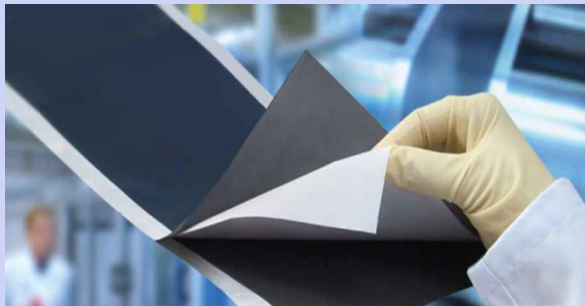




April 04<sup>th</sup> – 05<sup>th</sup> 2018

# 3<sup>rd</sup> INDUSTRIAL ON-SITE LITHIUM-ION CELL PRODUCTION TECHNOLOGY SEMINAR



## Dear Battery Follower

This seminar focusses on the industrial production of lithium-ion pouch cells. In **practical modules**, starting from the raw materials, slurries and electrodes going to the production of pouch cells and closing with the electrochemical characterization, the cell assembly will be performed **hands on**.

The corresponding **lecture program** gives insights to the latest lithium-ion technology trends on material and on machinery as well as on processing side. The battery training takes place on site at **Custom Cells** production facility and the **Fraunhofer ISIT** as Custom Cells R&D partner in north Germany.

### Key Benefits

The seminar provides:

- Practical sessions to learn about all lithium-ion cell production steps
- Direct insight into a state of the art lithium-ion cell production line
- Supporting lectures on every practical session; technology, processes and machinery
- Updates about the latest technology trends in lithium-ion batteries

### Who Should Attend?

- New Technology Startups
- Pack Assemblers
- Energy Storage Supplier
- Academic Researchers
- Energy Storage/Power R&D Engineers
- Automotive Industry Manager
- Chemical Industry Manager
- Other Industry Members



**Seminar Location**  
Fraunhoferstrasse 1b  
D-25524 Itzehoe  
Germany

## Seminar Program Topic

### Practical on-Site Sessions

Slurry preparation  
Material handling  
Coating process  
Cell assembly  
Electrolyte filling  
Sealing  
Formation process  
Cell characterization

### Lectures

Technology overview  
Active Materials  
Coating machinery  
Electrode characterization  
Customizing batteries  
Electrolyte additives  
System layout  
Next generation technologies

## Seminar Pricing

Commercial  
€ 3,100 + VAT

Academic \*  
€ 1,550 + VAT

\* Copy of an Academic Institute ID is required

10% discount for 3+ group attendees.

The number of participations is limited.

Pricing includes hard copy print out of all seminar presentations, lunch, refreshments and an invitation for a get together and dinner.

Booking is concluded after receiving confirmation.

The organizer is allowed to reject potential participants in exceptional cases.

Cancellation of registration:

Written notice only will be accepted:

Until March 25, 2018 – 50% refund

From March 26, 2018 – No refund

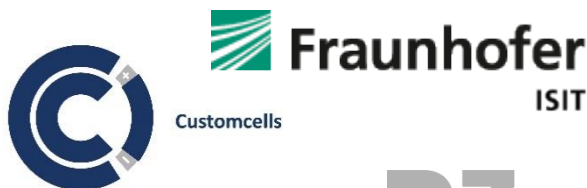
Remarks:

In case that the seminar will have to be cancelled due to force majeure, due to speaker's preventions or due to lack of participants, the participants will be informed accordingly no later than 7 days before the event. The event fee will be refunded in this case.

In case of cancellation of the seminar up to 7 days before the event, a claim for compensation for travel or accommodation costs is excluded

**Contact:**

Dr. Daniela Werlich  
daniela.werlich@customcells.de  
+49 4821 133 92 06  
+49 176 2432 7127



**April 04, 2018**

- 8:30 Registration  
Fraunhofer ISIT, Fraunhoferstr. 1, 25524 Itzehoe
- 9:00 Welcome to "Industrial battery manufacturing - training-"
- 9:45 Safety instructions
- Talk Session I**
- 10:00 Overview about material for the production of Li-ion cell electrodes  
Dr. Andreas Würsig (Group Leader, IES, Fraunhofer ISIT)
- 10:40 Modern Binder Materials for improved Li-ion cells  
ZEON
- 11:20 Advanced Mixing Technologies  
Philipp Stössel (Head of Market Segment; Bühler AG)
- 12:00 Lunch break
- Practical Session I  
In three groups**
- 13:00 Slurry Mixing  
-theoretical and practical training -  
**Anode coating on roll to roll coating line**  
- practical training-  
**Advanced machinery for electrode coating**  
Clemens Disch (Area Sales Manager, WERNER MATHIS AG)
- 15:30 Coffee break
- Talk Session II**
- 16:15 Battery Essential  
Shmuel De-Leon
- 17:00 Battery Supply chain  
Shmuel De-Leon
- 17:45 Modern Separator Materials for improved Li-ion cells  
FREUDENBERG
- 18:30 Conclusion first day  
Dr. Daniela Werlich (Senior Project Manager, Custom Cells)
- 20:00 CCI invite for a get together and dinner

**April 05, 2018**

- 7:30 Registration  
Fraunhofer ISIT, Fraunhoferstr. 1, 25524 Itzehoe
- Talk Session III**
- 8:00 Customizing of Lithium Battery Cells  
Dr. Daniela Werlich (Project Manager, Custom Cells)
- 8:45 Characterization of Electrodes with laboratory equipment  
Iris Zwanziger (Director of Marketing and Sales, EL Cell GmbH)
- 9:30 From Characterization of Li-ion cells to Module and System Level  
Dipl.-Ing. Christian Werlich (Project Manager, IES, Fraunhofer ISIT)
- 10:15 Coffee break
- Practical Session II  
In six groups**
- 10:45 Assembly of pouch Cells  
-practical training-  
Cutting  
Stacking  
Tab Welding  
Pouch Packing  
Electrolyte Filling  
Formation
- 13:15 Lunch break
- Talk Session IV**
- 14:15 25th anniversary of the liquid electrolyte in lithium ion batteries  
Dr. Ralf Wagner
- 15:30 Battery Safety  
Shmuel De-Leon
- 16:15 Next generation cell technology  
Dr. Andreas Würsig (Group Leader, IES, Fraunhofer ISIT)