

Microworks GmbH

Microworks - your shop for X-ray optical microcomponents

Microworks manufactures uniquely narrow and tall microstructures. We have been supplying customers in the fields of micromechanics, micro-optics, materials research and medical technology for 10 years with increasing success. The X-ray imaging market currently offers the greatest opportunities for Microworks. Our development expertise enables our customers to test new concepts for geometric X-ray optics and interferometric optics and to integrate them into final products as beam shaping elements or as sensors. Our products cover an energy range between 1eV and 100keV (wavelength range between 1 μ m and 0.01nm). Primarily structures made of gold and nickel are used. Our offer is technologically the LIGA technology.

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Kernkompetenzen

Lithography

Our technology uses exposure to X-ray light to transfer structures of a mask into a high polymer (X-ray lithography). Then the polymer structures are filled with a metal in an electroplating step. Among experts, this technology is known as LIGA (X-ray lithography and electroplating). Besides our core competence X-ray lithography, we also use laser lithography, UV lithography, 2-photon lithography and e-beam lithography with high expertise.

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Electroplating / Galvanoforming

Gold electroplating and nickel electroplating represent our other core competencies. We routinely deposit both materials up to a substrate size of 8 inches. Typical material heights range from single microns to 500 μ m (gold) and several mm (for nickel).

X-ray-Technology / Imaging

Our parts are typically used to improve x-ray imaging aparatuses. The product range is: Apertures, Gratings and Grating Sets, Beamstops, Resolution Targets, X-Ray Lenses and complete Talbot-Lau Interferometers for Darkfield- and Phase contrast imaging. (Talint-EDU series)

Wertschöpfungskette:

- Entwickler
- Produktion

Technologie:

- Foundry
- Mikroaktorik
- Mikromechanik
- Mikromontage
- Mikrooptik
- Nanotechnik
- RF-MEMS

Branche:

- Automatisierung
- Sensor- Mess- & Regeltechnik
- Informationstechnik und Telekommunikation
- Maschinen und Anlagenbau
- Medizintechnik
- Optische Industrie

Hauptgeschäftssitz

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Ansprechpartner

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Weitere Informationen

Niederlassungen (Orte): Karlsruhe, Eggenstein-Leopoldshafen (Zeiss-Innovation-Hub@KIT)
Mitarbeiterzahl: 6

