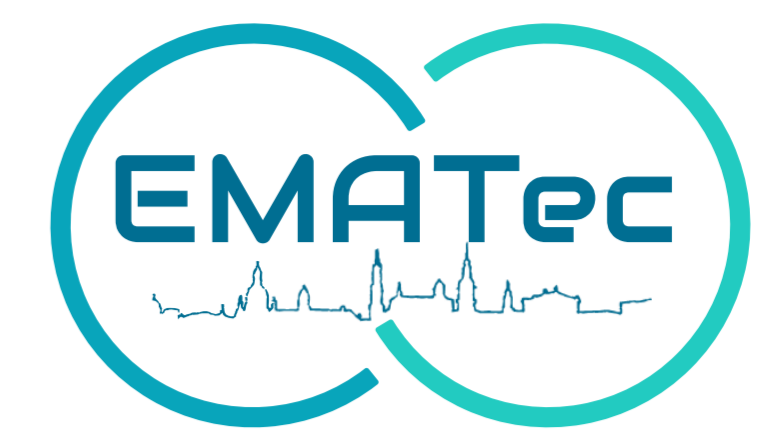


EMATec 2026

2-5 June 2026, Dresden / Radebeul



Tuesday, 2 June 2026

17:00

Registration

19:00

Welcome Reception

Wednesday, 3 June 2026

09:00

OPENING

Prof. Dr.-Ing. Thomas Weißgärber
Fraunhofer IFAM Dresden / TU Dresden

WELCOME ADDRESS

Prof. Dr. Heike Graßmann
State Secretary at the Saxon State Ministry for Science, Culture and Tourism

Jan Pratzka
Mayor of the City of Dresden; Division Economy, Digital, Personnel and Security

Prof. Dr.-Ing. Thorsten Schmidt
Dean of the Faculty of Mechanical Engineering, TU Dresden

PLENARY SESSION

(Chair: Prof. Dr.-Ing. Thomas Weißgärber)

09:30

Markus Schneider, GKN Sinter Metals

The production of functional materials via powder metallurgy and its dependency on the global supply chain

10:00

Arno Plankensteiner, Plansee

Mechanism-based modeling and numerical simulation enhancing data-driven PM process and component optimization for refractory metals applications

10:30

Coffee Break

Powder Manufacturing

(Chair: Jai-Sung Lee, Hanyang University)

H2 - Materials for Electrolysis

(Chair: Christian Bernäcker, Fraunhofer IFAM Dresden)

Soft Magnets – Nanocrystalline

(Chair: Konrad Güth, Fraunhofer IWKS)

11:00

Burghardt Klöden, m4p material solutions GmbH

Pushing the boundaries in additive manufacturing: customized alloys for specific applications & powder quality aspect

Vesna Middelkoop, VITO

3D printing of architectures for photo- and electro-chemical applications - multiscale characterisation

Jae Won Jeong, Korea Institute of Materials Science

Effect of co-added transition metal elements on the glass forming ability and soft magnetic properties of high- M_s nanocrystalline alloys

11:20

Kenan Boz, EPMA

Sustainable solutions for Titanium supply in Additive Manufacturing

Nadine Eißmann, Fraunhofer IFAM Dresden

Tailoring the properties of open-porous metallic foams by powder metallurgical coatings

Przemysław Zackiewicz, Lukaszewicz Research Network - Institute of Non-Ferrous Metals

Enhancing magnetizable concrete cores with nanocrystalline additives

11:40

Arun Chattopadhyay, AMAERO Inc

Atomization and characterization of Tungsten heavy alloy powders

Oluwajuyigbe Tomisin, University of Waterloo

Porous transport layer optimization via Additive Manufacturing of Inconel 718 lattice structures

Peter Nahringsbauer, TU Wien

Ultrasonic atomization as a route to nanocrystalline soft magnetic powders

12:00

Philip Grimm, Leibniz Institute for Solid State and Materials Research Dresden

Casting assisted design of a high-performance Sc-free Al-Mg-Si-Zr alloy for laser powder bed fusion

Sebastian Riecker, Fraunhofer IFAM Dresden

Advancing hydrogen technologies through Additive Manufacturing

Merlin Thamm, Fraunhofer IFAM Dresden

Powder metallurgical processing of nanocrystalline soft magnets

12:20

Lunch

AM Process Design

(Chair: Christian Kukla, Montanuniversität Leoben)

H2 Storage Materials I

(Chair: Guilherme Zepon, Federal University of São Carlos)

Soft Magnets – AM

(Chair: Thomas Studnitzky, Fraunhofer IFAM Dresden)

13:50

Simon Leupold, Friedrich-Alexander-Universität Erlangen-Nürnberg

ColdMetalFusion of AISI 316L stainless steel: Effects of laser wavelength on density, surface roughness and dimensional accuracy

Claudio Pistidda, Helmholtz-Zentrum Hereon

Advancing circularity: Hydrogen-storage materials and strategic metal recovery

Julian Schurr, Aalen University

Additive Manufacturing of multi-material soft magnetic components for electrical machines

14:10

Quentin Schmid, RMIT Europe

High fidelity environmental impact prediction of AM-based hybrid manufacturing systems

Marcus Vogt, Fraunhofer IFAM Dresden

A circular magnesium route linking PM electrodes, electrolysis and POWERPASTE

Taehyeob Im, Hanyang University

Sinter-based 3D-printed metal-insulation-metal (MIM) structures using Fe-6.5Si for soft magnetic cores

14:30

Feyzi Emrah Başar, TUD Dresden University of Technology

A concept for automated support removal in SLM using 5-axis CNC milling

Bruno Hessel Silva, University of Oslo

Design of multicomponent alloys for room temperature hydrogen storage: engineering microstructure and tuning properties

Bruno Weise, Fraunhofer IFAM Dresden

Advances in additive screen printing of electrical steel

14:50

Eberechukwu Dim, Enugu State University of Science and Technology

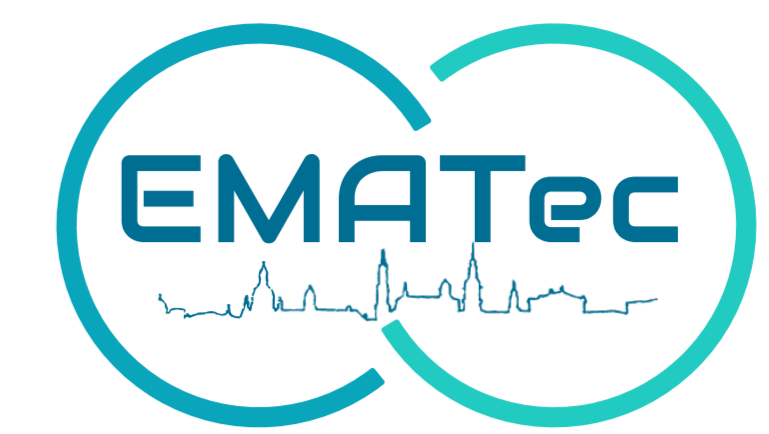
Technological maturity assessment of Additive Manufacturing technology reviewed

Nicol Daniela Jaramillo Rodriguez, Helmholtz-Zentrum Hereon

Sustainable synthesis of TiFe-based alloys for hydrogen storage: Influence of synthesis method and manganese substitution

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Wednesday, 3 June 2026 (continued)

15:10	Coffee Break		
	AM Production (Chair: Burghardt Klöden, m4p material solution GmbH)	H2 Storage Systems (Chair: Felix Heubner, Fraunhofer IFAM Dresden)	PM for Nuclear Applications (Chair: Dariusz Garbiec, Łukasiewicz – PIT)
15:40	Christian Staudigel, Headmade Materials ColdMetalFusion - Eliminating laser-sintering porosity in green parts via Cold Isostatic Pressing	Xin Wei, Johnson Electric Aachen GmbH AI-driven alloy design and industrial manufacturing of metal hydride systems	Jai-Sung Lee, Hanyang University ERICA Advances in high-density W-Cu alloy processing by nanopowder technology
16:00	Omer Sagi, Tritone Additive Manufacturing of fully enclosed hollow metal structures with complex internal geometry	Jan Warfsmann, Helmholtz-Zentrum Hereon Investigation of the hydrogen storage performance by the in-situ combination of an AB ₂ -metal hydride and PCM	Mike Parkin, CERN - European Organisation for Nuclear Research Hot-isostatic pressing for CERN's beam intercepting devices
16:20	Christian Staudigel, Headmade Materials ColdMetalFusion - Industrial process capability in production	Alexander Wimmer, DLR-TT Additive manufactured high-performance reactor for metal hydride-based air-conditioning of fuel cell electric vehicles	Uwe Funk, Dr. Fritsch GmbH Industrialization of intelligent alloys (SMART) and tungsten fiber reinforced tungsten composites (FitWfW) for fusion power plants
16:40	Uta Klement, Chalmers University of Technology Incorporation and characterization of graphene derivatives in thermal spray coatings and additively manufactured parts		Goulven Janod, CEA Grenoble Automated heatsink optimization for divertor cooling application
17:00	Coffee Break		
	Nickel-based AM (Chair: Martin Werz, MPA Stuttgart)	Materials for Thermal Energy Storage (Chair: Nadine Eißmann, Fraunhofer IFAM Dresden)	Hard Magnets I (Chair: Jae Won Jeong, Korea Institute of Materials Science)
17:30	So-Yeon Park, Inha University Plate-strut hybrid design for strengthening Kelvin-Truss Inconel 718 lattice structures	Sabrine Medjouel, CIRIMAT Innovative Freeze-Casting Manufacturing of 3D Copper Foams with Tailored Architecture for Energy Applications	Lukas Schäfer, Technische Universität Darmstadt Recycling and Additive Manufacturing of Nd-Fe-B: Challenges and prospects for resource Efficient permanent magnets
17:50	Ho Jin Ryu, Korea Advanced Institute of Science and Technology KAIST In situ alloying in metal Additive Manufacturing of ceramic-reinforced Ni-base superalloys	Rico Schmerler, Fraunhofer IWU Investigation of PCM infiltrated aluminum foam for heat storage in an EV battery system	Konrad Güth, Fraunhofer IWKS The 2-powder method for producing resource-efficient and more sustainable Nd-Fe-B magnets
18:10	Christian Staudigel, Headmade Materials ColdMetalFusion – Applications of Nickel-based alloys in oil & gas and energy	Torsten Seidel, Fraunhofer IFAM Dresden Advancing air compression technologies with a thermal compressor utilizing phase change materials and metal fiber-based heat conductive structures	Tae-Hoon Kim, Korea Institute of Materials Science Insight into Development of Pr-based Grain Boundary Diffusion Process for High-Performance HRE-Free Nd-Fe-B Sintered Magnets
18:30	Break		
19:00	Poster Session		

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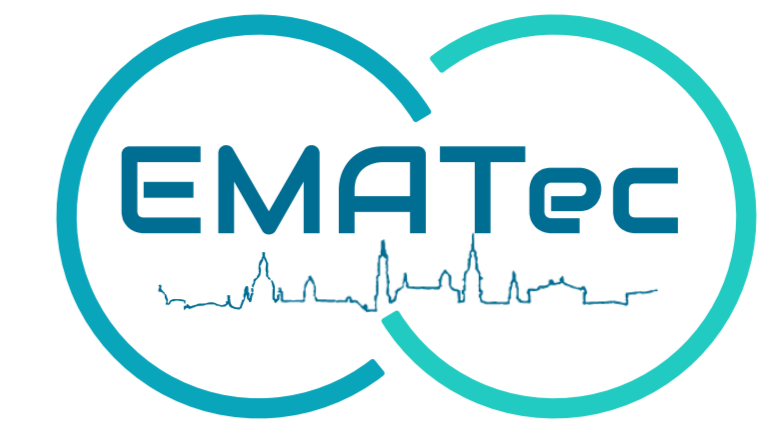
2-5 June 2026, Dresden / Radebeul

Thursday, 4 June 2026

Thursday, 4 June 2026			
	PLENARY SESSION (Chair: Dr.-Ing. Inge Lindemann)		
09:00	Animesh Bose, Shaping Innovations, Inc. Binderjet: Past, Present and Future		
09:30	Simon Höges, GKN AM Successes in serial production with AM technologies – How we can expand PM opportunities in new markets		
	AM Post Processing (Chair: Ho Jin Ryu, Korea Advanced Institute of Science and Technology KAIST)	H2 Storage Materials – HEA (Chair: Mateusz Balcerzak, Fraunhofer IFAM Dresden)	Hard Magnets II (Chair: Markus Schneider, GKN Sinter Metals)
10:10	Florian Döring, Neue Materialien Bayreuth GmbH Automated surface treatment method for combined depowdering and smoothing of SLS-printed metal green parts using Cold Metal Fusion Technology (AutoSmooth)	Guilherme Zepón, Federal University of São Carlos Gas Shielded Arc Melting (GSAM) process to produce hydride-forming multicomponent alloys	Christian Kukla, Montanuniversität Leoben In-situ particle alignment in Powder Extrusion Moulding (PEM) of NdFeB magnets
10:30	Konrad Kosiba, Leibniz Institute for Solid State and Materials Research Dresden Bayesian optimization for laser powder bed fusion of defect-free AA2024	Bartosz Morończyk, AMAZEMET Sp z o.o. Ultrasonic atomization of high-entropy metal powders for solid-state hydrogen storage	H.J. Blüm, MUT Advanced Heating Hydrogen processing for rare-earth magnet production
10:50	David Bacher, TUD Dresden University of Technology A generic pre-/postprocessor for non-planar G-code generation in FDM printing	Jéssica Bruna Ponsoni, Federal University of São Carlos Tuning hydrogen absorption in the (Ti _{0.5} Zr _{0.5}) ₁ (Fe _{0.5} Mn _{0.5}) ₂ C14 Laves phase alloy through Ce addition	Mahmudul Hasan, Fraunhofer IWKS Dismantling and recyclability of Nd-Fe-B magnets from electric motors: strategies for circular product design
11:10	Coffee Break		
	AM Powder Bed Processes (Chair: Anke Kaletsch, RWTH Aachen)	PM Recycling (Chair: Johannes Trapp, Fraunhofer IFAM Dresden)	Thermal Management (Chair: Simon Höges, GKN AM)
11:40	Sasidharan Periane Natarajan, Wayland Additive NeuBeam® Electron Beam AM: A novel and unique pathway for high-performance alloy 718	Min-Kyu Paek, Clausthal University of Technology Development of thermodynamic database for recycling and refining of Ti-V-Al alloy melt	Giulia Ferri, Snam SpA Electrified steam methane reforming with 3D-printed copper structures: A novel approach for low-carbon hydrogen production
12:00	Jingjia Sun, Nanjing University of Aeronautics and Astronautics Performance enhancement and crack control in Laser Powder Bed Fusion of Hastelloy X	Abhishek Maurya, Indian Institute of Technology Madras Green recycling of Aluminium alloys: Microwave-based solid-state technique for composite sheet fabrication	Thomas Hutsch, Fraunhofer IFAM Dresden Complex shaping of copper diamond using gel casting and quasi-static SPS
12:20	Alexander Wenda, Montanuniversität Leoben Processing of a novel oxide dispersion strengthened iron based high temperature alloy via Laser-Powder Bed Fusion	Gabriel Caballero García, Universidad Carlos III de Madrid Circular metal powders: Transforming scrap into AM-grade feedstocks for g-MEX extrusion	Paul Peritsch, Incus GmbH High-performance copper components via Lithography-Based Metal Manufacturing for advanced thermal management
12:40	Martin Werz, Materialprüfungsanstalt Universität Stuttgart Mechanical and corrosion testing of additively manufactured Inconel 718 and AISI 316L at high temperatures	Samuel Lister, University of Sheffield Dissimilar rotary friction welding of Titanium swarf billets consolidated via Field Assisted Sintering technology	Sandra Wieland, Fraunhofer IFAM Bremen Metal-powder-rich polymer composites for lightweight conductive structures, heat dissipation and EMC protection
13:00	Lunch		
	KEYNOTE (Chair: Prof. Dr.-Ing. Thomas Weißgärber)		
14:30	Olaf Andersen, Fraunhofer IFAM Dresden Status and Prospects for the Application of Cellular Metals in Industrial Practice		
	AM Debinding & Sintering (Chair: Oliver Schenk, RWTH Aachen)	PM Characterisation (Chair: Hongyu Chen, Nanjing University)	Biomaterials (Chair: Kee-Ahn Lee, Inha University)
15:10	Florian Jürries, Chalmers University of Technology Multi-material lithography-based Additive Manufacturing: Considerations for debinding	Gerhard Weber, Dr. Fritsch GmbH Audio-Sense: Analyzing FAST/SPS audio signals	György Harakaly, Incus GmbH Lithography-based Metal Manufacturing: Process development for biomedical devices
15:30	Gabriele Muraca, Chalmers University of Technology Debinding optimization for Multi-Material Cu-Al ₂ O ₃ components produced via Lithography-based Additive Manufacturing	Julian Reeh, Headmade Materials ColdMetalFusion - Fatigue of Ti6Al4V as-sintered and HIP	Dumitru Mitrica, R&D Institute for Nonferrous and Rare Metals - IMNR Modelling and selection of high entropy alloys for bacterial corrosion resistance
15:50	Tim Küsters, Carbolite Gero GmbH & Co. KG Part quality, sustainability, and performance: A comparison between graphite and metallic lined MIM furnaces	Ulrike Jehring, Fraunhofer IFAM Dresden Mechanical characterisation of PM and AM components	Jia-Chang Wang, National Taipei University of Technology Feasibility study of dental Zirconia discs Recycling applied to solvent-based slurry stereolithography printing
16:10	Thomas Studnitzky, Fraunhofer IFAM Dresden Materials and processes in Additive Manufacturing – is any combination possible?	Witold Węglewski, Institute of Fundamental Technological Research Polish Academy of Sciences The influence of material models and mesh quality on the accuracy of micro-XCT-based finite element simulations of thermal residual stresses in alumina-chromium sintered composites	

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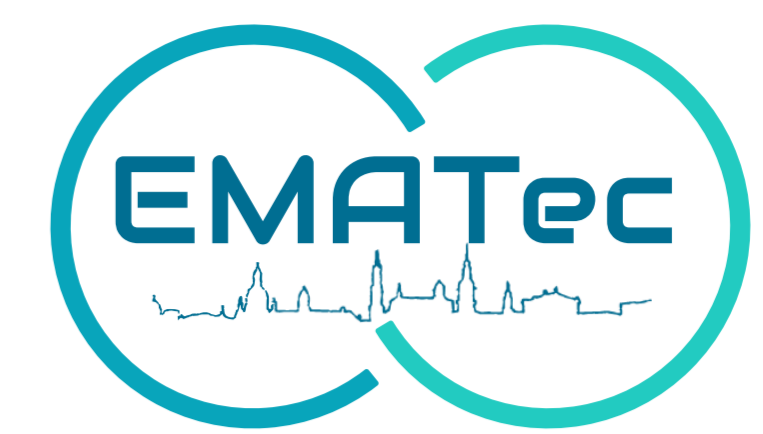


Thursday, 4 June 2026 (continued)

16:30	Coffee Break		
	Space & Defense (Chair: Olaf Andersen, Fraunhofer IFAM Dresden)	New Material Concepts I (Chair: Sebastian Riecker, Fraunhofer IFAM Dresden)	Workshop on high-performance aluminium alloys and composites (parallel project meeting for separate registrations only)
17:00	Erich Neubauer, RHP Technologies Assessment of different Additive Manufacturing methods for printing of 4D components	Yohann Thimont, CIRIMAT Binder Jetting coupled with Spark Plasma Sintering for the manufacturing of MnSi _y thermoelements with specific geometries	
17:20	Fatih Gözüküçük, Hamburg University of Applied Sciences Additive Manufacturing and Compression Behaviour of Spherene, Gyroid, and Hexagonal Cellular Structures via Metal Fused Granulate Fabrication	Kamil Bochenek, IPPT PAN Rhenium-modified hot-pressed AlCoCrFeNi high-entropy alloys: Strengthening and microstructural refinement effect	
17:40	Javier Hidalgo, Universidad de Castilla-La Mancha Pushing material extrusion Additive Manufacturing toward Titanium mesostructures for next-generation aerospace applications	Johannes Pötschke, Fraunhofer IKTS Beyond WC-Co: Supply-resilient hardmetals based on the high-entropy concept	
18:00	Break		
19:00	Conference Dinner		

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Friday, 5 June 2026																																	
PLENARY SESSION (Chair: Dr.-Ing. Felix Heubner)																																	
09:00	Matthias Scharvogel, Element 22 Scaling up the manufacturing of Titanium powder metallurgy products used in medical, aerospace, energy and high-end consumer products industries																																
09:30	Kee-Ahn Lee, Inha University Fabrication, structural and mechanical properties of porous materials by using powder metallurgy and Additive Manufacturing																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; text-align: center;">H2 Storage Materials II (Chair: Claudio Pistidda, Helmholtz Zentrum Hereon)</th> <th style="width: 50%; text-align: center;">New Material Concepts II (Chair: Bruno Weise, Fraunhofer IFAM Dresden)</th> </tr> <tr> <td>10:10</td> <td> Peter Hannappel, Fraunhofer IFAM Dresden Digitalizing materials development for hydrogen storage applications </td> </tr> <tr> <td>10:30</td> <td> Jan Krusenbaum, RWTH Aachen Mechanochemical synthesis and recycling of a deactivated TiMn2 hydrogen storage alloy </td> </tr> <tr> <td>10:50</td> <td> Gabriela C. Mayer, Federal University of São Carlos Impact of distinct cycling conditions on hydride stability of the Ti11Nb61Cr28 alloy for hydrogen storage </td> </tr> <tr> <td>11:10</td> <td style="text-align: center;">Coffee Break</td> </tr> <tr> <th style="width: 50%; text-align: center;">Materials for Extreme Environments (Chair: Erich Neubauer, RHP Technologies)</th> <th style="width: 50%; text-align: center;">AM Simulation (Chair: Florian Jürries, Chalmers University)</th> </tr> <tr> <td>11:40</td> <td> Hongju Chen, Nanjing University of Aeronautics and Astronautics Unusual deformation substructure and strain hardening in an additively manufactured CoCrFeMnNi high entropy alloy under extreme environment </td> </tr> <tr> <td>12:00</td> <td> Dinh Van Cong, University of Ulsan Effects of thermal exposure on microstructural stability and mechanical performance of an ODS Ni-based alloy fabricated by Spark Plasma Sintering </td> </tr> <tr> <td>12:20</td> <td> Adam Hunt, Globus Metal Powders Development of 718 Nickel superalloy via PM-HIP for oil and gas application </td> </tr> <tr> <td>12:40</td> <td> Yanan Zhao, Nanjing University of Aeronautics and Astronautics Composition design and strengthening-toughening of crack-resistant nickel-based superalloys for laser additive manufacturing </td> </tr> <tr> <td>12:00</td> <td> Oliver Schenk, RWTH Aachen AI-based prediction of the microstructure of green bodies produced by LMM </td> </tr> <tr> <td>12:20</td> <td> Jakob Scheibler, Fraunhofer IFAM Dresden Prediction of sinter deformation in sinter-based AM – Simulation vs. reality </td> </tr> <tr> <td>12:40</td> <td> Li Yanze, Nanjing University of Aeronautics and Astronautics Multi-scale phase field modeling for Laser Additive Manufacturing: Crystal growth prediction and mechanical property enhancement </td> </tr> <tr> <td>13:00</td> <td style="text-align: center;">CLOSING</td> </tr> <tr> <td>13:10</td> <td style="text-align: center;">Lunch</td> </tr> <tr> <td>14:30 - 18:00</td> <td style="text-align: center;">Option: Excursion Fraunhofer Institute Center Dresden</td> </tr> </table>	H2 Storage Materials II (Chair: Claudio Pistidda, Helmholtz Zentrum Hereon)	New Material Concepts II (Chair: Bruno Weise, Fraunhofer IFAM Dresden)	10:10	Peter Hannappel, Fraunhofer IFAM Dresden Digitalizing materials development for hydrogen storage applications	10:30	Jan Krusenbaum, RWTH Aachen Mechanochemical synthesis and recycling of a deactivated TiMn2 hydrogen storage alloy	10:50	Gabriela C. Mayer, Federal University of São Carlos Impact of distinct cycling conditions on hydride stability of the Ti11Nb61Cr28 alloy for hydrogen storage	11:10	Coffee Break	Materials for Extreme Environments (Chair: Erich Neubauer, RHP Technologies)	AM Simulation (Chair: Florian Jürries, Chalmers University)	11:40	Hongju Chen, Nanjing University of Aeronautics and Astronautics Unusual deformation substructure and strain hardening in an additively manufactured CoCrFeMnNi high entropy alloy under extreme environment	12:00	Dinh Van Cong, University of Ulsan Effects of thermal exposure on microstructural stability and mechanical performance of an ODS Ni-based alloy fabricated by Spark Plasma Sintering	12:20	Adam Hunt, Globus Metal Powders Development of 718 Nickel superalloy via PM-HIP for oil and gas application	12:40	Yanan Zhao, Nanjing University of Aeronautics and Astronautics Composition design and strengthening-toughening of crack-resistant nickel-based superalloys for laser additive manufacturing	12:00	Oliver Schenk, RWTH Aachen AI-based prediction of the microstructure of green bodies produced by LMM	12:20	Jakob Scheibler, Fraunhofer IFAM Dresden Prediction of sinter deformation in sinter-based AM – Simulation vs. reality	12:40	Li Yanze, Nanjing University of Aeronautics and Astronautics Multi-scale phase field modeling for Laser Additive Manufacturing: Crystal growth prediction and mechanical property enhancement	13:00	CLOSING	13:10	Lunch	14:30 - 18:00	Option: Excursion Fraunhofer Institute Center Dresden
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