Development of a Battery Testing System

Status: Available

Group Members: TBD

Sponsor(s): Future Vehicle Technologies Inc.

Supervisor(s): Todd Pratt, Future Vehicle Technolgies Inc.,
Farid Golnaraghi, PhD, PEng, Professor, Mechatronic Systems Engineering

Project Description

The Proposed Battery Testing Project would be to test a battery enhancing technology for Li Ion batteries. This technology reportedly increases the energy density of lithium cells externally with no known downsides. There is also the possibility that the technology reduces dendrite growth which will potentially increase cell life and safety. The impact of this technology on the lithium cell market could be significant. We have heard that energy density increases of 20% or more have been reported.

In this project FVT Research would supply 3 treated and 3 untreated cells of two different lithium chemistries. We can also supply data analysis hardware and software (if needed)so that testing can be recorded at ~100 samples per second . Testing would include loading the cells at .5,1,2,3,5 and 10C then comparing the performance of treated and control cells. Voltage, amperage, temperature, etc would all have to be recorded and compared.

Tests would include controlled charge, discharge and rest cycles. FVT would supply test parameters and charge protocol. SFU would do all testing, data collection and analysis.