

Minutes of the NDIA Power Sources Committee

Meeting Dates: 21 June 2017

Location:

Wright Patterson AFB

TEC^EDGE INNOVATION & COLLABORATION CENTER

5000 Springfield Street

Suite 100

Dayton, Ohio 45431

Attachments:

- A. Attendees
- B. Meeting Agenda
- C. Off-Gas Monitoring for Lithium Ion Battery Health and Safety - Nexceris
- D. Advanced CVX Cells for Military Applications – Engineered Power
- E. Alane - Aluminum Hydride for Fuel Cell Power - Ardica
- F. Electroplated Materials and Functional Substrates for High Performance Lithium Ion Batteries – Xerion Advanced Batteries Corp.
- G. UAS Hybrid Power & Propulsion - Air Force Research Laboratory

Attendees: See attachment A

Agenda: The agenda for this meeting is provided as Attachment B.

NDIA Power Sources Committee meeting

Off-Gas Monitoring for Lithium Ion Battery Health and Safety (Steve Cummings & Scott Swartz, Nexceris LLC.)

1. An overview of a sensing system to detect Li-Ion malfunctions was provided.
2. These systems can be mounted on board the battery or external. The closer the system is to a malfunctioning cell the greater the opportunity to prevent thermal runaway.
3. A copy of the presentation is provided as Attachment C.

Advanced CVX Cells for Military Applications (Vincent Visco, Engineered Power)

1. Engineered Power is a manufacturer of cylindrical non-rechargeable cells from 1/2AAA to DDD and E
2. They specialize in Li-Thionyl, Li-CFx and Li-CFx/MNO₂.
3. The principle customer for their products are oil drilling companies.
4. The products could be of benefit to military applications.
5. A copy of the presentation is provided as Attachment D.

Alane – Aluminum Hydride for Fuel Cell Power (Dan Braithwaite, Ardica)

1. Alane (aluminum hydride), produced through a patented Ardica process to produce hydrogen for light weight fuel cell applications.

2. Both Army and Navy applications are being developed.
3. A copy of the Ardica presentation is provided as attachment E.

Electroplated Materials and Functional Substrates for High Performance Lithium Ion Batteries (Justin Lenoff, Xerion Advanced Battery Corp.)

1. Xerion is developing a manufacturing process for electro-plating lithium ion electrodes.
2. The process is simple, lends itself to mass production and produces better electrodes.
3. A copy of the Xerion presentation is provided as attachment F.

UAS Hybrid Power & Propulsion (Michael Rottmayer, PhD - Air Force Research Lab)

1. A brief overview of Wright Patterson AFB along with how Power & Control Technologies fit in was provided.
2. A more detailed overview of the efforts to support Small Unmanned Aircraft Systems (SUAS) and Unmanned Aircraft Systems (UAS) was also briefed.
3. A copy of the Air Force presentation is provided as attachment G.

Our next meeting is tentatively set for November 2, 2017 at ACI in Philadelphia.