Thursday, March 22, 2012
RADIOISOTOPE POWER SYSTEMS: THERMOELECTRIC ENERGY CONVERSION
3:30 p.m.  Waterway Ballroom 3

Chairs:  Jean-Pierre Fleurial (Jet Propulsion Laboratory)
         Joseph Sholtis (Consultant)

3:30 p.m.  Caillat T. * Firdosy S.  Li B. C- Y.  Huang C. -K.  Cheng B.  Paik J.  Chase J.  Arakelian T.  Lara L.  Fleurial J. -P.
Progress Status of the Development of High-Efficiency Segmented Thermoelectric Couples [#3077]
Advanced thermoelectric couples have demonstrated 11 to 15% conversion efficiencies with cold and hot side temperatures in the 150°–200°C and 800°–1000°C range, respectively.

Progress Towards High Efficiency Thermoelectric Materials for Space Power [#3080]
An overview of collaborative research efforts to identify and characterize advanced bulk thermoelectric materials capable of quadrupling average ZT values and achieving at least 20% efficiency while maintaining long-term reliable power generation operation.

4:10 p.m.  LaLonde A. D. * Pei Y.  Wang H.  Snyder G. J.
Lead Telluride Alloy Thermoelectrics [#3071]
Key aspects for achieving maximum performance and successful band structure engineering strategies for further improvements in PbTe based materials are identified based on past and present successes of the material.

4:30 p.m.  Paik J. * Firdosy S.  Fleurial J. -P.  Caillat T.
Life Testing of Advanced of Advanced Thermoelectric Components [#3078]
Life test data for advanced thermoelectric materials (n-type La3-xTe4, p-type Yb14MnSb11, and n- and p-type filled skutterudites) and associated components is presented.