

FRAUNHOFER CSP

The Fraunhofer CSP conducts applied research into silicon crystallization, wafer production, solar cell characterization and module technology, developing in the process new technologies, production processes and product concepts along the entire photovoltaic value chain.

The Center's work is focused on the assessment of the reliability of solar cells and modules under laboratory and operating conditions as well as electrical, optical, mechanical and microstructural material and component characterization. Focusing its activities in this way enables the Center to develop measurement methods, devices and production processes for components and materials based on an understanding of failure mechanisms and offers increased levels of reliability.

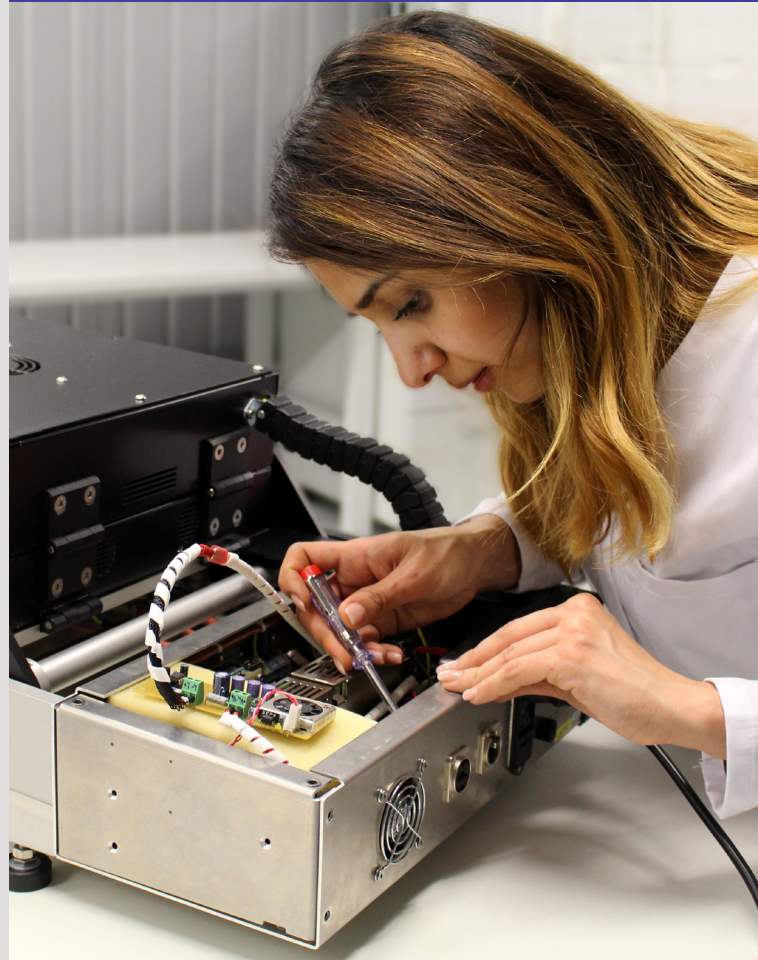
CONTACT

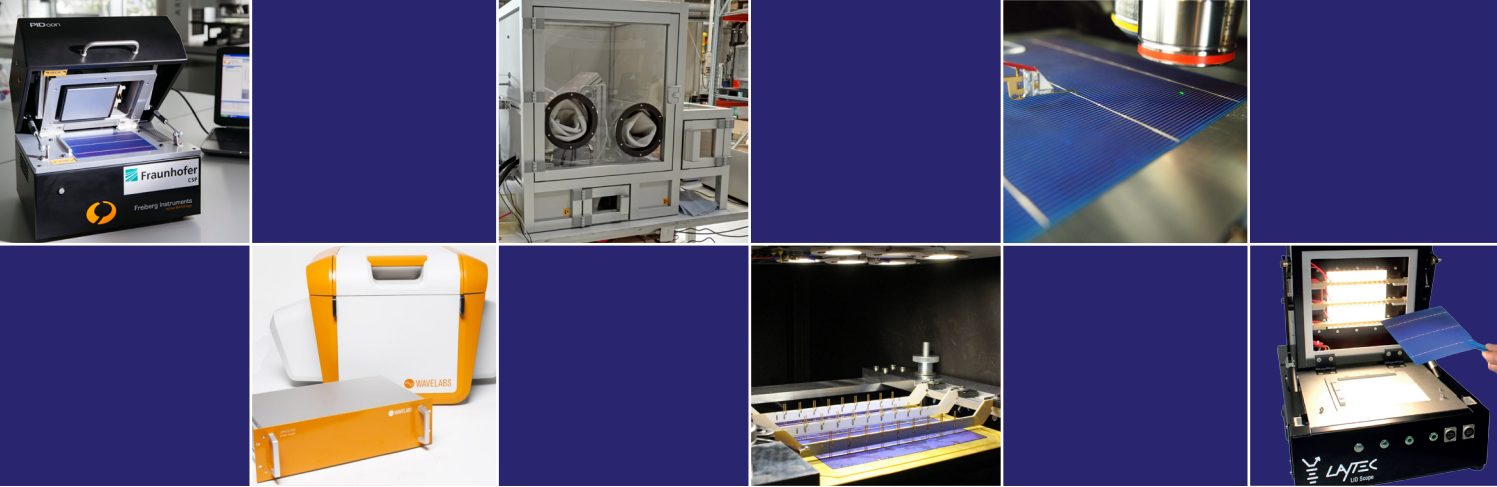
Dr. Christian Hagendorf
+49 345 5589-5100
hagendorf@csp.fraunhofer.de

Dr. Dominik Lausch
+49 345 5589-5114
lausch@csp.fraunhofer.de

Fraunhofer Center
for Silicon Photovoltaics CSP
Otto-Eissfeldt-Strasse | 06120 Halle (Saale) | Germany
www.csp.fraunhofer.de

METROLOGY EQUIPMENT FOR PHOTOVOLTAICS





SERVICES

- Failure and defect analysis using diagnostic methods
- Innovative PV metrology
 - Development of new test methods and devices
 - Prototype construction and technical support
- Planning and implementation of development projects up to and including marketing
- Licensing of own developments
- Technical support for calibration and standardization projects
- Line integration and mobile outdoor use

REFERENCES

- **LID Scope:** LID test system for automated and repeatable measurement of PERC cell degradation
- **PIDcon:** benchtop PID tester for solar cells and encapsulation materials
- **PIDcheck:** outdoor PID testing of modules in PV systems
- **SINUS 220:** LED sun simulator for solar cells
- **AntiSoiling test bench:** advanced indoor soiling tests under realistic test conditions
- **μ -LBIC:** fast high-resolution measurement of surface topography and local current generation