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TMS 2017
146th Annual Meeting & Exhibition



February 26 – March 2, 2017
San Diego, California, USA

IN-SITU METHODS FOR UNRAVELING STRUCTURE-PROPERTY RELATIONSHIPS IN LIGHT METALS

In light-metals technology, there is currently a sharp increase of interest in in-situ analysis, facilitated by the development and increasing accessibility of such techniques based on neutron and synchrotron radiation, electron microscopy, and acoustic emission. For instance, challenges in the analysis of magnesium include very high reactivity and a well-known propensity to substantially alter structure upon unloading in mechanical testing, which makes it difficult to understand correlations between microstructures observed in post-mortem analysis and physical processes during testing. This may be effectively overcome by in-situ approaches.

In a broader perspective, the applications of in-situ techniques span from the analysis of melts and liquid-solid transitions to thermo-mechanical processing and heat treatments to solid surface phenomena; i.e., phase transformations, interactions with various environments and (bio)-degradation. Therefore, such works are of significant interest to scientists working in the area of light-metals development as well as to a much broader audience from both academia and industry. This symposium aims to bring together all interested parties for discussing recent achievements in this area and identifying interesting directions for further development.

ORGANIZERS

Dmytro Orlov, Lund University, Sweden

Wim Sillekens, European Space Agency, Netherlands

PROCEEDINGS PLANS

Papers from this symposium will be a part of the *TMS2017 Supplemental Proceedings* volume. Manuscripts for accepted abstracts are due September 1.

SYMPOSIUM SPONSOR

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