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METHOD TO IMPROVE CC-CV LITHIUM-ION BATTERY CHARGER CHARGING TIME



▶ MORE INFORMATION

MEGA-TREND

- **Chemicals and Materials**

TECHNOLOGY READINESS LEVEL (TRL)

- **TRL 3**

PATENT/ GRANTED NUMBER

- **PI 2017700891**

▶ TECHNOLOGY OVERVIEW

The invention discloses a method for improving the charging time of a Li-ion battery using a CC-CV Li-ion battery charger. First the Lithium Ion battery voltage is measured while the current flows through the closed circuit of the CC-CV battery charger circuit. Now the charging process of the CC-CV Li-ion battery during a constant current stage of the CC-CV Li-ion battery charger operation is interrupted. The current duty cycle value during the CC-CV Li-ion battery charger operation is saved. Now a delay period of 0.26ms is executed and the voltage of the Li-ion battery is measured at the end of the delay

period. Now the duty cycle value measured during the CC-CV Li-ion battery charger operation is restored. Then the interrupt operation of the charging process of the CC-CV Li-ion battery is exited. The accurate CC-CV transition and voltage measurement improves the charging time of the Li-ion battery.

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