



Applied Photovoltaic Research
Swiss Solar Competence



«Swiss Solar Competence»

Applied PV Research

The PV laboratories of the four universities of applied sciences BFH, OST, SUPSI and ZHAW have joined forces to strengthen their expertise in applied research in the field of photovoltaics. Together they are a strong partner in applied research from PV modules to PV system technology to lifetime system performance.

Joint activities

By working together and pooling our expertise, we strengthen the offering to partners from industry, installer companies, authorities in public institutions and training centres. Our expertise is based on our research work in the institutes and our training in Bachelor's and Master's degree programmes in renewable energies.

One example of joint activities is a project called «Alpine PV Competence» which is on the way to set up an information and exchange platform for the upcoming installation of PV systems in alpine areas.



Mobile PV-Lab for I-V-curves, electroluminescence-analysis and high voltage measurements



Certified hail testing procedure



Grid connection, inverter and power electronics testing.



Miniaturized systems for quick and flexible adjustment and comparable measurements.

Infrastructure available through Network:

Module characterisation:

- I/V module flasher, EL- and IR- analyses
- Mobile PV-Lab, Drones for IR-measurement, IV curve tracer
- TLM, measurement of contact resistance

Modules:

- Stringer for solar cells
- Laminator for PV-Modules
- Climatic Chamber with UV illumination unit
- Mechanical testbench for PV Modules
- Outdoor testbenches, long term operation
- Artificial ageing
- hail- and snowload testing

Systems and components:

- Test equipment for inverters, batteries
- Concise Cycle Test for system performance

Simulation / emulation

- METEONORM, PVSyst, PV*Sol, Polysun, Matlab, Python, TRNSYS, PVCASE
- Emulators for PV generator and consumers

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