Session 3　Quantification of the Microstructure of Materials
材料显微组织的定量化

15：00－17：55，Saturday，**October 28**，2023

Location：Room 2-17（Second Floor）of Building 18／18 号楼 2-17 会议室

Co-Chair：Qingliang LIAO，University of Science and Technology Beijing；
Song LI，Northeastern University

Vice-Chair：Min JIANG，Northeastern University；
Hao WANG，University of Science and Technology Beijing；
Xiaoyong ZHANG，Xi'an Shiyou University

Organizer：Materials Science Committee of CSS；Metallographic and Microscopic Analysis Committee of CSS；University of Science and Technology Beijing；Northeastern University；Xi'an Shiyou University

	Title	Reporter	Chairs
15：00－15：15	Measuring the Strain Rate Sensitivity in Individual Grains in Magnesium Using 3D-xrd	**Leyun WANG**, *Shanghai Jiao Tong University*	**Xuemei LIU**, *Beijing University of Technology*
15：20－15：35	Atomic Details of 3D Defects in Highly Defected Massive γ Phase Revealed by Scanning Tunneling Microscope	**Keren ZHANG**, *Xi'an Shiyou University*	
15：40－15：55	Discussion on Quantitative Tracing Method of Atomic Clusters in Microstructure Simulation of Titanium Alloys	**Cheng LIN**, *Liaoning Petrochemical University*	
16：00－16：15	Order-disorder Transition from A1 to L10，L11，L12 Phases in Au-Pt-Cu System	**Yanglin WANG**, *Northeastern University*	
16：20－16：30	Application of Microscopic Imaging Technology in Material Analysis	**Peng ZHANG**, *Beijing Precise Instrument Co.，Ltd.*	
16：30－16：40	*Tea Break*		
16：40－16：55	Application of Deep Learning in Material Microscopic Image Analysis	**Boyuan MA**, *University of Science and Technology Beijing*	**Song LI**, *Northeastern University*
17：00－17：15	Microstructure of Graphene Reinforced Copper-Tungsten Electrical Contact Materials	**Tan LIU**, *State Grid Smart Grid Research Institute Co. Ltd.*	
17：20－17：35	Crystallographic Study in the Ni-Mn-In-based Magnetic Shape Memory Alloys	**Haile YAN**, *Northeastern University*	
17：20－17：35	Ultra-coarse Cemented Tungsten Carbide with（Zr，W）Cx Precipitates in Ceramic Phase	**Xuemei LIU**, *Beijing University of Technology*	
17：40－17：55	Feature Extraction of Metallographic Images and Micro-structure Type Identification on Iron and Steel Materials	**Sai WANG**, Liaoning *Technical University*	

13:30-18:25，Sunday，October 29，2023

Location：Room 2-17（Second Floor）of Building 18 / 18 号楼 2-17 会议室

Co-Chair： Qingliang LIAO，University of Science and Technology Beijing；
Song LI，Northeastern University

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	Title	Reporter	Chairs
13:30-13:45	Structural Manipulation of Functional Metal Oxides with Atomic-scale Resolution	**Xuedong BAI**，*Institute of Physics，Chinese Academy of Sciences*	**Li MENG**，*Central Iron and Steel Research Institute Co.，Ltd*
13:50-14:05	Deformation Behavior of a High Strength and High Toughness Titanium Alloy	**Bin GU**，*University of Science and Technology Beijing*	
14:10-14:25	Quantitative Characterization of the Microstructure of GH4742 Superalloy	**Yan LI**，*University of Science and Technology Beijing*	
14:30-14:45	Enhancing the Corrosion Resistance of High Mo S31254 Super Austenitic Stainless Steel Using Grain Boundary Engineering	**Hongli LIANG**，*Taiyuan University of Technology*	
14:50-15:05	Effect of Boron and Cerium Composite Microalloying on Oxidation Behavior of 254smo Super Austenitic Stainless Steel	**Zheng LI**，*Taiyuan University of Technology*	
15:10-15:25	Orientations Evolution and Characteristics of Inhomogeneous Deformation during ｛100｝ Columnar Grains Deformation in Electrical Steels	**Huanzhu WANG**，*University of Science and Technology Beijing*	
15:30-15:45	Effect of Microalloying on the Precipitation of Super Austenitic Stainless Steel	**Jie MA**，*Taiyuan University of Technology*	
15:50-16:00	Supporter Report		
16:00-16:10	*Tea Break*		

	Title	Reporter	Chairs
16:10−16:25	Excellent Corrosion Resistance and Wear Resistance of HVOF−sprayed Ni−Cr−Co Multiple Principal Elements Alloy Coating on Copper Plate	**Zhenlin XU**, *Anhui University of Technology*	
16:30−16:45	Comparison of Crystal Plasticity Finite Element Simulation Accuracy between Real Reconstructed Pure Iron Grains and Simulated Grains	**Mingxin ZHOU**, *Liaoning Technical University*	
16:50−17:05	Study on the Mapping Relationship Model between Microstructure and Mechanical Properties in Hypoeutectoid Steel	**Zinan ZHAO**, *University of Science and Technology Beijing*	**Sheji LUO**, *Xi'an Shiyou University*
17:10−17:25	Intelligent Recognition for Equilibrium Microstructure of Carbon Steel	**Runze GUO**, *Harbin Engineering University*	
17:30−17:45	Microstructure and Phase Composition of $(Mg_{0.2}Al_{0.2}Ce_{0.2}Y_{0.2}Zr_{0.2})O_2$ High−entropy Ceramic Prepared by Coprecipitation Method	**Jianping GONG**, *Southwest University of Science and Technology*	
17:50−18:05	Study on the Hot Deformation Behavior and Abnormal Grain Growth of GH4738 Alloy	**Min GUO**, *University of Science and Technology Beijing*	
18:10−18:25	Machine Learning Study of TTT Diagrams, CCT Diagrams and Hardenability Curves	**Zihan WANG**, Sichuan University	