

Priority Programme (Schwerpunktprogramm)

Compositionally Complex Alloys – High Entropy Alloys (CCA - HEA)

Karlsruhe, 25-27 March 2019

Karlsruhe Institute of Technology Building 50.41



Poster Session 1: High Entropy Alloys

Monday 14:20 - 17:00

Presenter	Affiliation	Poster Title
Basu, Silva	KIT Karlsruhe	Understanding the Plasticity of BCC Refractory High Entropy Alloys using Nanoindentation
Chen, Hans	KIT Karlsruhe	Ordering in Al-containing refractory high entropy alloys from the system Ta-Nb-Mo-Cr-Ti-Al
Durand, Adeline	RU Bochum	An experimental study of interdiffusion in quaternary Cr-Fe-Co-Ni High Entropy Alloys
Fantin, Andrea	HZ Berlin	From chaos to order: local structure in compositionally complex alloy $Al_8Co_{17}Cr_{17}Cu_8Fe_{17}Ni_{33}$
Gadelmeier, Christian	Uni Bayreuth	Tensile and creep properties of the single crystal equiatomic high entropy alloy CrMnFeCoNi and pure nickel up to 1000°C
Gaertner, Daniel	Uni Münster	Atomic transport in single phased equiatomic and quasi-binary couple high entropy alloys
Hanemann, Theresa	KIT Karlsruhe	Localized deformation in HfNbTaTiZr deformed at room temperature
Hinte, Christian	Uni Hannover	Challenges and Present Investigation in Mechanical Testing of Nickel-Titanium-HEA
Keil, Tom	TU Darmstadt	Phase stability and solid solution strengthening in fcc high-entropy alloys
Kottke, Josua	Uni Münster	Towards the origin of a diffusional high entropy effect: Bulk and grain boundary diffusion in $Co_xCr_xFe_xMn_xNi_{100-4x}$
Reinhart, Christian	RU Bochum	Effect of chemical composition on stacking fault energy in the Cantor system
Schneider, Mike	RU Bochum	Grain and annealing twin boundary hardening in an equiatomic CrCoNi MEA
Thiel, Felix	IFW Dresden	AuCuNiPdPt as a benchmark for high entropy alloys
Tirunilai, Aditya Srinivasan	KIT Karlsruhe	Features of plastic deformation in high entropy alloys

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Poster Session 2: Simulation, Modelling & Processing

Tuesday 09:30 - 11:50

Presenter	Affiliation	Poster Title
Deck, Korbinian	KIT Karlsruhe	The effect of chemical sublattice ordering on dislocation properties in BCC High Entropy Alloys
Dobbelstein, Henrik	RU Bochum	Laser metal deposition of TiZrNbHfTa high-entropy alloys
Ikeda, Yuji	MPIE Düsseldorf	Impact of interstitial solid solution on CrMnFeCoNi from first principles (<i>pdf-file is available on request</i>)
Klaver, Peter	TU Delft	Brute force composition scanning with a CALPHAD database to find low temperature bcc high entropy alloys
Lienig, Tim	FZ Jülich	Challenges of synthesizing single-phase single-crystalline fcc and bcc HEAs
Lysogorskiy, Yury	RU Bochum	Data-driven methods for multi-principal element alloys discovery
Noori, Mehdi	RWTH Aachen	Calphad modelling in Ni-V and Al-Co-Fe
Piorunek, David	RU Bochum	High Entropy Shape Memory Alloys - Effects of Chemical Complexity on Microstructure and Martensitic Transformation
Schellert, Steven	Uni Siegen	Microstructure of the alloys within the system Ta-Mo-Cr-Ti-Al: Theoretical assessment and experimental results
Sen, Sandipan	Uni Münster	Solute Diffusion in HCP High Entropy Alloys
Utt, Daniel	TU Darmstadt	Structure and Mobility of Grain Boundaries in High Entropy Alloys: A Molecular Dynamics Study
Vaidya, Mayur	Uni Münster	Grain boundary diffusion in CoCrFeNi and CoCrFeMnNi high entropy alloys

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Poster Session 3: Compositionally Complex Alloys

Tuesday 14:40 - 17:00

Presenter	Affiliation	Poster Title
Amalraj, Marshal	RWTH Aachen	Combinatorial screening of precipitation strengthened CCA in the AlCoCrFeMn and AlCrFeNiTi system
Asabre, Alex	RU Bochum	Mechanical properties of CCAs with a Widmanstätten microstructure
Haas, Sebastian	Uni Bayreuth	Mechanical behavior of L1₂-strengthened compositionally complex alloy Al₁₀Co₂₅Cr₈Fe₁₅Ni₃₆Ti₆ adjusted by small amounts of Hf, Mo, Zr and W
Jung, Hyo Yun	MPIE Düsseldorf	Synthesis of particle strengthened CoCrFeNi-based HEA-CCA via laser-powder bed fusion process
Kies, Fabian	RWTH Aachen	Efficient Exploration of New Compositionally Complex Alloys Using CALPHAD Screening and Laser Additive Manufacturing
Manzoni, Anna	HZ Berlin	Intermetallic phases in the Al₁₀Co₂₅Cr₈Fe₁₅Ni₃₆Ti₆ CCA and its variations
Peter, Nicolas	MPIE Düsseldorf	Microstructure and deformation behavior of particle strengthened CoCrFeNi-based alloys
Wolff-Goodrich, Silas	MPIE Düsseldorf	Development of Precipitation Strengthened CCAs in the AlCrFeNiTi System for High Temperature Structural Applications
Wu, Xiaoxiang	MPIE Düsseldorf	Quinary TWIP-TRIP high-entropy alloys: design, microstructure and mechanical properties