



Tohoku Forum for Creativity  
Thematic Program 2016

# Comprehensive Research on Materials, Systems and Energy for a Sustainable Future of the Earth

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**Agenda: TFC Conference Lecture on March 22, Wednesday, 2017**

At TOKYO ELECTRON House of Creativity, Katahira Campus, Tohoku University  
2-1-1 Katahira, Aoba-ku, Sendai 980-8577 JAPAN

**10:00-10:05 Introduction by Professor Shigeru Obayashi**  
Director, Institute of Fluid Science, Tohoku University

**10:05-11:35 Lecture by Professor Helmut Clemens**  
Montanuniversität Leoben, Leoben, Austria

(Professor Helmut Clemens is Head of the Chair of Physical Metallurgy and Metallic Materials at the Montanuniversität Leoben, Austria. Throughout his entire career he worked on development, processing and characterization of advanced functional and structural materials. Prof. Clemens started his scientific work with semiconductor technology, implementing Austria's first molecular beam epitaxy system for the growth of so-called IV-VI compound superlattices. The last 25 years, however, he focused his research on light-weight intermetallic titanium aluminides (TIAL alloys) which are considered as key structural materials for high temperature application in advanced next generation jet and automotive engines. For his achievements on TIAL alloys, Prof. Clemens was awarded with the famous Honda Prize in 2014.)

**Lecture Title: Intermetallic titanium aluminides - an example how research on innovative materials has a sustainable impact on environmental-friendly aviation**

**11:35-12:00 Coffee with discussion**



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