

# Compound Semiconductor Materials Europe TC Chapter

## Meeting Summary and Minutes

Technical Committee Meeting  
13 October 2016, 2m-4:30pm CEST  
Fraunhofer Institute IISB, Schottkystraße 10D-91058 Erlangen, Germany

### Next Committee Meeting

Tentatively in Spring 2017, Nuremberg, date to be defined (see action item below)

### Committee Announcements

1 Guest (without voting) participated

### Table 1 Meeting Attendees

**Co-Chair:** Arnd Weber (SiCrystal)

**SEMI Staff:** Kevin Nguyen

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
SiCrystal	Weber	Arnd	Freiberger Compound Materials	Kretzer	Ulrich
Munich University	Alt	Hans-Christian	Fraunhofer Institute IISB	Epelbaum	Boris
SemiMap	Jantz	Wolfgang			

### Table 2 Leadership Changes

→ None

### Table 3 Ballot Results (or move to Section 4, Ballot Review)

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

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

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
	( no ballots )	

### Table 4 Authorized Ballots (or move to Section 7, New Business)

#	<i>When</i>	<i>SC/TF/WG</i>	<i>Details</i>
#4689	Cycle 8 or 9 2016	SiC TF	5-year-review of M55 + all M55.x Substandards "SPECIFICATION FOR POLISHED MONOCRYSTALLINE SILICON CARBIDE WAFERS"

### Table 5 Authorized Activities (or move to Section 7, New Business)

#	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
tbd	SNARF	5-year Review M54	5-year-Review of M54 "Guide for semi-insulating GaAs parameters"

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

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

**Table 6 – Previous Meeting Actions Items**

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>	<i>Status</i>
1	U Kretzer	Create M54 review TFOF and SNARF in for October 2016	done
2	A Weber	Contact DGKK Arbeitskreis organizers to explore the possibility of holding the next TC meeting there	done

**Table 6 New Action Items (or move to Section 8, Action Item Review)**

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
1	A Weber	Fix and announce next meeting date and location (Nuremberg)

## 1 Welcome, Reminders, and Introductions

Arnd Weber called the meeting to order at 2:00pm. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed and there were no questions. Attendees introduced themselves.

Boris Epelbaum is interested in standardization and participated as a guest (no voting).

## 2 Review of Previous Meeting Minutes

The committee reviewed the minutes of the previous meeting. The minutes are already approved and published on SEMI's website.

All action items are closed.

**Attachment:** 1, [EUCSMMMeetingMinutes20160412](#)

## 3 Task Force Reports

### 3.1 SiC TF

Arnd Weber reported for the SiC Task Force.

Progress at M55 review is now at 100%. The technical work on doc 4689 was closed and the TF approved the document to be sent to ballot.

Arnd Weber explained the major changes in the structure (similar to M1 – no substandards) and the complete review and update of all technical parameters. New are edge shape specifications and a notch for High frequency application 150mm substrates.

The 5 year review of Semi M81 started with the Task Force formation. An invitation was sent to potentially interested participants. At the time of the meeting already 6 participants responded in a positive way.

The plan is to do the review in 6 teleconference meetings and finish the review before the next ECS spring meeting 2017.

**Attachment 2:** [Draft 4689 M55 + Background statement](#)

### 3.2 Resistivity Round Robin TF

Wolfgang Jantz reported on the status:

- The contactless resistivity standard is published as M87-0116
- There discussions to how to conduct a round robin on known standard material with the aim to compare different tools and methods. The material needs to be known homogeneous which may be the critical point.

- Wolfgang Jantz contacted and invited potential participants. Up to now the responses have been weak. Only one additional participant responded positively. Wolfgang Jantz will continue to win 2 more round robin participants to reach a useful number of labs.
- The expected results shall be added as an appendix (by a line-item ballot) to M87 in order to assist the user with representative sample data.

#### 4 Ballot Review

There was no ballot review scheduled in this meeting.

#### 5 Ballot Authorizatuion

Arnd Weber moved to approve doc 4689 (M55 5-year review as presented in the TF report) to the next ballot cycle

[See above Attachment 2](#)

**Motion:** Authorize doc 4689 (M55 5-year-revie) for ballot  
**By / 2<sup>nd</sup>:** Arnd Weber/Wolfgang Jantz  
**Discussion:** None  
**Vote:** 4/4 in favor

#### 6 5-year-Reviews

Ulrich Kretzer presented SNARF for the 5-year-review of **M54** (Guide for semi-insulating GaAs parameters). The activity shall be conducted within a **new TF (M54 5-year review TF)**. Target is to authorize the ballot of the finalizes the review at the Spring 2017 ECS meeting.

[Attachment 4: SNARF M54 revision 2016\\_10](#)

**Motion:** Approve the SNARF and Task Force Formation for M54 5y-review  
**By / 2<sup>nd</sup>:** Ulrich Kretzer/Hans-Christian Alt  
**Discussion:** None  
**Vote:** 4/4 in favor

Arnd Weber presented the upcoming next 5-year-reviews

2017 M75 (Specifications for Polished Monocrystalline Gallium Antimonide Wafers)

2018 M82 (Test Method for the Carbon Acceptor Concentration in Semi-Insulating Gallium Arsenide Single Crystals by Infrared Absorption Spectroscopy)

2018 M83 (Test Method for Determination of Dislocation Etch Pit Density in Monocrystals of III-V Compound Semiconductors)

#### 7 Liaison Reports

7.1 *North America Compound Semiconductors Materials Committee*

Arnd Weber presented this report for the North American Semiconductor Materials Committee. There were no questions.

[Attachment 5: NACSM Liaison Report Oct 2016](#)

## 8 New Business

8.1 As discussed in the last meeting CdZnTe compounds seem to experience a strong evolution on the market. Applications are mainly X-Ray detectors in the framework of medical and technical X-Ray analytics. All participants try to identify potential contact persons or experts for this material in order to propose CdZnTe materials for a standardization process.

8.2 SEMI standardization was presented at the DGKK meeting together with an invitation to join this ECS meeting. General feedback from the DGKK participants was positive. This kind of advertisement shall be continued.

## 9 Action Item Review

### 9.1 *New Action Items*

Arnd Weber reviewed the new action items. These can be found in the New Action Items table at the beginning of these minutes.

## 10 Next Meeting and Adjournment

The next meeting of Europe's Compound Semiconductor Materials Committee is scheduled for Spring 2017 in Nuremberg.

**Action Item:** Arnd Weber to announce the meeting date and location.

The meeting was closed at 3:25pm-

Respectfully submitted by:

These minutes are respectfully submitted by:

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SEMI Int'l Standards Operation Manager  
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Minutes approved by:

Arnd Weber

#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 Kevin Nguyen at the contact information above