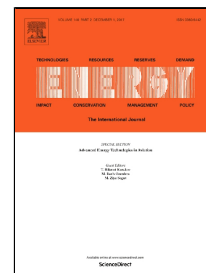


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A comprehensive model for lithium-ion batteries: from the physical principles to an electrical model

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Highlights

- A physical-based electrical model of a lithium-ion battery is proposed.
- The electrical model is represented as an equivalent circuit.
- An experimental procedure to characterize the battery is described.
- A fitting process for the model parameters is developed.
- Validation of the model is performed in various situations proving its accuracy.

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