



# 18 | PLANSEE SEMINAR 2013

International Conference on  
Refractory Metals and Hard Materials

Reutte/Austria  
3 – 7 June, 2013

First Circular

18<sup>th</sup> Plansee Seminar, 3 - 7 June, 2013

## Message from the Secretary

The 18<sup>th</sup> Plansee Seminar will be held on the premises of the Plansee Group in Reutte, Austria from 3 - 7 June, 2013.

Since its beginnings in 1952, the Plansee Seminar has been regarded as a global forum for the technical and scientific P/M community to exchange ideas and keep up with the latest innovations and market trends with respect to Refractory Metals and Hard Materials.

We are committed to continuing this tradition to give you the opportunity to gain insights into all aspects of the powder metallurgy of this exciting class of materials, covering materials science, manufacturing technology and applications as well as to display your latest achievements in these areas.

Moreover, the 18<sup>th</sup> Plansee Seminar will again provide ample opportunity to foster personal contact between industry and academia. Practitioners and scientists, both experienced and novices, are cordially invited to participate. The Plansee Seminar is an ideal platform to establish contacts to renowned experts and to augment your knowledge by visiting distinguished lectures from original research work as well as through lively discussions.

We are looking forward to meeting you in Reutte for this unique opportunity to exchange knowledge and experience with world authorities from academia and all branches of the industry.

It will be our pleasure to welcome you at the 18<sup>th</sup> Plansee Seminar!



Heinrich Kestler  
Secretary of the Plansee Seminar

## Applications

The presentations at the 18<sup>th</sup> Plansee Seminar will include all market segments where products based on **Refractory Metals and Hard Materials** are playing an important role, or where they are promising alternatives to present material solutions.

In particular, the following fields of application will be addressed by keynote lectures and/or by oral and poster presentations:

### **Refractory Metals and Composites for application in**

- Transportation
- Electronics
- Thermal management
- Lighting technology
- Medical technology
- Energy generation and distribution
- Power engineering
- Chemical engineering
- Coating technology
- Metal, glass and ceramics production
- High temperature furnaces and devices

### **P/M Hard Materials for application in**

- Wear parts
- Cutting tools for metals, composites, graphitic materials, wood and stone
- Precision tooling
- Chipless forming
- Mining and constructions
- New areas

# Refractory Metals and Composites

## Materials

- Refractory metals, alloys and compounds
- Composites, laminates and functionally graded materials
- Coatings

## Powder production

- Beneficiation
- Mixing, alloying and doping
- Recycling

## P/M processes

- Compaction, forming and near net shaping
- Rapid prototyping and additive manufacturing
- Sintering and infiltration
- Hot isostatic pressing, hot pressing and spark plasma sintering
- New consolidation processes
- Surface engineering and coating
- Joining

## Modeling, characterization and testing

- Materials and microstructure
- Stresses and deformation
- Failure and reliability
- Oxidation and corrosion
- Novel methods of destructive and non-destructive inspection

## P/M Hard Materials

### **Materials**

- Composition (hard phases, binders, dopants, impurities)
- New alloying concepts and material design
- Alternatives to hard metals

### **Powders and P/M processes**

- Powder production and processing
- Innovative production processes
- Ultrafine and nano-scaled powders
- Novel compaction and sintering technologies
- Safety, environmental and recycling aspects

### **Surface engineering**

- Coating materials and processes
- Coating/substrate interactions
- Gradient structures
- Friction and wear

### **Modeling, characterization and testing**

- Powders and granules
- Mechanical properties and reliability
- Surface characterization (growth and morphology of coatings, interfaces, residual stresses)
- Microstructure
- Novel methods of analysis and testing

# Scientific and Organizing Committee

## Scientific Committee

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## Local Organizing Committee

Heinrich Kestler, Lorenz S. Sigl, Dénes Széchényi, Josef Wagner

## Contact

For communication on the Plansee Seminar please submit any corrections or changes of your address and/or affiliation by e-mail.

Please pass on the information contained in this circular to colleagues who might not have received it. In case you should not have obtained this circular by mail and would like to get upcoming information on the Plansee Seminar, please forward your full name, affiliation and address by e-mail.

The Second Circular and Call for Papers will be distributed in April 2012.

Information on the Plansee Seminar, including this circular, is also available at [www.plansee-seminar.com](http://www.plansee-seminar.com).

### **Please address all communications related to the Plansee Seminar to:**

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