



April 04th – 05th 2018

3rd 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

Academic *

€ 3,100 + VAT

€ 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



Shmuel De-Leon
Energy Ltd

ZEON

EL-CELL®

BUHLER

Mathis
MADE IN SWITZERLAND

FREUDENBERG
INNOVATING TOGETHER

April 04, 2018

- 8:30** Registration
Fraunhofer ISIT, Fraunhoferstr. 1, 25524 Itzehoe
- 9:00** **Welcome to "Industrial battery manufacturing -training-"**
Torge Thönnessen (CEO, Custom Cells) and
Shmuel De-Leon (CEO, Shmuel De-Leon Energy, Ltd)
Dr. Andreas Würsig (Group Leader, IES, Fraunhofer ISIT)
- 9:45** **Safety instructions**
Dr. Daniela Werlich (Senior Project Manager, Custom Cells)
Dipl.-Ing. Christian Werlich (Project Manager, IES, Fraunhofer ISIT)
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)