

## FRAUNHOFER INSTITUTE FOR APPLIED OPTICS AND PRECISION ENGINEERING IOF



- 1 OLED ocular with integrated eye tracking system.
- 2 Analysis of scatter and stray light at a Cassegrain telescope.
- 3 Monolithic freeform objective in IR.

## Fraunhofer Institute for Applied Optics and Precision Engineering IOF

Albert-Einstein-Straße 7 07745 Jena

Director Prof. Dr. Andreas Tünnermann

Head of Business Unit Photonic Sensors and Measuring Systems Prof. Dr. Gunther Notni

#### Contact

Uwe Lippmann Phone +49 3641 807-249 uwe.lippmann@iof.fraunhofer.de

www.iof.fraunhofer.com



# DESIGN OF OPTICAL COMPONENTS AND SYSTEMS

#### Optical design – our competences

- Conception of complex and specially adapted optical systems and system developments
- Design and assessment
- Simulation of optical functions
- Raytracing
- Spectral regions: EUV VIS IR THz
- Propagation of ultrashort pulses
- Analysis of scatter and stray light
- Tolerancing
- Freeform design for nonrotational symmetric systems

## **Optical design software**

Design, simulation and analysis of optical components and systems utilizing the software programs:

- ZEMAX, OSLO, ASAP, FRED
- Extension of functionality with custom-made modules if required

#### Applications

- Projection lenses
- Camera lenses
- Illumination systems
- Head-up systems
- Head-mounted displays
- Sensors
- Ophthalmological devices
- Physiological optics
- Telescopes
- Measuring systems
- Optical systems with microdisplays,
- sensor devices

#### and much more ...

### Our Offer

- Feasibility study
- Prototype assembly, production
- Functional test and assessment
- System integration