Compound Semiconductor Materials Europe TC Chapter
Meeting Summary and Minutes

August 6, 2024
04:30 PM – 06:00 PM CEST
Online

TC Chapter Announcements

Next TC Chapter Meeting
November 14, 2024, SEMICON Europa. Check www.semi.org/en/standards for the latest update.

Table 1 Meeting Attendees

Co-Chair: Arnd Weber (SiCrystal)
SEMI Staff: Kevin Nguyen (SEMI)

Company	*Last*	*First*
Munich University of Applied Sciences	*Alt*	*Hans-Christian*
Wolfspeed	*Barbieri*	*Tom*
SOITEC	*Cela*	*Enrica*
Scientic Visual	*Cheze*	*Caroline*
KLA	*Kallus*	*David*
Fraunhofer IISB	*Kranert*	*Christian*
Freiberger Compound Materials GmbH	*Kretzer*	*Ulrich*
Bruker	*Lafford*	*Tamzin*
Kitabatake	*Makoto*	*Kitabatake*
Wolfspeed	*Rao*	*Shailaja*
SiCrystal	*Weber*	*Arnd*

Italic indicates online participant. Bold indicates in-person attendance.

Table 2 Leadership Changes

WG/TF/SC/TC Name	*Previous Leader*	*New Leader*
None		

Table 3 Committee Structure Changes

Previous WG/TF/SC Name	*New WG/TF/SC Name or Status Change*
None	

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
7233	Line Item Revision of SEMI M54-0319, Guide for Semi-Insulating (SI) GaAs Material Parameters	
	Line Item 1 - Editorial corrections	Passed as balloted
	Line Item 2 - Clarifications	Passed with editorial changes
	Line Item 3 - Update regarding technological developments	Passed as balloted
	Line Item 4 - Add value for 200 mm wafer	Passed as balloted

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

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

Table 5 Ratification Ballot Results

Document #	*Document Title*	*ISC A&R Action*	*A&R Forms*
None			

Note 1: **Passed** Ratification ballots will be submitted to SEMI publication for final processing.

Note 2: **Failed** Ratification ballots were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 6 Authorized Activity

#	*Type*	*SC/TF/WG*	*Details*
TBD	SNARF	5 Year Review TF	Line Item Revision of SEMI M83 – Test Method for Determination of Dislocation Etch Pit Density in Monocrystals of III-V Compound Semiconductors

#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*
7225	Cycle 7 of 2024	Silicon Carbide Engineered Substrate Task Force	New standard: Specification for Silicon Carbide Engineered Substrate

Table 8 New Action Items

Item #	*Assigned to*	*Details*
None		

Table 9 Previous Meeting Action Items

Item #	*Assigned to*	*Details*	*Status*
None			

1 Welcome, Reminders, and Introductions

1.1 Arnd Weber called the meeting to order at 04:30 PM. Attendees introduced themselves. Kevin Nguyen presented meeting reminders on antitrust, intellectual property issues and effective meeting guidelines.

2 Review of Previous Meeting Minutes

2.1 The TC Chapter reviewed the minutes of the previous meeting.

Motion:	To approve the meeting minutes
By / 2nd:	By: Christian Kranert / Fraunhofer IISB Second: Ulrich Kretzer / Freiberger Compound Materials GmbH
Discussion:	None
Vote:	7-0. Motion passed.

3 Task Force Reports

3.1 *SiC-Task Force*

3.1.1 Arnd Weber reported the TF has been reviewing SEMI M81, Guide to Defects Found in Monocrystalline Silicon Carbide Substrates. Little progress is made, due to lack of resources.

3.2 *5-year Review Task Force*

3.2.1 Hans Christian Alt reported the only item is reviewing the ballot for Line Item Revision of SEMI M54-0319 - Guide for Semi-Insulating (SI) GaAs Material Parameters, which will be at today's meeting.

3.3 *Test Methods Task Force*

3.3.1 Christian Kranert reported no outstanding work is due at the moment.

3.4 *SIC Epi-Defects Task Force*

3.4.1 Christian Kranert reported the progress for doc. 7160, New Standard: Guide for Defects found in Homoepitaxial Layers of Silicon Carbide. The TF will meet tomorrow. Christian reported the draft may be ready for balloting by Spring of next year.

3.5 *Silicon Carbide Engineered Substrate Task Force*

3.5.1 Enrica Cela reported the progress for Doc. 7233 New Standard: Specification for Silicon Carbide Engineered Substrate. The concept of this draft is based of SEMI M55 - Specification for Polished Monocrystalline Silicon Carbide Wafers. Enrica said she is unsure of the next steps. Arnd Weber elaborated that the next step is to authorize for Letter Ballot for reviewing at the next meeting in November.

4 Ballot Review

4.1 Doc. 7233, Line Item Revision of SEMI M54 - Guide for Semi-Insulating (SI) GaAs Material Parameters

4.1.1 Passed as with editorial changes. Refer to attachment for details.

Attachment: 7233 Procedural Review

5 Liaison Reports

5.1 *China CSM TC Chapter*

5.1.1 Kevin Nguyen reported. Of note:

- Last meeting
    - April 26（Part A）- OVTCCM
    - June 12（Part B）- Qingdao，Shandong
- Next meeting
    - TBD
- Ballot Review
    - Doc. 6769B, New Standard: Test Method Qualitative for Residual Stress of Silicon Carbide Wafers by Photoelastic
        - Failed
- New GaN Task Force
    - Leaders
        - Ronghua Wang– Runxin Micro
        - Guoqiao Tao - Enkris Semiconductor
        - Yi Pei - Dynax

Attachment: CSM China TC Chapter June 2024

5.2 *Japan CSM TC Chapter*

5.2.1 Kevin Nguyen reported. Of note:

- Last meeting
    - Tuesday, May 21, 2024
    - SEMI Japan Office + OVTCCM (Hybrid)
- Next meeting
    - Friday, November 8, 2024
    - SEMI Japan Office + OVTCCM (Hybrid)
- Ballot Results
    - Doc. 7211, Line Item Revision to SEMI M92-0423, Specification for 4H-SiC Homoepitaxial Wafer
        - Line Item 1 and 2: Failed
        - Line Item 3, 4, and 5: Passed
- Concerns
    - Concerns has been continuously raised regarding operation of China TC Chapter (such as lack of advance notice of TC meetings and uncertainty in information sharing) and the Japan TC Chapter wishes the China TC Chapter and its Task Forces to operate in accordance with the SEMI Standards Regulations.

Attachment: CSM_JA TC Chapter Liaison Report_Aug 2024_R0

5.3 *North America CSM TC Chapter*

5.3.1 Kevin Nguyen reported.

- TC Chapter has not met for a while. Discussed the option for disbandment, but wish to remain open for the time being.

6 New Business

6.1 Ulrich Kretzer reported SEMI M83 - Test Method for Determination of Dislocation Etch Pit Density in Monocrystals of III-V Compound Semiconductors, is due for 5 year.

Motion:	To approve the SNARF for Line Item Revision of SEMI M83
By / 2nd:	By: Ulrich Kretzer / Freiberger Compound Materials GmbH Second: Hans Christian Alt / Munich University
Discussion:	None
Vote:	6-0. Motion passed.

Attachment: SNARF revision to M083 2024-08-05

6.2 Per Enrica, Kevin Nguyen reported doc. 7225, New standard: Specification for Silicon Carbide Engineered Substrate, is ready for ballot submission.

Motion:	To authorize doc. 7225 for cycle 7-24
By / 2nd:	By: Hans Christian Alt / Munich University Second: Tom Barbieri / Wolfspeed, Inc.
Discussion:	None
Vote:	5-0. Motion passed.

7 Next Meeting and Adjournment

7.1 The next virtual meeting is scheduled for November 14, 2024 at 11:30 AM - 1:00 PM CEST. Refer to http://www.semi.org/standards for the list of meeting schedules.

Having no further business, adjournment was at 6:00 PM CEST.

Respectfully submitted by:

Kevin Nguyen,
SEMI Standards Operations Manager
Phone: 408-943-7997
Email: knguyen@semi.org

Minutes tentatively approved by:

Arnd Weber (SiCrystal)	

Table 10 Index of Available Attachments#1

Title
7161 A&R
CSM China TC Chapter June 2024
CSM_JA TC Chapter Liaison Report_Aug 2024_R0
SNARF revision to M083 2024-08-05

#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. For additional information or to obtain individual attachments, please contact [SEMI Staff Name] at the contact information above.