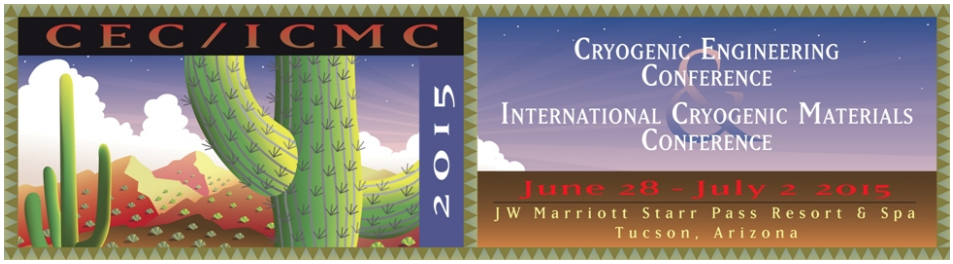

Contribution ID: **161** Type: **Contributed Oral Presentation**

High-entropy alloys prepared by high-gravity combustion synthesis and their cryogenic properties

Tuesday, June 30, 2015 5:45 PM (15 minutes)

High-entropy alloys consist of multiple elements with different crystal structures but can crystallize as a single phase. Recently, we developed a new technique to prepare high-entropy alloys, which is called high-gravity combustion synthesis. In the new technique, high-entropy alloys are produced by rapid solidification of hot melts from highly-exothermic aluminothermic reactions. High-gravity combustion synthesis may provide a fast and efficient way to produce high-entropy alloys with low energy consumption. Here, we report several high-entropy alloys by high-gravity combustion synthesis and investigate the cryogenic properties of the alloys.

Primary author: Prof. LI, Jiangtao (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)

Co-authors: Dr LIU, Guanghua (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences); Prof. LI, Laifeng (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences); Dr HUANG, Rongjin (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences); Dr YANG, Zengchao (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)

Presenter: Prof. LI, Jiangtao (Technical Institute of Physics and Chemistry, Chinese Academy of Sciences)

Session Classification: M2OrD - Cryogenic Materials V: Structural Materials

Track Classification: ICMC-11 - Metallic and Composite Materials