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Committees

International Scientific Committee

Sergiy V. Divinsky (Germany)	Andriy Ostapovets (Czech)
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Yuichi Ikuhara (Japan)	Gregory Rohrer (USA)
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Secretary

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To All Participants

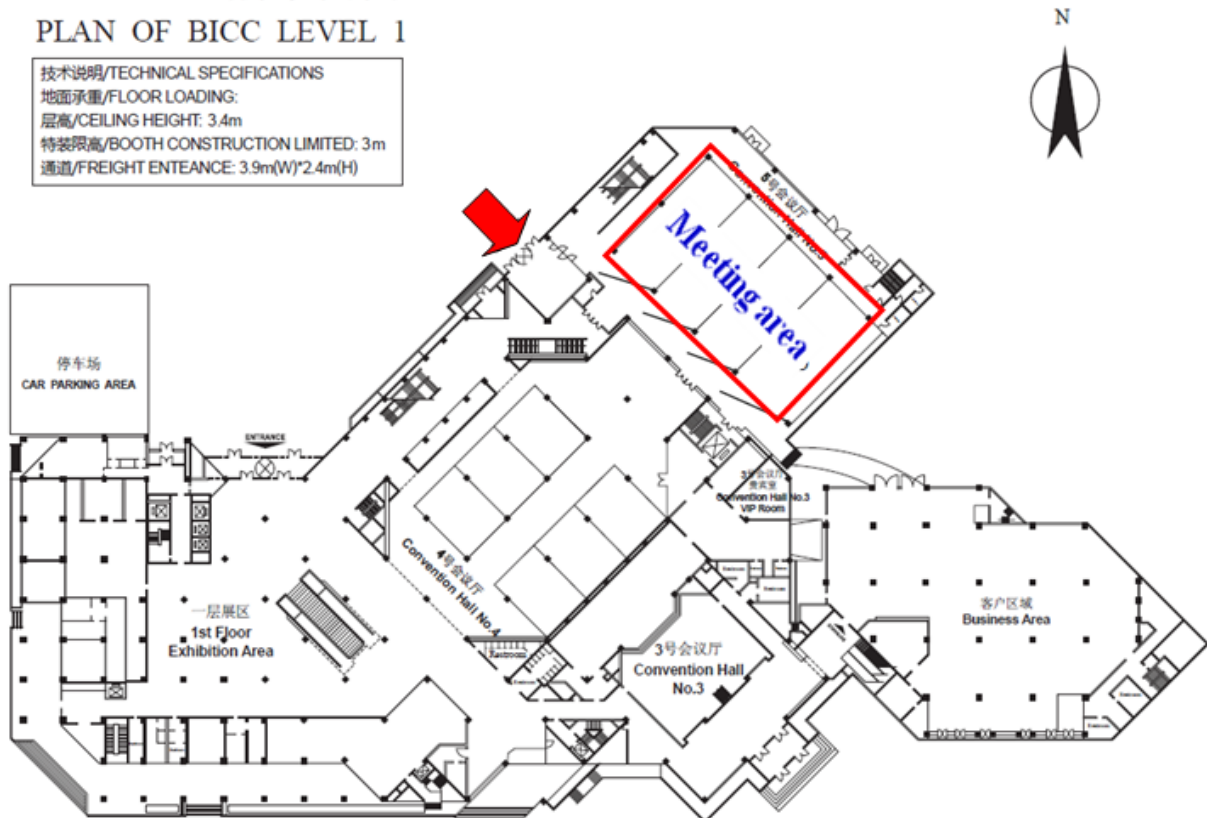
The Conference will be held in **Beijing International Convention Center (BICC)**.

Address: No. 8, Beichen Dong Lu, Chaoyang District, Beijing.

地址：北京市朝阳区北辰东路8号北京国际会议中心

BICC 一层平面图
PLAN OF BICC LEVEL 1

技术说明/TECHNICAL SPECIFICATIONS
地面承重/FLOOR LOADING:
层高/CEILING HEIGHT: 3.4m
特装限高/BOOTH CONSTRUCTION LIMITED: 3m
通道/FREIGHT ENTRANCE: 3.9m(W)*2.4m(H)



- On-site Registration Desk is arranged in the side hall (marked with a red arrow in the above map) of the Conference Hall No. 5.
- All the academic activities during the conference are arranged in the Conference Hall No. 5 (marked with a red box in the above map).
- All the participants are strongly suggested to enter the Conference Hall No. 5 from the side hall (marked with a red arrow in the above map).
- Buffet Reception of July 8, Banquet of July 10, and Lunches of July 9, 10 and 12, are arranged at the Banquet Hall of Beijing Continental Grand Hotel. Some guideposts will be set up along the way from the conference hall to the Banquet Hall.

Guidelines for Invited Talks and Oral Presentations

- Firstly, please note that the **Final Programme** given in this booklet is slightly different from that given in the conference website. So please confirm the date/time/room of your presentation in the program.
- Presenting authors of keynotes and oral presentations are kindly asked to prepare a PPT-format electronic file for your presentation and copy the file into the computer at the Registration Desk before 19:00, July 8.
- On the day of your presentation, please go to the session room at least 10 minutes before your presentation.
- The time allotted for each keynote is 20 min (including 3 min for discussion). The time allotted for each regular oral presentation is 15 min (including 3 min for discussion).
- In all session room, the speakers must use English.
- Each session room will be equipped with a notebook PC, which will be operated by the speaker.

Guidelines for Poster Presentations

- Firstly, please note that the **Final Programme** given in this booklet is slightly different from that given in the conference website. So please confirm the date of your presentation in the program.
- One panel (100 cm wide and 200 cm high) will be provided for each poster. There will be about 32 panels in the exhibition area, Conference Hall No. 5. The presenting author of each poster may select the panel to post his/her poster. Posters should be put on the panels before 12:00 of July 9, removed after 18:00 of July 12. Adhesive tapes will be available in the Service Desk in the exhibition area.
- Poster discussion will be held between 16:00 and 18:00 of July 10. During the period of poster discussion, the presenting author should spend at least 20 minutes in front of his poster panel to answer the possible questions from the participants. The presenting author of each paper should leave a message on their poster panel to inform the participants about the time when you will be in front of your panel to discuss with them.
- The poster awards will be selected by the review committee, and given to excellent poster presentations at the Banquet.

Events by Day

July 8

09:00 ~ 17:30 Registration

18:00 ~ 20:00 Buffet Reception

July 9

08:00 ~ 12:00 Plenary meeting

14:00 ~ 18:00 Parallel session

Characterization of interfaces

Modeling of interfaces

July 10

08:00 ~ 12:00 Parallel session

Characterization of interfaces

Interfaces in metals, ceramics, composites, and organic materials

14:00 ~ 16:00 Parallel session

Thermodynamics and kinetics of interfaces

Properties of interfaces

16:00 ~ 18:00 Posters

18:30 ~ 21:30 Banquet

July 11

08:00 ~ 18:00 Visiting/Workshop

July 12

08:00 ~ 12:00 Parallel session

Interfaces in metals, ceramics, composites, and organic materials

Modeling of interfaces

14:00 ~ 15:30 Oral Presentations

Interfaces in metals, ceramics, composites, and organic materials

16:00 ~ 17:30 Plenary Meeting

Programme Schedule

Morning, July 9 ♦ Room 5

(08:00 ~ 08:10)

Opening Ceremony

Chair: Rong YU (*Tsinghua University, China*)

(08:10 ~ 09:55)

Plenary Lectures

Chair: Rong YU (*Tsinghua University, China*)

- 08:10 (L01) Development of Atomic Resolution Electron Microscopy and Contribution to Grain Boundary Engineering**
Yuichi IKUHARA (*The University of Tokyo, Japan*)
- 08:45 (L02) The Influence of Interface-Dislocation Interactions on Materials' Mechanical Properties**
Qian YU (*Zhejiang University, China*)
- 09:20 (L03) Solute-Drag vs Solute-Acceleration and Disconnections Between Them**
Wayne D. KAPLAN (*Technion – Israel Institute of Technology, Israel*)

(09:55 ~ 10:15)

Take Picture

(10:15 ~ 12:00)

Plenary Lectures

Yuichi IKUHARA (*The University of Tokyo, Japan*)

- 10:15 (L04) Atomic Resolved Imaging of Grain Boundary Phase Transitions in Pure and Alloyed Metallic Thin Films**
Gerhard DEHM (*Max Planck Institut fur Eisenforschung GmbH, Germany*)
- 10:50 (L05) Computing Grain Boundary "Phase" Diagrams and Discovering Electrochemically Induced Grain Boundary Transitions**
Jian LUO (*University of California San Diego, USA*)
- 11:25 (L06) Impact of Electric Fields on Grain Boundary Atomic and Electronic Structures**
Klaus VAN BENTHEM (*University of California, USA*)

Programme Schedule

Oral Presentations

14:00 ~ 15:55, July 9 ♦ Room 5A

Characterization of Interfaces

Chair: Qian YU (*Zhejiang University, China*)

- 14:00 (A01) *In-situ* TEM of Genetic Phase Evolutions in Aluminum Alloys (Keynote)**
Jianghua CHEN (*Hainan University, China*)
- 14:20 (A02) Revealing Grain Boundary Deformation Mechanism at Atomic Level (Keynote)**
Lihua WANG (*Beijing University of Technology, China*)
- 14:40 (A03) Exploring the Relationship Between Grain Boundary Structure and Chemical Composition at the Atomic Level**
Xuyang ZHOU (*Max-Planck-Institut fuer Eisenforschung GmbH, Germany*)
- 14:55 (A04) Atomic-scale Dynamic Observation of Grain Boundary Migration by STEM**
Jiake WEI (*Dalian Institute of Chemical Physics, CAS, China*)
- 15:10 (A05) Segregated Grain Boundary of Soft Magnetic Ferrite**
Zhenhua ZHANG (*Hangzhou Dianzi University, China*)
- 15:25 (A06) Incommensurate Grain-boundary Atomic Structure in Silicon Steel**
Takehito SEKI (*The University of Tokyo, Japan*)
- 15:40 (A07) Hydrogen-Enhanced Decohesion Mechanism of the Interfaces in Ni-Based Alloys**
Shuang HE (*Xiangtan University, China*)
-

Programme Schedule

Oral Presentations

16:05 ~ 17:45, July 9 ♦ Room 5A

Characterization of Interfaces

Chair: Gerhard DEHM (*Max Planck Institut für Eisenforschung GmbH, Germany*)

- 16:05 (A08) The Near Singular Boundaries in BCC and High Stacking Fault Energy FCC metals (Keynote)**
Weiguo WANG (*Fujian University of Technology, China*)
- 16:25 (A09) Atomistic Grain Boundary Segregation Behavior in Oxide Materials Studied Using STEM-EDS (Keynote)**
Bin FENG (*The University of Tokyo, Japan*)
- 16:45 (A10) Optimization of Integrated EBSD-TEM Method and Applied to Al-Al₂O₃ Nucleation Interface Mismatch Characterization**
Zhizhuo WANG (*Shanghai Jiao Tong University, China*)
- 17:00 (A11) Grain Boundary Characterization in Rare Earth Permanent Magnet**
Zhongwei WU (*Tsinghua University, China*)
- 17:15 (A12) Topological Analysis of Grain Boundary Open Space in Bcc Iron via Persistent Homology**
Yongjie ZHANG (*Tohoku University, Japan*)
- 17:30 (A13) Investigation of Second Phase Interface Structures in Super Austenitic Stainless Steel**
Yulin GAO (*Beijing Jiaotong University, China*)
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Programme Schedule

Oral Presentations

14:00 ~ 15:40, July 9 ♦ Room 5B

Modeling of Interfaces

Chair: Wayne D. KAPLAN (*Technion – Israel Institute of Technology, Israel*)

- 14:00 (B01) Multiscale Modelling of Hydrogen-microstructure Interaction (Keynote)**
Vsevolod RAZUMOVSKIY (*Materials Center Leoben Forschung GmbH, Austria*)
- 14:20 (B02) On the Effect of Inclination Dependence of Grain Boundary Energy on Capillary-Driven Grain Boundary Migration (Keynote)**
Dmitri MOLODOV (*RWTH Aachen University, Germany*)
- 14:40 (B03) Interfaces between Mixed Carbonitrides and BCC Iron: a DFT Study on Hydrogen Trapping**
Philipp HAMMER (*Materials Center Leoben Forschung GmbH, Austria*)
- 14:55 (B04) Non-Conserved Migration Mode of Semicohesive Interfaces during Precipitate Growth**
Jin-Yu ZHANG (*Tsinghua University, China*)
- 15:10 (B05) Molecular Dynamics Simulation on Grain Growth Kinetics in Nanocrystalline Materials**
Jian ZHOU (*Soochow University, China*)
- 15:25 (B06) Phase-Field Method of Interface Migration and Microstructure Evolution during the Quenching-Partitioning-Tempering Process in Steels**
Hongqing ZHENG (*Shanghai Jiao Tong University, China*)
-

Programme Schedule

Oral Presentations

16:05 ~ 17:40, July 9 ♦ Room 5B

Modeling of Interfaces

Chair: Jian WANG (*University of Nebraska – Lincoln, USA*)

- 16:05 (B07) Strengthening Grain Boundaries in Ultra-High Temperature Ceramics by Segregation (Keynote)**
Fu-Zhi DAI (*University of Science and Technology Beijing, China*)
- 16:25 (B08) Molecular Dynamics Study of Plasticity in Cu/Ag Nanolayers under Different Stress Fields**
Qinqin XU (*Université de Poitiers, France*)
- 16:40 (B09) Arrangement of Polyhedral Units for Tilt Grain Boundaries**
Kazutoshi INOUE (*Tohoku University, Japan*)
- 16:55 (B10) Molecular Dynamics Simulation of the Migration Behavior of Inter-variant Interfaces and Internal Twin Boundaries under Compressive Stresses in Martensitic NiTi Alloy**
Xiao MA (*South China University of Technology, China*)
- 17:10 (B11) The Strain Energy Analysis of Icosahedral Particles within the Disclination Approach**
Stanislav KRASNITCKII (*ITMO University, Russia*)
- 17:25 (B12) Simulation Methods for Realistic Grain Boundaries in Nanocrystalline Thin Films**
Ankit YADAV (*Czech Academy of Sciences, Czech Republic*)
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Programme Schedule

Oral Presentations

08:00 ~ 09:55, July 10 ♦ Room 5A

Characterization of Interfaces

Chair: Jianghua CHEN (*Hainan University, China*)

- 08:00 (A14) Three-Dimensional and In-situ Observation of Dislocation Boundary Migration in Pure Aluminum (Keynote)**
Zongqiang FENG (*Chongqing University, China*)
- 08:20 (A15) Strong and Ductile Martensite Powered by Periodic Solute Segregation at Variant Boundary (Keynote)**
Dong QIU (*RMIT University, Australia*)
- 08:40 (A16) Cyclic Cantilever Bending Induced Coherent Twin Boundary Migration in Nanowhisker**
Yuanshen QI (*Guangdong Technion - Israel Institute of Technology, China*)
- 08:55 (A17) Unveiling the 5D Grain Boundary Character of Nanostructured Materials through 3D-OMiTEM**
Wanquan ZHU (*Chongqing University, China*)
- 09:10 (A18) Effect of Grain and Phase Boundaries in Hot Corrosion of Structural Metal Alloys**
Hongfei LIU (*Institute of Materials Research and Engineering, Singapore*)
- 09:25 (A19) Three-dimensional Characterization of Twin Boundaries in Alloys via Ptychography**
Jizhe CUI (*Tsinghua University, China*)
- 09:40 (A20) Twinning in Single Crystalline Gold Thin Films Studied by *in-situ* Pole Figure Measurements**
Pierre GODARD (*University of Poitiers, France*)
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Programme Schedule

Oral Presentations

10:05 ~ 11:50, July 10 ♦ Room 5A

Characterization of Interfaces

Chair: Bin FENG (*The University of Tokyo, Japan*)

- 10:05 (A21) High-temperature Internal Friction Peaks in Metals/ceramics Revealed by a Quantitative Electromechanical Impedance Method (Keynote)**
Faxin LI (*Peking University, China*)
- 10:25 (A22) Nanoionics vs Interface Nanoarchitectonics (Keynote)**
Alexandr DESPOTULI (*Russian Academy of Sciences, Russia*)
- 10:45 (A23) Intergranular and Interphase Boundaries in Cathode Materials for Rechargeable Batteries (Keynote)**
Pengfei YAN (*Beijing University of Technology, China*)
- 11:05 (A24) Phase Transition and Ferroelectricity in Two-Dimensional Chalcogenides**
Jiong ZHAO (*The Hong Kong Polytechnic University, China*)
- 11:20 (A25) Atomic-scale in situ Observations of Reversible Phase Transformation Assisted Twinning in a CrCoNi Medium-entropy Alloy**
Shufen CHU (*Shanghai Jiao Tong University, China*)
- 11:35 (A26) Twin Domain and Antiphase Boundaries in κ -Ga₂O₃ Microcrystals**
Sevastian SHAPENKOV (*Saint-Petersburg State University, Russia*)
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Programme Schedule

Oral Presentations

08:00 ~ 09:55, July 10 ♦ Room 5B

Interfaces in Metals, Ceramics, Composites, and Organic Materials

Chair: Hui GU (*Center for High Pressure Science and Technology Advanced Research, China*)

- 08:00 (C01) Atomic Resolution Revealing the Structure-Property Relation in Nitride Multilayer (Keynote)**
Zaoli ZHANG (*Austrian Academy of Sciences, Austria*)
- 08:20 (C02) Chemical Boundary Engineering: a New Route towards Lean, Ultrastrong yet Ductile Steels (Keynote)**
Hao CHEN (*Tsinghua University, China*)
- 08:40 (C03) Atomistic Investigation of Grain Boundary Fracture in Alumina**
Jingyuan YAN (*The University of Tokyo, Japan*)
- 08:55 (C04) Study of the Grain Boundary Structure of MgAlON Transparent Ceramics Based on Lanthanide Ion Fluorescent Structure Probes**
Bowen CHEN (*Wuhan University of Technology, China*)
- 09:10 (C05) Massive Interstitial Solid Solution Medium-Entropy Alloys Achieve Ultrahigh Strength and Large Deformability**
Chang LIU (*Xi'an Jiaotong University, China*)
- 09:25 (C06) Multi-Element Low-Alloying Strategy for Titanium: Breaking the Tradeoff between Oxidation Resistance and Ductility**
Zhang-Zhi SHI (*University of Science and Technology Beijing, China*)
- 09:40 (C07) Low-Cycle Fatigue Behavior of a 316L Stainless Steel Produced by Selective Laser Melting**
Andrey BELYAKOV (*Belgorod State University, Russia*)
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Programme Schedule

Oral Presentations

10:05 ~ 12:00, July 10 ♦ Room 5B

Interfaces in Metals, Ceramics, Composites, and Organic Materials

Chair: Kui DU (*Chinese Academy of Sciences, China*)

- 10:05 (C08) Fundamental Defects associated with Interfaces in Solids (Keynote)**
Jian WANG (*University of Nebraska – Lincoln, USA*)
- 10:25 (C09) Grain Boundary Mobility Control in Zirconia Ceramics (Keynote)**
Yanhao DONG (*Tsinghua University, China*)
- 10:45 (C10) Grain Boundary Design for Superior Multifunctional Properties in Bulk NanoSPD-produced Metals**
Ruslan VALIEV (*Ufa University of Science and Technology, Russia*)
- 11:00 (C11) Interface Evolution and Effect on the Mechanical Properties of Solid State Recycled Aluminum Alloys**
Deliang ZHANG (*Northeastern University, China*)
- 11:15 (C12) Substantially Enhanced Strength and Plasticity via Grain Boundary Amorphous Phases**
Ge WU (*Xi'an Jiaotong University, China*)
- 11:30 (C13) Interfacial Microstructure Optimization of Diamond/Aluminum Composites for High-Performance Thermal Management Applications**
Qiang ZHANG (*Harbin Institute of Technology, China*)
- 11:45 (C14) The Influence of Fe on Grain Boundary Mobility of Alumina**
Xinnian WU (*Guangdong Technion - Israel Institute of Technology, China*)
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Programme Schedule

Oral Presentations

14:00 ~ 15:55, July 10 ♦ Room 5A

Thermodynamics and Kinetics of Interface

Chair: Jian LUO (*University of California San Diego, USA*)

- 14:00 (D01) The Grain Boundary Wetting by The Second Solid Phase in the Iron-Carbon Alloys (Keynote)**
Boris STRAUMAL (*Russian Academy of Sciences, Russia*)
- 14:20 (D02) Surface Free Energy and Phase Transitions on Surface of Solid Solutions: Direct Experimental Measurements (Keynote)**
Sergei ZHEVNENKO (*National University of Science and Technology MISIS, Russia*)
- 14:40 (D03) Wetting, Spreading and Imbibition in Solid Fe – Liquid AgCu Melts System**
Ivan PETROV (*National University of Science and Technology MISIS, Russia*)
- 14:55 (D04) New Insights into the Interfacial Formation Mechanism of the Carbides and Inclusions in Steels**
Tingping HOU (*Wuhan University of Science and Technology, China*)
- 15:10 (D05) Effect of Electric Current Pulses on Twin Boundary Migration in 10M Ni-Mn-Ga**
Qingxing DUAN (*Guangdong Technion-Israel Institute of Technology, China*)
- 15:25 (D06) The Coupled Effect of Surface and Bulk Elasticity on the Morphological Stability of Patterned Bimaterial Interface**
Gleb SHUVALOV (*St. Petersburg State University, Russia*)
- 15:40 (D07) Grain boundary mediated plastic deformation mechanisms in Mg alloys based on disclination-dislocation reactions**
Yipeng GAO (*Jilin University, China*)
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Programme Schedule

Oral Presentations

14:00 ~ 15:55, July 10 ♦ Room 5B

Properties of Interfaces

Chair: Zaoli ZHANG (*Austrian Academy of Sciences, Austria*)

- 14:00 (E01) Intergranular Ductile Fracture in an α -Brass Alloy (Keynote)**
Thierry AUGER (*CNRS, France*)
- 14:20 (E02) Grain Boundary Structure Effect on Phase Precipitation in Nickel-Base Superalloys (Keynote)**
Kui DU (*Chinese Academy of Sciences, China*)
- 14:40 (E03) Bicontinuous Microstructure Formation through Partial Melting**
Zhongyang LI (*Technische Universität Hamburg, Germany*)
- 14:55 (E04) The Impact of Very High Cycle Fatigue on Interface Energy and Failure of Ultrafine Grained Near β Titanium Alloy**
Evgeny NAYDENKIN (*Siberian Branch of the Russian Academy of Sciences, Russia*)
- 15:10 (E05) Interface-controlled Accommodation Mechanisms Induced by Twin-grain Boundary Interactions in Titanium**
Shun XU (*Beijing Institute of Technology, China*)
- 15:25 (E06) The influence of alloying element on stacking fault energy and dislocation in γ -TiAl and deep potential construction of TiAlNb**
Hao WANG (*Shanghai University, China*)
- 15:40 (E07) Atomic Structures of Twin Boundaries in CoO, NiO, and CuO**
Wandong XING (*Fuzhou University, China*)
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Programme Schedule

Oral Presentations

08:00 ~ 09:55, July 12 ♦ Room 5A

Interfaces in Metals, Ceramics, Composites, and Organic Materials

Chair: Yong JIANG (*Central South University, China*)

- 08:00 (C15) Atomic and Electronic Structures of Semiconductor Interfaces (Keynote)**
Chunlin CHEN (*Institute of Metal Research, CAS, China*)
- 08:20 (C16) Interface Enhanced Mechanical Properties and Radiation resistance in Laminated Metallic Composition (Keynote)**
Shijian ZHENG (*Hebei University of Technology, China*)
- 08:40 (C17) Origin of Morphological Variation of Grain Boundary Precipitates in Metallic Alloys**
Rongpei SHI (*Harbin Institute of Technology (Shenzhen), China*)
- 08:55 (C18) Tailoring the Metal Exsolution on Grain Boundary**
Min XU (*Tsinghua University, China*)
- 09:10 (C19) Inoculation of beta-alpha Phase Transformation in Ti**
Qinglong ZHAO (*Jilin University, China*)
- 09:25 (C20) Ultra-uniform, strong, and ductile 3D printed titanium alloy**
Ziyong HOU (*Chongqing University, China*)
- 09:40 (C21) α Precipitation Crystallography on the Boundary of Martensite in Ti-16V-4Sn**
Tong WANG (*University of Science and Technology Beijing, China*)
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Programme Schedule

Oral Presentations

10:00 ~ 11:40, July 12 ♦ Room 5A

Properties of interfaces

Chair: Thierry AUGER (*CNRS, France*)

- 10:00 (E08) Clarification for Interfacial Band Bending of Insulator/Diamond Heterojunction with X-Ray Photoelectron Spectroscopy technique (Keynote)**
Jiangwei LIU (*National Institute for Materials Science, Japan*)
- 10:20 (E09) Anomalous Feature of Grain Growth in Ni-S and Al-Sn Systems (Keynote)**
Sadahiro TSUREKAWA (*Kumamoto University, Japan*)
- 10:40 (E10) Mechanical behavior of grain boundaries and polycrystals of (Ni,Fe)Cr₂O₄ spinel studied by molecular dynamics simulations**
Laurent VAN BRUTZEL (*Paris-Saclay University, CEA, France*)
- 10:55 (E11) Modeling of Efficient Catalysts for H₂S Decomposition**
Andrey KOVALSKII (*Aramco Research Center - Moscow, Russia*)
- 11:10 (E13) Spatially-Resolved Nanoscale Inter- and Intra- Grain Heat Conduction in 3C-SiC**
Omid FARZADIAN (*Nazarbayev University, Kazakhstan*)
- 11:25 (E14) Self-organization Processes and Specific Features of Volume and Boundary Structures of Advanced Superionic Conductors**
Alexandra ANDREEVA (*Russian Academy of Sciences, Russia*)
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Programme Schedule

Oral Presentations

08:00 ~ 09:40, July 12 ♦ Room 5B

Modeling of interfaces

Chair: Dong QIU (RMIT University, Australia)

- 08:00 (B13) Atom-Scale Defect Manipulating of 2D Materials for Boosted Electrocatalytic Properties (Keynote)**
Junjie GUO (*Taiyuan University of Technology, China*)
- 08:20 (B14) Atomistic Mechanism of Grain Boundary Dominated Plasticity in Metallic Materials (Keynote)**
Jiangwei WANG (*Zhejiang University, China*)
- 08:40 (B15) *Ab initio* Study of Cementite – α -Fe Interfaces under Irradiation**
Pablo CANCA-LOPEZ (*University of Granada, Spain*)
- 08:55 (B16) CPFEM for Grain Boundary Hardening Effect**
Yao SHEN (*Shanghai Jiao Tong University, China*)
- 09:10 (B17) Recovery of Thermal Conductivity of Irradiated 3C-SiC in the Presence of Stacking Faults**
Kairolla SEKERBAYEV (*Nazarbayev University, Kazakhstan*)
- 09:25 (B18) Structural Evolution and Mechanical Response of Multiple Al Σ 5(210) Grain Boundaries with Segregation of Solute Atoms**
Liang ZHANG (*Chongqing University, China*)
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Programme Schedule

Oral Presentations

09:50 ~ 11:55, July 12 ♦ Room 5B

Modeling of interfaces

Chair: Junjie GUO (*Taiyuan University of Technology, China*)

- 09:50 (B19) First-principles Construction of Interface Phase Diagram and its Exemplary Application for Materials Design (Keynote)**
Yong JIANG (*Central South University, China*)
- 10:10 (B20) Deformation Induced Martensite Transformation of Heterogeneous Austenite: a Molecular Dynamics Study**
Jun CHAI (*Tsinghua University, China*)
- 10:25 (B21) Coherent Interface Design for Tailoring Surface Microstructures of Copper-based Materials**
Yue LIU (*Shanghai Jiao Tong University, China*)
- 10:40 (B22) Revealing the Deformation Mechanisms of <110> Symmetric Tilt Grain Boundaries in CoCrNi Medium-entropy Alloy**
Qing ZHOU (*Northwestern Polytechnical University, China*)
- 10:55 (B23) On the Role of Interfacial Coherency and Carbon in Niobium Segregation at Ferrite/Austenite Interface: an Atomistic Study**
Haokai DONG (*The University of Hong Kong, China*)
- 11:10 (B24) Atomistic Insights into Nucleation of Ferroelastic Domains in PbTiO₃**
Haowen SUN (*Shanghai Jiao Tong University, China*)
- 11:25 (B25) On the Models of Shear Coupled Migration of Twin Boundaries**
Andrej OSTAPOVEC (*Institute of Physics of Materials CAS, Czech Republic*)
- 11:40 (B26) Twin Boundaries of Three-Dimensional Twins in Hexagonal Metals**
Mingyu GONG (*Shanghai Jiao Tong University, China*)
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Programme Schedule

Oral Presentations

14:00 ~ 15:25, July 12 ♦ Room 5A

Interfaces in Metals, Ceramics, Composites, and Organic Materials

Chair: Boris STRAUMAL (*Russian Academy of Sciences, Russia*)

- 14:00 (C22) Core–Rim Structures as Internal Interface-Induced, Solution Controlled, Local Phase-Transformations for Multiscale Microstructures in Ceramics (Keynote)**
Hui GU (*Center for High Pressure Science and Technology Advanced Research, China*)
- 14:20 (C23) Interface Regulation of Grain Refiners in As-cast Al-Si Alloys and Development of High-Efficiency Grain Refiners and Modifiers (Keynote)**
Qian Li (*Chongqing University, China*)
- 14:40 (C24) Achieving Excellent Strength-Ductility Combination through the Control of Intricate Substructures in an Additively Manufactured Co-Cr-Mo Alloy**
Song NI (*Central South University, China*)
- 14:55 (C25) Hardness Reversal in Severely Deformed Automotive Al-Mg-Si Alloys**
Xiejun HU (*Hunan University, China*)
- 15:10 (C26) *In-situ* HRTEM Investigation of Anomalous Dissolution of GPII Zone Induced by Strain at Precipitate-Matrix Boundary**
Tianshu ZHAO (*Beihang University, China*)
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Programme Schedule

Poster Presentations

1. **(P01) Three-Dimensional Characterization of Dislocation Boundaries in Cold-Rolled Aluminum**
Xiaoyong WU (*Chongqing University, China*)
2. **(P02) Design and Evolution of Heterogeneous Microstructure in Low-Carbon Lath Martensitic Steel**
Yaru WANG (*Chongqing University, China*)
3. **(P03) Investigating Atomic Structures in Silicon Steel Grain Boundaries by STEM Observations and Theoretical Calculations**
Masaki ARAI (*The University of Tokyo, Japan*)
4. **(P04) Atomistic Mechanism of Impurity Diffusion in α -Al₂O₃ Grain Boundary**
Toshihiro FUTAZUKA (*The University of Tokyo, Japan*)
5. **(P05) Atomic Origins and Implications of New Interphase Boundaries in Layered Oxide Cathodes for Lithium-Ion Batteries**
Chunyang WANG (*Institute of Metal Research, CAS, China*)
6. **(P06) Pro-Deformation above Ar₃ Effects on Mobility of Ferrite Boundaries**
Zelin TONG (*Shanghai Jiao Tong University, China*)
7. **(P07) Complementary Nanodomain Structures in Topologically Close-Packed Precipitates of Al-Zn-Mg-Cu Alloy**
Huichao DUAN (*Institute of Metal Research, CAS, China*)
8. **(P08) Nano-Scale ZnO Corrosion Product on a Biodegradable Zn Alloy Matrix**
Meng LI (*University of Science and Technology Beijing, China*)
9. **(P09) Zn Segregation in the Interface of b-Mg₁₇Al₁₂/a-Mg in AZ93 Alloy**
Liya FAN (*Chongqing University, China*)
10. **(P10) Precipitate Evolution During Isothermal Aging of Mg-Ca-Zn Alloy**
Hongwei WANG (*Chongqing University, China*)
11. **(P11) The Thickening Mechanism of T1 Precipitate And Effect of Plastic Deformation on Aging Behavior in Al-Cu-Li Alloy**
J.K. QUAN (*Chongqing University, China*)
12. **(P12) Atomic Segregation at Coherent {10-11} Twin Boundary of Mg-Bi-Zn Alloy**
Jia LIU (*Chongqing University, China*)
13. **(P13) Atomic Study of Solute Segregation at Coherent {10-12} Twin Boundary of Mg-Gd Based Alloys**
Licheng JIA (*Chongqing University, China*)
14. **(P14) Controllable Construction of Graphdiyne-Based Heterojunction Interface and its Hydrogen Production Performance**
Lu QI (*Shandong University, China*)
15. **(P15) The Interface Effect in Crack Nucleation in Titanium Alloy Under Cyclic Loading**
Binbin JIANG (*Institute of Metal Research, CAS, China*)

16. **(P16) Liquid Metal Embrittlement of a Titanium Alloy by Lithium**
Itza Camila HITTNER (*CNRS, France*)
17. **(P17) Strengthening or Softening: on the Role of Off-Stoichiometry in the Mechanical Properties of Zrc via a Machine Learned Interatomic Potential**
Shasha HUANG (*City University of Hong Kong, China*)
18. **(P18) Effect of Recrystallization Annealing on the Corrosion and Mechanical Performance of A 316L-Type Steel Obtained by Selective Laser Melting**
Marina TIKHONOVA (*Belgorod State National Research University, Russia*)
19. **(P19) Grain Boundary Wetting by the Second Solid Phase**
Boris STRAUMAL (*Karlsruhe Institute of Technology, Germany*)
20. **(P20) Mass Transfer in A Powder Medium of Microparticles With a Nanocrystalline Oxide Shell**
Boris STRAUMAL (*Russian Academy of Sciences, Russia*)
21. **(P21) Grain Boundary Wetting Influences the Yield Strength of ZEK100 Mg-Based Alloy**
Boris STRAUMAL (*Russian Academy of Sciences, Russia*)
22. **(P22) The "Wetting" of Ferrite Grain Boundaries in Crofer 22H Alloy by the Laves Phase**
Boris STRAUMAL (*Russian Academy of Sciences, Russia*)
23. **(P23) Growth Twins in Aluminum Alloys by Laser Surface Remelting**
Chunfeng MA (*Jilin University, China*)
24. **(P24) Tuning The Interfacial Networks of Cu-Zro₂ Composite Nanoglass Film to Achieve High Electrical Conductivity**
Panmei LIU (*Tianjin University, China*)
25. **(P25) Dislocation-Induced Stop-and-Go Kinetics of Interfacial Transformation**
Xianhu SUN (*Chinese Academy of Sciences, China*)
26. **(P26) Hydrogen Embrittlement of Precipitation Hardened Ni-Based Alloys: an Ab Initio Study**
Nina DAMM (*Materials Center Leoben Forschung GmbH, Germany*)
27. **(P27) Study on the Martensite Transformation Crystallography in Ni₂MnGa Alloy Based on Interfacial Defect Analysis**
Zhaozhao WEI (*Wuyi University, China*)
28. **(P28) Three-Dimensional Atomic Structure of Y-Segregated Grain Boundaries in α -Al₂O₃: a Neural-Network Potential and DFT Calculation**
Tatsuya YOKOI (*Nagoya University, Japan*)
29. **(P29) The Study of Nanodiamonds Applied in Adaptive-Propagator Ptychography**
Yifan LIU (*University of Science and Technology Beijing, China*)
30. **(P30) The Structure of an Al-Co-Ni Decagonal Quasicrystal in an Al₇₂Co₈Ni₂₀ Alloy Studied by Adaptive Propagator Ptychography**
Yibo LIANG (*University of Science and Technology Beijing, China*)
31. **(P31) Molecular Dynamics Simulation of the Deformation and Microstructure Evolution of the Lamellar Structure in TiAl Alloy**
Mengli WANG (*Institute of Metal Research, CAS, China*)