

PV Materials Technical Committee European Chapter

Meeting Summary and Minutes

Thursday, 23 June 2016, 11:00 – 13:00

Ramada Hotel & Conference Center, Munich, Germany

Table 1 Meeting Attendees

Italics indicate virtual participants

<i>Committee/Position</i>	<i>Company</i>	<i>Name</i>	<i>Attended?</i>
Co-chair	Self	Peter Wagner	Yes
Co-chair	Solarvalley	Hubert Aulich	Yes
Volunteer	FhG-CSP	Volker Naumann	Yes
Volunteer	FhG-CSP	Christian Hagendorf	Yes
Volunteer	FhG-CSP	Dominik Lausch	Yes
Volunteer	Freiberg Instruments	Kay Dornich	Yes
Volunteer	MeyerBurger Technology	André Richter	Yes
Volunteer	Wacker Chemie AG	Erich Dornberger	Yes
Volunteer	Hanwha Q-Cells GmbH	Max Köntopp	Yes
Volunteer	AIST Japan	Masaaki Yamamichi	Yes
Volunteer	ISC GmbH & Co KG	Werner Bergholz	Yes
Volunteer	AIST Japan	Tetsuo Fukuda	Yes
Volunteer	Sinton Instruments	Ron Sinton	Yes
SEMI Staff		Stephan Raithel	Yes

Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
2016-1	V. Naumann	Date for potential PV materials Degradation TF meeting
2016-2	V. Naumann	Forward doc5889 with editorial changes to Kevin Nguyen (done)

1 Welcome, Call to Order

- 1.1 Peter Wagner welcomed all attendees
- 1.2 Meeting reminders: were presented and accepted by all attendees.
- 1.3 Agenda Review: no changes

2 Review and Approval of Meeting Minutes from Intersolar Europe 2015, June 11, 2015

The meeting minutes were reviewed.

Motion: Accept minutes of the previous meeting as shown.

By / 2nd: Ron Sinton / Werner Bergholz

Discussion: none

Vote: 09-00 in favor. Motion passed

3 Liaison Reports of other regional chapters (see attachments)

- 3.1 China Chapter: presented by Stephan Raithel
- 3.2 Taiwan Chapter: presented by Stephan Raithel
- 3.3 Japan Chapter: presented by Tetsuo Fukuda
- 3.4 North America Chapter: presented by Stephan Raithel

4 Staff Report

Staff Report was presented by Stephan Raithel

5 Ballot Adjudication

5.1 Doc. 5889, TEST METHOD ON CELL LEVEL FOR POTENTIAL-INDUCED DEGRADATION SUSCEPTIBILITY OF SOLAR CELLS AND MODULE ENCAPSULATION MATERIALS

5.1.1 Negative by Zhonggang Sun, Yingli: “Cell level cannot characterization PID issue”.

Motion: The negative is related and technically not persuasive.

By / 2nd: Werner Bergholz / Ron Sinton

Discussion: The negative was discussed but published papers are available that confirm that PID can be tested at cell level. A reference will be added editorially to the document.

Vote: 9 – 0, motion passed.

5.1.2 Comments by Doug Hall, Consultant, Jay Lin, PVGuider, Joeng Shein, Tera Solar, and Tong Wang, SunChine. All comments were addressed and discussed based on PV Materials Degradation TF discussion (see attachments). Two notes were added to the document for clarification regarding some comments:

After 7.1.3: “For Test Method A (see 7.1.7.1) the electrode footprint has to be smaller than the solar cell to be tested due to requirement of contacting the front contacts of the solar cell for in situ shunt resistance measurement.”

After 10.5.2: “For Method A polymer foil can be cured or uncured. The curing state shall be reported in the test report. Curing is not possible for Method B.”

(In communication with SEMI staff the notes were slightly modified after the meeting in order to comply with SEMI Standards Regulations and Style Manual).

Motion: Doc. 5889 is approved with editorial changes as shown and to be forwarded to the A&R subcommittee for further processing.

Discussion: see above

By / 2nd: Ron Sinton / Max Koentopp

Vote: 11 – 0, motion passed.

5.1.3 Safety check:

Motion: doc 5889 is not a safety document when all safety-related information is removed, the Document is still technically sound and complete. (*Regulations* ¶ 8.7.1).

By / 2nd: Ron Sinton / Werner Bergholz

Discussion: none

Vote: 11 – 0, motion passed.

5.1.4 IP check also was performed. Potential material patented technology is known but an LOI has been obtained by SEMI from the patent owner.

6 Subcommittee & Task Force Reports

6.1 PV Material Degradation TF: see attachments

6.2 PV Si Materials TF: no meeting since June 2014. Potential new activities are 5 year reviews of several standards starting with 2017.

7 Old Business

none

8 New Business

none

9 Action Item Review

- Ballot Approval Form to SEMI HQ (SEMI, done)
- Ballot Doc with editorial changes to HQ (V. Naumann)
- Date for potential PV materials Degradation TF meeting (V. Naumann)

10 Next Meeting and Adjournment

Next meeting tbd, please check SEMI's web site.

Respectfully submitted by:

Stephan Raithel/SEMI Europe

Peter Wagner, Consultant

Minutes approved by:

Peter Wagner (Consultant), Co-chair	<Date approved>
Hubert Aulich (Solar Valley Mitteldeutschland), Co-chair	<Date approved>

Attachments

- Liaison report China Chapter
- Liaison report Taiwan Chapter
- Liaison report Japan Chapter
- Liaison report NA Chapter
- Staff report
- PV Materials Degradation TF discussion
- PV Material Degradation TF Report