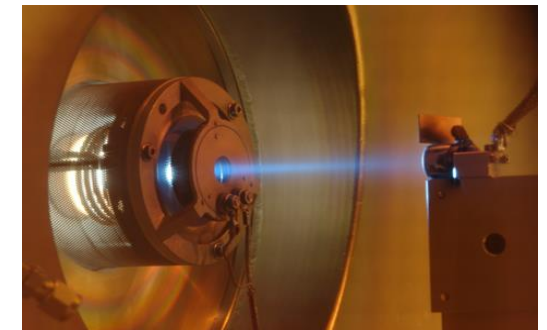
PLASMA ASSISTED POLISHING



- Application of non-reactive thermal plasma jet treatment for smoothing of ground glass surfaces
- Reduction of SSD and increase of laser damage threshold
- Materials: Fused silica, NBK7



ION BEAM FIGURING



- Modern machinery for ultra-precision IBF/RIBE processes
- Development of sub-aperture RIBE processes for direct treatment of aluminium surfaces
- Application: Figure error correction and smoothing of metal optics and other optical surfaces

