A NanoBioLab Symposium 2021 Webinar

Prof. Jeff Dahn, Dalhousie University

CAN ONE LEARN AS MUCH ABOUT LI-ION BATTERY AGING WITH A MICROMETER AS WITH A SYNCHROTRON?

Thursday, February 11, 2021
9:00 - 10:00 am SGT

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Prof. Jeff Dahn

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Photo by Danny Abriel, Dalhousie University

ABSTRACT

Many people believe "fancy instruments" are required to learn details about Li-ion battery aging. Here, I show that a simple micrometer can be used effectively to learn many things about Li-ion battery failure. X-ray CT experiments made using the Canadian Light Source shed light on the micrometer results. Experiments on two types of Li-ion pouch cells that underwent testing for 2.5 years at 40°C are discussed.

ABOUT THE SPEAKER

Jeff Dahn obtained his B.Sc. from Dalhousie University (1978) and his Ph.D. from the University of British Columbia in 1982. Dahn then worked at NRC (Canada) (82-85) and at Moli Energy (85-90) before taking up a faculty position at Simon Fraser University in 1990. He returned to Dalhousie in 1996. At Moli, he did pioneering work on lithium-ion batteries.

Dahn was appointed as the NSERC/3M Canada Industrial Research Chair in Materials for Advanced Batteries at Dalhousie University in 1996, a position that he held until 2016. In 2016, Dahn began a research partnership with Tesla as the NSERC/Tesla Canada Industrial Research Chair. With over 700 journal publications and 70 distinct inventions, his H-index is 123.

Dahn's research has been recognized by numerous awards including a Governor General's Innovation Award (2016) and the Gerhard Herzberg Gold Medal in Science and Engineering (2017), Canada's top science prize. He is the only person to have been awarded both. He has also been awarded both Electrochemical Society Battery Division Awards.

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