

PhD / Post-doc Position at the IFSW of the University of Stuttgart

“Design, fabrication and characterization of solid-core Bragg fibres for Raman suppression”

The Institut für Strahlwerkzeuge (IFSW) of the Universität Stuttgart, founded in 1986, is reputed as one of the leading laser research centres worldwide. Its strength is based on a holistic research approach covering every aspect from laser sources to their applications and ranging from fundamental investigations to industrial technology transfer. The main activities at the IFSW are currently concerned with selected topics in the fields of laser beam sources (especially the thin-disk laser), optical elements and components for beam delivery and beam shaping as well as fundamental investigations on the light-matter interaction with the subsequent process development of macro and micro applications for industrial manufacturing.

The flexible delivery of brilliant laser radiation using optical fibres is limited by the onset of nonlinear effects. One of the most relevant limiting effects is Stimulated Raman Scattering (SRS). To significantly increase the SRS threshold of solid-core fibres, spectral filtering of the Raman-shifted radiation is required.

For this purpose, spectrally selective solid-core Bragg fibres (SCBF) shall be investigated, starting from the design and optimization of the structure of the fibres. To be able to realize the required high refractive index contrasts in silica-based fibres, novel fabrication techniques employing the fibre drawing facilities at the IFSW shall be developed. The fabricated fibres have to be characterized regarding their spectral losses, their bending sensitivity as well as their power handling capabilities. Hence, the topic is versatile and offers a wide range of possibilities for the personal scientific education.

For this we are looking for a

PhD student (m/f) or Post-Doc (m/f)

You want to work on a challenging scientific project. You have an above-average degree and preferably some knowledge and hands-on experience in optics, optical fibres and lasers.

The payment will be according to TV-L 13 (100 %) plus the usual benefits. The position offered is limited to two years (with optional extension).

Please send you application to:

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