

Medical Batteries Seminar

17-18/10/2022 – Appenzell, Switzerland

The seminar program focuses on present and future needs of portable and stationary electrochemical energy sources and highlights the latest technological developments designed to satisfy application requirements.

The program reviews primary, rechargeable systems and their accessories.

The seminar program reviews typical cycle life aspects of designing and manufacturing energy source solutions: from application energy requirements, power source electrical and mechanical design, cells selection, cells evaluation tests, battery prototype, acceptance tests, design and manufacturing techniques, testing, mass production, safety issues, transportation, use and disposal.

Special focus is given to battery design and testing aspects which are vital tools for battery solution.

The program trains attendees on safety issues along the energy source solution cycle life.

The program focuses on electric vehicle and Batteries, and Medical Batteries

Key Benefits

Medical Batteries Seminar provides:

- Full review of current and future electrochemical energy sources.
- Training on cells selection, design, manufacturing, testing, safety, and transportation and disposal aspects of energy sources.
- Basic knowledge for new industry members entering the field.
- Expands the knowledge of industry members already working in the field.
- Training on Energy Sources Database software – a vital tool for optimal energy source design.

Seminar Program Topics

- Battery characteristics
- Primary cells & batteries
- Rechargeable cells & batteries
- Lithium rechargeable cell Manufacturing process
- Medical battery chargers
- Small size/Micro Batteries
- Plastic housing technology for li-ion cells
- Implantable Medical Batteries
- Battery design process
- Battery safety
- Battery disposal
- The “smart battery”
- Battery transportation regulations

Seminar Schedule

October 17-18, 2022

Seminar Location

Wyon AG
Saeghueslistrasse 15, CH-9050
Appenzell Steinegg

Local Partner

Mr. Raphael Mock
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Tel: +41 71 577 45 85
Website: www.wyon.ch

Who Should Attend?

- Battery and energy sources users
- Medical batteries customers
- Pack assemblers
- Cell makers
- Energy sources suppliers
- Academic researchers
- R&D engineers
- Market researchers
- Safety supervisors
- Battery shippers and disposals
- Medical industry members
- Others industry members

About Shmuel De-Leon

Shmuel De-Leon is Founder and CEO of Shmuel De-Leon Energy, Ltd.

Shmuel is a leading international expert in the business of Power Sources, Energy storage and EV's.

Prior to founding the company, Shmuel held for over 20 years various positions as a power sources, engineering and quality control team manager.

Shmuel holds BSc. in mechanical engineering from Tel-Aviv University and MBA in quality control and reliability engineering from the Technion Institute in Haifa as well as an Electronic Technician's diploma.

Shmuel De-Leon Energy Ltd. provides unique tools for the energy sources industry, such as Consulting, Training, Conference organizer, Market research reports Market research reports Energy Sources Database, Market research reports, Energy Sources Solutions, Industry News weekly newsletter.

Seminar Pricing

	Commercial	Academic *
<u>Early Registration Discount until 18/09/2022</u>	€ 800 + VAT	€ 400 + VAT
<u>Registration from 19/09/2022</u>	€ 880 + VAT	€ 440 + VAT

* Copy of an Academic Institute ID is required

** 10% discount for 3+ group attendees

*** Pricing includes hard copy print out of all seminar presentations, lunch & refreshments

Sponsor & Exhibit Opportunities

Exhibitor and Sponsor will receive:

- 1 roll-up display at the seminar room
- Advertisement materials on a side table in the seminar room
- Logo in the seminar program, agenda and seminar web site
- Extra 10% discount on attending the seminar

Pricing: € 400 + VAT

Seminar Schedule & Agenda

Monday, 17/10/2022
08:00 – 09:00 Registration
09:00 – 10:00 Battery Characteristics This session introduces a historical prospective of batteries, detailed battery definitions and features (electrical, mechanical, standards, etc.). Module 1 lays the foundation for the attendants to share a common “battery language” and provides all the background needed for upcoming modules.
10:00 – 11:00 Primary cells & Batteries This session reviews and compares primary battery chemistries (Alkaline Manganese Dioxide, Zinc Carbon, Zinc Chloride, Silver Zinc, Nickel Oxyhydroxide, Lithium Iron Disulfide, Lithium Iodine, Lithium Manganese Dioxide, Lithium Carbon Monofluoride, Lithium Sulfur Dioxide, Lithium Thionyl Chloride, Lithium Sulfuryl Chloride, Lithium Bromine Chloride and High Power Organic Lithium).
11:00 – 11:15 Coffee Break
11:15 – 11:45 Rechargeable cells & batteries This session reviews and compares rechargeable batteries chemistries (Nickel Cadmium, Nickel Metal Hydride, Rechargeable Alkaline, Lithium Ion and Lithium Polymer).
11:45 – 12:00 Lithium Rechargeable Cells Manufacturing Process This session reviews manufacturing process techniques for conventional and pouch cells.
12:00 – 13:00 Medical Battery Chargers This session reviews battery chargers, charging techniques per battery chemistry, charging problems and solutions, personal chargers, industrial chargers and charger types by charging time.
13:00 – 14:00 Lunch Break
14:00 – 14:30 Small size/Micro Batteries (Presented by Wyon) This session reviews and compares Small size/ Micro Rechargeable Batteries.
14:30 – 15:00 Plastic housing technology for li-ion cells (Presented by Wyon) This session reviews advantages, possibilities and applications of rigid plastic housing technology.
15:00 – 15:15 Coffee Break
15:15 – 16:30 Battery Design Process & Optimization This session introduces battery design processes (cell and raw materials selection, cell level testing, battery design documents, battery electrical, mechanical and safety design and final verification tests (electrical, mechanical, safety).
Tuesday, 18/10/2022
09:00 – 10:30 Battery Safety This session introduces the safety risks along the battery cycle life and provides safety guidelines for safety event elimination. Module 8 also addresses the procedures involved in handling safety events, including first aid.
10:30 – 11:00 Battery Disposal This session introduces battery disposal requirements and updates disposal status in Europe and the US.
11:00 – 11:15 Coffee Break
11:15 – 11:45 The “Smart Batteries” This session introduces the “Smart Battery” technology, including single wire and smart battery communications bus and its advantages.
11:45 – 12:30 Implantable Medical battery market 2022 presented by Shmuel De-Leon
12:30 – 13:30 Lunch Break
13:30 – 14:15 Battery Transportation Regulations
14:15 - 15:15 Wyon battery factory tour
15:15 – 16:00 QA with Wyon and Shmuel De-Leon Energy

Pre-Registration Form - Energy Storage Seminar
17-18/10/2022

Contact Details (*Required)

Company * First Name* Last Name*

Title City* Zip Code*

Street* Country* State

Phone* Mobile Fax

Email*

*Please complete the registration form and return to:

Shmuel De-Leon Energy LTD.
10 Mazal Arie, Hod Hasharon Israel 4536045
Tel: 972-77-5010792 email: shmuel@sdle.co.il

Or to:

Wyon/ Mr. Raphael Mock
Email: raphael.mock@wyon.ch
Tel: +41 71 577 45 85
Website: www.wyon.ch

* Remarks:

- Cancellation of registration must be made in writing only.
- 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.