

CAN I COMBINE SCIENCE AND BUSINESS IN A SINGLE JOB?

YES.

We'll show you how at Fraunhofer.



STARTING NOW, THE FRAUNHOFER INSTITUTE FOR APPLIED OPTICS AND PRECISION ENGINEERING OFFERS YOU AN EXCITING JOB OPPORTUNITY AS A

RESEARCH ASSISTANT (F/M) IN THE FIELD OF SOLDERING TECHNOLOGIES

The Fraunhofer Institute for Applied Optics and Precision Engineering IOF in Jena conducts application-oriented research in optical systems technology on behalf of industry and within the framework of publicly funded joint projects. The range of services offered by the Fraunhofer IOF includes system solutions, starting with new design concepts, through the development of technologies, manufacturing and measuring processes, to the construction of prototypes and pilot series for applications in the wavelength range from millimeters to nanometers.

The department "Opto-mechatronic Components and Systems" deals with assembly and integration technologies for miniaturized optical, opto-mechanical and opto-mechatronic components and assemblies. To strengthen the department, we are looking for a research associate to work on the challenging theoretical and experimental research topic "Low-stress joining of optical components using laser-based soldering technology".

Area of responsibility

- Development and optimization of a laser-based soldering technology for the adjusted joining of active and passive optical components, mainly nonlinear laser crystals, on expansion-adapted substrates
- Comparison of the selected technology with the state of the art, selection of suitable solder alloys and optimization of their processing in the laser-based reflow process
- Model-based and experimental process analysis and optimization regarding stress-related deformations and misalignments as well as long-term stability
- Application of optical and tactile measurement techniques for the characterization of stress optical and adjustment states
- Application of statistical test methods and data evaluation to assess process results and create parameter variants
- Scientific publications and lectures at national and international conferences

The opportunity for a doctorate is given.

What we expect from you

- You have a degree in science (Master / Diploma) in the field physics, material science, mechanical engineering or a comparable field.
- You have basic knowledge in optics and laser technology, preferably for the assembly and beam characterization of laser systems.
- Furthermore, you have extensive experience in the fields of design, materials and metrology.
- You already have experience in the fields of design, materials and measurement technology.
- A class B driver's license is desirable.
- You have very good English language skills in spoken and written.
- Your strengths include an independent, careful, systematic and solution-oriented approach to work as well as analytical and conceptual skills.
- A friendly, reliable and open manner rounds off your profile.

What you can expect from us

- A varied job in a modern working environment
- Cooperation in a collegial and open-minded team with physical and engineering background
- Personal and professional development opportunities in demanding and practical R&D projects
- Possibility to actively shape and accentuate your own research focus
- Networking with first-class industrial partners
- Independent work and personal and professional development opportunities
- Flexible working hours and a family-friendly workplace

Appointment, remuneration and social security benefits based on the public-sector collective wage agreement (TVöD). Additionally, Fraunhofer may grant performance-based variable remuneration components.

The working time consists of 39 hours per week.

The position is initially limited for 2 years.

In case of identical qualifications preference will be given to severely disabled candidates.

We would like to point out that the chosen job title also includes the third gender.

The Fraunhofer-Gesellschaft emphasises gender-independent professional equality.

This vacancy is also available on a part-time basis.

We look forward to receiving your application! Please use our online application portal.

<http://www.iof.fraunhofer.com>

Job Reference: **IOF-2020-27**

Closing date: **30.09.2020**