27th European Photovoltaic Solar Energy Conference and Exhibition
Messe Frankfurt, Germany
Conference 24 - 28 September 2012 • Exhibition 25 - 28 September 2012

# "Characterizing and Classifying Failures of PV Modules"

**Day:** **Monday, 24 September, 2012**
**Time:** **14:00 – 18:00**
**Site:** **Congress Center, Level C3, Conference Room 2**

**Programme Outline**

**14:00-14:20**
**The mission of PVPS towards reliable PV**
Stefan Nowak (invited), Chairman IEA PVPS, International Energy Agency
Photovoltaic Power Systems Programme, Conference General Chairman of EU PVSEC

**14:20-14:50**
**PV module reliability issues including testing and certification**
Ulrike Jahn, TÜV Rheinland, Cologne, Germany

**14:50-15:20**
**Snail tracks, worm marks and micro cracks**
Marc Köntges, Institute for Solar Energy Research Hamelin, Germany

**15:20-15:50**
**Crack statistic of crystalline silicon photovoltaic modules**
Sarah Kajari-Schröder, Institute for Solar Energy Research Hamelin, Germany

**15:50-16:20**
**Networking break**

**16:20-16:50**
**Fielded PV module condition**
Corinne E. Packard, National Renewable Energy Laboratory, Golden, CO, USA

**16:50-17:20**
**PV module failures observed in the field - solder bond and bypass diode failures**
Kazuhiko Kato, National Institute of Advanced Industrial Science and Technology, Japan

**17:20-17:50**
**PV module failures from field experiences**
Werner Knaupp, PV-plan, Stuttgart, Germany

**18:00**
**Workshop conclusion**

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# IEA PVPS Task 13 Workshop at 27th EU PVSEC Frankfurt

# "Characterizing and Classifying Failures of PV Modules"

The characterization of PV module failures is growing in importance as the growth in the PV sector boots the demand for more accurate information on PV module performance and reliability. This information is essential for PV module designer and manufacturers to observe process difficulties during the production, to keep improving their modules during development processes and last, but not least, to assure PV module warranties. For plant operators and customers, PV module characterization is important to observe output performance and reliability of their PV systems and to proof the faultless operation of the PV modules in the field.

This workshop will look at issues ranging from testing and certification of PV modules, cracking of crystalline silicon modules, the results of field investigations into module failures such as snail tracks and PV module failures in the field. The workshop will be of interest to both researchers in the field and PV module manufacturers as information on state-of-the-art of PV module degradation, identification of main problems due to material properties and failure risk estimations will be shared and discussed.

The international list of speakers will draw on their experiences in Europe, the US and Japan.

Participants can look forward to a series of expert presentations, discussions and networking opportunities.

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