AIST

6th International Workshop on the Sustainable Actions for "Year by Year Aging" under Reliability Investigations in Photovoltaic Modules, 2025

SAYURI-PV 2025

Agenda

Date: **November 5 – 6, 2025**

Venue: **TSUKUBA International Congress Center**
Convention Hall 300

Committee

Chair:	Takeshi Tayagaki		
	Hitoshi Sai	Hidenori Mizuno	Katsuto Tanahashi
	Keiichiro Sakurai	Masahiro Yoshita	Saemi Takahashi
	Shogo Ishizuka	Tadanori Tanahashi	Takashi Oozeki
	Takuya Matsui	Tomihisa Tachibana	Yasuo Chiba

Host

Renewable Energy Advanced Research Center (READ)
in National Institute of Advanced Industrial Science and Technology (AIST)

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[Day 1] November 5

9:00- The venue opens / Hanging Your Poster
9:30- General Introduction Takeshi Tayagaki (AIST)

Session I: Reliability of cutting-edge PV Cells and Modules

Chair: Hitoshi Sai (AIST) and Takeshi Tayagaki (AIST)

9:40- The biggest reliability risks facing today's modules: Insights from Kiwa PVEL's PQP testing
Jean-Nicolas Jaubert (PVEL)

10:15- Challenge of Service Lifetime Prediction for PV modules with POE or EVA
Nozomi Kamiya (Mitsui Chemicals)

10:45- Long-Term Outdoor Performance and Stability of Flexible PSC modules
Yoshihiro Hishikawa (Ritsumeikan University)

11:15- Lunch [Self-pay]

Session II: Module reliability for integrated PV

Chair: Takuya Matsui (AIST) and Shogo Ishizuka (AIST)

13:00- Reliability analysis of vehicle-integrated PV
Daisuke Sato (Univ. of Miyazaki)

13:30- Absolute EL Measurements of VIPV
Hidenori Mizuno (AIST)

14:00- Direct detection of vibration and resonance of the solar cells and estimation of the stress accumulation
Kenji Araki (Univ. of Miyazaki)

14:30- Poster Session & Coffee Break

Session III: Field testing

Chair: Masahiro Yoshita (AIST) and Tadanori Tanahashi (AIST)

15:30- Development of an electroluminescence evaluation method as a next coming technology
Yasuaki Ishikawa (Aoyama Gakuin University)

16:00- Current Status of crystalline silicon based photovoltaic modules exposed outdoors in Tosu city, Japan
Yasuo Chiba (AIST)

16:30- Discussions
16:45 End of 1st Day

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[Day 2] November 6

Session IV: PV Recycle

Chair: Michio Kondo (Waseda Univ., AIST) and Keiichiro Sakurai (AIST)

9:00- Towards Efficient Recycling of PV Modules through Advanced Pre-treatment and Design-for-Disassembly
Chiharu Tokoro (Waseda Univ., Univ. of Tokyo)

9:25- Technological Development of PV Panel Recycling Using Low-Temperature decomposition
Takeharu Yamashita (Tokuyama)

9:50- Innovative Recycling of Solar Panel Cover Glass into Float Glass
Naoya Kobayashi (AGC)

10:15- Coffee Break

Session V: Fundamentals of Module Failure Modes

Chair: Hidenori Mizuno (AIST) and Saemi Takahashi (AIST)

10:35- Reliability issues in emergent PV technologies
Takeshi Tayagaki (AIST)

11:05- Potential-induced degradation of Si photovoltaic modules with various n-type crystalline Si solar cells
Keisuke Ohdaira (JAIST)

11:35- Lunch [Self-pay]

Session VI: PV System Reliability

Chair: Takashi Oozeki (AIST) and Yasuo Chiba (AIST)

13:00- Influence of Glass Thickness on the non-uniform Snow Load Resistance of Photovoltaic Modules
Samuli Ranta (TUAS)

13:35- Standardization of Electrically Heated PV Modules (Snow-PV)
Akio Sato (VDE) (Online presentation)

14:05- An equivalent circuit model between PV module/string and the ground for discussion on risk of electrical shock
Kazuhiko Kato (AIST)

14:35- Discussions

14:50- Closing Takeshi Tayagaki (AIST)

14:50 End of 2nd Day

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Poster Session:
November 5, 14:30 – 15:30

1. Durability test and degradation mechanism of metal halide perovskite solar cells
   Masatoshi Yanagida (NIMS)

2. A Study on the Recycling and Regeneration of Silicon Heterojunction Solar Cells
   Hitoshi Sai (AIST)

3. Evaluation of Front Eave Load Caused by Snow Accumulation on Photovoltaic Array
   Tadanori Tanahashi (AIST)

4. Contact Metallization and Emitter Optimization in Advanced N-Type Silicon Solar Cells
   Abdelghani Boucheham (CRTSE)

5. Laser-Based Repair of Perovskite Solar Cells: A Dual Strategy for Performance Recovery and Degradation Prevention
   Tatsuro Kawamura (EneCoat Technologies)

6. Worldwide Roud Robin Test of Maximum Power Measurement for a Perovskite Solar Cell
   Tomoyuki Tobe (KISTEC)

7. Thermal Modeling of PV Modules Based on Field Measurements at FREA
   Kenji Kamide (AIST)

8. Improving the Thermal Durability of Flexible Film-Type Perovskite Solar Cell Modules
   Hideki Goto (EneCoat Technologies)