

# Parallel Session Schedule

## FIELD 1: Additive Manufacturing (3D Printing)

Session 1(AM: Process Analysis I): Tuesday Morning, Oct. 21, 9:00-10:25; Function room 22, Level 2

Chair: Chai Guocai, Research Institute of Advanced Materials (Shenzhen)Co.,Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Energy-field Hybrid Laser Additive Manufacturing of Multi-material Graded Components	Guangyi Ma	Dalian University of Technology, China
<b>Keynote Speech</b>	342	Understanding the sintering mechanism of multimodal powder feedstock for sinter-based additive manufacturing	Jai Sung Lee	Hanyang University ERICA, Korea
Oral Presentation	105	Effect of Laser Power on Microstructure and Properties of Al7(VCoNi)93 Medium Entropy Alloy Fabricated by Additive Manufacturing	Yinghao Zhu	China Iron & Steel Research Institute Group, China
Oral Presentation	192	Effect of processing parameters on the densification, microstructure and mechanical characterization by selective laser melting of W-25%Re alloy	Yingying Zhang	Advanced Technology & Materials Co., Ltd., China

Session 2(AM: Process Analysis II): Tuesday Morning, Oct. 21, 10:35-12:00; Function room 22, Level 2

Chair: Zong Guisheng, 3D Printing Technology, Inc.

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	224	Wear performance improvement by B additions in filament-based material extrusion additively manufactured 316L alloys	Chanun Suwanpreecha	National Metal and Materials Technology Center (MTEC), National Sciences and Technology Development Agency (NSTDA), Thailand
Oral Presentation	226	Microstructural and mechanical characterisation of bimetallic 316L/17-4PH stainless steel fabricated via filament-based material extrusion additive manufacturing	Natthaphat Parsompech	National Metal and Materials Technology Center (MTEC), National Sciences and Technology Development Agency (NSTDA), Thailand

Oral Presentation	323	Nanoceramic decoration of metal powders for additive manufacturing by ultrafine bubble-assisted hetero-agglomeration	Mingqi Dong	Tohoku University, Japan
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Session 3(AM: Material & Process Development I): Tuesday Morning, Oct. 21, 13:30-15:00; Function room 22, Level 2

Chair: Zhang Deliang, Northeastern University

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Nanoparticle Jetting of Zirconia Ceramics and Their Applications in Oral Products	Huiping Tang	Hangzhou City University, China
<b>Keynote Speech</b>	129	Additive Manufacturing of Segregation-free Fe-Cr-Co Magnetic Steel via Laser Powder Bed Fusion	Yuheng Liu	Osaka University, Japan
Oral Presentation	106	Optimizing Cr7C3 Content in Ni3Al-Based Laser Cladding Coatings: Microstructure Evolution and Tribological Performance on 42CrMo Steel	Shiqin Wei	Central Iron & Steel Research Institute Co., Ltd. , China
Oral Presentation	107	Particle/liquid Refractive Index Coupling Introduced Light Penetration Effect Enabling High Thermal Conductivity of 3D Printing AlN	Maohang Zhang	University of Science and Technology Beijing, China

Session 4(AM: Material & Process Development II ): Tuesday Morning, Oct. 21, 15:10-17:00; Function room 22, Level 2

Chair: Yang Yafeng, Institute of Process Engineering, CAS

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Keynote Speech</b>	167	Process optimization of laser powder bed melting for the preparation of superhard M2 high-speed steel	Siyu Xu	CISRI International New Materials Innovation Center (Shenzhen) Co., Ltd., China
Oral Presentation	162	Rheological Performance Optimization of Aqueous YG8 Slurry for Direct Ink Writing Formation	Xiao-Fei Li	Hefei University of Technology, China

Oral Presentation	228	Surface quality and wear performance of 316L stainless steel fabricated by MIM and MEX: effects of shot peening	Aphichat Sakkaeo	National Metal and Materials Technology Center (MTEC), National Sciences and Technology Development Agency (NSTDA), Thailand
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Session 5(AM: Material & Process Development III): Wednesday Morning, Oct. 22, 9:00-10:25; Function room 26, Level 2

Chair: Cheng Jigui, Anhui University of Technology

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Keynote Speech</b>	52	Additive Friction Stir Deposition of AZ31B Magnesium Alloy: Microstructural Evolution, Mechanical Properties, and Thermo-Mechanical Modeling	Zhixin Xia	Soochow University, China
Oral Presentation	275	Composition gradient structure governs scale-dependent mechanical properties in multi-materials integrated Additive Manufacturing	Yaojie Wen	University of Science and Technology Beijing, China
Oral Presentation	319	Electron Beam Point-Wise Fabrication of NiTi Coatings on Titanium Inspired by Additive Manufacturing Technique	Lei Wang	The University of Osaka, Japan

Session 6(AM: Binder Jetting &Printed Materials and Analysis): Tuesday Morning, Oct. 21, 9:00-10:25; Function room 26, Level 2

Chair: Zhao Lin, Central Iron & Steel Research Institute Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Binder Jetting Manufacturing	Guisheng Zong	3D Printing Technology, Inc., China
<b>Keynote Speech</b>	6	DEM-based insights into mechanisms governing the print-bed characteristics in binder jet printing additive manufacturing	Abolfazl Malti	The University of Melbourne, Australia
Oral Presentation	43	Analysis of Microstructure and Mechanical Properties of Niobium Alloy Manufactured by Laser Beam-Powder Bed Fusion (LB-PBF) Process	SUGWAN LEE	University of Ulsan, Korea

Session 7(AM: Printed Materials and Analysis I ): Tuesday Morning, Oct. 21, 10:35-12:00; Function room 26, Level 2

Chair: Niu Zhibin, Tianjin University

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Keynote Speech</b>	22	Anodizing of 3D-printed AlSi10Mg Alloy and its Fatigue Property	Hiroataka Kurita	Yamaha Motor Co., Ltd., Japan
Oral Presentation	241	Strong and ductile niobium-based refractory alloy via deformable zirconia nanoparticles	Jianan Chen	University of Science and Technology Beijing, China
Oral Presentation	299	Microstructure and mechanical properties of C-HRA-1 nickel-based superalloy by laser melting deposition	Shaobo Ping	CISRI Hydrogen & Porous Technology Co., Ltd., China
Oral Presentation	331	Preparation of Oxide Thermoelectric Films via Freeze-Dry Pulsated Orifice Ejection Method and Laser Powder Bed Fusion	Zhenxing Zhou	Tohoku University, Japan
Oral Presentation	341	Microstructure and properties of TiC/Mo composites via laser powder bed fusion	Wenjing Yang	Anhui University, China

Session 8(AM: Printed Materials and Analysis II ): Tuesday Afternoon, Oct. 21, 13:30-15:00; Function room 26, Level 2

Chair: Niu Zhibin, Tianjin University

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	243	Strong and ductile nanoscale Ti-1Fe dual-phase alloy via deformation twinning	Chang Liu	University of Science and Technology Beijing, China
Oral Presentation	200	Preparation of Cu-Cr-Zr-Nb alloys by selective laser melting with elemental powders	Xinyu Yang	GRIPM Advanced Materials Co., Ltd, China
Oral Presentation	203	Vibration-Induced Separation of Dissimilar Mixed Metal Powders for Powder Bed Fusion Additive Manufacturing: A Digital Twin Science Study	Yuichiro Koizumi	Osaka University, Japan
Oral Presentation	134	Effect of micro-strain and (100) texture intensity on corrosion behaviors of NiTi alloy via laser powder bed fusion	An Yan	South China University of Technology, China

Session 9(AM: Printed Materials and Analysis III): Tuesday Afternoon, Oct. 21, 15:10-17:00; Function room 26, Level 2

Chair: Zong Guisheng, 3D Printing Technology, Inc.

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	244	Development of strong and ductile titanium alloys with wear resistance and enhanced damping	Haiyue Zhang	University of Science and Technology Beijing, China
Oral Presentation	221	Metallurgical Strengthening Behavior in Heterogeneous Interface of NiWCo/Cu Fabricated by Additive Manufacturing	Chenxu Lei	University of Science and Technology Beijing, China
Oral Presentation	116	Microstructural characteristics and mechanical properties of hypereutectic Al-Si alloy fabricated by laser powder bed fusion	Asuka Suzuki	Nagoya University, Japan
Oral Presentation	179	Microstructural and Mechanical Characterization of MA6000 Samples with Different Y <sub>2</sub> O <sub>3</sub> Contents Fabricated by L-PBF	jun-seo Park	University of ulsan, Korea

Session 10(AM: Modeling and Post-processing): Wednesday Morning, Oct. 22, 10:35-12:00; Function room 26, Level 2

Chair: Niu Zhibin, Tianjin University

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Keynote Speech</b>	309	An Integrated CALPHAD-Based FEM Tool for Additive Manufacturing Simulation	Shan Jin	Thermo-Calc Software AB, Sweden
Oral Presentation	340	Research on Additive Manufacturing and Hot Isostatic Pressing for Biomedical Pure Tantalum	Xin Liu	Institute of New Materials, Guangdong Academy of Sciences, China
Oral Presentation	372	A novel performance-aimed geometric tolerancing evaluation framework for topologically optimized models based on sensitivity analysis	Pengfei Yan	Eighth Research Institute of Nuclear Industry, China
Oral Presentation	190	A Novel Digital Tool for Additive Manufacturing: From LB-PBF to Sinter-Based Processes	Yan Liu	SIMTEC Soft Sweden AB, Sweden

**FIELD 2: Powder forming and sintering**

Session 11(Powder Injection Molding): Tuesday Morning, Oct. 21, 9:00-10:25; Function room 35+37, Level 3

Chair: Yau Hung Chou, XGIMI(Ningbo) Intelligent Equipment Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Development Status of POM Base Feedstock of PIM in Asia	Yau hung Chou	You Need Enterprise Consulting Co., Ltd., Chinese Taiwan
Oral Presentation	333	Study on sintering behaviour of metal injection molded Ti-6Al-4V based on experimental and molecular dynamics	Haibo Sun	Central South University, China
Oral Presentation	135	Formation mechanism of W-coated Cu composite powders and the metal injection molding using polyoxymethylene-based binders	Xipeng Ding	Hefei University of Technology, China
Oral Presentation	45	The Importance of the Particle Size Analysis of Powders in Metal-powder Injection Molding	Yau hung Chou	You Need Enterprise Consulting Co., Ltd., Chinese Taiwan
Oral Presentation	359	Defect Analysis of Metal Powder Injection Molding	Yau hung Chou	You Need Enterprise Consulting Co., Ltd., Chinese Taiwan

Session 12(Press, Sinter& Secondary Operations I): Tuesday Morning, Oct. 21, 10: 35-12:00; Function room 35+37, Level 3

Chair: Yau Hung Chou, XGIMI(Ningbo) Intelligent Equipment Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	13	Process design of surface densification rolling of powder metal gears	Philipp Scholzen	Höganäs, China
<b>Keynote Speech</b>	-	Sintering Mechanism and Application of SPS Technology	Jiuxing Zhang	Hefei University of Technology, China
Oral Presentation	30	Influence of ultrasonic surface rolling process on surface integrity and internal porosity in selective laser melted CP-Ti	Xingyi Li	South China University of Technology, China

Oral Presentation	32	Corrosion behavior of sintered duplex stainless steel manufactured from gas-atomized powders discarded from 3D printing	Yitong Liu	South China University of Technology, China
Oral Presentation	-	Atomic-Scale Insights into Powder Metallurgy and Additive Manufacturing using Atom Probe Tomography	Florian Vogel	Guangdong Provincial Key Laboratory for Processing and Forming of Advanced Metallic Materials, China

Session 13(Press, Sinter& Secondary Operations II): Tuesday Afternoon, Oct. 21, 13:30-15:00; Function room 35+37, Level 3

Chair: Chen Gang, University of Science and Technology Beijing

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	76	Development of a "Zero-shrinkage" anaerobic sealant for powder metallurgical parts	Huangyong Jiang	NBTM New Materials Group Co., Ltd., China
Oral Presentation	87	Microstructure and mechanical properties of ceramic nanoparticles dispersion-strengthened tungsten alloys	Fei Lin	Northwest Institute for Nonferrous Metal Research, China
Oral Presentation	71	Gelcasting technology for large-scale complex-shaped titanium alloy components	Xin Li	University of Science and Technology Beijing, China
Oral Presentation	56	Simulation of a hot isostatic pressing furnace	Chang Gao	CISRI HIPEX Technology Co., Ltd., China

Session 14(Press, Sinter& Secondary Operations III): Tuesday Afternoon, Oct. 21, 15:10-17:00; Function room 35+37, Level 3

Chair: Chen Gang, University of Science and Technology Beijing

Type	Paper No.	Paper title	Name	Organization (Region)
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<b>Invited Presentation</b>	163	Effect of initial relative density on liquid phase sintering behavior of Al powder using Al-Cu eutectic alloy powder: In-situ observations using microscopy and synchrotron X-ray computed tomography	Ryotaro Kusunoki	Nagoya University, Japan
Oral Presentation	178	Analysis of the reinforcement effect of TiN and WC content to improve the mechanical properties of Ti-Grade12	Hyun-Su Kim	University of Ulsan, Korea
Oral Presentation	252	Development and evaluation of 17-4PH micro gears via high performance powder metallurgy	Tzu-Yao Lin	Porite Taiwan Co., Ltd., Chinese Taiwan
Oral Presentation	352	Optimizing Heat Treatment and Alloying for Enhanced Performance of Astalov® CrS PM Steel	Jie Yang	Höganäs, China

Session 15(Press, Sinter& Secondary Operations IV): Wednesday Morning, Oct. 22, 9:00-10:25; Function room 35+37, Level 3

Chair: Xu Kai, CISRI Hydrogen & Porous Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	347	Fabrication of MXene-reinforced silver matrix composites	Weiwei Zhou	Tohoku University, Japan
Oral Presentation	260	Effect of air oxidation time on microstructure of sintered Cr-Fe alloy	Shing-Yin Liao	PORITE TAIWAN CO., LTD., Chinese Taiwan
Oral Presentation	264	Investigation of nitrogen effects on Cr-Fe alloys during high-temperature sintering	Chih-Ching Chung	Porite Taiwan Co., Ltd., Chinese Taiwan
Oral Presentation	399	Achieving strength-ductility balance in Cu matrix composite reinforced with double nanophase of CNT and intragranular in-situ TiC	Jingmei Tao	Kunming University of Science and Technology, China

Session 16(Press, Sinter& Secondary Operations V): Wednesday Morning, Oct. 22, 10:35-12:00; Function room 35+37, Level 3

Chair: Xu Kai, CISRI Hydrogen & Porous Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	378	Benefits of high-performance mixes solution in consistency and efficiency of PM part production	Xiaolin Huang	Höganäs China Co.,Ltd., China



Oral Presentation	-	Interfacial bonding enhancement in laser clad Ni45 coatings on martensitic stainless steel through CeO2 modification	Boliang Hu	Xi'an University of Architecture and Technology, Associate Professor,, China
Oral Presentation	-	Multi-scale Mechanism of Sintering and Density Enhancement of Molybdenum Powder and Prediction Model	Chengfang Chai	Kunming University of Science and Technology, China
Oral Presentation	343	Microstructural and mechanical properties of oxide dispersion strengthened (ODS) ferritic steels fabricated by mechanical alloying and powder forging	Himanshu Pal	Indian Institute of Technology, Indian

### FIELD 3: Refractory Metals&Cemented Carbide

Session 17(Refractory Metals&Cemented Carbide I ): Tuesday Morning, Oct. 21, 9:00-10:25; Function room 31+33, Level 3

Chair: Wang Tiejun, CISRI Hydrogen & Porous Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	267	Rare earth oxide turns molybdenum alloy into a feasible functional material	Jinshu Wang	Beijing University of Technology, China
Oral Presentation	-	The recent development of tungsten-molybdenum alloy materials in China	Tiejun Wang	CISRI Hydrogen & Porous Technology Co., Ltd., China
Oral Presentation	29	Effect of FeCoNiMoW high entropy alloy binder on mechanical properties of high entropy (Ti,W,Mo,Nb,Ta)(C,N) based cermets	Houan Zhang	Xiamen University of Technology, China
Oral Presentation	-	With the tenacity of molybdenum, safeguard the flexibility of life—The Application of Molybdenum Alloys in the Medical Field	Di Dong	ATTL Advanced Materials Co.,Ltd., China

Session 18(Refractory Metals&Cemented Carbide II ): Tuesday Morning, Oct. 21, 10:35-12:00; Function room 31+33, Level 3

Chair: Liu Bin, Central South University

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	83	High-Temperature Mechanical Properties and Irradiation Behavior of Tungsten-Rich Multiple Principle Element Alloys	Bin Liu	Central South University, China
Oral Presentation	113	Vacuum diffusion bonding Nb521 and GH3230 alloys via different interlayers	Yuanyi Peng	Northwest Institute for Nonferrous Metal Research, China
Oral Presentation	49	Study On Microstructure And Mechanical Properties Of Molybdenum Rhenium Alloy	Guangda Wang	Advanced Technology & Materials Co., Ltd., China
Oral Presentation	140	Creep Behavior and Life Prediction of Rhenium: A Multi-scale Investigation Integrating Constitutive Modeling and Machine Learning	Di Zhang	Northwestern Polytechnical University, China

Session 19(Refractory Metals & Cemented Carbide III): Tuesday Morning, Oct. 21, 13:30-15:00; Function room 31+33, Level 3

Chair: Qin Yongqiang, Hefei University of Technology

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Research on the irradiation resistance modification of tungsten materials for nuclear fusion reactors	Hongyu Chen	Zhejiang University of Technology, China
Oral Presentation	272	Research on preparation and properties of CeO <sub>2</sub> -modified WC-FeNiCo ultrafine-grained cemented carbides	Yongqiang Qin	Hefei University of Technology, China
Oral Presentation	148	Interfacial structure evolution and fracture toughness of polycrystalline diamond with medium-entropy alloy binder	Tianxu Qiu	Hefei University of Technology, China
Oral Presentation	288	High stress twining in High-Stacking-Fault-Energy M6C carbides of M42 high speed steel	Qiangqiang Yuan	University of Science and Technology Beijing, China

Session 20(Refractory Metals & Cemented Carbide IV): Tuesday Afternoon, Oct. 21, 15:10-17:00; Function room 31+33, Level 3

Chair: Xiong Ning, ATTL Advanced Materials Co.,Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
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Oral Presentation	286	Synergistic multi-objective Optimization for Refractory High-Entropy Alloys	Ruixia Sun	University of Science and Technology Beijing, China
Oral Presentation	72	Nitride dispersion strengthened tungsten alloy based on in-situ synthesis	Xingyu Li	University of Science and Technology Beijing, China
Oral Presentation	114	The high temperature tensile properties and mechanisms of Re-0.1ZrO <sub>2</sub>	Wenqing Ying	Northwestern Polytechnical University, China

#### FIELD 4: HIP

Session 21(HIP materials): Tuesday Morning, Oct. 21, 9:00-10:25; Function room 24, Level 2

Chair: Chen Hongxia, CISRI HIPEX Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	366	Research Status and Industrial Application Progress of High Performance Silicon Nitride Ceramics	Weiru Zhang	Sinoma Advanced Materials Co., Ltd., China
<b>Invited Presentation</b>	151	The Booster for Large-Scale High-Performance Powder Metallurgy Products —— Development of Ultra-Large Hot Isostatic Pressing Equipment	Hongxia Chen	CISRI HIPEX Technology Co., Ltd., China
Oral Presentation	330	Complex effects of capsule structure and powder particle size on the mechanical properties of powder metallurgy Inconel 718 alloys	Xiaosheng Tian	Institute of Metal Research, Chinese Academy of Sciences, China
Oral Presentation	410	Innovative Applications of Hot Isostatic Pressing (HIP) and Its Integration into the Product Value Chain	Tianshu Zhang	CISRI HIPEX Technology Co., Ltd., China

Session 22(HIP Simulation): Tuesday Morning, Oct. 21, 10:35-12:00; Function room 24, Level 2

Chair: Chen Hongxia, CISRI HIPEX Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	186	Holistic Simulation Approaches for Hot Isostatic Pressing: Bridging Physics, Materials, and Digital Twins	Zhenghua Yan	SIMTEC Soft Sweden AB, Sweden
<b>Invited Presentation</b>	277	Digital twin of the PM-HIP manufacturing chain from powder filling and pre-consolidation to near-net-shape components	Yuanbin Deng	RWTH Aachen University, Germany

Oral Presentation	401	Research on Numerical Simulation and Capsule Design and Manufacturing for Near Net Shaping Hot Isostatic Pressing	Chengjian Zhang	Huazhong University of Science and Technology, China
Oral Presentation	271	Multiscale Simulation of Hot Isostatic Pressing in Iron and Steel Manufacturing: Advances in DEM-CFD Coupled Modeling	Guangming Chen	Nanjing University of Aeronautics and Astronautics, China

Session 23(HIP materials and simulation I ): Tuesday Afternoon, Oct. 21, 13:30-15:00; Function room 24, Level 2

Chair: Christoph Broeckmann, RWTH Aachen University

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	155	Influence of Hot Isostatic Pressing Temperature on Compositional Distribution Uniformity of Ni-Ti Alloyed Molybdenum Targets Fabricated via Powder Metallurgy	Zhanfang Wu	CISRI HIPEX Technology Co., Ltd., China
Oral Presentation	398	Research on the microstructure and properties of "mechanics- shielding" integrated magnesium matrixed composite	Zunyan Xu	Kunming University of Science and Technology, China
Oral Presentation	409	The current situation and development trends of hot isostatic pressing (HIP)	Songtao Meng	CISRI HIPEX Technology Co., Ltd., China
Oral Presentation	396	Strengthening and deformation mechanism of high-strength CrMnFeCoNi high entropy alloy prepared by powder metallurgy	Caiju Li	Kunming University of Science and Technology, China

Session 24(HIP materials and simulation II ): Tuesday Afternoon, Oct. 21, 15:10-17:00; Function room 24, Level 2

Chair: Qi Wen, CISRI HIPEX Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	403	Investigation of HIP-NNS for SAF2205 Duplex Stainless Steel	Pengjie Zhang	CISRI HIPEX Technology Co., Ltd., China
Oral Presentation	402	Key Technologies and Industrial Application of Hot Isostatic Pressing in Near-Net-Shape Manufacturing of Maintenance-Free Wear-Resistant Roller Sleeves	Haonan Zheng	Huazhong University of Science and Technology, China

Oral Presentation	411	Research Progress of Hot Isostatic Pressing Diffusion Bonding Between Steel and Dissimilar Materials	Haofeng Li	CISRI HIPEX Technology Co., Ltd., China
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## FIELD 5: Metal Powder Preparation and Processes

Session 25(Metal Powder Preparation and Processes I ): Tuesday Afternoon, Oct. 21, 13:30-15:00;

Function room 25, Level 2

Chair: Yu Yang, Tiangong International Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	The principle of plasma milling and its application in materials synthesis	Min Zhu	South China University of Technology, China
<b>Invited Presentation</b>	-	A novel powder coating technology by fluidized bed deposition and its applications	Yafeng Yang	Institute of Process Engineering, CAS, China
Oral Presentation	374	Co-manufacturing gas atomization technology for powder	Pengfei Yan	Eighth Research Institute of Nuclear Industry, China, China
Oral Presentation	23	Monitoring and Optimisation of Powder Outgassing for Sintering and HIPing	ERIK COX	Genco Ltd., United Kingdom
Oral Presentation	34	Producing ultrafine electrolytic copper powder	Roman Voinkov	JSC Uralelectromed, Russia

Session 26(Metal Powder Preparation and Processes II ): Tuesday Afternoon, Oct. 21, 15:10-17:00;

Function room 25, Level 2

Chair: Huang Zanjun, Advanced Technology & Materials Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Technical and market development of PM high speed and tool steels in China	Yang Yu	Chief scientist, Tiangong international, China
<b>Keynote Speech</b>	-	Development status of stainless steel powder industry for powder metallurgy	Lintao Du	Jiangmen Hongjia New Material Technology Co., Ltd, China
Oral Presentation	237	Controlled One-Pot Synthesis of Copper Nanospheres through Green Aqueous Reduction	Chengjun Wang	Gricy Advanced Materials Co., Ltd, China, China
Oral Presentation	304	Ultrasonic Atomization of Refractory Medium Entropy Alloys	Tomasz Choma	Warsaw University of Technology, Poland

Oral Presentation	38	Mechanical properties and applications of Cr-containing PM sintered steel	Jing Yang	Höganäs, China
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## FIELD 6: Functional Materials & Magnetic Materials

Session 27(Functional Materials & Magnetic Materials I ): Tuesday Morning, Oct. 21, 9:00-10:25; Function room 25, Level 2

Chair: Wencheng Chang, National Chung Cheng University

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Rare earth based high-frequency soft magnetic material	Jinbo Yang	Peking University, China
Oral Presentation	88	High-performance Nd-saving hot-deformed permanent magnets	Jung-Goo Lee	Korea Institute of Materials Science, Korea
Oral Presentation	266	Dramatically improving thermoplasticity of by regulating $\gamma'$ phase	Hua Zhang	Yantai University, China
Oral Presentation	82	Additive manufacturing of Mn-Cu alloys: microstructure and mechanical properties	Liyang Sun	Institute of New Materials, Guangdong Academy of Sciences, China

Session 28(Functional Materials & Magnetic Materials II ): Tuesday Morning, Oct. 21, 10:35-12:00; Function room 25, Level 2

Chair: Yang Jinbo, Peking University

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Technological progress of weightless rare earth permanent magnet materials	Rui Han	Central Iron & Steel Research Institute Co., Ltd. , China
<b>Invited Presentation</b>	112	Improved soft magnetic properties of FeSi/FeSiCrBC compound powder core induced by enhanced magnetic coupling	Hongzhen Li	South China University of Technology, China
Oral Presentation	168	Microstructure and properties of W-Cu functional graded materials prepared by combining tape casting with infiltration sintering method	Changcheng Sang	Hefei University of Technology, China

Session 35(Functional Materials & Magnetic Materials III): Wednesday Morning, Oct. 22, 10:35-12:00; Function room 31+33, Level 3

Chair: Han Rui, Central Iron & Steel Research Institute Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	208	Radiation resistance of 9Cr oxide dispersion strengthened steels at different temperatures	Xiaosheng Zhou	North University of China, China
Oral Presentation	314	Design of high-performance Mo-Re alloys with customized mechanical properties through controlled microstructure and strategic second-phase additions	Yuhang Song	Tianjin University, China
Oral Presentation	-	Preparation of atomized FeSi alloy powder and study on magnetic properties of magnetic core	Boliang Hu	Xi'an University of Architecture and Technology, Associate Professor, China
Oral Presentation	368	Effect of dewaxing process on magnetic properties of SMC material	Le Liu	Höganäs China Co.,Ltd., China
Oral Presentation	115	The quantitative investigation of the lattice oxygen and grain edge oxygen on the thermal conductivity of aluminum nitride ceramics	Zhirui Zhang	University of Science and Technology Beijing

## FIELD 7: Metal Matrix Composites

Session 29(Metal Matrix Composites): Wednesday Morning, Oct. 22, 9:00-10:25; Function room 24, Level 2  
Chair: Yin Haiqing, University of Science and Technology Beijing

Type	Paper No.	Paper title	Name	Organization (Region)
Oral Presentation	59	Enhanced High-Temperature Performance of Powder Metallurgy Al–Cu–Mg Alloy via Dispersoid Strengthening and Delayed $\theta'$ Phase Precipitation	Yang Li	University of Science and Technology Beijing, China
Oral Presentation	60	Mechanical property and microstructure of in-situ (TiB+ TiC)/TA15 composites via adding B4C in TA15 powder	Zhaohong Feng	University of Science and Technology Beijing, China
Oral Presentation	394	Enhancing the mechanical and electrical properties in CNTs/Cu composites via chemical vapor deposition introducing ex-situ interfacial WC	Junqin Feng	Southwest Forestry University, China
Oral Presentation	153	Achieving high strength and large recoverable strain by designing honeycomb-structural dual-shape-memory-alloy composite	Weisi Cai	The University of Hong Kong, Hong Kong, China



Oral Presentation	393	Break through the strength-ductility trade-off dilemma in titanium matrix composites via precipitation assisted interface tailoring and solid solution	Qiong Lu	Kunming University of Science and Technology, China
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Session 30(Ceramic Matrix Composites): Wednesday Morning, Oct. 22, 10:35-12:00; Function room 24, Level 2

Chair: Yin Haiqing, University of Science and Technology Beijing

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	180	Upcycling waste MoSi <sub>2</sub> into high-performance composite coatings for protecting refractory alloys across a wide temperature range	Peizhong Feng	China University of Mining and Technology, China
Oral Presentation	324	Design of Toughened TiB <sub>2</sub> via Reactive Sintering and DFT Simulations	Wondayehu Yeshewas Alemu	National Taipei University of Technology, Chinese Taiwan

## **FIELD 8: Energy Materials, Fundamentals and Materials Genome Engineering**

Session 31(Fundamentals and Materials Genome Engineering): Wednesday Morning, Oct. 22, 9:00-10:25; Function room 25, Level 2

Chair: Li Xiang, Research Institute of Advanced Materials (Shenzhen) Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	328	AI-Driven Multimodal Fusion Platform for Powder Metallurgy: Revolutionizing Material Design and Analysis	Shaohua Su	Longcheng Laboratory of Advanced Manufacturing, China
<b>Invited Presentation</b>	282	Deep-thinking LLM agents for automated literature review and taxonomy in powder metallurgy	Xiang Li	Research Institute of Advanced Materials (Shenzhen) Co., Ltd., China
Oral Presentation	259	Research on Intelligent Design and Performance Influence Mechanism of Precipitation-Strengthened High-Strength, High-Ductility and Corrosion-Resistant High-Entropy Alloys	Youpeng Song	Research Institute of Advanced Materials (Shenzhen) Co., Ltd., China
Oral Presentation	212	Multi-Field Numerical Simulation of the 45 Carbon Steel Welding Process	Shaobo Ping	CISRI Hydrogen & Porous Technology Co., Ltd., China
Oral Presentation	339	CALPHAD Thermodynamic and Kinetic Simulations for Powder Metallurgy:	Johan Bratberg	Thermo-Calc Software AB, Sweden



		Applications from Binder Design, Atomization to Sintering		
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Session 32(Energy Materials): Wednesday Morning, Oct. 22, 10:35-12:00; Function room 25, Level 2  
Chair: Lee Huei-Long, Porite Taiwan Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	Metal Hydrides and Application	Shumao Wang	General Research Institute for Engineering and Technology, Inc., China
Oral Presentation	-	Optimization of Dehydrogenation and Mechanism of Rare Earth Nitrides in Aluminum Hydroxide	Shaolei Zhao	Central Iron & Steel Research Institute Co., Ltd. , China
Oral Presentation	-	Preparation and Application of W–Cu Conductive Pastes for HTCC	Wangzhi Xu	Hefei University of Technology, China
Oral Presentation	161	Solid State Hydrogen Storage Materials and Devices: Current Advances and Challenges from Material Dynamic Response to System Integration Optimization	Hu Gu	CISRI Hydrogen & Porous Technology Co., Ltd., China

#### **FIELD 9: Porous materials**

Session 33(Porous materials): Wednesday Morning, Oct. 22, 9:00-10:25; Function room 22, Level 2  
Chair: Gu Hu, CISRI Hydrogen & Porous Technology Co., Ltd.

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	The Application and Development Trend of Porous Metal Materials in the Hydrogen Energy Field	Hu GU	CISRI Hydrogen & Porous Technology Co., Ltd., China
Oral Presentation	47	Short-Process Fabrication and Uniformity Control Technology for Large-Scale Porous Titanium Gas Diffusion Layer	Baoguang Zhang	Northwest Institute for Nonferrous Metal Research, China
Oral Presentation	392	3D Microstructure and Corrosion Behavior of Porous Co-Al-Cr Intermetallic Fabricated via Rapid Low-Energy Self-Exothermic Reaction for Advanced Filtration Applications	Zhichao Shang	Henan Academy of Sciences, China
Oral Presentation	61	Electrical resistance characteristics of Al <sub>2</sub> O <sub>3</sub> fillers as a component in immersion heaters for Al alloys melting.	Kazuya Maeda	Hiroshima University, Japan

**FIELD 10: Powder Metallurgy Superalloy**

Session 34(Powder Metallurgy Superalloy): Wednesday Morning, Oct. 22, 9:00-10:25; Function room 31+33, Level 3

Chair: Zhang Lin, University of Science and Technology Beijing

Type	Paper No.	Paper title	Name	Organization (Region)
<b>Invited Presentation</b>	-	The effect of Ta on Nickel-based Powder Metallurgy Superalloys	Haopeng Zhang	Gaona Aero Material Co., Ltd., China
Oral Presentation	67	The Mechanism of Oxygen Content on the Microstructure and Performance of FGH96 Alloy	Lin Zhang	University of Science and Technology Beijing, China
Oral Presentation	150	Microstructure Evolution and Mechanism of Nickel-based Powder Superalloy during Cooling after Hot Deformation	Hailiang Huang	Yantai University, China
Oral Presentation	274	Investigation of the Dynamic Degassing Behavior of Argon-Atomized Nickel-Based Superalloy Powders	Qiang Zhang	Gaona Aero Material Co., Ltd., China