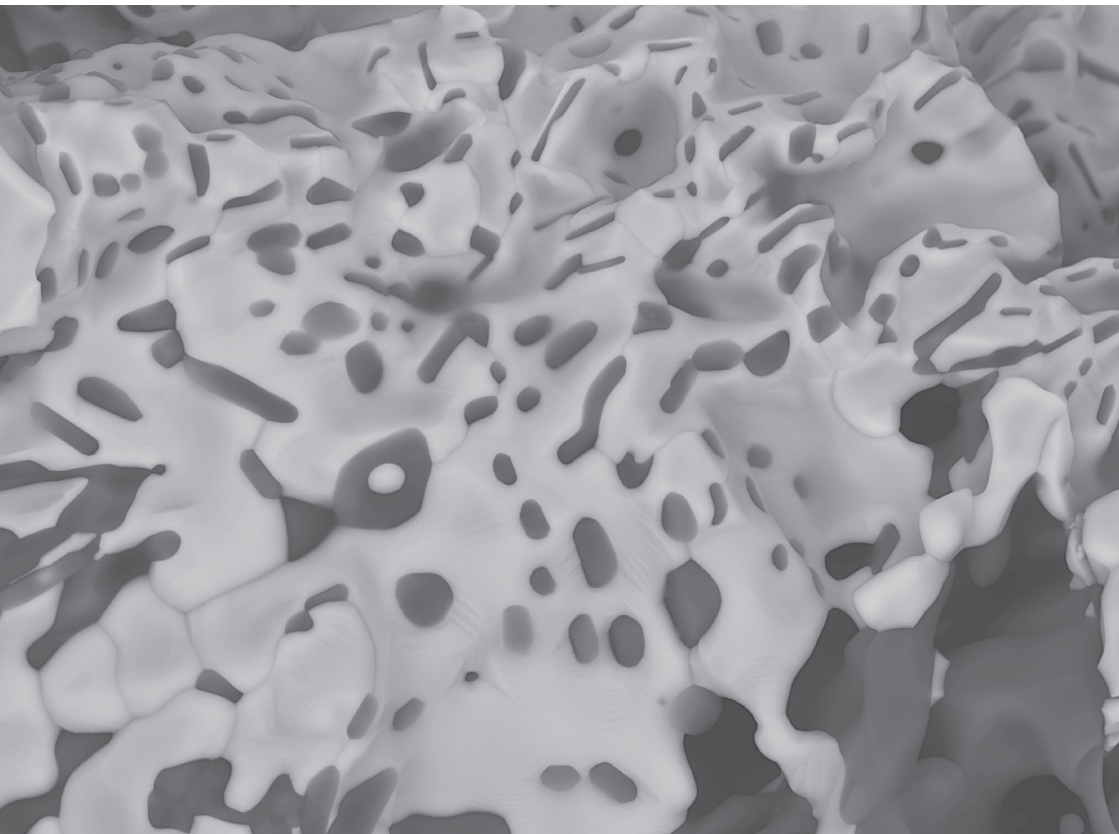


# INTERNATIONAL WORKSHOP

OF THE RESEARCH UNIT FOR 3010

Multifunctional, Coarse-Grained Refractory Composites for Large-Scale  
Key-Components in High Temperature Processes

**SEPTEMBER 27-28, 2021**



# SEPTEMBER 27, 2021

- 15:00-15:40** Prof. Christos G. Aneziris (TU Bergakademie Freiberg, Germany) and Prof. Martin Heilmaier (Karlsruhe Institute of Technology, Germany)  
Welcome  
Introductory lecture to the Research Unit FOR 3010: **„Multifunctional, Coarse-Grained, Refractory Composites for Large-Scale Key Components in High Temperature Processes“**  
Appointment of an International Advisory Board
- 15:40-16:20** Dr. Heinrich Kestler (Plansee SE, Reutte, Austria)  
Invited lecture **„Powder Metallurgy of Refractory Metals Molybdenum and Tungsten“**  
Discussion on the topic of the Invited lecture
- 16:20-17:00** Dr. Tilo Zienert (TU Bergakademie Freiberg, Germany)  
Presentation of subproject TP1 **„Pre-Synthesis of Functional Grains for Manufacturing of Refractory Composites“**  
Discussion on the topic of subproject TP1
- 17:00-17:40** Coffee/Lunch/Supper break
- 17:40-18:20** Prof. Olivia A. Graeve (University of California, San Diego, USA)  
Invited lecture **„Materials in Space: What is Needed to Colonize Other Planets?“**  
Discussion on the topic of the Invited lecture
- 18:20-19:00** Dirk Endler (TU Bergakademie Freiberg, Germany)  
Presentation of subproject TP2 **„Refractory Composites via Vibration Assisted Casting based on Conventional Pressureless Sintering“**  
Discussion on the topic of subproject TP2
- 19:00-19:40** Gökhan Günay (TU Bergakademie Freiberg, Germany)  
Presentation of subproject TP3 **„High-Temperature Mechanical Properties and Damage of Refractory Composites“**  
Discussion on the topic of subproject TP3
- 19:40-20:00** Internal Meeting of the International Advisory Board  
Prof. Olivia A. Graeve, Prof. Elizabeth J. Opila,  
Dr. Heinrich Kestler, Prof. Wayne D. Kaplan  
(together with Prof. Aneziris & Prof. Heilmaier)

# SEPTEMBER 28, 2021

- 15:00-15:40** Prof. Wayne D. Kaplan (Technion - Israel Institute of Technology, Haifa, Israel)  
Invited lecture „**Solid-Solid Wetting and Adhesion at Metal-Ceramic Interfaces**“  
Discussion on the topic of the Invited lecture
- 15:40-16:20** Prof. Elizabeth J. Opila (University of Virginia, Rolls-Royce University Technology Center on Advanced Material Systems, Charlottesville, USA)  
Invited lecture „**Oxidation Resistance of High Entropy Refractory Metals, Carbides, and Borides**“  
Discussion on the topic of the Invited lecture
- 16:20-17:00** Julian Gebauer (Karlsruhe Institute of Technology, Germany)  
Presentation of subproject TP7 „**Thermodynamics of Refractory Aluminum Niobates and Phase Diagrams of the Al-Nb-O System**“  
Discussion on the topic of subproject TP7
- 17:00-17:40** Coffee/Lunch/Supper break
- 17:40-18:20** Bastian Kraft (Karlsruhe Institute of Technology, Germany)  
Presentation of subproject TP6 „**Field-Assisted Sintering of Refractory Composites and the Impact on the Material Properties**“  
Discussion on the topic of subproject TP6
- 18:20-19:00** Michael Eusterholz (Karlsruhe Institute of Technology, Germany)  
Presentation of subproject TP5 „**Interface Analysis and Design of Sintered -Alumina-Nb/Ta Refractory Metal-Ceramic Composites**“  
Discussion on the topic of subproject TP5
- 19:00-19:40** Max Weiner (TU Bergakademie Freiberg, Germany)  
Presentation of subproject TP4 „**Microscopic sintering simulation of irregular shaped particles**“  
Discussion on the topic of subproject TP4
- 19:40-20:00** Recommendations by the International Advisory Board  
Prof. Olivia A. Graeve, Prof. Elizabeth J. Opila,  
Dr. Heinrich Kestler, Prof. Wayne D. Kaplan
- 20:00** Closing of the International Workshop of the Research Unit FOR 3010



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### Invited Lectures:



Prof. Olivia A. Graeve, University of California, San Diego, USA  
<https://mae.ucsd.edu/matsci/faculty/professors/olivia-graeve>



Prof. Elizabeth J. Opila, University of Virginia (Rolls-Royce University  
Technology Center on Advanced Material Systems), Charlottesville, USA  
<https://engineering.virginia.edu/faculty/elizabeth-j-opila>



Dr. Heinrich Kestler, Plansee, Reutte, Austria  
[www.plansee.com](http://www.plansee.com)



Prof. Wayne D. Kaplan, Technion Israel Institute of Technology, Haifa, Israel  
<https://materials.technion.ac.il/en/team/prof-kaplan-wayne-d/>

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