



**INTERNATIONAL  
THERMOELECTRIC  
ACADEMY**

**JEFF SNYDER**

**(DEDICATED TO 45-th ANNIVERSARY)**

On December 27, 2013 Dr. Jeff Snyder, a well-known specialist in thermoelectric materials and devices, academician and vice-president of the International Thermoelectric Academy, celebrated his 45-th jubilee.

Jeff Snyder received his B.S. in physics, chemistry and mathematics at Cornell University and his Ph.D in applied physics from Stanford University (1997) where he was a Hertz Fellow.

Jeff Snyder's scientific interests include colossal magnetoresistance materials and metallic ferromagnets which involved thin film deposition, and design, automation and analysis of electronic and magnetic measurements. At the Max Planck Institut für Festkörperforschung, Stuttgart, Germany (1992 – 93) he studied intermetallic, sub-nitride and  $C_{60}$  intercalation solid state chemistry. At Cornell University (1990 – 91) he studied chalcogenides.

He was a senior member of the technical staff at the Jet Propulsion Laboratory, California Institute of Technology, for 9 years (1997 – 2006).

Since joining JPL in 1997, Dr. Snyder has been investigating novel thermoelectric materials focusing recently on complex Zintl phases and nanometer scale structures. He has developed the concept of thermoelectric compatibility for design and optimization of segmented generators, and he has developed empirical and analytical models for calculating thermoelectric performance. He is especially interested in thermoelectric properties of materials above room temperature. The scientist has developed capabilities for measurements of Seebeck coefficient (thermoelectric power), electrical resistivity, Hall effect, thermal diffusivity and thermal conductivity up to 1000 degrees C.

Using electrochemistry and low-cost microfabrication techniques, he has developed the fabrication process and testing of thermoelectric microdevices. He has also designed and tested portable power sources for terrestrial and space applications.

Dr. Snyder's current teaching as well as research focuses on thermoelectric materials and devices. He has participated in several short courses teaching the engineering, chemistry and physics of thermal and electrical transport of thermoelectrics and has been lecturer for a similar course at California State Polytechnic University (Pomona).

International Thermoelectric Academy, Institute of Thermoelectricity of the National Academy of Sciences and Ministry of Education and Science of Ukraine, "Journal of Thermoelectricity" Publishers cordially congratulate the respected Jeff Snyder on his jubilee and wish him sound health, creative inspiration, happiness and new advances in science.