



# Platform Li-Ion Battery Risk Assessment Tool

Cooperative Research and Development  
Final Report

**CRADA Number: CRD-01-406**

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**CRADA Report**  
NREL/TP-7A10-53589  
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## Cooperative Research and Development Final Report

In accordance with Requirements set forth in Article XI.A(3) of the CRADA document, this document is the final CRADA report, including a list of Subject Inventions, to be forwarded to the Office of Science and Technical Information as part of the commitment to the public to demonstrate results of federally funded research.

CRADA number: CRD-01-406

CRADA Title: Platform Li-Ion Battery Risk Assessment Tool

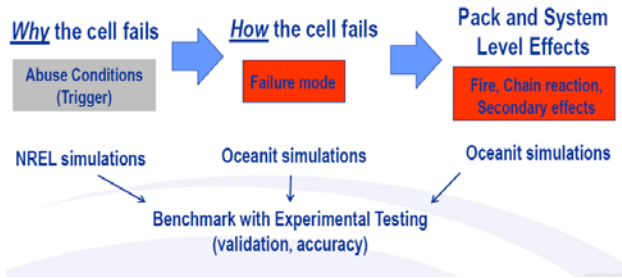
Parties to the Agreement: Oceanit Laboratories

Joint Work Statement Funding Table showing DOE commitment:

Estimated Costs	NREL Shared Resources
Year 1	\$ 00.00
Year 2	\$ 00.00
Year 3	\$ 00.00
TOTALS	\$ 00.00

Abstract of CRADA work:

The pressure within a lithium-ion cell changes due to various chemical reactions. When a battery undergoes an unintended short circuit, the pressure changes are drastic – and often lead to uncontrolled failure of the cells. As part of work for others with Oceanit Laboratories Inc. for the NAVY STTR, NREL built Computational Fluid Dynamic (CFD) simulations that can identify potential weak spots in the battery during such events, as well as propose designs to control violent failure of batteries.



Summary of Research Results:

Please see slides (Oceanit WFO\_Jan2012.pptx) attached.

Subject Inventions listing: None

Report Date: 01/16/2012

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