



- 1 Performance of environmental testing program for coating qualification.
- 2 TMA-mirrors with protected Ag-coating.
- 3 Coating of a metal mirror.

COATINGS FOR SPACE AND ASTRONOMICAL APPLICATIONS

Fraunhofer Institute for Applied Optics and Precision Engineering IOF

Albert-Einstein-Straße 7
07745 Jena

Director
Prof. Dr. Andreas Tünnermann

Head of Business Unit Functional Optical Surfaces and Layers
Dr. Sven Schröder

Contact
Dr. Stefan Schwinde
Phone +49 3641 807-297
stefan.schwinde@iof.fraunhofer.de

www.iof.fraunhofer.de

Motivation

Development and customization of coatings for astronomy and space based applications. The portfolio includes coatings based on Mo/Si, Sc/Si or B₄C for EUV, Al and fluoride for DUV, Ag and Au for high reflectivity, as well as dielectric antireflection-, absorbing-, and structured coatings. Fraunhofer IOF offers performance of coating qualification programs, handling of delicate substrates, cleaning of substrates, construction of holders and coating of complex optical components.

Our expertise

- Coating design in order to meet the requirements of the application
- Development of deposition processes and coating evaluation
- Substrate cleaning and consideration of cleanliness requirements

- Inspection of coated and uncoated optical elements
- Documentation

What we offer

- Highly reflective coatings from EUV to IR (Al-, Ag- or Au-based)
- Antireflection coatings for broad bandwidth and large ranges of light incidence angles
- Optical dense structured coatings or absorbing coatings
- Handling and coating of complex optical components
- Realization of test programs for coating qualification