



www.globaltechinc.com

Global Technology Connection, Inc.
2839 Paces Ferry Rd., Ste. 1160
Atlanta, GA 30339
Phone: (770) 803-3001 fax: (770) 234-4148
e-mail: mail@globaltechinc.com

PRESS RELEASE

For Immediate Release

GLOBAL TECHNOLOGY CONNECTION AWARDED MISSILE DEFENSE AGENCY PROGRAM ON LI-ION CELL PERFORMANCE MODELING

Atlanta, GA. August 1, 2011 – Global Technology Connection, Inc., in collaboration with their academic and battery manufacturer partners propose to create a physics-based modeling for predicting the life performance of Low and Middle Earth Orbit (LEO/MEO) Lithium-ion cells. The relationships between solid-electrolyte interphase (SEI), electrolyte chemistry, Li+ or other active material loss, temperature, depth of discharge, self-discharge, discharge rate, and capacity fade will be determined through the model. Development of Li-ion performance physics-based models will assume graphite as the negative electrode material. The statistical relationships between aging cells and measurable quantities will also be analyzed through non-parametric models. Methodologies to collect accelerated test data from batteries and to assess the ability to make performance predictions from these data will also be determined. Models will be validated using existing Li-ion battery data sets.

The benefits of physics-based models to predict Lithium-ion battery performance are many. Using a physics-based approach, the user gains more insight into the underlying relationships that cause battery performance deterioration. The ability to make these predictions allow one to size batteries appropriately for applications, improve safety of systems, and reduce the chance of unexpected failures during use. Many applications outside of space could use the developed models such as cell-phones, hybrid electric vehicles, wind turbines, laptop computers, battery backup systems, etc.

For more information, please contact Dr. Ash Thakker and Dr. Nicholas Propes at (770) 803-3001.