



**PV Committee China TC Chapter**  
**PV Materials Committee China TC Chapter**  
**Joint Meeting Summary and Minutes**

China Fall Standards Meeting 2021  
 November 17<sup>th</sup>, 2021, 13:30-17:00  
 Shanghai, China.

**TC Chapter Announcements**

*Next TC Chapter Meeting*

April, 2021, 09:00-17:00

TBD, China

**Table 1 Meeting Attendees**

*Italics indicate virtual participants*

**Co-Chairs:** Guangchun Zhang (CSI)

**SEMI Staff:** Isadora Jin

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
MDEP	LV	Jinbiao	LINTON	Li	Zhixin
RUNERGY	Chen	Rulong	SUNTECH	Chen	Liping
<i>JASolar</i>	<i>Huang</i>	<i>Xinming</i>	TALESUN	Qian	Hongqiang
<i>Sinosico</i>	<i>Yan</i>	<i>Dazhou</i>	<i>Jolywood</i>	<i>Zhong</i>	<i>Lai</i>
Canadian Solar	Guo	Suqin	RedSolar	Cai	Xianwu
Canadian Solar	Xu	Tao	RedSolar	Yang	Yao
Leadmicro	Li	Weiming	RedSolar	Liu	Zengsheng
Fujian Metrology Institute	You	Hongliang	Shenzhen SC	Tan	Haoyun
Fujian Metrology Institute	He	Xiang	Shenzhen SC	Tang	Huiming
Sunland	Kong	Wei	Hohai University	Zhang	Zhen
<i>NAURA</i>	<i>Li</i>	<i>Buzhong</i>	<i>Yongxiang</i>	<i>Liu</i>	<i>Yifeng</i>
<i>NAURA</i>	<i>Tian</i>	<i>Tao</i>	<i>Yongxiang</i>	<i>Wang</i>	<i>Yaping</i>
<i>JNU</i>	<i>Wu</i>	<i>Shaohang</i>	<i>Yingli</i>	<i>Song</i>	<i>Dengyuan</i>
LONGi	Zhou	Rui	<i>Yingli</i>	<i>Li</i>	<i>Yingye</i>
SunChine	Li	Xiang	ANaME	Wu	Hao
Trinasolar	Zhou	Wei	CHINT	Xue	Xinying
Trinasolar	Wang	Yu	CHINT	Wang	Jianing
Trinasolar	Du	Qingguo	<i>Hanergy</i>	<i>Wu</i>	<i>Zhenyu</i>
Trinasolar	Jin	Yunhong	<i>Hanergy</i>	<i>Bai</i>	<i>Yan</i>
Trinasolar	Zhou	Yujia	Canadian Solar	Zhang	Guangchun
			Canadian Solar	Wu	Zhonghai



**Table 2 Leadership Changes**

<i>WG/TF/SC/TC Name</i>	<i>Previous Leader</i>	<i>New Leader</i>
<i>Photovoltaic</i>		
Thin Film PV Module Task Force	Yaohua Mai – Jinan University Xinwei Niu – JA Solar Zhen Zhang – Hohai University Jian Ding – Hanergy	Yaohua Mai – Jinan University Xinwei Niu – JA Solar Zhen Zhang – Hohai University Zhenrui Yu – UtMost Light Ganhua Fu – CNBM
<i>Photovoltaic Materials</i>		
None		

**Table 3 Committee Structure Changes**

<i>Previous WG/TF/SC Name</i>	<i>New WG/TF/SC Name or Status Change</i>
<i>Photovoltaic</i>	
None	
<i>Photovoltaic Materials</i>	
None	

**Table 4 Ballot Results**

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
<i>Photovoltaic</i>		
None		
<i>Photovoltaic Materials</i>		
None		

#1 **Passed** ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

#2 **Failed** ballots and line items were returned to the originating task forces for re-work and re-balloting or abandoning.

**Table 5 Activities Approved by the GCS between meetings of the TC Chapter**

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
<i>Photovoltaic</i>			
None			
<i>Photovoltaic Materials</i>			
None			

**Table 6 Authorized Activities**

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
<i>Photovoltaic</i>			
6871	SNARF	PV Module TF	Reapproval of SEMI PV77-0817, Guide for Calibration of Photovoltaic (PV) Module UV Test Chambers
6872	SNARF	Crystalline Silicon Solar Cell TF	Revision to PV75, Test Method on Cell Level for Potential-induced-degradation Susceptibility of Solar Cells and Module Encapsulation Materials



**Table 6 Authorized Activities**

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

#	Type	SC/TF/WG	Details
<i>Photovoltaic Materials</i>			
None			

#1 SNARFs and TFOFs are available for review on the SEMI Web site at:

<http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF>

**Table 7 Authorized Ballots**

#	When	TF	Details
<i>Photovoltaic</i>			
6610	Cycle1-22	PV Module TF	Revision to PV86, Specification for Crystalline Silicon Photovoltaic Module Dimensions
6671	Cycle1-22	PV Module TF	Revision to PV63, Specification for Ultra-Thin Glasses Used for Photovoltaic Modules
<i>Photovoltaic Materials</i>			
None			

**Table 8 SNARF(s) Granted a One-Year Extension**

#	TF	Title	Expiration Date
<i>Photovoltaic</i>			
6113	PV Module TF	New Standard: Test Method for Abrasion Resistance of the Polymer Backsheet of Crystalline Silicon Solar Modules	2022/11/17
<i>Photovoltaic Materials</i>			
None			

**Table 9 SNARF(s) Abolished**

#	TF	Title
<i>Photovoltaic</i>		
None		
<i>Photovoltaic Materials</i>		
None		

**Table 10 Standard(s) to receive Inactive Status**

Standard Designation	Title
<i>Photovoltaic</i>	
None	
<i>Photovoltaic Materials</i>	
None	



**Table 11 Table 10 Standard(s) to receive Withdrawal Status**

<i>Standard Designation</i>	<i>Title</i>
<i>PV</i>	
None	
<i>PV Materials</i>	
None	

**Table 12 New Action Items**

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
None		

**Table 13 Previous Meeting Action Items**

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
None		

**1 Welcome, Reminders, and Introductions**

Committee co-chair Guangchun Zhang called the meeting to order at 13:30. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

**Attachment:**

**2 Review of Previous Meeting Minutes**

The TC Chapter reviewed the minutes of the previous meeting.

**Motion:** To approve the minutes of the previous meeting as written

**By / 2<sup>nd</sup>:** Rulong Chen (Runergy)/ Zhixin Li (Linton)

**Discussion:** None

**Vote:** 16Y - 0 N . Total 16 companies. Motion Passed.

**Attachment:** 2. China PV&PVM TC Joint Spring Meeting Minutes 20210429-v1

**3 Liaison Reports**

*3.1 PV Materials North America TC Chapter*

-- ( ) reported for the <Committee Name> North America TC Chapter. Of note:

**Action Item:**

**Attachment:**

*3.2 PV Materials Europe TC Chapter*

-- ( ) reported for the <Committee Name> North America TC Chapter. Of note:

**Action Item:**

**Attachment:**

3.3 *PV and PV Materials Japan Joint TC Chapter*

-- ( ) reported for the <Committee Name> North America TC Chapter. Of note:

**Action Item:**

**Attachment:**

3.4 *Photovoltaic Taiwan TC Chapter*

Isadora Jin (SEMI) reported for the PV Taiwan TC Chapter. Of note:

**Action Item:** Next meeting –78th Building, No. 195, Section 4, Zhongxing Road, Zhudong Township., Hsinchu, Taiwan, Jan 10, 2022

- The Co-chairs of Taiwan PV Materials TC are T.C. Wu (CMS/ITRI), Ray Sung (UL Taiwan) and C.C. Lin (PV Guider).
- Leadership Changes
  - None
- Ballot Results
  - None
- Authorized Activities
  - None
- Authorized Ballots
  - 6705 Reapproval of SEMI PV72-0316-EN Test Method of to Evaluate an Accelerated Thermo Humidity Resistance of PV Encapsulation
  - 6731 Revision of SEMI PV69 - Test Method for Spectrum Response (SR) Measurement of Organic Photovoltaic (OPV) and Dye-Sensitized Solar Cell (DSSC) and Perovskite Solar Cell (PSC)
  - 6730 Revision of SEMI PV57 - Test Method for Current-Voltage (I-V) Performance Measurement of Organic Photovoltaic (OPV) and Dye-Sensitized Solar Cell (DSSC) and Perovskite Solar Cell (PSC)
  - 6732 Revision of SEMI PV76 - Test Method for Durability of Low Light Intensity Organic Photovoltaic (OPV) and Dye-Sensitized Solar Cell (DSSC) and Perovskite Solar Cell (PSC)
  - 6733 Revision of SEMI PV80 - Specification of Indoor Lighting Simulator Requirements for Emerging Photovoltaic and Perovskite Solar Cell (PSC)
  - 6734 Revision of SEMI PV89 - Test Method of Current-Voltage (I-V) Measurement in Indoor Lighting for Dye-Sensitized Solar Cell and Organic Photovoltaic and Perovskite Solar Cell (PSC)
- Abolished SNARF(s)
  - None
- Task Force Highlights
  - OPV, DSSC&PSC TF
    - Process A&R review process for the below 5 ballots.

- #6730 #6731 #6732 #6733 #6734
- PV Reliability Test TF
  - After review of the Ballot Doc.#6705: SEMI PV72-0316-EN Test Method of to Evaluate an Accelerated Thermo Humidity Resistance of PV Encapsulation for one year extension. There were few rejects from ballot cycle 4. Decided to motion fail this ballot, return to re-work
- Five-Year Review
  - None

**Attachment:** 4. PV Taiwan Liasion Report\_20211001\_V1

### 3.5 SEMI Staff Report

Isadora Jin (SEMI) gave the SEMI Staff Report. Of note:

**Action Item:**

- Standards Technical Committees
- 2021 Critical Dates for SEMI Standards Ballots
- 2022 Critical Dates for SEMI Standards Ballots
- SEMI Standards Publications
- 5 Year Review List
- A&R SC Membership
- Organization chart for China PV Committee
- Organization chart for China PVM Committee
- China PV&PV Materials TC Update

**Attachment:** 3. SEMI Staff Report 20211117

### 3.6 Other SDO (Standards Development Organization) Update

- None

## 4 Ballot Review

- None

## 5 Subcommittee and Task Force Reports

### 5.1 PV Silicon Raw Materials Task Force

None

**Action Item:**

**Attachment:**

### 5.2 PV Silicon Wafer Task Force

Rui Zhou (LONGi) reported for the PV Silicon Wafer Task Force. This report contained information on:

**Action Item:**

- Introduced the task force's leaders and members.
- Divisions of PV Silicon Wafer Task Force
- Proposals of PV Silicon Wafer Task Force
- Division of Responsibilities of PV Silicon Wafer Task Force
- Working Schedule of PV Silicon Wafer Task Force

**Attachment:** 5. PV Silicon Wafer TF Report Nov. 17th, 2021, 2021

*5.3 Crystalline Silicon Solar Cell Task Force*

Dengyuan SONG (YINGLI) reported for the Crystalline Silicon Solar Cell Task Force. This report contained information on:

**Action Item:**

- Introduced the task force's leaders and members
- Introduced published standards.
- Working on
  - SNARF: Revision to PV75-1016: Test Method on Cell Level for Potential-induced-degradation Susceptibility of Solar Cells and Module Encapsulation Materials (电池以及组件封装材料 PID 敏感性测试)

**Attachment:** 6. 2021-11-12-- Crystalline Silicon Solar Cell &nbsp;&nbsp; Report--电池工作组汇报 PPT

*5.4 PV Module Task Force*

Wei ZHOU (TrinaSolar) reported for the PV Module Task Force. This report contained information on:

**Action Item:**

- Introduced the task force's leaders and members
- Introduced published standards
- Working on
  - Doc 6113, Test Method for Abrasion Resistance of the Polymer Backsheet of Crystalline Silicon Solar Modules
  - Doc 6610, Specification for Crystalline Silicon Photovoltaic Module Dimensions (Revision to PV86-1018)
  - Doc 6671, Revision to SEMI PV63-0215, Specification for Ultra-thin glasses used for photovoltaic modules
  - IEC/TC82 WG2 标准进展
- **Attachment:** 8. SEMI PV Module TF Report 2021-11-17

*5.5 Building Integrated Photovoltaic (BIPV) Task Force*

Dengyuan SONG (YINGLI) reported for the Building Integrated Photovoltaic (BIPV) Task Force. This report contained information on:

**Action Item:**

- Introduced the task force's leaders and members
- Introduced published standards
- Working on
  - Doc. 6542, Guide for Scrap Judgement of Photovoltaic modules in building
  - Doc. 6700, Test Methods of Wind Uplift Resistance for Roof-Top Building Integrated Photovoltaics (BIPV)
- Work Plan for the Next Step

**Attachment:** 7. 2021-11-12--Building Integrated Photovoltaic (BIPV) Task Force--BIPV 工作组汇报 PPT

### 5.6 PV Equipment Task Force

Haoyun TAN (SHENZHEN S.C.) reported for the PV Equipment Task Force. This report contained information on:

#### **Action Item:**

- Introduced the task force's leaders and members
- Introduced published standards
- Working on
  - Doc. 5983D, Test Method for In-line Sheet Resistance Inspection Using the Junction Photo-Voltage Method
- Work Plan for the Next Step

**Attachment:** 9. semi 光伏设备工作组汇报 ppt(2021 秋季会议)v2-20211114(不涉密)

### 5.7 Thin Film PV Modules Task Force

Shaohang Wu ((JINAN University) reported for the Thin Film PV Modules Task Force. This report contained information on:

#### **Action Item:**

- Introduced the task force's leaders and members
- Working on
  - Reactivated Document Number: 6401 SNARF for: New Standard: Test Method for Indentation Force of Flexible Thin Film PV Modules
  - Reactivated Document Number: 6402 SNARF for: New Standard: Test Method for Vibration Durability of Flexible Thin Film PV Module
  - Reapproval SEMI PV78-0817: Test Method for Bending Property of Flexible Thin Film Photovoltaic (PV) Modules

**Attachment:** 10. Thin Film PV Modules TF Report Nov. 17th, 2021

## 6 Old Business

### 6.1 Refer to Table 12 Previous Meeting Action Items



## 7 New Business

### 7.1 Requests for ballots in Cycle of 2022

#### 7.1.1 Doc. 6610, Revision to PV86, Specification for Crystalline Silicon Photovoltaic Module Dimensions

**Motion:** Approve Document 6610 for Letter Ballot in Cycle 1-22.  
**By / 2<sup>nd</sup>:** Tao XU (CSI) / Zhixin LI (LINTON)  
**Discussion:** Zhixin Li (Linton): Is there any revision to the SNARF?  
Tao XU (CSI): YES.  
Isadora (SEMI): Please revise the SNARF and I will inform GCS.  
**Vote:** 16 in favor and 0 opposed. (Total 16 companies. 0 companies abstain.) Motion passed.  
**Attachment:** 11. PV86 修订 (组件外形尺寸及技术要求) 全球投票申请

#### 7.1.2 Doc. 6671, Revision to PV63, Specification for Ultra-Thin Glasses Used for Photovoltaic Modules

**Motion:** Approve Document 6671 for Letter Ballot in Cycle 1-22.  
**By / 2<sup>nd</sup>:** Yu WANG (TrinaSolar) / Zhixin LI (LINTON)  
**Discussion:** Zhixin Li (Linton): Is there any revision to the SNARF? Let the TF leader to check.  
**Vote:** 16 in favor and 0 opposed. (Total 16 companies. 0 companies abstain.) Motion passed.  
**Attachment:** 12. Doc 6671 光伏组件用超薄玻璃 2021 年 11 月 17 日

### 7.2 New SNARFs

#### 7.2.1 SNARF, Revision to PV75, Test Method on Cell Level for Potential-induced-degradation Susceptibility of Solar Cells and Module Encapsulation Materials

**Motion:** Approve the SNARF.  
**By / 2<sup>nd</sup>:** Zhonghai WU (CSI) / Wei ZHOU (TrinaSolar)  
**Discussion:** Isadora (SEMI): I received disapprove comments from Peter Wagner.  
Zhonghai WU (CSI): Let us discussed. Let us contacted Peter and explain to him.  
Isadora (SEMI): I will forward Peter's comments to you.  
**Vote:** 16 in favor and 0 opposed. (Total 16 companies.) Motion passed.  
**Attachment:** 17. 20211117 SEMI PV75-1016 AMD overview\_Final

### 7.3 Five-Year-Review

#### 7.3.1 5-Year-Review SNARF, SEMI PV77-0817, New Standard: Guide for Calibration of Photovoltaic (PV) Module UV Test Chambers

**Motion:** Approve the SNARF for 5-Year-Review.  
**By / 2<sup>nd</sup>:** Xiang HE ((FJLL) / Zhixin LI (LINTON)  
**Discussion:** None  
**Vote:** 16 in favor and 0 opposed. (Total 16 companies.) Motion passed.  
**Attachment:** 16. 五年复审 SNARF-PV73-0216 - PPT.pptx [Repaired]





**Table 14 Index of Available Attachments#1**

16. 五年复审 SNARF-PV73-0216 - PPT.pptx [Repaired]	17. 20211117 SEMI PV75-1016 AMD overview_Final
17. SNARF_Nov2021 (Revision to PV75) rev2	

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at [www.semi.org](http://www.semi.org). For additional information or to obtain individual attachments, please contact [SEMI Staff Name] at the contact information above.