



19 | PLANSEE SEMINAR 2017

International Conference on
Refractory Metals and Hard Materials

Reutte/Austria
29 May – 2 June, 2017

Second Circular and Call for Papers

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Local Organizing Committee

Heinrich Kestler, Lorenz S. Sigl, Dénes Széchényi, Andreas Pilz

Message from the Organizers

We are delighted to announce that the 19th Plansee Seminar will take place on the premises of the Plansee Group in Reutte, Austria from 29 May to 2 June, 2017.

We are committed to continuing the tradition of a highly successful series of conferences, which from the onset in 1952 have 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 in the fields of Refractory Metals and Hard Materials.

It is our aim to organize a conference which will provide ample opportunity for gaining insights into all aspects of this important class of materials – from materials science to the latest achievements in extractive metallurgy, manufacturing technology, industrial applications and recycling.

Moreover, the 19th Plansee Seminar will be an ideal platform to foster personal contact between industry and academia. Practitioners and scientists alike, both experienced or novice, are cordially invited to participate. The Plansee Seminar is the ideal event to augment your knowledge by visiting lectures from renowned experts, attending the poster sessions and participating in lively discussions.

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

It will be our special pleasure to welcome you at the 19th Plansee Seminar!



Lorenz S. Sigl

Chairman of the Plansee Seminar



Heinrich Kestler

Secretary of the Plansee Seminar

Scope of the 19th Plansee Seminar

The presentations at the 19th Plansee Seminar will include all areas where products based on **Refractory Metals and Hard Materials** play an important role, or where they are promising alternatives to present material solutions.

Applications, materials, processes and testing methods will be addressed in key-note lectures and contributed papers. The latter will be presented in oral and poster sessions.

Preliminary Program

| | Sunday 28 May | Monday 29 May | Tuesday 30 May | Wednesday 31 May | Thursday 1 June | Friday 2 June |
|-----------|-------------------|------------------------|------------------------|------------------------|------------------------|-------------------|
| Morning | | Opening | Refractory Metals | Hard Materials | Refractory Metals | Hard Materials |
| | | | General P/M Technology | General P/M Technology | General P/M Technology | Refractory Metals |
| Afternoon | | General P/M Technology | Hard Materials | Refractory Metals | Hard Materials | Farewell Address |
| | | Refractory Metals | Hard Materials | Refractory Metals | Hard Materials | |
| Evening | Welcome Reception | | Poster Evening | | Conference Dinner | |

Call for Papers

Authors are invited to submit abstracts for papers to be presented either as lecture or poster. All papers must contain unpublished results that are of current interest. To allow for evaluation by the Scientific Committee, the abstracts (max. 175 words) should clearly outline the aim of the work and the methods employed, as well as the major results and conclusions. The conference language will be English, thus all presentations and papers must be submitted in English.

Please subscribe and submit your abstract via the online submission system at the Seminar website www.plansee-seminar.com.

All abstracts will be reviewed and allocated to oral or poster sessions by the Scientific Committee. You will be notified about acceptance of your paper by 14 December, 2016; guidelines for manuscript preparation will be provided.

Important deadlines

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| Submission of abstracts: | 9 September, 2016 |
| Notification of acceptance: | 14 December, 2016 |
| Submission of full papers: | 1 March, 2017 |

Proceedings

All papers of oral and poster sessions submitted by 1 March, 2017 will be distributed on a USB flash drive at the beginning of the Seminar. The conference package will also include a printed abstract booklet. The full conference proceedings will be distributed electronically after the Seminar in September 2017.

Topics of the 19th Plansee Seminar

Refractory Metals and Composites

1. Applications

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|--------------------------|---|
| 1.1. Transportation | 1.7. Chemical engineering |
| 1.2. Electronics | 1.8. Coating technology |
| 1.3. Thermal management | 1.9. Joining technology |
| 1.4. Lighting technology | 1.10. Metal, glass and ceramics production |
| 1.5. Medical technology | 1.11. High temperature furnaces and devices |
| 1.6. Power engineering | 1.12. New areas |

2. Materials

- 2.1. Refractory metals and alloys, composites, laminates and functionally graded materials
- 2.2. Coatings

3. Powder production

- 3.1. Extractive metallurgy
- 3.2. Recycling

4. P/M processes

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| 4.1. Mixing, alloying and doping | 4.5. Hot isostatic pressing, hot pressing and spark plasma sintering |
| 4.2. Compaction, forming and near net shaping | 4.6. New consolidation processes |
| 4.3. Additive manufacturing and rapid prototyping | 4.7. Surface engineering and coating |
| 4.4. Sintering and infiltration | 4.8. Joining |

5. Simulation and Modeling

- 5.1. Materials and microstructure
- 5.2. Stresses and deformation
- 5.3. Failure and reliability
- 5.4. Oxidation and corrosion
- 5.5. Constitutional and multi scale modeling
- 5.6. Components and devices

6. Characterization and Testing

- 6.1. Microstructure
- 6.2. 3D and small scale characterization
- 6.3. Destructive and non-destructive inspection

Topics of the 19th Plansee Seminar

P/M Hard Materials

7. Applications

- 7.1. Wear parts
- 7.2. Machining of metals, composites, graphitic materials, wood and stone
- 7.3. Precision tooling
- 7.4. Chipless forming
- 7.5. Mining and construction
- 7.6. Joining technology
- 7.7. New areas

8. Materials

- 8.1. Hard compounds, binders, dopants, impurities
- 8.2. New alloying concepts and material design
- 8.3. Alternatives to hard metals

9. Powders and P/M processes

- 9.1. Powder production and processing
- 9.2. Innovative production processes
- 9.3. Ultrafine and nano-scaled powders and microstructures
- 9.4. Novel compaction and sintering technologies
- 9.5. Safety, environmental and recycling aspects

10. Surface engineering

- 10.1. Coating materials and processes
- 10.2. Gradient structures
- 10.3. Friction and wear

11. Simulation and Modeling

- 11.1. Powders and granules
- 11.2. Mechanical properties and reliability
- 11.3. Constitutional and multi scale modeling
- 11.4. Components and devices

12. Characterization and testing

- 12.1. Microstructure
- 12.2. Surface characterization (coatings, interfaces, residual stresses)
- 12.3. 3D and small scale characterization
- 12.4. Novel methods of analysis and testing

Important Information

Registration

Online registration via www.plansee-seminar.com is highly recommended and will open in December 2016. On-site registration will be possible only within the limitation to the maximum number of participants. It is recommended to contact the Seminar Office beforehand. Please note that registration is also required for authors.

Conference fees

The conference fee includes admission to the technical sessions, proceedings, snacks and refreshments during the welcome reception and breaks, the social evening and the conference dinner. The preferred mode of payment will be by credit card. Registration is only valid upon receipt of payment.

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| Early registration (before 31 March, 2017) | € 1,490 |
| Standard registration | € 1,690 |
| Presenting author | € 1,090 |
| Student | € 390 |
| Conference dinner (accompanying persons) | € 60 |

The reduced fee for presenting authors can be granted only if the paper is submitted by 1 March, 2017. Space for the conference dinner is limited, so please register accompanying persons early.

The conference fees include 20% VAT (VAT registration number ATU 6028167).

General conditions / Cancellation

Your registration is regarded as binding agreement to the conditions stated in this circular. Substitutes will be accepted provided that advance notice is given in writing.

The following charges will apply for cancellations received by:

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| 31 March, 2017 | € 400 |
| 1 May, 2017 | € 1,000 |

No refund of the conference fee will be made after 1 May, 2017.

Registration desk opening hours

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| Sunday, 28 May, 2017 | 2 pm – 10 pm |
| Monday – Thursday, 29 May – 1 June, 2017 | 8 am – 6 pm |
| Friday, 2 June, 2017 | 8 am – 1 pm |

Venue

The Plansee Seminar will be held on the premises of the Plansee Group in Reutte, Austria. Reutte is a town of 6,400 people, located at an altitude of 860 m in the valley of the river Lech in northern Tyrol, about 90 km north-west of Innsbruck and just a few kilometers south of Füssen, Bavaria.

Daytime temperatures in June generally range between 18 and 26°C, evenings and nights can be chilly.

Travel

The nearest airports are Innsbruck and Munich. Reutte may be reached by train (approximately 3 hours from Munich or Innsbruck). Detailed travel information will be made available on www.plansee-seminar.com.

Courtesy bus services from and to the airports and the main railway stations of Munich and Innsbruck will be arranged on Sunday, 28 May and on Friday, 2 June, 2017. Also, daily bus transportation from and to the hotels will be provided. Schedules will be announced in time.

Visa

Participants should be aware that a visa will be required for many countries outside the European Union to travel into Austria. Please make sure that you apply for a uniform “Schengen” visa, which allows you to arrive in and leave from Europe also outside of Austria. For detailed information please contact an Austrian embassy or consulate.

If you require an official letter of invitation for your visa application, please contact the Seminar Office in time. Letters of invitation will only be issued to invited speakers or to participants who have registered and paid the conference fee. However, this invitation implies no obligation, financial or otherwise by Plansee.

Accommodation

Upon request reservation of hotel rooms in Reutte and vicinity will be handled by our partner travel agency Kuoni (contact email kuoni.reisedienst@plansee.com). A list of different hotel categories will be available on www.plansee-seminar.com in due course.

Social program

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| Sunday, 28 May, 6 pm – 9 pm | Welcome reception |
| Tuesday, 30 May, 7 pm | Poster evening |
| Thursday, 1 June, 7 pm | Conference dinner |

For accompanying persons an excursion program will be arranged to places of interest in the vicinity of Reutte as well as in and around Innsbruck. All tours are accompanied by an English-speaking guide; rain protection and hiking boots are recommended.

Mobile App

Participants will have access to an app for mobile devices. This app contains all information which is necessary for a smooth event, including short term program changes, bus schedules, and much more. It also offers the opportunity to set up a personalized program. The app will be available for both iOS and Android devices.

Communication

This circular and more information on the Plansee Seminar will be made available in due time at www.plansee-seminar.com. Updates will be communicated on this website and by e-mail to registered participants.

To ensure smooth communication, please e-mail us any corrections or changes of your address and/or affiliation. In case you should not have received this circular by mail, but would like to receive upcoming information on the Plansee Seminar, please subscribe to the Seminar mailing list. Also, please pass on this circular to colleagues, and if applicable to your students.

Contact

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