

## **High-flux solar simulator Synlight**

The Solar institute of the German Aerospace Center (DLR) is one of the leading research facilities in the world. Within the SFERA III-Programme DLR offers the access to the solar simulator Synlight which is part of the DLR's solar research infrastructure in Jülich.

The five main areas of research supported by the infrastructure are:

- Testing of components for concentrated solar thermal plants
- Testing of solar-chemical reactors
- Testing of high-temperature resistant materials or components
- Rapid material ageing and resistance testing (UV, heat), also for simulation of radiation conditions in space
- Calibration of optical measuring devices

## **Services currently offered by the infrastructure**

Since the facility is quite new (less than a year of operation) only few results has been achieved so far. During testing of full-scale solar-thermal reactors temperatures over 1000°C were reached. At the moment further qualification works are running, in order to determine the highest reachable temperatures (over 3000°C expected) and the heat flux profiles.

Furthermore additional assistance for research projects is available:

- Excellent accessibility of the facilities including storage space, spacious testing rooms and fully equipped workshops
- Over 30 well-trained specialists and scientists, who can offer assistance to research groups in the field of solar energy, solar process or chemical engineering.
- Various local craftsman's workshops and specialised traders located close to the facility, which enables fast and cost effective repairs or reconstructions of test rigs