



# RUB-Symposium on High-, Medium-Entropy Alloys (HEAs/MEAs) and Compositionally Complex Alloys (CCAs) - 2022



Location: ZGH building; all talks: 20 min presentation + 10 min discussion

Wednesday 9.03.2022

Session 1: Mechanical properties of MEAs and HEAs

8:30-8:50

Coffee

8:50

Opening

9:00-9:30

**Antonín Dlouhý**, *Institute of Physics of Materials, Czech Republic*  
Recovery creep in HEAs and MEAs

9:30-10:00

**Christian Gadelmeier**, *Universität Bayreuth, Germany*  
Creep properties of single crystalline fcc HEAs over a very wide temperature range

10:00-10:30

**Christian Reinhart**, *Ruhr-Universität Bochum, Germany*  
Effect of Cr/Ni ratio on the physical properties of Cr-Mn-Fe-Co-Ni HEAs

10:30-11:00

Coffee break

11:00-11:30

**Mike Schneider**, *Ruhr-Universität Bochum, Germany*  
Mechanical twinning in a CrFeNi MEA

11:30-12:00

**Mike Mills**, *The Ohio State University, USA*  
Monotonic and Fatigue Mechanisms in Equiatomic CrCoNi

12:00-12:30

**Laura Rosenkranz**, *Universität Bayreuth, Germany*  
Entropy effect on tensile strength of hcp high entropy alloy Y-Gd-Tb-Dy-Ho

12:30-14:00

Lunch Break

Session 2: Phase stability of HEAs and chemically complex intermetallics

14:00-14:30

**Guillaume Laplanche**, *Ruhr-Universität Bochum, Germany*  
High-throughput screening of refractory HEAs

14:30-15:00

**Yujun Zhao and Tong Li**, *Ruhr-Universität Bochum, Germany*  
Investigation on the precipitation in the TiZrNbHfTa BCC HEA by APT and TEM

15:00-15:30

**Ahmadreza Riyahi Khorasgani**, *Ruhr-Universität Bochum, Germany*  
Carbon effects on Thermodynamics and Kinetics of HEAs

15:30-16:00

Coffee break

16:00-16:30

**Yujiao Li and Alfred Ludwig**, *Ruhr-Universität Bochum, Germany*  
Phase stability in nanocrystalline HEAs

16:30-17:00

**Maik Rajkowski**, *Ruhr-Universität Bochum, Germany*  
Phase stability and diffusion kinetics in  $\gamma$ -MEAs

17:00-17:30

**Yordan Kalchev**, *Ruhr-Universität Bochum, Germany*  
Investigations of a compositionally complex and topologically close-packed  $\sigma$  phase

18:00

Dinner at Q-West (on campus)

8:30-9:00

**Coffee**

9:00-9:30

**Uwe Glatzel**, *Universität Bayreuth, Germany*  
CC alloy  $\text{Al}_{10}\text{Co}_{25}\text{Cr}_8\text{Fe}_{15}\text{Ni}_{36}\text{Ti}_6$  (at.%) – microstructure and creep behavior

9:30-10:00

**Steffen Neumeier**, *Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany*  
Temperature- and time-dependent deformation behavior of polycrystalline HE superalloys

10:00-10:30

**Jean-Philippe Couzinié**, *Institut de Chimie et des Matériaux Paris-Est, Thiais, France*  
CC alloys strengthened by ordered phases: Design, microstructures and deformation mechanisms

10:30-11:00

**Coffee break**

11:00-11:30

**Liuliu Han and Ziyuan Rao**, *Max-Planck-Institute für Eisenforschung, Germany*  
Alloy Design Strategies for Soft Magnetic HEAs

11:30-12:00

**Julian Hunfeld**, *Ruhr-Universität Bochum, Germany*  
Effects of Ti, Al, Cr, and W on phase stability and creep properties of polycrystalline ME superalloys

12:00-12:30

**Alex Asabre**, *Ruhr-Universität Bochum, Germany*  
Phase stability and coarsening kinetics of a model  $\text{Al}_{0.75}\text{CoCrFeNi}$  CCA with a lamellar microstructure

12:30-14:00

**Lunch Break**

14:00-14:30

**Christopher Zenk**, *Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany*  
Microstructure evolution of CC  $\alpha'/\alpha''$ -Strengthened Ferritic Superalloys

14:30-15:00

**Oluwaseyi Oluwabi**, *Ruhr-Universität Bochum, Germany*  
HE shape memory alloys - effects of chemical complexity on microstructures, martensitic transformation and atomic mobilities

15:00-15:30

**Pascal Thome, Florian Fox, Janine Pfetzinger-Micklich, Gunther Eggeler and Easo P. George**, *Ruhr-Universität Bochum, Germany und Oak Ridge National Laboratory, USA*  
Orientation imaging scanning electron microscopy and micromechanical testing of HEAs and MEAs

15:30-16:00

**Coffee break**

16:00

Visit of ZGH and Institute for Materials facilities

19:00

Get together (self-organized)

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