

1st Li-Ion-Solid Electrolyte & Lithium Metal (Liquid & Solid Electrolyte) Rechargeable Cell Manufacturing Seminar, August 19-20, 2019

This seminar focuses on the technology, design and manufacturing of rechargeable li-ion solid state electrolyte & lithium metal (solid & liquid electrolyte) cells. In practical sessions, cell assembly will be performed in hands-on training by starting with raw materials and going through to the final cell assembly, test and characterization.

The lecture program gives insights into the latest cell technology trends for materials and manufacturing equipment as well as state-of-the-art process technologies.

The seminar takes place on site at SpectraPower's Battery Lab in Livermore CA, USA. Livermore is a 1 hour drive east of San Francisco.

Key Benefits

The seminar provides

- Theoretical & Practical sessions to learn about production steps for li-ion & lithium metal cells with solid state or solid electrolyte
- Direct insight into a state of the art lithium rechargeable cell production line
- Supporting lectures with practical sessions technology, processes, and machinery
- Updates on latest technology trends in lithium Solid Electrolyte rechargeable batteries

Who Should Attend?

- Battery & Electrochemistry Industry Members
- Battery Material Makers Members
- Battery Manufacturing Equipment Makers
- New Technology Startups
- Potential Investors in lithium technology
- Academic Researchers
- Other Industry Members

Seminar Program Topics

Practical On-Site Sessions

- Electrode preparation
- Material handling
- Coating process
- Cell assembly
- Package sealing
- Formation process

Lectures

- Li rechargeable cell technology overview
- Lithium rechargeable manufacturing
- Solid Electrolytes for lithium batteries
- Solid Electrolyte material: processing, properties, and opportunities
- Solidstate Li metal battery equipment, processes, and cell teardown analysis
- Cell design
- High Energy Cathodes for Lithium Metal Rechargeable Cells
- Battery safety
- Next generation lithium metal and li-ion solid electrolyte technologies market review 2019
- Tear down & Analys of Solid State Thin Film Cells

1st Seminar Schedule

August 19-20, 2019

Seminar Location

SpectraPower LLC
460 Lindbergh Ave,
Livermore, CA 94551 USA

Presented by SpectraPower and Shmuel De-Leon Energy

Day 1 – Monday, August 19, 2019

8:00-8:30 am	Registration, Continental Breakfast, and Networking SpectraPower LLC, 460 Lindbergh Ave, Livermore, CA 94551 USA
8:30-8:45 am	Introduction Welcome, Introduction and Opening Remarks James Kaschmitter (SpectraPower) Speaker Introductions Shmuel De-Leon (Shmuel De-Leon Energy Ltd) Dr. Ernest Demaray (Demaray LLC), Adj. Prof. Dr. Rainer Fasching (Stanford University), Pavel Khokhlov (SpectraPower), Steve Pierce (SpectraPower), Aubert Demaray (SpectraPower), Hui Du (Ampcera Inc.), Sumin Zhu (Ampcera Inc.)
8:45-9:45 am	Fundamentals of Rechargeable Lithium Battery Technology James Kaschmitter (SpectraPower)
9:45-10:45 am	Manufacturing of Lithium Rechargeable Batteries James Kaschmitter (SpectraPower)
10:45-11:45 am	Overview of Solid Electrolytes for Lithium Batteries (Different solid electrolyte battery technologies) Adj. Prof. Dr. Rainer Fasching (Stanford University)
11:45-12:30 pm	Lunch in Conference Area
12:30-1:30 pm	Solid Electrolytes - Materials, Applications and Opportunities Sumin Zhu, Ph.D., CEO & Hui Du, Ph.D., CTO (Ampcera Inc.)
1:30-2:30 pm	Equipment and Processes for Solid-state Lithium Metal Batteries (PVD equipment) Dr. Ernest Demaray (Demaray LLC)
2:30-3:00pm	Lithium Metal rechargeable Cell Design and Fabrication Pavel Khokhlov (SpectraPower)
3:00-3:30 pm	High Energy Cathode to Match with Lithium Metal Rechargeable Cell Design and Manufacturing Steve Pierce (SpectraPower)
3:30-3:45 pm	Afternoon Break
3:45-4:00 pm	Laboratory Safety Training Aubert Demaray (SpectraPower)
4:00–4:45 pm	Electrode Slurry Preparation and Coating - Practical Training Steve Pierce (SpectraPower)

4:45-5:30 pm	Electrode Preparation (Cutting, Calendaring, Punching and TABs preparation) - Practical Training Pavel Khokhlov and Hank Zhang (SpectraPower)
5:30-7:00 pm	Break and transition to Dinner in a nearby restaurant
7:00 pm-8:30 pm	Dinner and Networking

Day 2 – Tuesday, August 20, 2019

8:00-8:30 am	Continental Breakfast and Networking SpectraPower LLC, 460 Lindbergh Ave, Livermore, CA 94551 USA
8:30-10:00 am	Battery Safety Shmuel De-Leon (Shmuel De-Leon Energy Ltd)
10:00-11:00 am	Lithium metal rechargeable battery market 2019 Shmuel De-Leon (Shmuel De-Leon Energy Ltd)
11:00-12:00 am	Lithium solid electrolyte rechargeable market 2019 Shmuel De-Leon (Shmuel De-Leon Energy Ltd)
12:00-12:45 pm	Lunch in Conference Area
12:45-1:45 am	Tear Down & Analysis of Solid-state Thin film Li Metal Cell Dr. Ernest Demaray (Demaray LLC)
1:45-2:15 am	Beyond Li-Ion Cell market 2019 (>300 Wh/Kg Cells) Shmuel De-Leon (Shmuel De-Leon Energy Ltd)
2:15-4:15 pm	Single & Multi-layer Li Metal Rechargeable Pouch Cell Assembly with liquid electrolyte – Practical Training Pavel Khokhlov and Hank Zhang (SpectraPower)
4:15-5:15 pm	Li-Ion Solid state Cell, Lithium Metal Rechargeable Cell Formation and Testing – Practical Training Pavel Khokhlov and Hank Zhang (SpectraPower)
5:15-5:45 pm	Q&A and Summary of Seminar All
5:45 pm	End of Seminar

Seminar Pricing

Registration

Commercial Registration: \$3000 + VAT

Academic and Government employee registration*: \$1500 + VAT

* Full time students only. Copy of Academic Institute ID is required, Government employee ID

10% discount for 3+ group attendees.

The number of participants is limited.

Pricing includes:

1. Hard copy print-out of all presentation except the market report presentation. The attendants will not get a copy of the two market reports that will be presented by Shmuel De-Leon at the seminar. The participants will be able to purchase a copy with 25% discount.
2. Continental breakfast, lunch and refreshments for both days
3. Dinner on the first evening

Event Registration and Release of Liability Form:

All attendees will be required to sign an Event Registration and Liability form in order to participate in the seminar. All Attendees who wish to participate in the practical training sessions must attend the Laboratory Safety training on the first day and follow the safety guidelines and instructions of SpectraPower personnel.

Booking is concluded after receiving confirmation from SpectraPower that they have received Payment and a signed copy of the Event Registration and Liability form.

Cancellation of registration:

Written notice only will be accepted:

Until **July 30th**, 2019 – 50% refund

From **August 1st**, 2019 – 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 seminar fee will be refunded in this case.

Contact Person for registration:

Aubert Demaray

Director of Operations



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650 269 7297

Registration Form

Participant:

Print Name: _____

Title: _____

Email: _____

Phone: _____ **Mobile:** _____

Company:

Name: _____

Address: _____

Emergency Contact: _____ **Contact Relationship:** _____ **Contact Telephone #:** _____

Allergies or Known Medical Issues Seminar Personnel should be aware of: