



WORLD ENERGY STORAGE DAY[®]

Virtual Global Conference and Expo

22 September, 2022
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WORKSHOP Hall-2

Hazards associated with battery fires in EV and ESS



Date: September 22, 2022

Time: 06:30 pm - 08:00 pm IST | 08:00 am - 09:30 am CT | 09:00 am - 10:30 am ET

Workshop description:

Lithium-ion battery fires have become a common occurrence today with the inception of e-mobility (EV) and stationary grid energy storage systems (ESS). Thermal runaway of lithium-ion batteries is accompanied by high temperatures, venting, fire, smoke, and particular emissions. The gaseous components of the fire and smoke can be above lower flammability limit (LFL) and cause explosions if trapped within a restricted volume as with EV and ESS. Hazards such as cycle life and calendar life aging under extreme environmental conditions can lead to various levels of degradation. Some degradations can lead to hazardous events in the batteries causing thermal runaway and fires.

The presenters at this workshop will cover battery aging hazards and emissions and explosions associated with lithium-ion batteries under off-nominal conditions.

Workshop structure

| Topic | Speaker | Time (IST CT ET) |
|---|---|--|
| Welcome & Introduction to the workshop | Dr. Judy Jeevarajan Vice President & Executive Director, Electrochemical Safety Research Institute, UL Research Institutes | 06:30 pm – 06:35 pm IST 08:00 am – 08:05 am CT 09:00 am – 09:05 am ET |
| Aging and safety for li-ion cells and batteries | Dr. Anna G. Stefanopoulou William Clay Ford Professor of Technology, Professor of Mechanical Engineering, University of Michigan | 06:35 pm – 06:50 pm IST 08:05 am – 08:20 am CT 09:05 am – 09:20 am ET |
| Particulate emissions | Dr. Vinay Premnath Lead Engineer, Particle Science and Technology Section, Southwest Research Institute (SWRI) | 06:50 pm – 07:05 pm IST 08:20 am – 08:35 am CT 09:20 am – 09:35 am ET |
| Plume-rise and dispersion modelling in open surrounding of smoke from large-scale lithium-ion battery fires | Dr. Christian Lejon Research Engineer, Swedish Defense Research Agency (FOI) | 07:05 pm – 07:15 pm IST 08:35 am – 08:45 am CT 03:35 pm – 03:45 pm Sweden time |
| Aerosol studies and explosion proof containers related to lithium-ion batteries | Dr. Teresa Barone Chemical Engineer, National Institute for Occupational Safety and Health (NIOSH) Dr. Thomas Dubaniewicz Lead General Engineer, National Institute for Occupational Safety and Health (NIOSH) | 07:20 pm – 07:35 pm IST 08:50 am – 09:05 am CT 09:50 am – 10:05 am ET |
| EV fires' investigations | Dr. Thomas Barth Chief, Special Investigations Branch, Office of Highway Safety, National Transportation Safety Board (NTSB) | 07:35 pm – 07:50 pm IST 09:05 am – 09:20 am CT 10:05 am – 10:20 am ET |
| Acknowledgements and Closing Remarks | Dr. Judy Jeevarajan Vice President & Executive Director, Electrochemical Safety Research Institute, UL Research Institutes | 07:50 pm – 08:00 pm IST 09:20 am – 09:30 am CT 10:20 am – 10:30 am ET |

FOR FURTHER QUERIES, CONTACT

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