WORLDPM2018 Congress Schedule

Sunday 16 September 2018		
14:00-20:30	Registration & Information Desk Open	
18:30-20:00	VIP Dinner	

Monday 17 September 2018		
09:00-09:20	Welcome Speeches	
09:30-18:30	Exhibition Open	
09:20-10:40	Global Review of PM	
10:40-11:05	PM Design Awards	
11:05-12:35	Plenary Reports	
12:35-14:00	Lunch and Exhibition & Poster Networking	
14:00-16:30	Plenary Reports	
18:30-20:30	Welcome Dinner (Distinguished Contribution Award, International Exchange Awards)	

Tuesday 18 September 2018		
08:30-10:00	Session 1	PM Components & Processes I
	Session 2	AM I: New Material & Applications 1
	Session 3	PIM I: Developments of Raw Powder, Binder System & Feedstock
	Session 4	Sintering Parts and Components
	Session 5	Metal Powder Preparation & Processes I
	Session 6	**SIS**: China-Australia Joint Symposium on Powder Metallurgy I
	Session 7	**SIS**: Metal Injection Molding I
	Session 8	Compaction & Forming Processes I
	Session 9	Porous Materials I: Preparation & Property 1
	Session 10	Magnetic Materials & Functional Materials I
	Session 11	Hard Alloys I
	Session 12	Non-Ferrous Metals & Rare Earth Metals I
09:30-19:30	Exhibition Open	
10:00-10:25	Coffee Break	
10:25-12:10	Session 13	PM Components & Processes II
	Session 14	AM II: Technology Overview
	Session 15	PIM II: Characterizations in Metal Injection Molding
	Session 16	Hot Isostatic Pressing
	Session 17	Metal Powder Preparation & Processes II
	Session 18	**SIS**: China-Australia Joint Symposium on Powder Metallurgy II
	Session 19	**SIS**: Metal Injection Molding II
	Session 20	Compaction & Forming Processes II
	Session 21	Porous Materials I: Preparation & Property 2
	Session 22	Magnetic Materials & Functional Materials II

	Session 23	Hard Alloys II
	Session 24	Non-Ferrous Metals & Rare Earth Metals II
12:10-14:00	Lunch and Exhibition & Poster Networking	
14:00-16:15	Session 25	PM Components& Processes III
	Session 26	AM III: Process Analysis I
	Session 27	PIM III: Processing, Microstructures and Properties
	Session 28	Steel Sintering I
	Session 29	Metal Powder Preparation & Processes III
	Session 30	**SIS**: China-Australia Joint Symposium on Powder Metallurgy III
	Session 31	**SIS**: Refractory Metals & Superhard Materials I
	Session 32	Surface Technology I
	Session 33	Porous Materials II: Alloy & Intermetallics
	Session 34	Magnetic Materials & Functional Materials III
	Session 35	Hard Alloys III
	Session 36	Biomedical Materials & Other Powders I
16:15-16:35	Coffee Break	
16:35-18:00	Session 37	PM Components & Processes IV
	Session 38	AM III: Process Analysis 2
	Session 39	PIM IV: Biomaterials and its Applications
	Session 40	Steel Sintering II
	Session 41	Metal Powder Preparation & Processes IV
	Session 42	**SIS**: China-Australia Joint Symposium on Powder Metallurgy IV
	Session 43	**SIS**: Refractory Metals & Superhard Materials II
	Session 44	Surface Technology II
	Session 45	Porous Materials III: Porous Composite
	Session 46	Magnetic Materials & Functional Materials IV
	Session 47	Hard Alloys IV
	Session 48	Biomedical Materials & Other Powders II

Wednesday 19 September 2018

08:30-10:00	Session 49	PM Components & Processes V
	Session 50	AM IV: Material & Process Development I
	Session 51	Spark Plasma Sintering
	Session 52	**SIS**: Automobile Industry & PM I
	Session 53	Refractory Metals I
	Session 54	Analysis, Testing, Numerical Simulation, Data and Data Mining I
	Session 55	Energy Materials I
	Session 56	Super Alloys & Composites I
	Session 57	Metal Powder Preparation and Processes V
09:30-19:30	Exhibition Open	
10:00-10:25	Coffee Break	

10:25-12:00	Session 58	PM Components & Processes VI
	Session 59	AM IV: Material & Process Development 2
	Session 60	Novel Sintered Materials
	Session 61	**SIS**: Automobile Industry & PM II
	Session 62	Refractory Metals II
	Session 63	Analysis, Testing, Numerical Simulation, Data and Data Mining II
	Session 64	Energy Materials II
	Session 65	Super Alloys & Composites II
	Session 66	Metal Powder Preparation and Processes VI
12:00-14:00	Lunch and Exhibition & Poster Networking	
14:00-15:50	Session 67	Compaction & Forming Processes III
	Session 68	AM I: New Material and Application 2
	Session 69	Sintered Light Alloys
	Session 70	PIM V: Miscellaneous Functional Materials and Advanced Processes
	Session 71	Hard Alloys V
	Session 72	Analysis, Testing, Numerical Simulation, Data and Data Mining III
	Session 73	Non-Ferrous Metals & Rare Earth Metals III
	Session 74	Super Alloys & Composites III
	Session 75	Metal Powder Preparation and Processes VII
	Session 76	**SIS**: PM Magnetic Materials I
	Session 77	**SIS**: Sino-Swedish Advanced Materials Forum I
15:50-16:10	Coffee Break	
16:10-18:00	Session 78	AM III: Process Analysis 3
	Session 79	Machining of Sintered Materials
	Session 80	PIM VI: Developments in Processing and Sintering
	Session 81	Superhard Materials & Ceramics
	Session 82	Analysis, Testing, Numerical Simulation, Data and Data Mining IV
	Session 83	Non-Ferrous Metals & Rare Earth Metals IV
	Session 84	Super Alloys & Composites IV
	Session 85	Metal Powder Preparation and Processes VIII
	Session 86	**SIS**: PM Magnetic Materials II
	Session 87	**SIS**: Sino-Swedish Advanced Materials Forum II
18:30-20:30	Gala Dinner (Poster Awards)	

Thursday 20 September 2018

08:30-10:15	Session 88	AM IV: Modeling and Post-processing I
	Session 89	Energy Materials III
	Session 90	**SIS**: PM Standards & Data Base I
10:15-10:35	Coffee break	
10:35-11:15	Session 91	AM IV: Modeling and Post Processing 2
	Session 92	Super Alloys & Composites V
	Session 93	**SIS**: PM Standards & Data Base II
12:00-14:00	Lunch and Exhibition & Poster Networking	
14:00-18:00	Plant Tour	

Tuesday Morning, 18 September, Part 1

Session 1: PM Components & Processes I
Time: 8:30-10:00

Keynote Paper
Time: 8:30-9:00
Latest Trends and Developments in Powder Metal Components and Processes
Goto, Ryu (Engineering Sintered Components, United States)

Oral Presentation
Time: 9:00-9:20
Influence of Graphite and Base Powder on the Tribological Behavior of Iron-Based Self-Lubricating Bearings
Marzaro, Matteo (Pometon S.p.A., Italy)

Time: 9:20-9:40
Effect of Graphite Type on Processability and Performance of Sintered Brake Pads
Gilardi, Raffaele (Imerys Graphite and Carbon, Switzerland)

Time: 9:40-10:00
Effect of Fe-Mo-Cr Pre-alloyed Powder on the Microstructure and Properties of TiC Steel-bonded Carbide
Li, Guoping (Central South University, China)

Session 2: AM I: New Material & Applications I
Time: 8:30-9:50

Oral Presentation
Time: 8:30-8:50
In Vitro Degradation Behavior and Bioactivity of ZK30-Bioglass Composites by SLM for Biomedical Applications
Yin, Yong (Central South University, China)

Time: 8:50-9:10
Compression Fracture Behavior of Additive Manufactured Ti-6Al-4V Porous Material
Wu, Ming-Wei (National Taipei University of Technology, Chinese Taipei)

Time: 9:10-9:30
Extended Qualification of CuCr1Zr for the LBM Process
Kashevko, Vasyl (Institute for Machine Tools and Factory Management TU Berlin, Germany)

Time: 9:30-9:50
Fabrication of Al2O3-reinforced Mo-based Composites by Laser Powder Bed Fusion
Zhou, Weiwei (Tohoku University, Japan)

Session 3: PIM I: Developments of Raw Powder, Binder System and Feedstock
Time: 8:30-9:55

Invited Presentation
Time: 8:30-8:55
Minimizing Binder Removal Time during MIM Using Efficient Binder System
Cao, Peng (University of Auckland, New Zealand)

Oral Presentation
Time: 8:55-9:15
Feedstock Development for the Powder Injection Molding of Short Fiber Reinforced Ceramic Matrix Composites
Tueluemen, Hasan Metin (Karlsruhe Institute of Technology, Germany)

Time: 9:15-9:35
Water Atomized Stainless Steel (SUS316) Powder for MIM Parts with Excellent Surface Properties
Mori, Masaki (Mitsubishi Steel Mfg. Co., Ltd., Japan)

Time: 9:35-9:55
High Strength Austenitic Stainless Steel of Catamold Feedstock from BASF
Huang, Allen(BASF (China) Company Ltd., China)

Session 4: Sintering Parts and Components
Time: 8:30-10:00

Keynote Paper
Time: 8:30-9:00
Fabrication of Complex near Net Shape Components by 3D Printing and Spark-Plasma Sintering
Olevsky, Eugene (San Diego State University, United States)

Oral Presentation
Time: 9:00-9:20
Equipment & Process for the Continuous Production of Sintered Iron Parts with a Bainitic Microstructure
N, Gopinath (Fluidtherm Technology Pvt Ltd, India)

Time: 9:20-9:40
Reduction of Distortion of Product Generated in Induction Heating Process by Optimization of Coil Shape
Kanda, Yusuke (Sumitomo Electric Sintered Alloy, LTD., Japan)

Time: 9:40-10:00
Research of Sintering Processes of MIM High Nitrogen Stainless Steel Products
Wang, Mingyue (Future High-tech Co. Ltd, China)

Session 5: Metal Powder Preparation & Processes I
Time: 8:30-9:55

Invited Presentation
Time: 8:30-8:55
Metal Powder Solutions to Promote Future Growth of the PM Industry
Engstrom, Ulf (Hoganas (China) Co., Ltd, China)

Oral Presentation
Time: 8:55-9:15
Development of Graphene Reinforced Metal Matrix Composite by Spark Plasma Sintering
Yongbum, Choi (Hiroshima University, Japan)

Time: 9:15-9:35
Chromium Alloyed PM Steels – Cost Effective High Performance Material Solutions
Han, Yunjuan (Hoganas China, China)

Time: 9:35-9:55
Optimizing and Assessing the Properties of Iron Alloy Powders for Near-Net Shape Manufacturing Processes
Langley, Cathryn (Malvern Panalytical, United Kingdom)

Session 6: SIS China-Australia Joint Symposium on Powder Metallurgy I
Time: 8:30-10:00

Oral Presentation
Time: 8:30-9:00
Highly Thermal Conductive Bulk Boron Nitride Synthesized from Boron Nitride Nano sheets
Chen, Ying (Deakin University, Australia)

Time 9:00-9:30
Advanced Electrode Materials for Alkali Metal-Ion Batteries
Guo, Zaiping (University of Wollongong, Australia)

Time: 9:30-10:00
Composite Structure Electrode Materials Design for High-Energy Batteries
Yu, Haijun (Beijing University of Technology, China)

Session 7: SIS Metal Injection Molding I
Time: 8:30-10:00

Oral Presentation
Time: 8:30-9:00
Metal Injection Molding in Europe - Technological Trends and Business Situation
Petzoldt, Frank (European Metal Injection Moulding Group, Germany)

Time: 9:00-9:30
Metal Injection Molding in Asia: Recent Development and Future Perspectives
Qu, Xuanhui (University of Science & Technology Beijing, China)

Time: 9:30-10:00
Metal Additive Manufacturing with Roots in MIM Technology
Bose, Animesh (Desktop Metal, Inc., USA)

Session 8: Compaction & Forming Processes I
Time: 8:30-9:40

Keynote Paper
Time: 8:30-9:00
Advances in the Compaction and Shaping of PM Nano powder
Lee, Jai-Sung (Hanyang University ERICA, Korea)

Oral Presentation
Time: 9:00-9:20
The Effect of Temperature and Pressure on Densification Rates of Pre-Alloyed and Elemental 316L Stainless Steel Powder
Azevedo, Jose (University of Cambridge, United Kingdom)

Time: 9:20-9:40
Optimizing Design of Powder Compacting Process on Complex Parts Using Experimental Data-Based Numerical Simulations
Huang, Yongqiang (Nanjing University of Science and Technology, China)

Session 9: Porous Materials I: Preparation & Property I
Time: 8:30-10:05

Keynote Paper
Time: 8:30-9:00
Properties of Porous Metals Manufactured By Powder Metallurgy Based Methods
Zhao, Yuyuan (University of Liverpool, United Kingdom)

Invited Presentation
Time: 9:00-9:25
Fabrication and Properties of Porous Titanium and Titanium Aluminum Carbide (Ti3AlC2)
Zhang, Faming (Southeast University, China)

Oral Presentation
Time: 9:25-9:45
Compressive Behavior of High Specific Strength NiCr Alloy Foams at Ambient Temperature
Zhao, Peng (Central Iron & Steel Research Institute, China)

Time: 9:45- 10:05
Investigation on Electrochemical Performance of Porous Ni-Cr-Fe-RE（RE=Rare Earth）Alloy Electrode
Wu, Liang (Xiangtan University, China)

Session 10: Magnetic Materials & Functional Materials I
Time: 8:30-10:05

Keynote Paper
Time: 8:30-9:00
SMC Materials in Electrical Machine Prototypes
Actis Grande, Marco (Politecnico di Torino, Italy)

Invited Presentation
Time: 9:00-9:25
Characterization of Fe3O4@CS Composite Magnetic particles
Shao, Huiping (University of Science and Technology Beijing, China)

Oral Presentation
Time: 9:25-9:45
Improved Processing and Handling of Sintered Soft Magnetic Materials
McQuaig, Mark (Hoeganaes Corporation, United States)

Time: 9:45-10:05
Effects of Ball Milling Parameters on Structural and Magnetic Properties of SrFe12O19 Sintered Ferrite Permanent Magnets
Li, Yuping (Nanjing Institute of Technology, China)

Session 11: Hard Alloys I
Time: 8:30-10:05

Keynote Paper
8:30-9:00
Microstructure Engineering to Improve the Performance of Hardmetals
Fang, Zhigang Zak (University of Utah, United States)

Invited Presentation
9:00-9:25
Potential of Extrusion Based 3D-Printed Hardmetal and Cermet Parts
Kitzmantel, Michael (RHP-Technology GmbH, Austria)

Oral Presentation
9:25-9:45
Effect of Binder Phase on Sintering of Cemented Carbides
Roulon, Zoé (Univ. Grenoble Alpes, France)

9:45-10:05
Fracture Toughness of Cemented Carbides – an Energy Release Rate Approach
Linder, David (KTH Royal Institute of Technology, Sweden)

Session 12: Non-Ferrous Metals & Rare Earth Metals I
Time: 8:30-10:05

Keynote Paper
Time: 8:30-9:00
Recent Progress in High-Entropy Materials
Zhang, Yong (university of science and technology Beijing, China)

Invited Presentation
Time: 9:00-9:25
Microstructure and Properties of Ti-6Al-4V Alloy Produced by a Novel Process from Machining Chips
Yang, Fei (University of Waikato, New Zealand)

Oral Presentation
Time: 9:25-9:45
Influence of Composition and Alloying Technique on Free-Sintered Bronze Powders for Diamond Tools
Matteo, Marzaro (Pometon S.p.A., Italy)

Time: 9:45-10:05
Influence of Microstructure on the Fatigue Behavior of Blended Elemental Ti-6Al-4V Alloy Post-Consolidated by Extrusion
Carlos, Romero (University of Waikato, New Zealand)

Tuesday Morning, 18 September, Part 2

Session 13: PM Components & Processes II
Time: 10:25-12:10

Invited Presentation
Time: 10:25-10:50
The Ultrahigh Friction Coefficient and Low Wear Loss of Cu Matrix Brake Pads with Addition of Fe Content
Zhang, Peng (University of Science and Technology Beijing, China)

Oral Presentation
Time: 10:50-11:10
The Tribological Behavior of Sintered Copper Based Powder Metallurgy Friction Material Reinforced with Monoclinic and Cubic Zirconia
Zhou, Haibin (Central South University, China)

Time: 11:10-11:30
Metal Powder Concept Engineered to Facilitate Efficient Manufacturing of VVT Components
Molin, Linnea (Höganäs Korea Ltd., Korea)

Time: 11:30-11:50
A Parametric Study on PM Gear Rolling Densification Simulations Coupled with Experimental Results
Angelopoulos, Vasilis (Hoganas AB, Sweden)

Time: 11:50-12:10
Shape Distortion and Tooth Root Bending Fatigue Strength Obtainable with Various Hardening Process Routes of Ring Gears Made of PM Material
Andersson, Olof (Höganäs AB, Sweden)

Session 14: AM II: Technology Overview
Time: 10:25-12:20

Keynote Paper
Time: 10:25-10:55
Reflections on the Development of Metal Laser Melting Technology
Yan, Yongnian (Jiangsu Yongnian Laser Forming Technology Co., Ltd., China)

Invited Presentation
Time: 10:55-11:20
Beam Based vs Binder Based 3D Printing – a Critical Discussion
Aumund-Kopp, Claus (Fraunhofer IFAM, Germany)

Oral Presentation
Time: 11:20-11:40
Adoption and Diffusion of Disruptive Technologies: the Case of Additive Manufacturing in MedTech Industry
Tavassoli, Sam (RMIT University, Australia)

Time: 11:40-12:00
Review of Additive Manufacturing Powders for Conformally-cooled Mold Tool Applications
Davies, Paul (Sandvik Osprey, United Kingdom)

Time: 12:00-12:20
Binder Jetting Technology
Yu, Huayun (United States)

Session 15: PIM II: Characterizations in Metal Injection Molding
Time: 10:25-12:10

Invited Presentation
Time: 10:25-10:50
X-Ray Tomography Analysis of Powder Injection Molding
Yang, Shidi (Sanying Precision Instruments Co., Ltd, China)

Oral Presentation
Time: 10:50-11:10
Analysis of Rheological Behavior of Metal/Ceramic Mixed Feedstock in Injection Molding
Baek, Jongwon (POSTECH, Korea)

Time: 11:10-11:30
The Evaluation of Homogeneity Using Viscoelasticity Test with Sio2 Powder for Powder Injection Molding
Seo, Jinhyeuk (POSTECH, Korea)

Time: 11:30-11:50
Microstructure and Mechanical Properties of MIM Inconel 713LC with Different Silicon Content
Chen, Shunfa (Porite Taiwan Co., Ltd., Chinese Taipei)

Time: 11:50-12:10
Rheological and Mechanical Properties of Gas and Water Atomized SS 17-4PH Material Used In Metal Injection Molding (MIM)
Bhimsena Nagaraj, Mukund (INDO MIM PVT LTD, India)

Session 16: Hot Isostatic Pressing
Time: 10:25-12:05

Oral Presentation
Time: 10:25-10:45
High Pressure Heat Treatment - Optimized Material Properties by HIP
Eklund, Anders (Quintus Technology AB, Sweden)

Time: 10:45-11:05
Hot Isostatic Pressing with Integrated Heat Treatment of PM-HIP Cold Work Steel D7: Modelling and Simulation
Deng, Yuanbin (IWM, RWTH Aachen University, Germany)

Time: 11:05-11:25
Interface Evolution between Ti-47Al-2Cr-2Nb Alloy and AISI 304 Steel during Various Hot Isostatic Pressing Processes
Li, Jizhan (Huazhong University of Science and Technology, China)

Time: 11:25-11:45
Advantages of Hot Isostatic Pressing on the Manufacturing of Key Parts With Long Life and High Reliability
Chen, Hongxia (CISRI, China)

Time: 11:45-12:05
Heat Treatment of PM Parts by Hot Isostatic Pressing
Eklund, Anders (Quintus Technology AB, Sweden)

Session 17: Metal Powder Preparation & Processes II
Time: 10:25-11:45

Oral Presentation
Time: 10:25-10:45
Numerical Simulation of Metal Droplet Breakup Behavior in Gas Atomization
Du, Kaiping (Beijing General Research Institute of Mining & Metallurgy, China)

Time: 10:45-11:05
Microstructure and Non-Metallic Inclusions in 316L Steel for Net Shape Manufacturing
Balart Murria, Maria (University of Warwick, United Kingdom)

Time: 11:05-11:25
Visualization of Water Sprays in Water Atomization of Molten Metals
Asgarian, Ali (University of Toronto, Canada)

Time: 11:25-11:45
Optimization of Fe-Co-Ni Binder Ratio and Corrosion Behavior Study in Cemented Carbide
Prabhu, Vaishali Jagannath (Kennametal India Limited, India)

Session 18: SIS China-Australia Joint Symposium on Powder Metallurgy II
Time: 10:25-12:25

Oral Presentation
Time: 10:25-10:55
Enhanced Electrochemical Performance of Metal Oxides Modified Ni Rich Layered LiNi1-x-yCoxMnyO2 Cathode Material for Lithium Ion Batteries
Tao, Tao (Guangdong University of Technology, China)

Time: 10:55-11:25
Graphene Based Materials for Printable and Planar Energy Storage Devices
Wu, Zhongshuai (Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China)

Time: 11:25-11:55
Molybdenum Disulphide – Graphene Composite Nano sheets as A High-Performance Anode with Good Cycling Stability for Lithium Ion Batteries
Srikanth, Mateti (Deakin University, Australia)

Time: 11:55-12:25
Boron Nitride Nanotube-Sulfur-Polysulfone Composite Cathode of Lithium-Sulfur Batteries with an Ultra-stability and Excellent Capacity
Ye, Fan (Deakin University, Australia)

Session 19: SIS Metal Injection Molding II
Time: 10:25-11:55

Oral Presentation
Time: 10:25-10:55
Refractory Metals for Powder Injection Molding in North
Johnson, John (Elmet Technologies LLC, USA)

Time: 10:55-11:25
Development of High Fatigue Strength Ti-6Al-4V Alloy Compacts through MIM Process
Miura, Hideshi (Kyushu University, Japan)

Time: 11:25-11:55
Feedstock of MIM-New recipe for OACD (Oxalic Acid Catalysis Debinding)
Chiou, Yau Hung (Dongguan University of Technology, China)

Session 20: Compaction & Forming Processes II
Time: 10:25-12:10

Invited Presentation
Time: 10:25-10:50
Improved Lubrication during Compaction from Highly Efficient Lubricants and Heated Tool Die
Larsson, Mats (Höganäs AB, Sweden)

Oral Presentation
Time: 10:50-11:10
Effect of Resin Additives on Strength of Iron Powder Compacts and Damage during Green Machining
Unami, Shigeru (JFE Steel Corporation, Japan)

Time: 11:10-11:30
Influence of Particle Size on the Compaction Mechanics of AISI 316L Powder Uniaxially Cold Compacted
Cristofolini, Ilaria (University of Trento, Italy)

Time: 11:30-11:50
Densification Mechanisms of Titanium-Based Powders during Cold Compaction
Machio, Christopher (Council for Scientific and Industrial Research, South Africa)

Time: 11:50-12:10
Densification Mechanisms of Titanium-Based Powders during Cold Compaction
Luo, Xia (Southwest Petroleum University, China)

Session 21: Porous Materials I: Preparation & Property 2
Time: 10:25-12:00

Keynote Paper
Time: 10:25-10:55
Dealloyed Nanoporous Metals: From Depletion Gilding to Modern Nanotechnologies
Ding, Yi (Tianjin University of Technology, China)

Invited Presentation
Time: 10:55-11:20
The Enabling Role of Dealloying in the Creation of Specific Hierarchical Porous Metal Structures
Song, Tingting (RMIT University, Australia)

Oral Presentation
Time: 11:20-11:40
Effects of Porosity and Sintering Time on the Tensile Fatigue Behavior of Sintered Stainless Steel Fiber Felts
Ma, Jun (Xian Jiaotong University, China)

Time: 11:40-12:00
The Influence of Post Treatment on Mechanical Properties of Ti-6Al-4V Lattices Fabricated By Selective Electron Beam Melting (SEBM)
Zhang, Xuezhe (Northeastern University, China)

Session 22: Magnetic Materials & Functional Materials II
Time: 10:25-12:20

Keynote Paper
Time: 10:25-10:55
Design and Implementation of SMC Components for an Automotive Electric Water Pump
Pennander, Lars Olov (Höganäs AB, Sweden)

Invited Presentation
Time: 10:55-11:20
Novel Iron Based FeSi Mixes for Inductor Applications
Hellsén, Ann-Cathrin (Höganäs AB, Sweden)

Oral Presentation
Time: 11:20-11:40
The Investigation on Corrosion Behavior and Protection Methods for SMC Component
Ye, Zhou (Höganäs AB, Sweden)

Time: 11:40-12:00
Development of the Ce-based Sintered Magnets: Review and Prospect
Li, Anhua (Central Iron & Steel Research Institute, China)

Time: 12:00-12:20
The Mechanism of Coercivity Enhancement for the As-Sintered (Pr/Nd, Ce)-Fe-B Magnet Prepared by Dual Main Phase Method
Han, Rui (Central Iron & Steel Research Institute, China)

Session 23: Hard Alloys II
Time: 10:25-12:20

Keynote Paper
Time: 10:25-10:55
In-Depth Understanding of Fatigue Micromechanisms in Cemented Carbides: Implications for Optimal Microstructural Tailoring
Llanes, Luis (Universitat Politecnica de Catalunya (UPC), Spain)

Invited Presentation
Time: 10:55-11:20
Effect of Recycled Material in Cemented Carbides
Trivedi, Pankaj (Kennametal Inc., United States)

Oral Presentation
Time: 11:20-11:40
Micromechanics of Ti(C, N)-FeNi Composites
Roa, Joan Josep (UPC-EEBE, Spain)

Time: 11:40-12:00
Tailoring the Functional Profile of Niobium Carbide (NbC) as Cutting Tool Materials and for Wear Protection
Woydt, Mathias (Federal Institute for Materials Research and Testing BAM, Germany)

Time: 12:00-12:20
Studies Of Model Co-W-Ta-C Alloys With Different Carbon Contents Simulating Binders Of WC-Co Hardmetals Containing Tac
Zaitsev, Alexandr (National University of Science and Technology, Russia)

Session 24: Non-Ferrous Metals & Rare Earth Metals II
Time: 10:25-12:15

Invited Presentation
Time: 10:25-10:50
Influence of the Physical and the Chemical Characteristics of the Precious Metal Powders on the Properties of Parts Produced by SLM
Molinari, Alberto (Universitat Politecnica de Catalunya (UPC), Spain)

Time: 10:50-11:15
Recent Developments in Aluminum Alloy Powders for Selective Laser Melting
Li, Peiyong (Beijing Institute of Aeronautical Materials, China)

Oral Presentation
Time: 11:15-11:35
Powder Metallurgy Fabricated In-Situ Al-Al2O3 Composite (HITEMAL®): A Sheath Material of MgB2 Based Superconductive Wire
Balog, Martin (Institute of materials and machine mechanics, Slovak academy of sciences, Slovakia)

Time: 11:35-11:55
Wear Resistance of Tib and Tic Particles Reinforced Titanium Metal Matrix Composites Fabricated Via Blended Elemental Powder Metallurgy Process
Shiina, Katsuomi (Institute of materials and machine mechanics, Slovak academy of sciences, Slovakia)

Time: 11:55-12:15
Wear Resistance Study of Ceramic Reinforced Sintered Aluminium Alloy
Yan, Weiwei (NBTM New Materials Group Co.， LTD, China)

Tuesday Afternoon, 18 September, Part 1

Session 25: PM Components& Processes III
Time: 14:00-15:55

Invited Presentation
Time: 14:00-14:25
Manufacturing Process of High Density Ferrous Powder Metallurgy Products
Xu, Kai (NBTM New Materials Groups Co., LTD, China)

Oral Presentation
Time: 14:25-14:45
Microstructure and Mechanical Property of TiCx/Cu Composites Fabricated by Self-infiltration
Lin, Tongwei (Advanced Technology & Materials Co., Ltd, China)

Time: 14:45-15:15
Development of High Efficiency Oil Pump for Automobiles
Takada, Shoichi (Sumitomo Electric Sintered Alloy, Ltd, Japan)

Time: 15:15-15:35
Effect of Fe3P Addition on Density and Magnetic Property of Low-Sintering-Temperature Powder Metallurgical Iron
Ma, Rui (Southern University of Science and Technology, China)

Time: 15:35-15:55
Development of Heat-Resistant Sintered Alloy Having High Wear Resistance and Salt Damage Resistance
Fukuda, Ryosuke (Diamet Corporation, Japan)

Session 26: AM III: Process Analysis I
Time: 14:00-16:15

Keynote Paper
Time: 14:00-14:30
Changes in Metal Powder Surface Chemistry during Powder Bed Fusion Processing: an Overview
Hryha, Eduard (Chalmers University of Technology, Sweden)

Invited Presentation
Time: 14:30-14:55
Origin and Effects of Microstructural Gradients in Powder-Based Additive Manufacturing of Ti-6Al-4V
Zhao, Hao (3DPTek Co., Ltd., China)

Oral Presentation
Time: 14:55-15:15
Optimizing Process Performance through Powder Rheology
Lu, Nephele (Freeman Technology, China)

Time: 15:15-15:35
Effects of Powder Size on the Surface Quality, Microstructure and Mechanical Properties of Co-Cr-W alloy by Selective Laser Melting
Mao, Xinhua (Guangdong Institute of Materials and Processing, China)

Time: 15:35-15:55
Hot Cracking in DMLS Processed IN738
Gruber, Hans (Chalmers University of technology, Sweden)

Time: 15:55-16:15
Selective Cracking Development in a Selectively Laser Melted Nickel-Based Super Alloy
Qiu, Chunlei (Beihang University, China)

Session 27: PIM III： Processing, Microstructures and Properties
Time: 14:00-16:05

Invited Presentation
Time: 14:00-14:25
Investigations of the Mold Filling Process in Powder Injection Molding
Piotter, Volker (Karlsruhe Institute of Technology, Germany)

Oral Presentation
Time: 14:25-14:45
Improvement of Creep Rupture Life of Nickel-Based Superalloy IN713LC Fabricated by Metal Injection Molding
Hibino, Shinya (Kawasaki Heavy Industries, Ltd., Japan)

Time: 14:45-15:05
Effect of B and Zr in Ni-Base Superalloys Fabricated by Metal Injection Molding
Sheng, Naicheng (Friedrich-Alexander University of Erlangen-Nuremberg (FAU), Germany)

Time: 15:05-15:25
Processing and Properties of MIM418 Superalloy Prepared by Prealloy and Master Alloy Routes
Zhang, Lin (University of Science and Technology Beijing, China)

Time: 15:25-15:45
Effects of Powder Type and Sintering Condition on the Properties of MIM Kovar
Fan, YangLiang (Taiwan Powder Technologies CO., Ltd, Chinese Taipei)

Time: 15:45-16:05
Effect of Particle Size Distribution and Sintering Conditions on Molding, Microstructure and Properties of MIM 17-4PH
Hsieh, Shu-Hsu (Chenming Molding. Corp., China)

Session 28: Steel Sintering I
Time: 14:00-16:05

Invited Presentation
Time: 14:00-14:25
Sintering Enhancement by the Use of Master Alloys: Important Concepts and New Possibilities
De Oro Calderon, Raquel (TU Wien, Austria)

Oral Presentation
Time: 14:25-14:45
Influence of Cooling Rate on Microstructure and Mechanical Properties of Different Low Alloy PM Materials
Yang, Jie (Hoganas China Co. Ltd, China)

Time: 14:45-15:05
Sintering of PM-Steels with C-Master Alloy Addition
Gierl-Mayer, Christian (TU Wien, Austria)

Time: 15:05-15:25
Influence of Carbon Potential Control during Sintering on Properties of Low Alloy Steel
Fan, Hanjin (The Linde Group, China)

Time: 15:25-15:45
High Temperature Sintering and Fast Cooling – the Economical Way to Produce Better Parts
Creutziger, Martin (Eisenmann Thermal Solutions, Germany)

Time: 15:45-16:05
Influence of Sintering Conditions on Dimensional Precision for Different PM Steels
Tan, Zhaoqiang (Hoganas China Co., Ltd, China)

Session 29: Metal Powder Preparation & Processes III
Time: 14:00-15:25

Invited Presentation
Time: 14:00-14:25
Surface Chemistry of Metal Powders and Changes during the Sintering Process
Danninger, Herbert (Technische Universitaet Wien, Austria)

Oral Presentation
Time: 14:25-14:45
Advanced Alloy Powders and Materials Aspects in Additive Manufacturing
Ivanov, Eugene (Tosoh SMD Inc., United States)

Time: 14:45-15:05
Microstructure Evolution during Laser Cladding of Nickel Aluminide / Chromium Carbide Coatings
Gong, Karin (Chalmers University of Technology, Sweden)

Time: 15:05-15:25
Manufacturing of Ti6Al4V Powder for SLM via Super-Speed Plasma Rotating Electrode Process
Liu, Yang (Sino-Euro Materials Technologies of Xi'an Co., Ltd. China)

Session 30: SIS China-Australia Joint Symposium on Powder Metallurgy III
Time: 14:00-15:30

Oral Presentation
Time: 14:00-14:30
Boron Nitride Nanotube – Sulfur – Polysulfone Composite Cathode of Lithium-Sulfur Batteries with an Ultra-stability and Excellent capacity
Ye, Fan (Deakin University, Australia)

Time: 14:30-15:00
Geometry Concept Structure Design of Advanced Anode Materials for Rechargeable Batteries and Their Storage Mechanisms
Wang, Xi (Beijing Jiaotong University, China)

Time: 15:00-15:30
Additive Manufacturing of an Ultra-Strong and Tough Titanium Alloys Matrix Composite Reinforced by Boron Nitride Nanotubes
Fabijanic, Daniel (Deakin University, Australia)

Session 31: SIS Refractory Metals & Superhard Materials I
Time: 14:00-15:30

Oral Presentation
Time: 14:00-14:30
Molybdenum Consumption for 2012-17 in Finished Parts
Towey, Andrew (POLEMA JSC, Russia)

Time: 14:30-15:00
Sintering of Nano sized Tungsten Powder and the Ductility of Ultrafine Grain Tungsten
Fang, Zak Zhigang (University of Utah, USA)

Time: 15:00-15:30
Development of CVD Tungsten for Fusion Energy
Yu, Yang (China National R&D Center for Tungsten Technology, USA)

Session 32: Surface Technology I
Time: 14:00-16:15

Keynote Paper
Time: 14:00-14:30
Explore Applications of Electron Work Function in Investigation of Surface Properties and Phenomena for Composite Materials
Li, Dongyang (H.C. Starck Surface Technology and Ceramic Powders GmbH, Sweden)

Invited Presentation
Time: 14:30-14:55
Powders and Materials on the Surface
Bengtsson, Sven (Höganäs AB, Sweden)

Oral Presentation
Time: 14:55-15:15
Microstructure and Wear Mechanisms in Dry-Wear Testing of Laser Clad Nickel Aluminide / Chromium Carbide Coatings against Cast Iron
Gong, Karin (Chalmers University of Technology, Sweden)

Time: 15:15-15:35
Cobalt Based Alloy Cladding Made with Cloth and UltraflexTM Technologies
Zheng, Qingjun (Kennametal Inc., China)

Time: 15:35-15:55
Strengthening Effect of Nano TiC Powder Addition during Laser Surface Modification: Microstructure and Mechanical Properties
Chen, Yanzhe (Tsinghua University, China)

Time: 15:55-16:15
Microstructure and Wear Resistance of Ni3Al/Cr3C2 Laser Cladding Composites
Zhao, Lin (CENTRAL IRON & STEEL RESEARCH INSTITUTE, China)

Session 33: Porous Materials II: Porous Alloy & Intermetallics
Time: 14:00-15:55

Keynote Paper
Time: 14:00-14:30
Preparation and Application of Microporous Metal Membrane
Wang, TianYao (Kunming University of Science and Technology, China)

Invited Presentation
Time: 14:30-14:55
Porous Intermetallic Foam Fabricated via Thermal Explosion
Feng, Peizhong (China University of Mining and Technology, China)

Oral Presentation
Time: 14:55-15:15
Porous CuAl Intermetallics Prepared by Thermal Explosion
Cai, Xiaoping (China University of Mining and Technology, China)

Time: 15:15-15:35
Sintering Behavior and Microstructure of Ni-Al/Ti-Al Porous Alloys by Elemental Powder Method
Jiang, Heng (Southern University of Science and Technology, China)

Time: 15:35-15:55
Preparation and Structural Characteristics of Porous Monel by Sintering-Dissolution Process
Wang, Qiangbing (Northwest Institute for Non-ferrous Metal Research, China)

Session 34: Magnetic Materials & Functional Materials III
Time: 14:00-16:15

Keynote Paper
Time: 14:00-14:30
Effect of RT (R=Rare Earth;T=Cu or Ga) Additives on the Microstructure and Magnetic Properties of Hot Deformed NdFeB Magnets
Chang, Wen-Cheng (National Chung Cheng University, Chinese Taipei)

Invited Presentation
Time: 14:30-14:55
Synthesis and Characterization of Hybrid Transition Metal/Iron Nanowires
Lin, Hong-Ming (Tatung University, Chinese Taipei)

Oral Presentation
Time: 14:55-15:15
Improvement of Magnetic Performance for the Fe-6.5wt%Si Soft Magnetic Composites
Liu, Xin (Guangdong Institute of Materials and Processing, China)

Time: 15:15-15:35
Influence of Specific Surface Area and Particle Size Distribution on Reaction behavior of Iron Oxide with Zinc Oxide in Mn-Zn Ferrite
Hong, Yongxiong (China Steel Corporation, Chinese Taipei)

Time: 15:35-15:55
Preparation of Fe-Al-Si-Ni Soft Magnetic Composites with Excellent High-Frequency Properties
Li, Shigeng (Central South University, China)

Time: 15:55-16:15
Effect of Heating Rate and Holding Time on Phase Structure, Density and Magnetic Properties of Sintered NiFe2O4
Zhou, Chunxia (School of Materials Science and Engineering, China)

Session 35: Hard Alloys III
Time: 14:00-16:15

Keynote Paper
Time: 14:00-14:30
Mechanisms of Abrasive Wear in WC/Co Hardmetals
Gee, Mark (National Physical Laboratory, United States)

Invited Presentation
Time: 14:30-14:55
Interdependency of Hard Phase and Binder Phase Composition in Ti(C, N)-Based Cermets
Lengauer, Walter (TU Vienna, Austria)

Oral Presentation
Time: 14:55-15:15
Computational Materials Design of Hardmetals
Frisk, Karin (Innomat AB, Sweden)

Time: 15:15-15:35
Can Cobalt Be Replaced as a Binder in Hardmetals?
Prakash, Leo (WTP Materials Engineering, Germany)

Time: 15:35-15:55
Impact of WC-Co Powder Preparation on the SPS Sintering Behavior
Stanciu, Victor Ioan (University of Mons, Belgium)

Time: 15:55-16:15
Cermet Reinforced Cemented Carbides
Zhang, Jiulai (Ceratizit Austria GmbH, Austria)

Session 36: Biomedical Materials & Other Powders I
Time: 14:00-15:20

Oral Presentation
Time: 14:00-14:20
Optimization of Mg Content in Novel Bioactive Ti-Mg Composite for Dental Implants Produced by Warm Powder Consolidation Process
Ibrahim, Ahmed Mohamed Hassan (The Slovak academy of sciences, Slovakia)

Time: 14:20-14:40
Effect of Process Parameters on the Pore Formation in a Low Magnetic Zr-Based Alloy Fabricated by Powder Bed Fusion Process Using Fiber Laser
Nomura, Naoyuki (Tohoku University, Japan)

Time: 14:40-15:00
Biomimetic Porous Metal Implants Manufactured by 3D Printing and Bioactive Ceramic Coating
Lai, Hong-Jen (Material and Chemical Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan, Chinese Taipei)

Time: 15:00-15:20
Processing of Biodegradable Magnesium Alloy WE43 Using Selective Laser Melting
Suchy, Jan (Brno University of Technology, Czech Republic)

Tuesday Afternoon, 18 September, Part 2

Session 37: PM Components & Processes IV
Time: 16:35-18:20

Invited Presentation
Time: 16:35-17:00
A Case Study for Light Weight Structural Powder Metal Solution: 10 Speed Automatic Transmission Planetary Carrier
Demir, Semih (Stackpole International, Canada)

Oral Presentation
Time: 17:00-17:20
Property of Sintered Rolling Carburized Gear without Grinding
Taniguchi, Yuji (Kobe Steel, Ltd., Japan)

Time: 17:20-17:40
Properties of Steel Powder Mixture with Developed Lubricant for High Density Application
Sato, Mitsuhiro (Kobe Steel, Ltd., Japan)

Time: 17:40-18:00
Approaches to Reach Fully Dense Powder Metallurgical Materials
Vattur Sundaram (Chalmers University of Technology, Sweden)

Time: 18:00-18:20
Preparation of Bonded Iron-Based Powder and the Compacting Behavior
Chen, Yan (University of Science and Technology Beijing, China)

Session 38: AM III: Process analysis 2
Time: 16:35-18:05

Keynote Paper
Time: 16:35-17:05
Preliminary Research of High Entropy Alloy Manufactured through SLM Process
Zhang, Lijuan (National Innovation Institute of Additive Manufacturing, China)

Oral Presentation
Time: 17:05-17:25
Effect of X-Ray Computed Tomography Magnification on Porosity Analysis of Additively Manufactured Parts
Zekavat, Amir Reza (Örebro University, Ltd., Sweden)

Time: 17:25-17:45
Effect of Laser Parameters on Microstructure, Metallurgical Defects and Property of AlSi10mg Printed by Selective Laser Melting
Wu, Hong (Central South University, China)

Time: 17:45-18:05
Process Optimization and Mechanical Properties of 18Ni Maraging Steel Fabricated by Selective Laser Melting
Chen, Zhong-Chun (Tottori University, Japan)

Session 39: PIM IV: Biomaterials and its Applications
Time: 16:35-17:55

Oral Presentation
Time: 16:35-16:55
Novel Stent Prepared by Metal Injection Molding and its Biomedical Application
He, Hao (Guangxi University of Science and Technology, China)

Time: 16:55-17:15
The Effect of Sintering Parameter on Mechanical and Physical Properties of Hydroxyapatite (HA) through Ceramic Injection Molding (CIM)
Muhamad, Norhamidi (Universiti Kebangsaan Malaysia, Malaysia)

Time: 17:15-17:35
Sintering Behavior of Ti6Al4V/W Composite Fabricated by Powder Injection Molding
Sulong, Abu Bakar (Universiti Kebangsaan Malaysia, Malaysia)

Time: 17:35-17:55
Metal Injection Molding of Pure Titanium and Ti-6Al-4V Alloy
Ye, Shulong (Southern University of Science and Technology, China)

Session 40: Steel Sintering II
Time: 16:35-18:15

Oral Presentation
Time: 16:35-16:55
Effect of Sintering Conditions on the Properties of Lean PM Steels Produced through the Masteralloy Route
De Oro Calderon, Raquel (TU Wien, Austria)

Time: 16:55-17:15
Effect of Mass and Geometry on Performance of Different PM Steels after Sinter-Hardening
Ding, Yi (Höganäs AB, China)

Time: 17:15-17:35
Oxide Reduction in Water-Atomized Iron Powder and its Influence on Sintering
Wendel, Johan (Chalmers University of Technology, Sweden)

Time: 17:35-17:55
Influence of Nanopowder Addition on Sintering of Water Atomized Iron Powder
Manchili, Swathi Kiranmayee (Chalmers University of Technology, Sweden)

Time: 17:55-18:15
Development of Matrix Reinforced Valve Seat Materials with Improved Adhesive Wear Resistance
Yamamoto, Hiroyuki (Fine Sinter Co., Ltd., Japan)

Session 41: Metal Powder Preparation & Processes IV
Time: 16:35-17:55

Oral Presentation
Time: 16:35-16:55
A Comparative Study of Ti-6Al-4V Powders for Additive Manufacturing by Gas Atomization, Plasma Rotating Electrode Process and Plasma Atomization
Chen, Gang (Northwest Institute for Non-ferrous Metal Research, China)

Time: 16:55-17:15
Fine Spherical Powder Production through Gas Atomization of Pressurized Metal Melts
Li, Xinggang (General Research Institute for Nonferrous Metals, China)

Time: 17:15-17:35
The Metalysis Process – A Flexible Distributed Manufacturing Route for the Production of Novel AM Powders
Benson Marshall, Luke (Metalysis Ltd., United Kingdom)

Time: 17:35-17:55
Formation of Flake Particles during Plasma Rotating Electrode Process of Ti6Al4V
Liu, Yang (Sino-Euro Materials Technologies of Xi'an Co.， Ltd. China)

Session 42: SIS China-Australia Joint Symposium on Powder Metallurgy IV
Time: 16:35-15:30

Time: 16:35-17:05
Towards More Reliable Lithium-Sulfur Batteries
Li, Feng (Chinese Academy of Science, China)

Time: 17:05-17:35
Two-dimensional Supramolecular Clay for Capacitive Intercalation Storage
Wang, Dawei (UNSW, Australia)

Time: 17:35-18:05
Boron Nitride Nanotube-Sulfur-Polysulfone Composite Cathode of Lithium-Sulfur Batteries with an Ultra-stability and Excellent Capacity
Ye, Fan (Deakin University, Australia)

Session 43: SIS Refractory Metals & Superhard Materials II
Time: 16:35-17:35

Oral Presentation
Time: 16:35-17:05
Refractory Metal Powders in Additive Manufacturing
Cretu, Cristian (H. C. Starck INC, USA)

Time: 17:05-17:35
Development of W Materials and W/Cu Divertor Component
Liu, Guohui (Advanced Technology & Materials Co., Ltd., China)

Session 44: Surface Technology II
Time: 16:35-18:15

Oral Presentation
Time: 16:35-16:55
Effect of Cr Addition on Microstructure and Mechanical Properties of TiCN Based Composite Coatings Prepared by Reactive Plasma Spraying
Zhang, Fanyong (Hebei University of Technology, China)

Time: 16:55-17:15
Surface Integrity Assessment of Coated Cemented Carbides Following Laser Treatment
Fang, Shiqi (EEBE- Universitat Politècnica de Catalunya, Spain)

Time: 17:15-17:35
Structure and Microhardness of Coatings Obtained by Cladding of Chromium Carbide and Titanium Carbide Powder Mixture on Low Carbon Steel Using High-Energy Electron Beam
Yu, Baohai (Institute of Metal Research Chinese Academy of Sciences, China)

Time: 17:35-17:55
Microstructure and Wear Behavior of FeCoCrNiMo0.2 High Entropy Coatings Prepared by Air Plasma Spray and the High Velocity Oxy-Fuel Spray Processes
Li, Tianchen (Central South University, China)

Time: 17:55-18:15
The Effects of Nano Oxide on Microstructure and Wear Resistance of Hardfacing Alloys for Cold Roll
Chen, Cuixin (Hebei University of technology, China)

Session 45: Porous Materials III: Porous Composites
Time: 16:35-18:00

Invited Presentation
Time: 16:35-17:00
Pore Structure Characterization of Sintered Ti-Ti5Si3 Composite Gradient Porous Materials
Liu, Zhongjun (Xi'an Shiyou University, China)

Oral Presentation
Time: 17:00-17:20
Open-Cell 316L Foam Sandwiched Tubes Was Fabricated by Powder Metallurgy Route and its Applications
Li, Guangzhong (Northwest Institute for Non-ferrous Metal Research, China)

Time: 17:20-17:40
Novel Preparation Technology of Aluminum Foam Sandwich Panels with Excellent Cellular Structure by Powder Metallurgical
Ding, Xiang (Anhui University of Technology, China)

Time: 17:40-18:00
Static Three-Point Bending Behavior of Aluminum Foam Core Sandwich Panel
Yu, Yang (School of Metallurgy, Northeastern University, China)

Session 46: Magnetic Materials & Functional Materials IV
Time: 16:35-18:10

Keynote Paper
Time: 16:35-17:05
Influence of SiC on Magnetic and Mechanical Properties of Hot-Deformed Nd-Fe-B Magnets
Zheng, Liyun (Central Iron and Steel Research Institute, China)

Invited Presentation
Time: 17:05-17:30
Influence of Dy Content in Nd-Fe-B Base Magnet on Grain Boundary Diffusion
Cheng, Xinghua (Central Iron and Steel Research Institute, China)

Oral Presentation
Time: 17:30-17:50
The Influence of Sintering Temperature on Microstructure and Magnetic Properties of Fe/Fe3O4 Powder Cores Fabricated by Spark Plasma Sintering
Xie, Yuye (Tongji University, China)

Time: 17:50-18:10
Coercivity Enhancement of High Energy Product Nd-Fe-B Magnets by Grain Boundary Diffusion
Zhao, Yang (Central Iron and Steel Research Institute, China)

Session 47: Hard Alloys IV
Time: 16:35-18:10

Keynote Paper
Time: 16:35-17:05
WC-Co-Re Cemented Carbides: State of the Art
Konyashin, Igor (Element Six GmbH, Germany)

Invited Presentation
Time: 17:05-17:30
Effect of Nitrogen Content and Cubic Composition on the Structure of Gradient Cemented Carbide—Computer Simulation and Experimental Investigation
Wang, Shequan (Zhuzhou Cemented Carbide Cutting tools CO., LTD, China)

Oral Presentation
Time: 17:30-17:50
Niobium Carbide Based Cermets with Secondary Carbide and Carbonitride Addition
Huang, Shuigen (KU Leuven, Belgium)

Time: 17:50-18:10
Effect of Ru Addition Amount on Microstructure and Properties of WC-Co Hardalloys
Shi, Kaihua (Zigong Cemented Carbide Corp., Ltd, China)

Session 48: Biomedical Materials & Other Powders II
Time: 16:35-17:35

Oral Presentation
Time: 16:35-16:55
Developing Bioactive Ti/A-TCP/Ti-Mesh Composite by Spark Plasma Sintering
Chen, Wenjuan (Central South University, China)

Time: 16:55-17:15
The Influence of Oxygen Content on the Grindability of Ti-15Zr-Based Alloys as Dental Materials
Tang, Hanchun (Central South University, China)

Time: 17:15-17:35
Effect of HfO2 Doping on Properties and Low Temperature Degradation of Y-TZP
Zhang, Liu (University of Science and Technology Beijing, China)

Wednesday Morning, 19 September, Part 1

Session 49: PM Components & Processes V
Time: 8:30-10:00

Keynote Paper
Time: 8:30-9:00
Selective Densification of Powder Metal Components – A Review and Scope for New Product Development
Shivanath, Rohith (Stackpole International, Canada)

Oral Presentation
Time: 9:00-9:20
Study on the Structure Properties of Ferritic ODS Alloy
Wang, Shengxi (University of Science and Technology Beijing, China)

Time: 9:20-9:40
Study of Suitable PM Materials for Low Pressure Heat Treatment Processes in Combination with Gas Quench
Dahlstrom, Magnus (Höganäs AB, Sweden)

Time: 9:40-10:00
Fatigue Properties of High Strength Cr-Alloyed PM Steels Produced by High Temperature Sintering and Sinter-Hardening
Bergman, Ola (Höganäs AB, Sweden)

Session 50: AM IV: Material & Process Development I
Time: 8:30-9:55

Invited Presentation
Time: 8:30-8:55
Methods for Preparation of Spherical Ti Alloy Powder
Fang, Zhigang (University of Utah, United States)

Oral Presentation
Time: 8:55-9:15
Filament Metal Printing: Sintered Metal Parts Based on FFF with Reinforced Feedstock
Kitzmantel, Michael (RHP-Technology GmbH, Austria)

Time: 9:15-9:35
Fe-50%Ni Soft Magnetic Alloy Prepared by 3D Gel-Printing
Shao, Huiping (University of Science and Technology Beijing, China)

Time: 9:35-9:55
Microstructure and Mechanical Properties of Carbides Prepared by Selective Laser Melting (SLM)
Deng, Xin (Guangdong University of Technology, China)

Session 51: Spark Plasma Sintering
Time: 8:30-9:55

Invited Presentation
Time: 8:30-8:55
Special Effect of Spark Plasma Sintering (SPS) and Application in Advanced Powder Metallurgy Materials
Zhang, Jiuxing (Hefei University of Technology, China)

Oral Presentation
Time: 8:55-9:15
Advanced Methods for Consolidation of Powder Materials by Impulse Electromagnetic Fields
Grigoryev, Evgeny (Institute of Structural Macrokinetics and Materials Science of Russian Academy of Sciences, Russia)

Time: 9:15-9:35
Improvement of Plasticity of Bulk Metallic Glasses by Addition of a Crystalline Phase: Manufacturing of CuZrAl Composites by Spark Plasma Sintering
Cardinal, Sandrine (MATEIS, France)

Time: 9:35-9:55
Atomic Diffusion Coefficient Dependence on Applied Pressure during Spark Plasma Sintering
Yang, Chao (South China University of Technology, China)

Session 52: SIS Automobile Industry and PM I
Time: 14:00-16:00

Oral Presentation
Time: 14:00-14:30
Research on Lightweight of Automobile
Zhang, Xuming (SAE-China, China)

Time: 14:30-15:00
The advantage of Gasoline Engines will continue
Aoki, Mikiharu (Toyota Production Consulting Corp, Japan)

Time: 15:00-15:30
Application Development and New Opportunities of PM Materials in Automotive Industry
Liu, Yong (Central South University, China)

Time: 15:30-16:00
Electrification trend in China Automotive Industry
Wang, Sherry (Neuron Auto, China)

Session 53: Refractory Metals I
Time: 8:30-10:05

Keynote Paper
Time: 8:30-9:00
Enhanced Sintering of Tungsten and Tungsten-Based Composites
Johnson, John (Elmet Technologies LLC, United States)

Invited Presentation
Time: 9:00-9:25
Refractory Metals: Stubbornly Resistant
Shields, John (PentaMet Associates, United States)

Oral Presentation
Time: 9:25-9:45
An Investigation of the Critical Factors Affecting Tungsten's Ductility through Microstructural and Mechanical Analysis of Annealed Rolled Tungsten
Ren, Chai (University of Utah, United States)

Time: 9:45-10:05
Investigation on Microstructures and Properties of W-Cu by Extrusion Molding-Infiltration Sintering
Han, Shengli (Guangdong Institute of Materials and Processing, China)

Session 54: Analysis, Testing, Numerical Simulation, Data and Data Mining I
Time: 8:30-10:00

Invited Presentation
Time: 8:30-8:55
Evaluation of Wear in Automotive Transmission Using Powder Metal Gears
Flodin, Anders (Höganäs AB, Sweden)

Invited Presentation
Time: 8:55-9:20
Advanced CFD Modelling of Process in a Hydrogen High–Temperature Sintering Furnace
Liu, Yan (Simtec Soft Sweden AB, Sweden)

Oral Presentation
Time: 9:20-9:40
Deep Neural Network-Based Approach for Warpage and Weight Prediction of Plastic Injection Molding
Lee, Chihun (POSTECH, Korea)

Time: 9:40-10:00
Micro magnetic Simulations of Magnetization Reversal in NdFeB Magnets
Li, Lei (Central Iron & Steel Research Institute, China)

Session 55: Energy Materials I
Time: 8:30-10:05

Keynote Paper
Time: 8:30-9:00
Lithium-Ion Battery Electrodes Materials and Technology for Vehicles
Yunhui Huang (Tongji University, China)

Invited Presentation
Time: 9:00-9:25
High-Voltage Li-ion Batteries and Materials
Liao, Shih-Chieh (Industrial Technology Research Institute, Chinese Taipei)

Oral Presentation
Time: 9:25-9:45
Synthesis Mechanism of LiFePO4 with Different Carbon Content
Tian, Na (Pulead Technology Industry Co., Ltd., China)

Time: 9:45-10:05
Facile Synthesis of Ball-Milled SnS-Carbon Nanocomposites with Superior Lithium Storage
Zeng, Hong (China iron & steel research institute group, China)

Session 56: Super Alloys & Composites I
Time: 8:30-9:50

Oral Presentation
Time: 8:30-8:50
Simultaneously Enhanced Strength and Ductility of CNT/Cu Composites by Spray Pyrolysis and SPS Sintering
Yi, Jianhong (Kunming University of Science and Technology, China)

Time: 8:50-9:10
Segment Matrix Design and Drilling Test of Diamond Bit for Sapphire
Xu, Liang (Beijing Gang Yan Diamond Products Company, China)

Time: 9:10-9:30
Synthesis and Characterization of Ti- Si3N4 Metal Matrix Composites Prepared by Press-and-Sinter
Singh, Harshpreet (University of Auckland, New Zealand)

Time: 9:30-9:50
Fabrication Be-CuCrZr/SS Joints by Hot Isostatic Pressing Diffusion Bonding
Che, Hongyan (Advanced Technology & Materials Co., Ltd., China)

Session 57: Metal Powder Preparation and Processes V
Time: 8:30-9:55

Invited Presentation
Time: 8:30-8:55
Copper and Copper Alloy Powder Market and Technology Developments in China
Wang, Li-min (Beijing General Research Institute for Nonferrous Metals, China)

Oral Presentation
Time: 8:55-9:15
Use of Diffusion Bonded Copper Powder for Better Powder Mix Stability
Campbell Tremblay, Julie (Rio Tinto Metal Powders, Canada)

Time: 9:15-9:35
Electrolytic Copper Powder with Low Fraction, Specific Surface Area and Oxygen Content for Special Applications
Romanov, Vitaly (JSC "URALELEKTROMED", Russia)

Time: 9:35-9:55
Effects of Cooling Rate and Copper Content on the Hardenability of Low-Prealloy
Su, Fengge (Jiande Yitong Metal Powder Material Co., Ltd, China)

Wednesday Morning, 19 September, Part 2

Session 58: PM Components & Processes VI
Time: 10:25-11:50

Invited Presentation
Time: 10:25-10:50
Analysis of Manufacturing Costs for Powder Metallurgy (PM) Gear Manufacturing Processes: a Case Study of a 4th Drive Gear
Kianian, Babak (Lund University, Sweden)

Oral Presentation
Time: 10:50-11:10
Rolling Fatigue Life Behavior of PM-Steel with Different Porosity and Surface Finish
Holmberg, Anders (Uppsala University, Sweden)

Time: 11:10-11:30
Effect of Sintering Partial Pressure on Sintering Behavior of Al-SiC Composite Material
Huang, Wei-Ping (Porite Taiwan Co., Ltd., Chinese Taipei)

Time: 11:30-11:50
Development of Fully Dense and High Performance Powder Metallurgy HSLA Steel Using HIP Method
Liu, Wensheng (Central South University, China)

Session 59: AM IV: Material & Process Development 2
Time: 10:25-11:45

Oral Presentation
Time: 10:25-10:45
Effect of Helium-Argon Mixtures as Laser-Powder Bed Fusion Processing Atmospheres on the Properties of the Built Ti-6Al-4V Parts
Pauzon, Camille (Chalmers University of Technology, Sweden)

Time: 10:45-11:05
Factors Affecting Printability of 316L Powders Using DMLS Process
Riabov, Dmitri (Chalmers University, Sweden)

Time: 11:05-11:25
Improving the Fatigue Strength of L-PBF Manufactured IN718 Samples by HIP Post Processing
Kaletsch, Anke (RWTH Aachen University, Institute for Materials Applications in Mechanical Engineering (IWM), Germany)

Time: 11:25-11:45
Advanced Spherical Powders of NiAl- Based Alloys and their Application in Additive Technologies
Martynov, Dmitrii (POLEMA JSC, Russia)

Session 60: Novel Sintered Materials
Time: 10:25-12:05

Oral Presentation
Time: 10:25-10:45
Sintering of The Chalcogenide Glass Powder Compacts for Infrared Transmittance
Woo, Seok Yang (POSTECH, Korea)

Time: 10:45-11:05
Features of Interfaces in a Metallic Glass Matrix Composite Obtained by Densification of Amorphous Powders
Pelletier, Jean-Marc (INSA-Lyon, France)

Time: 11:05-11:25
Microstructures and Mechanical Properties of In-Situ Elongated B-Si3N4 toughen WC-ZTA Composite
Li, Xiaoqiang (South China University of Technology, China)

Time: 11:25-11:45
Bioinspired Functionally Graded Alumina
Hussainova, Irina (Tallinn University of Technology, Estonia)

Time: 11:45-12:05
Microstructural Evolution and Mechanical Properties of a Vanadium and Yttrium TiAl Based Alloy Densified by Spark Plasma Sintering
Gu, Xu (Harbin Institute of Technology, China)

Session 61: SIS Automobile Industry and PM II
Time: 10:25-11:55

Oral Presentation
Time: 10:25-10:55
PM Transmission Design and Transmission Technology & Market Trends
Dhjeine, Henrik (AVL LIST GmbH, Germany)

Time: 10:55-11:25
Present State and Future Potential for PM Components in Modern Vehicles
Schneider, Eckart (Höganäs AB, Sweden)

Time: 11:25-11:55
Round Table Discussion about Electrification

Session 62: Refractory Metals II
Time: 10:25-11:55

Invited Presentation
Time: 10:25-10:50
Study on the Mass Preparation W-Y2O3 Materials by Wet-Chemical Method and its Properties
Luo, Laima (Hefei University of Technology, China)

Time: 10:50-11:15
Preparation and Emission Property of W-Re Matrix Dispenser Cathode
Wang, Jinshu (Beijing University of Technology, Canada)

Oral Presentation
Time: 11:15-11:35
Preparation and Characterization of Tungsten Particulate Reinforced High Entropy Alloy (W-HEA) Composite
Zhou,Shangcheng (Beijing Institute of Technology, China)

Time: 11:35-11:55
The Study on Low Temperature Sintering of a New W–Ni–Cu–Sn Heavy Alloy
Cai,Qingshan (Central South University, China)

Session 63: Analysis, Testing, Numerical Simulation, Data and Data Mining II
Time: 10:25-12:10

Invited Presentation
Time: 10:25-10:50
Matai: Intelligent Management of Material Data in Powder Metallurgy Research
Wang,Zhuo (MatAi Company, China)

Oral Presentation
Time: 10:50-11:10
The Complex Characterization of the Metallic and Ceramic Particles' Shape and Size by a Different Method
Gacsi, Zoltan (University of Miskolc, Hungary, Hungary)

Time: 11:10-11:30
Compacting Process Optimization of Transmission Pin Shift Finger
Dong, Jinyang (Porite Yangzhou Technology & Industry Co., Ltd, China)

Time: 11:30-11:50
Evolution of Microstructure and Mechanical Properties at Cryogenic Temperatures of 316L Processed by Powder Bed Fusion
Sas, Jan (Karlsruhe Institute of Technology, Germany)

Time: 11:50-12:10
Thermodynamic Modeling of Solid-Liquid Interfacial Energies and its Application on Grain Growth Simulation of TiC-Based Cermets
Zhang, Cong (University of Science and Technology Beijing, China)

Session 64: Energy Materials II
Time: 10:25-11:45

Oral Presentation
Time: 10:25-10:45
Lithium Germinate (Li2GeO3)-A New Anode Material for Lithium-Ion Batteries
Rahman, Md Mokhlesur (Deakin University, Australia)

Time: 10:45-11:05
High Quality Prussian-blue Cubic Crystal Wrapped with Redox Graphene for Ultra-stable Sodium-ion Batteries
Jiang, Yang (Hefei University of Technology, China)

Time: 11:05-11:25
Ferroelectric Polymer-Based Nanocomposite Capacitors for Energy Storage
zhang,dou (State Key Laboratory of Powder Metallurgy， Central South University, China)

Time: 11:25-11:45
Two-dimensional Supramolecular Clay for Capacitive Intercalation Storage
Wang, Da-Wei (UNSW, Australia)

Session 65: Super Alloys & Composites II
Time: 10:25-11:50

Invited Presentation
Time: 10:25-10:50
Research on New Third Generation P/M Superalloy FGH100L
Tian, Tian (University of Science and Technology Beijing, China)

Oral Presentation
Time: 10:50-11:10
Microstructures and Properties of Ti-HSS Composites Prepared by Spark Plasma Sintering
Zeng, Han (Central South University, China)

Time: 11:10-11:30
Microstructure and Wear Behavior of Fe-Mn-Ni-Al Matrix Self-Lubricating Steels Produced by Mechanical Alloying and Spark Plasma Sintering
Han, Liuliu (Central South University, China)

Time: 11:30-11:50
SWOT Analysis of the Special Steel and Metal Alloy Powder Metallurgy
Polard, Victor (SMR Premium GmbH, Germany)

Session 66: Metal Powder Preparation and Processes VI
Time: 10:25-11:45

Oral Presentation
Time: 10:25-10:45
Metallic Glass for Arc Welding Application
Su, Liap Tat (Singapore Polytechnic, Singapore)

Time: 10:45-11:05
The Effect of Plasma Atomization Process Parameters on the Particle Size
YURTKURAN, Emre (Gazi University, Turkey)

Time: 11:05-11:25
Research on The Water-Atomized Iron Powder Production Line Of 200,000 Tons Per Annual of Ansteel (Anshan) Metallurgical Powder Materials Co., LTD
Li, Jiang (Ansteel (Anshan) metallurgical powder materials Co., LTD, Central South University, China)

Time: 11:25-11:45
Carbonyl Nickel Powder Production Progress
Xiao, Dongming (Jinchuan Group Co. Ltd., China)

Wednesday Afternoon, 19 September, Part 1

Session 67: Compaction & Forming Processes III
Time: 14:00-15:30

Invited Presentation
Time: 14:00-14:25
Evaluation of High Performance Premixes in the Manufacturing of VVT Components
Paris, Vincent (Rio Tinto Metal Powders, Canada)

Time: 14:25-14:50
Hot Isostatic Pressing of the Water Atomized Steel Powder: Possibilities and Challenges
Hryha, Eduard (Chalmers University of Technology, Sweden)

Oral Presentation
Time: 14:50-15:10
Layered Functionally Graded Alumina Ceramic Composite with Anisotropic Properties
Saffar Shamshirgar, Ali (Tallinn University of Technology, Estonia)

Time: 15:10-15:30
Effects of the Content of Mo on Microstructure and Mechanical Properties of Powder Forging Steel
Sun, Lu (Nanjing University of Science and Technology, China)

Session 68: AM I: New Material and Applications 2
Time: 14:00-15:20

Oral Presentation
Time: 14:00-14: 20
The Effect of the Addition of Alloying Elements on the Microstructure and Properties in AISI H13 Processed by Selective Laser Melting
Wang, Mei (Huazhong University of Science and Technology, China)

Time: 14:20-14:40
Microstructures and Mechanical Properties of C-Containing FeCoCrNi High-Entropy Alloy Fabricated by Selective Laser Melting
Zhou, Rui (Central south university, China)

Time: 14:40-15:00
A Novel High Strength Al Alloy with Improved SLM Process Ability
Casati, Riccardo (Politecnico di Milano, Italy)

Time: 15:00-15:20
Additive Manufacturing of Medical Device Components by DMLS
Kotila, Juha (EOS Finland, Finland)

Session 69: Sintered Light Alloys
Time: 14:00-15:45

Invited Presentation
Time: 14:00-14:25
Thermomechanical Consolidation of Metallic and Metal Matrix Nanocomposite Powders
Zhang, Deliang (Northeastern University, China)

Oral Presentation
Time: 14:25-14:45
Effects of Hot Compression Process on Microstructure and Properties of Vapor-Grown Carbon Nano-Fiber Reinforced Aluminum
Guo, Ying (Yanshan University, China)

Time: 14:45-15:05
Mechanical Properties and Wear and Corrosion Resistance of a Super-High Strength Nanostructured Aluminum Alloy
Wang, Zhi (South China University of Technology, China)

Time: 15:05-15:25
Spark Plasma Sintering and Characterization of a Melt-spun Al-Mg-Si Alloy
Li, Xia (Beijing University of Technology, China)

Time: 15:25-15:45
Preparation of Biomedical Ti2448 Alloy with High Strength and Low Elastic Modulus by Powder Metallurgy
Li, Xia (South University of Science and Technology of China, China)

Session 70: PIM V: Miscellaneous Functional materials and Advanced Processes
Time: 14:00-16:05

Invited Presentation
Time: 14:00-14:25
A Review of Metal Injection Molding for Tungsten and its Alloys
Mori, Masaki (Mitsubishi Steel Mfg. Co., Ltd., China)

Oral Presentation
Time: 14:25-14:45
Sintering of a Bi-material of Two-Component Powder Injection Molded Stainless Steel (17-4PH) and Yttria Stabilized Zirconia (3YSZ)
Sulong, Abu Bakar (Universiti Kebangsaan Malaysia, Malaysia)

Time: 14:45-15:05
Nano Powder in Fe Bimodal Powder Injection Molding Process
Oh, Joo Won (Pohang University of Science and Technology (POSTECH), Korea)

Time: 15:05-15:25
Powder Injection Molding (PIM) of Hard and Soft magnetic Materials
SHIN, DA SEUL (POSTECH, Korea)

Time: 15:25-15:45
Fabrication and Pool Boiling Test of Powder Injection Molded Porous Copper Structures Using Space Holder Technology
Cho, Hanlyun (Pohang University of Science and Technology, Korea)

Time: 15:45-16:05
Fabrication of Aluminium Nitride Ceramic by Powder Injection Molding
Lu, Huifeng (University of Science and Technology Beijing, China)

Session 71: Hard Alloys V
Time: 14:00-15:10

Invited Presentation
Time: 14:00-14:25
Sintering Cemented Carbides: Nanograin Size or Performance?
Song, Xiaoyan (Beijing University of Technology, China)

Time: 14:25-14:50
Research into Grain Growth and Microstructure of Double Layer Cemented Carbides with Different WC Grain Size
Chen, Jian (Guangdong University of Technology, China)

Oral Presentation
Time: 14:50-15:10
Fabrication and Characterization of WC-AlCoCrCuFeNi High-Entropy Alloy Composites by Spark Plasma Sintering
Luo, Wenyan (South China University of Technology, China)

Session 72: Analysis, Testing, Numerical Simulation, Data and Data Mining III
Time: 14:00-15:25

Invited Presentation
Time: 14:00-14:25
Simulation of Cutting Behavior in Green Powder Compact by Using Distinct Element Method
Yagi, Naoki (National Institute of Technology, Nara College, China)

Oral Presentation
Time: 14:25-14:45
Effect of Gas on the Flowability of Metallic Powders
Lefebvre, Louis-Philippe (National Research Council Canada, Canada)

Time: 14:45-15:05
A Materials Informatics Approach to Powder Metallurgy Sintered Density Prediction
Deng, Zhenghua (University of Science and Technology Beijing, China)

Time: 15:05-15:25
Effect of Sintering Process on the Microstructure and Mechanical Properties of Mo2FeB2-based Cermets
Yang, Guoqiang (University Science and Technology Beijing, China)

Session 73: Non-Ferrous Metals & Rare Earth Metals III
Time: 14:00-16:10

Invited Presentation
Time: 14:00-14:25
Powder Metallurgy of High-entropy Alloys
Ji, Wei (Wuhan University of Technology, China)

Time: 14:25-14:50
Spark Plasma Sintering of Micro- and Nano-Powders of Tungsten and Molybdenum
Olevsky, Eugene (San Diego State University, Nara College, United States)

Oral Presentation
Time: 14:50-15:10
Through Ball-Milling Process Eliminating Micron Level of Al2O3 Particle on Powder Particle Boundary and its Effect on Mechanical Properties
Li, Pei (University of Science and Technology Beijing, China)

Time: 15:10-15:30
Dissolvable Fracturing Ball of Magnesium Alloy
Lei, Chaonan (University of Science and Technology Beijing, China)

Time: 15:30-15:50
Microstructural Characterization and Mechanical Properties of Nanostructured Al-10Zn-3.0Mg-1.8Cu Alloy
Peng, Guangyao (University Science and Technology Beijing, China)

Time: 15:50-16:10
Study on the Growth Kinetics of Interphases at Al/Mg Diffusion Interface
Ma, Yunzhu (Central South University, China)

Session 74: Super Alloys & Composites III
Time: 14:00-16:00

Oral Presentation
Time: 14:00-14:20
Tribological Behavior of the Ni3Al-Based Composites/Gray Cast Iron Tribo-Pairs at High Temperatures
Fu, Lihua (Central Iron and Steel Research Institute, China)

Time: 14:20-14:40
Nickel Modified Graphene-Nanoplates Reinforce Aluminum Matrix Composites with Simultaneously Enhanced Strength and Toughness
Han, Tielong (Tianjin University, China)

Time: 14:40-15:00
Tensile Deformation Mechanisms of Advanced High Performance PM Nickel-based Superalloy
Huang, Hailiang (School of Materials Science and Engineering, University of Science and Technology Beijing, China)

Time: 15:00-15:20
In Situ Synthesis of Boride Whiskers for Preparing Reinforced Aluminum Matrix Composites
Wang, Fucheng (Tianjin University, China)

Time: 15:20-15:40
Effect of B4C Addition on Microstructure and Mechanical Properties of Powder Metallurgy M3: 2 High-Speed Steel
Li, Songlin (Central South University, China)

Time: 15:40-16:00
Development of a High-Performance Cu-based Sintered Alloy Contact Strip
Ryota, Kobayashi (Fine Sinter Co., Ltd, Japan)

Session 75: Metal Powder Preparation and Processes VII
Time: 14:00-15:25

Invited Presentation
Time: 14:00-14:25
Development and Design of Self-Organized Composite Powders in Liquid Phase Separated System
Liu, Xingjun (Xiamen University, China)

Oral Presentation
Time: 14:25-14:45
Characterization of Nanostructured Ni-Binary and Ternary Alloys Developed via Spark Plasma Sintering Technique
Babalola, Bukola (Tshwane University of Technology, South Africa)

Time: 14:45-15:05
Effect of Binder Treated Process on Powder
Su, Fengge (Jiande Yitong Metal Powder Material Co., Ltd, China)

Time: 15:05-15:25
Oxygen Content Control in ppm Level of Nickel-Based Alloy Powders Made by Vacuum Atomization and the Influence on Oxidation Resistance
Xu, Zhenyuan (BGRIMM Technology Group, China)

Session 76: SIS PM Magnetic Materials I
Time: 14:00- 15:30

Oral Presentation
Time: 14:00-14:30
Research and Development of Rare Earth Permanent Magnet
Li, Wei (Chinese Academy of Sciences (CAS), China)

Time: 14:30-15:00
Electrification a Great Opportunity for Soft-Magnetic Composites-SMC
Pennander, Lars-Olov (EMA Höganäs AB, Sweden)

Time: 15:00-15:30
Advances and Applications of Fe-Based Amorphous Materials
Zhou, Shaoxiong (The Asian Union of Magnetics Societies (AUMS), China)

Session 77: SIS Sino-Swedish Advanced Materials Forum I
Time: 14:00-15:30

Oral Presentation
Time: 14:00-14:30
12 Years Annual Reports of Sino-Swedish Advanced Materials Exchange Center
Tian, Zhiling (CISRI, China); Lars Nyborg (Chalmers University of Technology, Sweden)

Time: 14:30-15:00
Strategic Innovation Program for Metallic Materials: Industrialization of AM for Metallic Materials
Maren, Anders (VINNOVA, Sweden)

Time: 15:00-15:30
Prospective of Future Cooperation between NSFC and STINT
Gao, Ruiping (NSFC, China); Erik Forsberg (STINT, Sweden)

Wednesday Afternoon, 19 September, Part 2

Session 78: AM III: Process Analysis 3
Time: 16:35-17:55

Oral Presentation
Time: 16:35-16:55
Effect of Powder Size, Droplet Size, and Layer Thickness on the Resolution of Binder Jet 3D Printed Parts
Klein, Andrew (EXONE, United States)

Time: 16:55-17:15
Effect of the Residual Oxygen Content in the Processing Atmosphere on the Properties of Stainless Steel 316L Built by Laser-Powder Bed Fusion
Pauzon, Camille (Chalmers University of Technology, Sweden)

Time: 17:15-17:35
Relevance and Application of Oxygen and Hydrogen Determination in Additive Manufacturing and Powder Recycling
Paplewski, Peter (Bruker AXS GmbH, Germany)

Time: 17:35-17:55
Ceramic Additive Manufacturing for Energy Storage by Nanoparticles Paste Stereo Lithography
Kirihara, Soshu (Osaka University, Japan)

Session 79: Machining of Sintered Materials
Time: 16:35-17:55

Oral Presentation
Time: 16:35-16:55
Ferrous PM Machinability; Examining the Effectiveness and Stability of Additives
Kraus, Neal (Hoeganaes Corporation, United States)

Time: 16:55-17:15
Selecting Productive and Cost-Effective Machining Solutions for PM Materials
Hu, Bo (North American Hoganas, United States)

Time: 17:15-17:35
New Machinability Enhancers for Improved Drilling of PM Steels
Yang, Jing (AMES-Sintered Metal Components, Spain)

Time: 17:35-17:55
Influence of Additives on Machined Surface Quality of Sintered Steel
Qin, Xiaodong (NBTM New Materials Group Co. Ltd., China)

Session 80: PIM VI: Developments in Processing and Sintering
Time: 16:35-18:40

Invited Presentation
Time: 16:35-17:00
The Size Effect in Micro Powder Injection Molding
Yin, haiqing (University of Science and Technology Beijing, China)

Oral Presentation
Time: 17:00-17:20
Research on Sintering of Plastic Base 17-4PH Stainless Steel by Metal Powder Injection Molding
Wang, Chunguan (HaiAn ENGLE-GLOBE Group Co., Ltd, China)

Time: 17:20-17:40
Development of Powder Injection Molding Process for Si3N4 Ceramic Ball
Gal, Chang Woo (POSTECH, Korea)

Time: 17:40-18:00
The Effects of Sintering Temperature on Micro-MIM Carbonyl Fe Parts
Xu, Hui (Anton Medical Group, China)

Time: 18:00-18:20
Effect of Carbon on Sintering Densification Behavior of MIM420 Stainless Steel
Yu, Yong (Central South University, China)

Time: 18:20-18:40
Development of Micro-Powder Injection Molding Process for Manufacturing a Piezoelectric Structure with High-aspect-ratio
Park, Jae Man (Pohang University of Science and Technology, Korea)

Session 81: Superhard Materials & Ceramics
Time: 16:35-18:00

Invited Presentation
Time: 16:35-17:00
High Entropy Alloy-Based Composites: Promising Wear-Resistant Hard Materials
Liu, Yong (Central South University, China)

Oral Presentation
Time: 17:00-17:20
Preparation and Microstructure of H-BN/Sic Multiphase Ceramics via Spark Plasma Sintering
Lun, Huilin (Central South University, China)

Time: 17:20-17:40
Ion-Electron-Plasma Modification of Structure, Tribological and Strength Properties of the Surface Layer of a Metal-Ceramic Composite
Yu, Baohai (Institute of Metal Research Chinese Academy of Sciences, China)

Time: 17:40-18:00
Beneficial Effects of Ti-Si Eutectic Alloy as Sintering Aid on Densification, Microstructure and Mechanical Properties of Hot-Pressed B4C-Based Ceramic Composite
Zhong, Zhihong (Hefei University of Technology, China)

Session 82: Analysis, Testing, Numerical Simulation, Data and Data Mining IV
Time: 16:35-18:20

Invited Presentation
Time: 16:35-17:00
Powder Characterization Methods for Additive Manufacturing: Repeatability, Reproducibility and Relevancy
Meyer, John (Carpenter Technology Corporation, United States)

Oral Presentation
Time: 17:00-17:20
3-D CFD Analysis of Gas Flow inside a Hot Isostatic Pressing Apparatus
Yan, Zhenghua (Simtec Soft Sweden AB, Sweden)

Time: 17:20-17:40
Microstructural Characterization of Cemented Carbides by Means of Sequential Polishing and 3D Volume Reconstruction
Fang, Shiqi (EEBE- Universitat Politècnica de Catalunya, Spain)

Time: 17:40-18:00
A Novel Approach to Predict Green Density by HVC Based on Materials Informatics Method
Zhang, Kaiqi (University of Science and Technology Beijing, China)

Time: 18:00-18:20
FEA Auxiliary Design of Large Tonnage Mold in Powder Metallurgy
Lu, Dongbai (Porite Yangzhou Technology & Industry Co., Ltd, China)

Session 83: Non-Ferrous Metals & Rare Earth Metals IV
Time: 16:35-18:25

Invited Presentation
Time: 16:35-17:00
ERS of Titanium Alloys: Processing, Microstructure and Analysis of the Oxygen Content
Lagos, Miguel (TECNALIA, Spain)

Time: 17:00-17:25
Mechanical Properties Optimization and Application of Low-Cost Elemental P/M Ti-Al-M (V, Fe, Mo) Alloys
Xu, Rongjun (Central South University, China)

Oral Presentation
Time: 17:25-17:45
Effects of Different Carbon Sources on Synthesis of ZrB2 by Carbothermal Reduction
Gui, Tao (General Research Institute for Non-Ferrous Metals AB, China)

Time: 17:45-18:05
Effect of Solution Treatment on Microstructure and Mechanical Properties of Ti-35Nb-10Zr Alloy Hot-Rolled Rods
Zhu, Baohui (CNMC Ningxia Orient Group Co. Ltd)

Time: 18:05-18:25
Microstructure and Mechanical Properties of Low-Cost Ti-Al-Fe-Mo-O Alloy Prepared by Powder Metallurgy
Xu,Rongjun (State Key Lab of Powder Metallurgy, Central South University, China)

Session 84: Super Alloys & Composites IV
Time: 16:35-17:55

Oral Presentation
Time: 16:35-16:55
Precipitation Behavior during Hot Deformation of Powder Metallurgy Ti-Nb-Ta-Zr-Al High Entropy Alloys
Cao, Yuankui (Central Iron and Steel Research Institute, China)

Time: 16:55-17:15
Influence of Plastic Working on Mechanical Properties of Al2O3/B4C/Al Composite
Zan, Yuning (Chinese academy of science, China)

Time: 17:15-17:35
Hot Deformation of CNTs/7055Al Composite
Ma, Kai (Chinese Academy of Science, China)

Time: 17:35-17:55
Enhanced Strength for Carbon Nanotube-Reinforced 7055 Al Alloy Composites through Aligned Reinforcement Distribution
Bi, Sheng (Chinese Academy of Sciences, China)

Session 85: Metal Powder Preparation and Processes VIII
Time: 16:35-17:15

Oral Presentation
Time: 16:35-16:55
The Microstructure of EP741NP Powder by PREP and Heat Treatment
Han, Zhiyu (Sino-Euro Materials Technologies of Xi'an Co.，Ltd, China)

Time: 16:55-17:15
Particle Shape Modification and Related Properties of Iron Powder
Zheng, Fengshi (General Research Institute for Nonferrous Metals, China)

Session 86: SIS PM Magnetic Materials II
Time: 16:35-18:05

Oral Presentation
Time: 16:35-17:05
Influence of the Iron Powder Characteristics on the Iron Loss of Iron Powder Cores
Takashita, Takuya (JFE Steel Corporation, Japan)

Time: 17:05-17:35
Some Possible Ways for Improving the Coercivity of the Hot Deformed NdFeB Magnets
Chang, W.C. (National Chung Cheng University, Chinese Taipei)

Time: 17:35-18:05
Round Table Discussion

Session 87: SIS Sino-Swedish Advanced Materials Forum II
Time: 16:35-17:35

Oral Presentation
Time: 16:35-17:05
Prospective of Future Cooperation between STINT and NSFC
Löwhagen, Mattias (STINT, Sweden)

Time: 17:05-17:35
Joint Project Review and Exchange
Zhang, Ji (CISRI, China); Bengtsson, Sven (Höganäs AB, Sweden)

Thursday Morning, 20 September, Part 1

Session 88: AM IV: Modeling and Post-processing 1
Time: 8:30-9:50

Oral Presentation
Time: 8:30-8:50
Discrete Element Simulation of Metal Powder Dynamics and Calibration for Additive Manufacture
Dai, Ling (Scientist, Singapore)

Time: 8:50-9:10
Effect of Heat Treatment on the Properties of GH4169 Alloy Fabricated by Selective Laser Melting
Cao, Xuanyang (Changsha Advanced Material Industry Research Institute Co., Ltd, China)

Time: 9:10-9:30
Evaluation of Nitriding and Surface Machining Effects on Tensile and Fatigue Properties of Additively
Mukhtar, Aamir (Titanium Industry Development, New Zealand)

Time: 9:30-9:50
Heat Treatment of AM parts by Hot Isostatic Pressing
Eklund, Anders (Quintus Technologies AB, Sweden)

Session 89: Energy Materials III
Time: 8:30-10:15

Invited Presentation
Time: 8:30-8:55
An Overview of Recycling Method and Technology for Spent Five Types of Lithium-Ion Batteries in China
Xu, Xuemei (Central South University, China)

Oral Presentation
Time: 8:55-9:15
Study of Sintering Behavior in High Iron Content Sintering Fe-Cr Alloy
Yao, Chih-Kai (Porite Taiwan Co., Ltd., Chinese Taipei)

Time: 9:15-9:35
Characteristics of NdBa0.5Sr0.5Co2-xNixO5+δ Cathode Materials for Solid Oxide Fuel Cells
Tsai, Jeng-Ting (National Taipei University of Technology, Chinese Taipei)

Time: 9:35-9:55
The Oxidation Behavior of Stainless Steel Powder-Made SOFC Supports By Spark Plasma Sintering Technique
Yuan, Kang (BGRIMM Technology Group, China)

Time: 9:55-10:15
The Sintering Behavior of ScZr-, SmCe-, AlYZr-Oxides as Electrolyte Materials for Medium and Low Temperature SOFCs
Yuan, Kang (BGRIMM Technology Group, China)

Session 90: SIS PM Standards & Data Base I
Time: 8:30-10:00

Oral Presentation
Time: 8:30-9:00
Development and Trend of International Standardization
Zhang, Xiaogang (Former President of ISO, China)

Time: 9:00-9:30
China's Standardization System of Materials
Wang, Haizhou (Chinese Academy of Sciences (CAS), China)

Time: 9:30-10:00
Anatomy of a Powder-Based Standards Program: The MPIF Standards
Adams, James (MPIF, USA)

Session 91: AM IV: Modeling and Post-processing 2
Time: 8:30-9:10

Oral Presentation
Time: 8:30-8:50
Influence of Heat Treatment in Fracture Surfaces of Type 316L SS Prepared by Powder Bed Fusion
Bidulsky, Robert (Technical University of Košice, Slovakia)

Time: 8:50-9:10
Process-Structure-Properties Modeling Of Selective Laser Melting with Continuum Thermomechanics and Phase Field Modeling
Pinomaa, Tatu (VTT Technical Research Centre of Finland, Finland)

Session 92: Super Alloys & Composites V
Time: 10:35-11:55

Oral Presentation
Time: 10:35-10:55
Compositionally Gradient Ti-Ta Metal-Metal Composite with Ultra-High Strength
Xu, Shenghang (Central South University, China)

Time: 10:55-11:15
Microstructure Evolution and Tensile Properties of Spray-Formed FGH4095M during Quasi-Isothermal Forging
Wu, Haixin (University of Science and Technology Beijing, China)

Time: 11:15-11:35
Numerical Model of the First Facility for Manufacturing Ultra-Clean Nickl-based Superalloy Powders
Feng, Shan (University of Science and Technology Beijing, China)

Time: 11:35-11:55
Fabrication of in-situ Grown Graphene Nanosheets/Al laminated Composites via Synergistic-Strengthening and Catalytic Effect of Cu Banoparticle with Enhanced Nechanical Properties
Pu, Bowen (Tianjin University, China)

Session 93: SIS PM Standards & Data Base II
Time: 10:25-11:55

Oral Presentation
Time: 10:25-10:55
Strategies for Cross-referencing Powder Characteristics for Sintered Material
Nyborg, Lars (Chalmers University of Technology, Sweden)

Time: 10:55-11:25
Introduction to China Knowledge Centre for Engineering Sciences and Technology
Ren, Baijun (Inspur Group, China)

Time: 11:25-11:55
Round Table Discussion

Poster Program

Session 1: Metal Powder Preparation and Processes

Spherical Ti2AlNb Pre-alloyed Powder Prepared by EIGA Method for 3D Printing
Jin, Ying (Zhejiang Asia General Soldering & Brazing Material Co., Ltd, China)

Processing Mechanism and Experimental Study of C/Si C Composite Material AUAG
Xiao, Chunfang (Changsha Aeronautical Vocational & Technical College, China)

Effect of Separator on the Preparation of Ultrafine Nickel Powder by Solid Phase Reduction Method
Wang, Zhubo (Central South University, China)

Preparation of High Quality Ti-6al-4v Alloy Powder and Its Densification by Hot Isosatic Pressing
Zou, Liming (Guangdong Institute of Materials and Processing, China)

A New Preparation Technology of Nano-MoO3 Powders
Pang, Jianming (China Iron & Steel Research Institute Group, China)

Effect of Copper Powder on the Properties of Iron-Based Powder Metallurgy Sintered Products
Pang, Jianming (China Iron & Steel Research Institute Group, China)

Preparation of SnO2 Nanoparticles with Controlled Particle Sizes and Morphologies
Zhong, Jingming (State Key Laboratory of Special Rare Metal Materials, China)

Advances in Powder Processing Beryllium-Containing Materials
Xu, Demei (Northwest Rare Metal Materials Research Institute, China)

Study on the Influence of Different Copper Infiltrant Composition on the Properties of Sintered Steel and Its Infiltration Process
Wang, Yonghui (GRIPM Advanced Materials Co., Ltd., China)

Study on Powder and 3D Printing Properties of Vacuum Atomized High Speed Steel
Li, Likun (Wuhan branch of Central Research Institute of Bao steel Co. Ltd., China)

The Characterization of Ceramic Particles Reinforced Molybdenum Powder Produced by High Energy Ball Milling
Petho, Daniel (Institute of Physical Metallurgy, Hungary)

The Effect of the Mechanical Alloying on Rutile Reinforced Titanium Powder by High Energy Ball Milling
Angel, David Adam (Institute of Physical Metallurgy, Hungary)

Study on Magnetic Properties of Iron-Based Nanocrystalline Magnetic Powder Core
Pang, Jianming (China Iron & Steel Research Institute Group, China)

Characterization of Spherical AlSi10Mg Powder Produced by Double-Nozzle Gas Atomization Using Different Parameters
Gao, Chaofeng (South China University of Technology, China)

Study on Sintering Behavior and Mechanism of Cu-Al-Ni Alloy
Teng, Huaj (Chongqing Three Gorges University, China)

Process and Properties of Automobile Shock Absorber Piston Using Reduction Iron Powder Made by Steel Scrap from Bearing Rollers Production
Liu, Jing (University of Science and Technology Beijing, China)

Effect of Ce Addition on the Microstructural Evolution and Mechanical Properties of Sintered M2E High Speed Steel from Overspray Powder
Liu, Bowen (University of Science and Technology Beijing, China)

Analysis and Pressing Mould Design of CAM Shaft Timing Gear Forming Process
Gu, Wenjin (XINGCHEG POWDER METALLURGY CO., LTD, China)

The Precision Design of Powder Metallurgy Cycloidal Rotor Pressing Mould
Gu, Wenjin (XINGCHEG POWDER METALLURGY CO., LTD, China)

Preliminary Research on Ultra-Clean High-Speed-Steel Powders
Tian, Tian (University of Science and Technology Beijing, China)

Session 2: Compaction & Forming Processes

Effects of Cr2AlC Content on the Compressive and Densification Behaviors of Cu-Cr2AlC Mixed Powder
GUO, Biao (Xihua University, China)

Preparation and Friction Behavior of Novel Premixed Fe-2Cu-0.8C Powders
Chen, Wenchao (Hefei University of Technology, China)

Hot Hydrostatic Extrusion Process of Pure Tungsten
Hong, Kaijun (Hefei University of Technology, China)

Recent Innovations on Cold Axial Die Compaction Technologies
Zwagart, Igance (OSTERWALDER AG, China)

Effect of Cu Alloy Element on the Performance of Powder Metallurgy Surface Rolling Densification
Ding, Xia (Shanghai Automotive Powder Metallurgy Co., LTD, China)

Experimental Study on the Application of New Modified Paraffin Molding Agent for cemented carbide
Li, Yi (Jiangsu Taier Novel Material Co., Ltd., China)

Effects of Molybdenum Addition Ways on the Warm Compaction Behaviors of Fe-Cu-C-Mo Powders
Chen, Wenchao (Hefei University of Technology, China)

Application of Ferrous PM Joining and Welding Technology in Automotive Parts
Lei, Xiangbing (Chongqing Huafu Industrial Co., Ltd, China)

Developments and Applications of Mechanical Friction Pairs by Powder Forming Technology
Xu, Jiabing (Hefei University of Technology, China)

The Study on Powder Metallurgy Brake Pads Of 350km/H "Fuxing" China Standard EMU
Zhu, Song (CRRC Qishuyan Institute Co., LTD., China)

Session 3: Sintering & Post Processing

Sintering Powdered Metal Compacts Using Little or No Hydrogen
Hammond, Dennis (Apex Advanced Technologies, United States)

Study on the Mechanical Properties and Wear Resistance in Sinter Steel after Heat Treatment
Cheng, Chaohsu (Chung Chou University of Science and Technology, Chinese Taipei)

Preparation of Sintered Fe-W-Mo-Cr-V-C Materials by Adding Alloy Carbide Powders
Luan, Huaizhuang (Central South University, China)

Spark Plasma Sintering Behavior of Tib2 –Reinforced Fe Matrix Composites and Their Microstructures
Ke, Yujiao (Hiroshima University, Japan)

Preparation and Properties of the Carbon Nanotube Reinforced Copper Matrix Composite by Spark Plasma Sintering
Han, Cuiliu (Hefei University of Technology, China)

Microstructure and Mechanical Properties of Power Metallurgy 7055 Aluminum Alloy Processed by Hot Extrusion
Han, Weihao (Institute of Advanced Materials and Technology, China)

Sintering Behavior of Carbon Nano-Fiber and Ceramic Particle Reinforced Aluminum Matrix Composites in the Plasma Sintering Process
Xu, Zhefeng (Hiroshima University, Japan)

Study on Microstructure and Wear Resistance of 316L+Ni60A Gradient Coating by Laser Cladding on Q345b Steel Surface
Zhu, Jia-lei (Beijing Institute of Petrochemical Technology, China)

The Effect of Binder System on Retained Carbon Content of Injection Molded Ti-6Al-4V Alloy and Its Influence on the Mechanical Properties
Lee, Eunhye (Kyerim Metal Injection Molding, Department of Advanced Root Industry Engineering, Korea)

Ultrasonic Bending Fatigue and Fracture Characteristic of a Chromium Containing Iron-Based Sintered Material
Ke, Mei-Yuan (South China University of Technology, China)

High Pressure High Temperature Consolidation of ZrC Based Ceramic Composites
Minasyan, Tatevik (Tallinn University of Technology, Estonia)

A Study on The Wear Behavior of Valve Seat According to the Addition of Ods Alloy Powder and Sintering Conditions
SHIN, MINHO KOREA (SINTERED METAL, Korea)

The Development of Microwave Heating Furnace for Powder Selective High Temperature Sintering
Ao, Wenqing (Central Iron and Steel Research Institute, China)

Mechanical Property of a Melt-Spun and Hot Extruded 6061 Al Alloy
Ou, Yongliang (South China University of Technology, China)

Short-Time Heat Treatment and In-Situ Reaction Layer in Multi-Layer Graphene (MLG)-Reinforced Titanium Matrix Composites
Mu, Xiaonan (Beijing Institute of Technology, China)

Analysis on the Cost of Large-scale Hot Isostatic Pressing
Chen, Hongxia (CHINA IRON & STEEL RESEARCH INSTITUTE GROUP, China)

Session 4: Powder Injection Molding

Study on Properties of TC4 Titanium Alloy Formed by Powder Injection Molding
Luo, Tiegan (Guangdong Insitute of Materials and Processing, China)

Influence of the Metal Injection Moulding Process on the Corrosion Behavior of 17-4PH Parts
Rodriguez, Pedro Pablo (MIM TECH ALFA, S. L. , Spain)

Mechanical Properties of MIM 17-4PH Stainless Steel
Chen, Lei (ShangHai Future High-tech Co., Ltd, China)

Refinement of PEG/PMMA Binder System for Titanium Metal Injection Moulding
Zhang, Hongzhou (University of Auckland, New Zealand)

Influence of Gas Atomization Powder Content on Microstructure and Mechanical Properties of 316L Stainless Steel Prepared by Metal Injection Molding
Zhang, Yongyun (Southern University of Science and Technology, China)

Microstructure and Mechanical Properties of MIM491 Superalloy Prepared by Master Alloy Technique
Chen, Xiaowei (University of Science and Technology Beijing, China)

The Metal Injection Molding Technical Study of Corrosion Resistant Automobile Door Lock Parts
Huang, Ruo (Beijing Institute of Technology, China)

Metal Injection Molding (MIM) in the Laptop Shaft Parts Processing Applications
Jiang, Ronggao (SHANGHAI JINGKE POWDER METALLURGY TECHNOLOGY CO., LTD, China)

Study on the Manufacturing Technology of MIM Cupronickel Instrument
Huang, Ruo (Beijing Institute of Technology, China)

The Metal Injection Molding Technical Study of Electronic Control System'S Armature
Huang, Ruo (Beijing Institute of Technology, China)

Deterioration Causes Reduction of Recycled Feedstocks in Metal Injection Molding
Mohammadi, Farhad (National Tsing Hua University, Chinese Taipei)

Session 5: Refractory Metals, Hard Alloys, Superhard Materials & Ceramics

The Effect of Elevated Temperature on Mechanical Properties of Al/B4C Neutron Absorber Material
Liu, Gruiong (Advanced Technology & Materials Co., Ltd, China)

Study on Technology of MHC Alloy Diffusion Joining
Dong, Di (Advanced Technology & Materials Co., Ltd, China)

Synthesis of Stainless Steel Matrix Composite Reinforced with SHS-Produced Ni-TiC Master Alloy
Zhang, Zhiheng (China Iron & Steel Research Institute Group, China)

Effect of Cold Processing on the Properties of Molybdenum-Rhenium Foils
Wang, Guangda (Advanced Technology & Materials Co., Ltd, China)

Research into Functionally Graded Cemented Carbide: Microstructure Evolution of Specifically Engineered Surface Layer and Gradient Formation Mechanisms
Ji, Hongwei (Guangdong University of Technology, China)

Research on the Preparation and Properties of Tungsten Coating on the Surface of Oxygen Free Copper
Zhang, Danhua (Advanced Technology & Materials Co., Ltd., China)

Investigation of Cryogenic Mechanical Properties and Fracture Mechanism of Tungsten Alloy
Wang, Ling (Advanced Technology & Materials Co., Ltd. Refractory Materials Branch , China)

Effect of Mo2C on the Microstructure and Corrosion Resistance of Fine Wc-6Co Cemented Carbides Fabricated by SPS
Guo, Shengda (Jiangxi University of Science and Technology, China)

Research of W-La2O3 Alloy Designed by an Innovative Combustion-Based Approach
Chen, Pengqi (Hefei University of Technology, China)

Study on the Matrix of High Sharpness Diamond Saw Blade
Zhang, Jianqiong (Beijing Gang Yan Diamond Products Company, China)

Evolution of Microstructure and Performance in WC-Co Cemented Carbides with Tac Addition
Wei, Jianqing (Xiamen Golden Egret Special Alloy Co., Ltd., China)

Effects of Rare Earths on the Microstructure, Mechanical Properties of Ti(C,N)-Based Cermets
Qiu, Hao (South China University of Technology, China)

Effect of Selective Laser Melting Process Parameters on Microstructure of Molybdenum
Li, Xiaodong (Institute of Advanced Materials and Technology University of Science and Technology Beijing, China)

Grain Structure of Selective Laser Melted Tungsten
Li, Xingyu (Institute of Advanced Materials and Technology University of Science and Technology Beijing, China)

Regular Changes of Coercive Forces of Cemented Carbide Compacts during Sintering
Nie, Hongbo (Xiamen Tungsten Co., LTD., China)

Effects of Different Iron Powders on Properties of Diamond Fickert
Lin, Tao (University of Science and Technology Beijing, China)

The Effect of Gas Elements on the Properties of TiCN Cermet
Lin, Fei (Institute of iron and Steel Research, China)

Preparation and Properties of Ultrafine-Grained WC-10Co Cemented Carbides
Li, Jianfeng (HeFei University of Technology, China)

Fabrication and Tribological Properties of In-Situ Reduced Graphene Oxide Reinforced Zirconia Ceramic
Zeng, Zhaoyubo (South China University of Technology, China)

Research on MoCoB Ternary Boride Hard Material
Xu, Zhifeng (University of Science & Technology Beijing, China)

Study on Fabrication of (WSi2)X(W0.67Cr0.33)Y Alloy Through Spark Plasma Sintering and Its Antioxidant Performance
Luo, Laima (Hefei University of Technology, China)

The Effect of Titanium Content on the Microstructure and Property of Mo-Ti Alloy
Niu, Xuanyang (Henan University of Science and Technology, China)

Session 6: Non-Ferrous Metals & Rare Earth Metals

Effects of Cyclic Solid Solution Treatment on Microstructures of as-HIP PM Ti-45Al-8.5Nb-(W, B, Y) Compacts
Lang, Zebao (Aerospace Research Institute of Materials & Processing Technology, China)

Synthesis of Low-Cost Titanium Alloys with Wrought-Like Mechanical Properties by Sintering Blended Elemental Powder in Pressure-Less Vacuum
Zhang, Ce (University of Science and Technology Beijing, China)

Study on the Process of Small Size TA16 Titanium Alloy Tube for High Temperature Pressure
Chen, Shengchuan (China)

Preparation of High-Performance Gel-Casting Titanium Parts With Anaerobic Gel System
Shao, Yanru (University of Science and Technology Beijing, China)

Study on Hot Multi-Spinning Processing of Shearing and Rheological Deformation of Molybdenum Plate
Feng, Pengfa (Jinduicheng Molybdenum Co., Ltd, China)

Session 7: Super Alloys & Composites

Effects of Hafnium on Mechanical Properties in FGH4097 Powder Metallurgy Superalloy
Zhang, Yiwen (China Iron & Steel Research Institute Group, China)

The Microstructure of P/M Nickel Base Superalloys Prepared by Spark Plasma Sintering (SPS)
Qin, Zijun (Central South University, China)

Hot Pressed Invar Alloy: Structure, Microstructure and Mechanical Properties
FILGUEIRA, MARCELLO (UNIVERSIDADE ESTADUAL DO NORTE FLUMINENSE, Brazil)

Carbides Evolution of FGH4096 PM Superalloy Powders during Pre-Heat Treatment Process
Liu, Jiantao (Central Iron & Steel Research Institute, China)

Current-Carrying Friction and Wear Performance of Copper-Graphite Composites Reinforced by Graphene
Lin, Xueyang (Central South University, China)

Graphene Oxide as Carbon Source for Sintered W6Mo5Cr4V2 Iron-based Alloy
Wu, Wendeng (Central South University, China)

Pulsed Plasma Sintering of Pre-Alloyed Fe-50Cu-25Nb Powders
FILGUEIRA, MARCELLO (UNIVERSIDADE ESTADUAL DO NORTE FLUMINENSE, Brazil)

Mechano-Synthesis of Invar Alloy Powders with Nb Addition
FILGUEIRA, MARCELLO (UNIVERSIDADE ESTADUAL DO NORTE FLUMINENSE, Brazil)

Spark Plasma Sintering of the Pre-Alloyed Fe-36%Ni-15%Nb Powders
FILGUEIRA, MARCELLO (UNIVERSIDADE ESTADUAL DO NORTE FLUMINENSE, Brazil)

Influence of Ta Content on Prior Particle Boundary Precipitation In the As-HIPed Powder Metallurgy Superalloy FGH4098
Jia, Jian (Steel Research Institute Group, China)

Solid Solution Cooling γ′ Precipitation Evolution Rule in Powder Metallurgy Superalloy FGH98
Zhang, Hongfei (University of Science and Technology Beijing, China)

Effect of Alloying Element Ta on Microstructure and Properties of High Performance P/M Superalloy
Wang, Zhicheng (University of Science and Technology Beijing, China)

The Effect of Al, Ti And Nb Content on Microstructure of Powder Superalloy
Shao, Yinlong (University of Science & Technology Beijing, China)

Powder Metallurgy as Efficient Way in Manufacture of Aerospace Grade Magnesium Metal Matrix Nanocomposites
Makovskyi, Spartak (Motor Sich JSC|Eduard Tzyvirko, Ukraine)

Microstructure and Properties of Cu/Graphite Composites with Different Volume Fraction of Modified Expanded Graphite
Liu, Ben (Chinese Academy of Sciences, China)

Session 8: Porous Materials

Comparative Study on the High Temperature Sulfur Corrosion Resistance of Fe-Al and Ni-Al Intermetallic Compound Porous Materials
Yang, Junjun (AT&M Environmental Engineering Technology Co., Ltd., China)

Preparation and Properties of Nickel Porous Materials with Micro-Pores and High Porosity
Liu, Rutie (Central South University, China)

Mechanical Properties of Al-Based Auxetic Lattice Structures Fabricated by 3-D Printing Combined with Investment Casting
Xue, Yingying (Chinese Academy of Sciences, China)

Experimental Research on Convective Heat Transfer Performance of NiCu Alloy Foams
Zhao, Peng (Central Iron & Steel Research Insititute, China)

Preparation and Properties of Reaction Bonded Porous SiC Ceramics by Adding Micro SiC and Al2O3 Powders
Liu, Jiadong (Chinese Academy of Sciences, China)

Dependence of the Ferrovanadium Power as Additive on Mechanical Property in Porous Ti
Qiu, Guibao (Chongqing University, China)

Preparation and Properties of Porous SiC Ceramic Membrane Supports by In Situ Reaction Bonding Technique
Luo, Zhiyong (China Iron & Steel Research Institute Group, China)

Session 9: Surface Technology

The Study of Microstructure and Property of CVD Mt-Ti (C, N) Coating with Varied C/N Ratio
Zhuang, Limin (Xiamen Golden Egret Special Alloy Co., Ltd., China)

Adhesion of PACVD Coatings on Nanostructured Cemented Carbides
Sakoman, Matija (Faculty of Mechanical Engineering and Naval Architecture, Croatia)

Microstructure and Cutting Performance of Nanostructured TiAlSiN Films by Cathodic Arc Method
Zhao, Xiaoxiao (Xiamen Golden Egret Special Alloy Co., Ltd., China)

Study on Microstructure and Wear Resistance of Laser Cladding Fe3Al/Cr3C2 Composites
Lin, Shuangping (Iron and Steel Research Institute, China)

Fabrication of Niobium Layer of Coated Fuel Particle for High-Temperature Gas-Cooled Reactor by Chemical Vapor Deposition
Lv, Pengpeng (Institute of Process Engineering, Chinese Academy of Sciences, China)

Fluidized Bed Chemical Vapor Deposition of Iron through Hydrogenous Reduction Reaction from Ferric Iron Halide
Lv, Pengpeng (Institute of Process Engineering, Chinese Academy of Sciences, China)

Study on Corrosion Resistance of CMAS of Environmental Barrier Coatings
Hou, Weiao (BGRIMM Technology Group, China)

The Research on Microstructure and Performance of Cladding Sulfuric Acid Corrosion Resistant Alloy by Laser Cladding
Li, Zhengqiu (BGRIMM Technology Group, China)

Effect of Electric Pulse Treatment on Microstructure and Properties of Nitrided Layer on Cr12MoV Steel
Zhao, Zuofu (Liaoning University of Technology, China)

Phase Stability and Thermal Shock Resistance of Gd2O3 Doped La2Ce2O7 Thermal Barrier Coatings
Gao, Lihua (Beijing General Research Institute of Mining and Metallurgy, China)

Micro-hardness and Structure of a Laser Cladded Martensitic Heat Resistant Steel
Ren, Kai (Tianjin University of Technology, China)

Study on the Effects of Oxides on the Properties of YSZ Thermal Barrier Coatings
Ji, Xiaojuan (Northeastern University, China)

Session 10: Magnetic Materials & Functional Materials

High Density and Excellent Magnetic Properties of Nickel Ceramics Produced by Spark Plasma Sintering (SPS)
Yan, Liang (Tongji university, China)

Improvement of the Mechanical Properties in the NdFeB Magnets
Zhou, Lei (Advanced Technology & Materials Co., Ltd., China)

Study on Bump Losing Protection of Nd-Fe-B Magnetic In Transportation and Storage
Xing, Shuhai (Advanced Technology and Materials co. ltd., China)

Effect of Fast Neutron Irradiation on Sintered Nd-Fe-B Magnets
Chen, Jie (Advanced Technology and Materials Co., Ltd, China)

The Effects of Alloying Elements on the Microstructure and Magnetic Properties of the TbDyFe Alloys
Wang, Naijuan (Tsinghua University, China)

Effect of Cool Isostatic Pressure on Magnetic Properties of Sintered Nd-Fe-B Magnet
Deng, Zhiwei (Advanced Technology and Materials co. ltd., China)

Study on the Performance of Metal Magnetic Powder Cores and High Green Density with Body Enhance Technology
Nie, Junwu (NBTM New Materials Co., Ltd., China)

Relationship between the Remanence and Microstructure of Cylindrical Hot Deformed Nd-Fe-B Magnets
Jing, Zheng (Central Iron and Steel Research Institute, China)

Correlation between Phase Homogenization and Magnetic Properties For 2:17-Type Sm-Co Sintered Magnets
Wang, Shuai (Central Iron and Steel Research Institute, China)

Effect of Misch-Metal (Mm) with the Nature Ratio on Phase Composition and Magnetic Properties in Nanocrystalline R30Fe68.45Al0.5B1.05 Ribbons
Liu, Fei (Central Iron & Steel Research Institute, China)

The Phase Composition and Magnetic Properties of Pr-Nd-Mm-Fe-B Nanocrystalline Magnets Prepared Bby Spark Plasma Sintering Method
Wang, Xin (Central Iron and Steel Research Institute, China)

Effects of Heat Treatment on the Microstructures and Mechanical Properties of Sintered Nd–Fe–B Permanent Magnets
Jia, Bei (Advanced Technology & Materials Co.Ltd, China)

The Development of Sintered (Nd, Ce)-Fe-B Corrosion Behavior in Different Environment
Shi, Xiaoning (Central Iron and Steel Research Institute, China)

The Present Status and Trends of Radially Oriented NdFeB Integrated Ring Magnets
Wang, Yu (China Iron & Steel Research Institute Croup, China)

Characterization of Fe3O4@CS Composite Magnetic Particles
Shao, Huiping (University of Science and Technology Beijing, China)

Magnetic Properties of Iron-Based Soft Magnetic Composites with ZrO2 Coating Obtained by Sol–Gel Method
Hou, Zhenguo (Tongji University, China)

Properties of FeSiCr Soft Magnetic Powder Coated with Phosphates
Yu, Haichen (Advanced Technology (bazhou) special Powder co., Ltd, China)

Mechanism of Interaction Between Sm-Co Magnets and Glass Coatings Doped with Different Adherent Oxides
Yu, Xiao-jie (Central Iron and Steel Research Institute, China)

Progress in Micromagnetic Modeling and Numerical Simulation for Exchange Coupled Nd2Fe14B/A-Fe Nanocomposite Magnets
Ryo, Hyok-Su (Harin Institute of Technology, China)

The FeNi Soft Magnetic Composites Coated with Al2O3 Prepared by a Sol-gel Processing
Peng, Yuandong (Central South University, China)

Soft Magnetic Powders with High Magnetization Saturation Produced by Refinement of Amorphous Ribbons
Kowalczyk, Maciej (Warsaw University of Technology, Poland)

Study of Assembly on Sintered NdFeB Magnets in Automotive Motor
Han,Weiping (Advanced Technology and Materials co. ltd., China)

Session 11:Additive Manufacturing (3D Printing)

Advanced Melt Pool Image Processing for Additive Manufacturing Systems
Sampson, Robert (TWI, United Kingdom)

Fe-50%Ni Soft Magnetic Alloy Prepared by 3D Gel-Printing
Shao, Huiping (University of Science and Technology Beijing, China)

Microstructures and Mechanical Properties of Fe-Cu-C Alloys Manufactured by Selective Laser Melting
Xu, Jie (Central South University, China)

The Influence of Cooling Rates in the HIP Process on SLM UNS N07718 API for Use in Oil & Gas Applications
Burns, Madison (Baker Hughes, a GE Company, Germany)

Influence of Laser Energy Density and Re-Melting Process on Surface Roughness, Microstructure and Tensile Property of AlSi10mg Manufactured by Selective Laser Melting
Xie,Yanjun (China Iron & Steel Research Institute Group, China)

Fine-Structured Copper Alloy by Selective Laser Melting of Pre-Alloyed Cu-15Ni-8Sn Powder
Zhang, Gengming (State Key Laboratory of Powder Metallurgy, Central South University, China)

Fundamental Study on Ceramic Parts Made by Supersonic Cold Spraying and Micro Rolling Composite Additives Manufacturing
Zhang, Haiou (Huazhong University of Science & Technology, China)

Material Design for 3D Printing of Novel Biomedical Titanium Alloys
Huang, Jian (Shanghai Institute of Ceramics, Chinese Academy of Sciences, China)

Laser Metal Deposition of Al-Cu-Fe Powder on Al 6061 Substrate
Lai, Hong-Jen (Industrial Technology Research Institute, China)

Preparation and Characterization of Prealloyed Ti-6Al-4V Alloy Powders from EIGA Method for Additive Manufacturing
Liu, Zhongqiang (South China University of Technology, China)

Influence of Processing Parameters on the Surface Structure, Porosity and Mechanical Properties in Ti-6al-4v Alloy Parts Fabricated by Selective Laser Melting
Wang, Zhen (South China University of Technology, China)

Fatigue Property of Porous Ti-6Al-4V Structures Made by Selective Laser Melting
Chen, J.K. (National Taipei University of Technology, Chinese Taipei)

Effect of Powder Steel Recycling on Porosity of SLM Parts
Palousek, David (Brno University of Technology, Czech Republic)

X-Ray Computed Tomography Investigation on Effect of Surface Morphology on Dimensional Measurement of Additively Manufactured Thin-Wall Part
Zekavat, Amir Reza (Orebro University, Sweden)

Improvement of Yield Rate of Cobalt-Based Powder for Additive Manufacturing by Controlling Gas Atomization Process
Chen,Yi-Chun (ThinTech Materials Technology Co., Ltd., Chinese Taipei)

How Porosity is Affected by Different Residual Oxygen Concentrations in the Building Chamber during Laser Powder Bed Fusion (L-PBF)
Dietrich, Kai (Linde AG, Germany)

Degradation of In718 Powder During EBM Processing
Henriksson, Mikael (Chalmers University of Technology, Sweden)

Additive Manufacturing of Titanium Parts by Solvent Jetting on TiH2-based Granule Beds
Carreño-Morelli, Efrain (University of Applied Sciences and Arts Western Switzerland, Switzerland)

The Concept of the Possibility of Using a 3d Printer for Manufacturing Metal Monoliths of Catalytic Converter's
Karpiński, Marcin (Institute of Non-Ferrous Metals, Poland)

Influence of Post Heat Treatments on Mechanical Properties of Powder Bed Fusion Electron Beam Processed Alloy 718
Harlin, Peter (Sandvik Materials Technology, Sweden)

Effect of Powder Characteristics on the Properties of Parts Fabricated by Selective Laser Melting
Wang, Fuchao (Huazhong University of Science and Technology, China)

Research on the Effect of Rf Plasma Spheroidized Powders on SLM
Xiao, Mengzhi (Lanzhou University of Technology, China)

Session 12: Energy Materials (Lithium Battery, FC Battery, Super Capacitor, Hydrogen Storage)

Mechanism of the Phase Evolution and Hydrogen Storage Thermodynamics and Kinetics of Ternary Ce5Mg90Sm5 Alloys
Yong, Hui (Central Iron and Steel Research Institute, China)

Study of the Effect of Y Partial Substituting La on the Phase Structure and Hydrogen Storage Properties of La-Mg-Ni Alloys
Zhang,Wei (Central Iron and Steel Research Institute, China)

The Influence of Melt Spinning and Annealing Treatment on Structures and Hydrogen Storage Properties of La0.8Pr0.2MgNi3.6Co0.4 Alloy
Zhai,Tingting (Inner Mongolia University of Science and Technology, China)

Improved Dielectric Constant and Energy Density of P(VDF-HFP) Composites Using NBT-xST (x=0, 0.10, 0.26) Whiskers
Zhou, Xuefan (State Key Laboratory of Powder Metallurgy, Central South University, China)

High Energy Density in PVDF Nanocomposites Using an Optimized Nanowire Array
Guo, Ru (State Key Laboratory of Powder Metallurgy, Central South University, China)

Session 13: Biomedical Materials & Other powders

Effect of Phase Composition on Microstructure and Mechanical Properties of Nano mica/apatite Glass-ceramics by Powder Metallurgy
Wang, Yaming (Henan University of Science and Technology, China)

Biocompatible Ag-Doped Multicomponent Coatings Obtained by Pulsed Electrospark Deposition with Using of Composite SHS Electrodes
Zaitsev, Alexandr (National University of Science and Technology, Russia)

Microstructure and Mechanical Behavior of Ti-30Nb Metal-Metal Composite
Cheng, Wenjuan (Central South University, China)

Session 14: PM Components & Processes

The Application of Impregnation and Local Densification Technology on the Production of PM Automobile VVT Pulley Stator
Shi, Changxu (Jiangsu Advanced Engineering Ltd, China)

Application of Powder Metallurgy High Speed Steel in Cold Rolling Working Roll
Chen, Feixiong (Advanced Technology & Materials Co., Ltd, China)

Study on Ti-6Al-4V Alloy Produced by Powder Metallurgy Process
Chen, Feixiong (Advanced Technology & Materials Co., Ltd, China)

Application of the Powder Metallurgy Process in Productb of Cathodes for Deposition of High-temperature Thermal-barrier Coatings (TBCs) on Gas Turbine Blades
Pedash, Oleksii (MOTOR SICH JSC,Ukraine)

Study on Mechanical Properties of Iron Based High Density Sintered Material
Noda, Munehiro (Functional Materials Department, Japan)

Study on the Mechanical Properties of the Matrix of the Diamond Bit Enhanced by the Beta -SiC Whisker
Xu, Qiang (Iron and Steel Research Institute, China)

Fabrication and Properties of Iron-based Soft Magnetic Composites Coated with Polyimide
Chen, Fangfang (University of Science and Technology Beijing, China)

Microstructure and Properties of Graphene Enhanced Copper Matrix Composites via Coprecipitation and Powder Metallurgy
Ji, Qingzhu (University of Science and Technology Beijing, China)

Research on Wear Resistance of Sintered Metal Oil-Impregnated Bearing
Wang, Chunguan (Jiangsu Eagle-Globe Group Co., Ltd., China)

Comparison of Mechanical Properties Produced by Aluminium Based and Iron Based Powder Metallurgy Composites
Do, Kyoung-Rok (Korea Sintered Metal, Korea)

Enhanced Hardenability of Lean Sintered Steels by the Use of Fine Masteralloy Powders
De Oro Calderon, Raquel (TU Wien, Austria)

Optimization of Cu13Al4Ni Alloy Sintering Parameters
Bruce Fialho, Michaella (Socorro University of Brasilia, Brazil)

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Effect of Grain Boundaries and Dispersed Particles on Electrical Properties of ODS Copper Studied by In Situ AFM Measurement
Lu, Tianxing (University of Science and Technology Beijing, China)

Fracture Failure Analysis of Ball Head Hanging Rings on Overhead Transmission Line
Lin, Shuangping (Iron and Steel Research Institute, China)

The Evaluation Method and Properties of Environment-Friendly Molding Agent for Cemented Carbide on the Modification of Paraffin Wax
Li, Yi (Jiangsu Taier Novel Material Co., Ltd., China)

Investigation of Failure Characteristics in Iron Powder Compact
Mizuta, Kohei (National institute of technology, Nara college, Japan)

Identification of Friction Angle and Cohesion for Iron Powder Compact
Yoshimura, Taichi (National institute of technology, Nara college, Japan)