



ISNT2017 & ISSNOX5 Program

| Aug. 27 Sunday | Aug. 28 Monday | | Aug. 29 Tuesday | | Aug. 30 Wednesday | |
|---------------------------------|---------------------------|---------------------------|--|---------------------------|--|----------------------------|
| | Room A | Room B | Room A | Room B | Room A | Room B |
| | Session A1 8:45~10:30 | | Session A5 8:45~10:30 | Session B5 8:45~10:30 | Session A9 8:45~10:30 | Session B9 8:45~10:30 |
| | Coffee Break | | | | | |
| | Session A2 11:00~12:30 | | Session A6 11:00~12:30 | Session B6 11:00~12:30 | Session A10 11:00~12:30 | Session B10 11:00~12:30 |
| | Lunch Break 12:30~14:00 | | | | | |
| | Session A3 14:00~15:45 | Session B3 14:00~15:45 | Session A7 14:00~15:30 | Session B7 14:00~15:30 | Session A11 14:00~16:15 | |
| | Coffee Break | | | | | |
| Registration 15:00~19:00 | Session A4 16:15~18:00 | Session B4 16:15~18:00 | Session A8 16:00~17:00 | Session B8 16:00~17:00 | | |
| Welcome Party 17:00~19:00 | | | Poster Session – Room C (1F) – 17:00~19:00 | | Conference Banquet, HOTEL MYSTAYS-Sapporo Aspen, 18:00~20:00 | |

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| | Aug. 31, Thursday | Sept. 1, Friday | |
| | Workshop for Advanced Nitrides & Oxynitrides, in <i>Noboribetsu</i> | | |
| Invited Lecture : 30 min Oral Presentation : 15 min (Including both presentation and discussion) Poster board size : W86 mm X H176 mm (A0 size is recommended.) | | | |

August 27 (Sunday)

- 15:00~19:00 Registration: Lobby (Frontier Research in Applied Science Building in Hokkaido Univ.)
17:00~19:00 Welcome Party: Restaurant Elm (Faculty House "Trillium" in Hokkaido Univ.)
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August 28 (Monday)

- 8:45~9:00 Opening Remark, **Shinichi Kikkawa** (Conference Chair)

Session A1 : Future View of Nitrides & Non-Oxides I

- Chairperson : Shinichi Kikkawa, Tatsuki Ohji**
- 9:00~9:30 A1-IL1 **Isao Tanaka**, Kyoto University, Japan
Materials Discovery Through Machine Learning Process
- 9:30~10:00 A1-IL2 **Young-Wook Kim**, University of Seoul, Korea
Electrically Conductive Liquid-Phase Sintered Silicon Carbide Ceramics
- 10:00~10:30 A1-IL3 **Mrityunjay Singh**, Ohio Aerospace Institute, USA
Additive Manufacturing: A Flexible and Disruptive Manufacturing
- 10:30~11:00 **Coffee Break**

Session A2 : Future View of Nitrides & Non-Oxides II

- Chairperson : Tatsuki Ohji, Shinichi Kikkawa**
- 11:00~11:30 A2-IL1 **Yuichi Ikuhara**, The University of Tokyo, Japan
Grain Boundary and Interface Atomic Structures of Nitrides and Oxides
- 11:30~12:00 A2-IL2 **Walter Lengauer**, Vienna University of Technology, Austria
Titanium Carbonitride-Based Cermets: A Review on Material Developments, Performance and Applications
- 12:00~12:30 A2-IL3 **Shinichi Kikkawa**, Hokkaido University, Japan
Change of Magnetic Coercivity in α -Fe₁₆N₂ Like Nitride
- 12:30~14:00 **Lunch** (Univ. COOP north-restaurant)

Session A3 : Functional Nitrides for Energy & Environment I – Energy Materials

- Chairperson : Yuichi Ikuhara and Hajime Kiyono**
- 14:00~14:30 A3-IL1 **-canceled-**
- 14:30~14:45 A3-O1 **Hajime Kiyono**, Shibaura Institute of Technology, Japan
Kinetics and Mechanism on Ammonia Nitridation of Oxides by Thermogravimetric Measurements and Microstructural Observations
- 14:45~15:00 A3-O2 **Ken Sakaushi**, National Institute for Materials Science, Japan
Highly Efficient Energy Conversion Reactions of Carbon-, Nitrogen-based Frameworks

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| 15:00~15:15 | A3-O3 | -canceled- |
| 15:15~15:30 | A3-O4 | Takahiro Kozawa , Osaka University, Japan Role of Carbon Nanoparticles in Mechanical Synthesis of Cathode Materials for Li-ion Batteries |
| 15:30~15:45 | A3-O5 | Dragoljub Vrankovic , Technische Universität Darmstadt, Germany SiCN Ceramics with Tailored Porosity for Stable and Reversible Li-Ion Storage |
| 15:45~16:15 | | Coffee Break |

Session A4 : Functional Nitride for Energy & Environment II – Nitride Phosphors

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| | | Chairperson : Rong-Jun Xie and Zoltan Lences |
| 16:15~16:45 | A4-IL1 | Rong-Jun Xie , National Institute for Materials Science, Japan Luminescent Nitride Ceramics for Solid State Laser Lighting |
| 16:45~17:15 | A4-IL2 | LiangJun Yin , University of Electronic Science and Technology of China, China Composition-Structure-Property Relationships for Eu-doped AlN-based Phosphors: a Review |
| 17:15~17:30 | A4-O1 | Zoltan Lences , Slovak Academy of Sciences, Slovakia Luminescent Properties of Lanthanide Oxide and Fluoride Doped LaSi ₃ N ₅ Phosphors |
| 17:30~17:45 | A4-O2 | Fumitaka Yoshimura , Mitsubishi Chemical Group, Science and Technology Research Center, Inc., Japan Synthesis, Crystal Structure and Luminescence Properties of a New Polymorph SrAlSi ₄ N ₇ :Eu ²⁺ |
| 17:45~18:00 | A4-O3 | Takuma Takahashi , Kanagawa Academy of Science and Technology, Japan Fabrication of Translucent CaAlSiN ₃ :Eu ²⁺ Bulk Ceramics using a Spark Plasma Sintering Technique |

Session B3 : Engineering Materials – Composite & Ceramics of Nitrides

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| | | Chairperson : Mathias Herrmann and Hui Gu |
| 14:00~14:30 | B3-IL1 | Mathias Herrmann , Fraunhofer-IKTS, Germany Diamond, cBN Reinforced Ceramic Materials: Potential Wear Resistant Components |
| 14:30~15:00 | B3-IL2 | Tatsuki Ohji , National Institute of Advanced Industrial Science and Technology, Japan Additive Manufacturing of Ceramic Components |
| 15:00~15:15 | B3-O1 | Eveline Zschippang , Fraunhofer-IKTS, Germany Preparation and Characterization of Diamond/RBSN and cBN/RBSN Composites |
| 15:15~15:30 | B3-O2 | Dowon Song , Hanyang University, Korea Crack Propagation Behavior in Thermal Barrier Coatings with Self-Healing Agent |

15:30~15:45 B3-O3 **Hui Gu**, Shanghai University, China
From Oxynitride, Nitrocarbide, to Carboboride Ceramics: Multi-Levelled
Microstructures to Dictate Multi-phase Relationship

15:45~16:15 Coffee Break

Session B4 : Coating & Thin Films

Chairperson : Takashi Goto and Jingyang Wang

16:15~16:45 B4-IL1 **Takashi Goto**, Tohoku University, Japan
Preparation of SiAlON Films by Laser Chemical Vapor Deposition

16:45~17:15 B4-IL2 **Jingyang Wang**, Shenyang National Laboratory for Materials Science,
China
Integrated Carbides Coating for Accident Tolerant Zircaloy Fuel Cladding

17:15~17:30 B4-O1 **Sung-Min Lee**, Korea Institute of Ceramic Engineering and Technology,
Korea
Fabrication of Plasma Resistant Yttrium Oxyfluoride Coatings Through
Suspension Plasma Spray

17:30~17:45 B4-O2 **Yanling Cheng**, Guangdong University of Technology, China
Epitaxial Growth of Aluminium Nitride Film by a Urea Glass Route

17:45~18:00 B4-O3 **Anongsack Paseuth**, Hokkaido University, Japan
Thermal Stability of Al-Rich c-Al_xTi_{1-x}N Coatings Prepared by LP-CVD

August 29 (Tuesday)

Sessions in Room A – “Oxynitride Sessions” supported by “Mixed Anion Project” in MEXT Session A5 : Novel Oxynitride & Synthesis Advances I

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| | | Chairperson : Amparo Fuertes and Takafumi Yamamoto |
| 8:45~9:15 | A5-IL1 | Amparo Fuertes , ICMA-B-CSIC, Spain New Developments in the Chemistry of Oxynitride Materials |
| 9:15~9:45 | A5-IL2 | Hiroshi Kageyama , Kyoto University, Japan Transition Metal Oxynitride Perovskite |
| 9:45~10:00 | A5-O1 | Emanuel Ionescu , Technische Universität Darmstadt, Germany Formability Prediction and Synthesis Methods of Perovskite-type Metal Oxynitrides |
| 10:00~10:15 | A5-O2 | Takafumi Yamamoto , Kyoto University, Japan Low Temperature Synthesis of Oxynitrides by a Labile Hydride Strategy |
| 10:15~10:30 | A5-O3 | Akira Hosono , Hokkaido University, Japan Flux Growth of $\text{Sr}_{1-x}\text{Ba}_x\text{TaO}_2\text{N}$ ($x=0.05\sim 0.25$) Oxynitride |
| 10:30~11:00 | | Coffee Break |

Session A6 : Functional Nitrides for Energy and Environment IV – Oxynitride Phosphors

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| | | Chairperson : Qian Liu and Tetsuo Uchikoshi |
| 11:00~11:15 | A6-O1 | Barbara Justyna Adamczyk , Silesian University of Technology, Poland Influence of Phase Purity on Photoluminescence Properties of Strontium Oxynitride Phosphor Doped with Eu^{2+} Ions |
| 11:15~11:30 | A6-O2 | Yuuki Kitagawa , Kyoto University, Japan Construction of Vacuum Referred Binding Energy Diagram in YSiO_2N Doped with Lanthanide Ions for Persistent Luminescence |
| 11:30~11:45 | A6-O3 | Qian Liu , Chinese Academy of Sciences, China Oxynitride Phosphors: Novel Synthesis, Transition Metal Ion Doping, Luminescent Properties |
| 11:45~12:00 | A6-O4 | Tetsuo Uchikoshi , National Institute for Materials Science, Japan Surface Modification of $\text{Ca-}\alpha\text{-SiAlON:Eu}^{2+}$ Phosphor Particles for Obtaining Dense, Homogeneous Layer by Electrophoretic Deposition Process |
| 12:00~12:15 | A6-O5 | Yuwaraj Khatri Kshetri , Sun Moon University, Korea Infrared to Visible Upconversion in $\alpha\text{-Sialon}$ and First Principles Study of Electronic Properties of $\text{Er}^{3+}\text{-}\alpha\text{-Sialon}$ |
| 12:15~12:30 | A6-O6 | Junichi Tatami , Yokohama National University, Japan Fabrication of Transparent and Fluorescent $\text{Ca-}\alpha\text{-SiAlON:Eu}$ Bulk Ceramics |
| 12:30~14:00 | | Lunch (Univ. COOP north-restaurant) |

Session A7 : Novel (Oxy)Nitrides & Synthesis Advances I

Chairperson : Richard Dronskowski and Laurent Le Gendre

- 14:00~14:30 A7-IL1 **Richard Dronskowski**, RWTH Aachen University, Germany
Itinerant Nitrides and Salt-Like Guanidinates – The Diversity of Solid-State Nitrogen Chemistry
- 14:30~14:45 A7-O1 **Cedric Tassel**, Kyoto University, Japan
Novel LiNbO₃-type Oxynitride Perovskites Prepared via High Pressure
- 14:45~15:00 A7-O2 **Fumitaka Takeiri**, Kyoto University, Japan
Topochemical Reactions to Reach (O²⁻, H⁻, N³⁻) Anion-Ternary Compounds
- 15:00~15:15 A7-O3 **Laurent Le Gendre**, Université de Rennes 1, France
Microwave and Radio-Frequency Dielectric Properties of Oxynitride Perovskite Thin Films
- 15:15~15:30 A7-O4 **Kumiko Yamazaki**, TDK Co. Ltd., Japan
SrTaO_xN_y (x>2, y<1) Polycrystalline Thin Film of Low tan δ and High Permittivity
- 15:30~16:00 **Coffee Break**

Session A8 : Novel Oxynitrides & Synthesis Advances III

Chairperson : Tanguy Rouxel and Toshihiro Moriga

- 16:00~16:30 A8-IL1 **Tanguy Rouxel**, Université de Rennes 1, France
Mechanical Properties of Silicon Oxynitride Glasses: What Makes Them Different from Other Glasses?
- 16:30~16:45 A8-O1 **Toshihiro Moriga**, Tokushima University, Japan
Eco-friendly Preparation of Sr₂TaO₃N from Stoichiometrically-different Oxide Precursor
- 16:45~17:00 A8-O2 **Yuji Masubuchi**, Hokkaido University, Japan
Synthesis of SrTaO₂N Oxynitride by using Carbon Nitride as a Nitrogen Source

17:00~19:00 Poster Session – Room C (1F) –

Session B5 : Functional Nitrides for Energy & Environment III – Thermal Property

Chairperson : Kiyoshi Hirao and Jingxian Zhang

- 8:45~9:15 B5-IL1 **Hideki Hirotsuru**, Denka Co., Ltd., Japan
Technical Trend of a Ceramics Substrate for Power Module
- 9:15~9:45 B5-IL2 **Kiyoshi Hirao**, National Institute of Advanced Industrial Science and Technology, Japan
Assessment of Thermal Fatigue During High Temperature Cycling of AlN/Cu and Si₃N₄/Cu Metalized Substrates

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| 9:45~10:00 | B5-O1 | Jingxian Zhang , Shanghai Institute of Ceramics, China Low Temperature Sintering of Si ₃ N ₄ for Potential Use as Circuit Substrate of Power Device |
| 10:00~10:15 | B5-O2 | You Zhou , National Institute of Advanced Industrial Science and Technology, Japan Effects of Sintering Additives on Thermal Conductivity of Sintered Reaction-bonded Silicon Nitride Ceramics |
| 10:15~10:30 | B5-O3 | Ji-Xuan Liu , Donghua University, China Reactive Hot-pressed ZrB ₂ -SiC-BN Ceramics with Improved Thermal Shock Resistance |
| 10:30~11:00 | | Coffee Break |

Session B6 : Engineering Materials – Silicon Nitrides & Carbides

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| | | Chairperson : Martin Schwentenwein and Tohru S. Suzuki |
| 11:00~11:15 | B6-O1 | Martin Schwentenwein , Lithoz GmbH, Austria Lithographic Additive Manufacturing of SiAlON Systems |
| 11:15~11:30 | B6-O2 | Xuemei Yi , Northwest A&F University, China Combustion Synthesis and Spark Plasma Sintering of (Y,Ca)- α -SiAlONs |
| 11:30~11:45 | B6-O3 | Young-Jo Park , Korea Institute of Materials Science, Korea The Fabrication of β -SiAlONs not by the Reaction Sintering |
| 11:45~12:00 | B6-O4 | Motoyuki Iijima , Yokohama National University, Japan PEI-Fatty Acid Complex as Surface Modifier for Processing Si ₃ N ₄ Ceramics from Non-Aqueous Multi-component Slurries |
| 12:00~12:15 | B6-O5 | Tohru S. Suzuki , National Institute for Materials Science, Japan Tailoring the Microstructure in SiC by Magnetic Field |
| 12:15~12:30 | B6-O6 | Mariko Sado , Yokohama National University, Japan Improvement in Thermal Conductivity of Si ₃ N ₄ Ceramics Through a Low Magnetic Field Orientation Technique |
| 12:30~14:00 | | Lunch (Univ. COOP north-restaurant) |

Session B7 : Engineering Materials – Nitrides & Carbides

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| | | Chairperson : Yoshio Sakka and Rolf J. Waesche |
| 14:00~14:30 | B7-IL1 | Yoshio Sakka , National Institute for Materials Science, Japan Fabrication and Some Properties of MAX Phase Ceramics |
| 14:30~15:00 | B7-IL2 | Yanchun Zhou , Aerospace Research Institute of Materials and Processing Technology, China Damage Tolerant Ceramics with Nanolaminated Structures: from MAX Phases to MAB Phases |
| 15:00~15:15 | B7-O1 | Rolf J. Waesche , Federal Institute for Materials Research and Testing (BAM), Germany Colloidal Processing of Niobium Carbide Cermets with Ni Binder |

15:15~15:30 B7-O2 **Ayuka Matsugami**, Yokohama National University, Japan
Control of Wear Behavior of AlN Ceramics using a Tribo-chemical Reaction

15:30~16:00 **Coffee Break**

Session B8 : Polymer Derived Materials I – Boron Nitrides

Chairperson : Philippe Miele and Yoshiyuki Sugahara

16:00~16:30 B8-IL1 **Philippe Miele**, Université de Montpellier, France
Boron Nitride Based Nanostructured Materials for Energy, Environmental and Health Applications

16:30~16:45 B8-O1 **Yoshiyuki Sugahara**, Waseda University, Japan
Preparation of Amorphous Solids from Precursors and Their Applications to High Pressure Synthesis of Cubic Boron Nitride

16:45~17:00 B8-O2 **Samuel Bernard**, Université Montpellier 2, France
Highly Crystallized Precursor-derived Boron Nitride

17:00~19:00 Poster Session – Room C (1F) –

- P1 **Dai Kusano**, Japan Fine Ceramics Co., Ltd., Japan
Development of High Thermal Conductivity Silicon Nitride Substrates for Power Semiconductor Applications
- P2 **Yuki Tokunaga**, Tokyo Institute of Technology, Japan
Visible-light-response of Layered Titanium Niobates Doped with Nitrogen
- P3 **Laurent Le Gendre**, Université de Rennes 1, France
A Combined Experimental and Theoretical Study of the Photophysical Performance of SrTaO₂N Thin Films
- P4 **Laurent Le Gendre**, Université de Rennes 1, France
Study of the Post-nitridation of Dielectric Strontium and Tantalum Based Oxide and Oxynitride Thin Films
- P5 **Yasushi Sato**, Okayama University of Science, Japan
Photoluminescence Properties of Pr³⁺-activated CaZr_xTa_{1-x}O_{2+x}N_{1-x}
- P6 **Hisanori Yamane**, Tohoku University, Japan
New Nitride Phosphors Containing Boron, Sr₃BaAl₅Si₉N₂₀:Eu and Ba₅B₂Al₄Si₃₂N₅₂:Eu
- P7 **Ryo Ishikawa**, The University of Tokyo, Japan
Atomic Structures of Luminescent Centres in Nitrides
- P8 **Genki Saito**, Hokkaido University, Japan
Dopant Distribution Analysis of Eu-doped Ca-α-SiAlON via HAADF-STEM Imaging
- P9 **Takuya Yasunaga**, Tohoku University, Japan
Synthesis of a Novel Oxynitride BaYSi₂O₅N and its Photoluminescence Property
- P10 **Sayaka Nishitani**, Hokkaido University, Japan
Novel BaCN₂ Prepared by Ammonolysis of BaCO₃ and Its Application in Red Emitting Phosphor
- P11 **Tomoya Inagaki**, Nagoya University, Japan
High Pressure-High Temperature Synthesis of Novel Tin Nitride

- P12 **Yuka Kuboki**, Shibaura Institute of Technology, Japan
Growth of GaN Crystals by Ammonia Nitridation of Ga₂O₃ Powder using a Vessel with Gas Permeable Plate
- P13 **Shu Yin**, Tohoku University, Japan
Low Temperature Nitridation of In₂O₃ using Sodium Amide
- P14 **Shi-Kuan Sun**, University of Sheffield, UK
Direct Synthesis of SrTaO₂N Powder from SrCO₃/TaN
- P15 **Qiang Liu**, Harbin Institute of Technology, China
Fabrication of Stable Si₂N₂O from Amorphous Nano-Sized Si₃N₄ Powders Surface Modified by a Chemical Route
- P16 **Kenta Hasegawa**, Yokohama National University, Japan
Shaping Process Through In-situ Solidification of Non-aqueous Dense Slurry by Michael Additive Reaction using Multifunctional Acrylates
- P17 **Satoshi Suehiro**, Japan Fine Ceramic Center, Japan
Reaction Sintering of Silicon Carbide using Nd:YAG Laser
- P18 **Soo-Hyeik Jeon**, Changwon National University, Korea
Dispersibility of Modified Carbon Nanotubes (CNTs) in Porous Alumina Composites
- P19 **Yuki Sagawa**, Hokkaido University, Japan
Precipitation Behaviour of TiN from Amorphous Ti Doped Silica Prepared by the Hydrolysis Reaction of Alkoxides
- P20 **Fumika Sakamoto**, Yokohama National University, Japan
Fabrication of Oriented h-BN/Epoxy Resin Composites by Applying a Low Magnetic Field using Multi-layered-graphene-coated Platelets
- P21 **Lung-Hao Hu**, Southern Taiwan University of Science and Technology, Taiwan
Organic Polysilazane Pre-ceramic-precursor for 3D Ceramic Inkjet Printing
- P22 **Masaki Kakiage**, Shinshu University, Japan
Effects of Starting Materials on Morphology of Calcium Hexaboride Powder Synthesized from Condensed Boric Acid-Polyol Product
- P23 **Atsushi Uga**, Yokohama National University, Japan
Fabrication of Porous TiN Structures from TiO₂ Colloids using Polymer Monolith as a Template
- P24 **Koji Mizutani**, Nagoya Institute of Technology, Japan
Hydrogen Absorbing Properties of Polymer-derived Amorphous SiAlCN
- P25 **Daiki Hamana**, Nagoya Institute of Technology, Japan
Chemical Formation of β-SiAlON:Eu²⁺ Phosphors from Single Source Precursors
- P26 **Yuke Shi**, Sungkyunkwan University, Korea
Long-Time Oxidation of Ti₃(Al,Si)C₂ Carbides at 400-800 °C
- P27 **Yeon-Gil Jung**, Changwon National University, Korea
Finite Element Modeling of Mechanical Properties of WC-Co Composite
- P28 **Yumi Imoto**, Yokohama National University, Japan
Relationship Between Strengths of a Neck and a Bulk Body of Porous SiC

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- P29 **Youngseok Kim**, INOCERA inc., Korea
The Study on Process Variables of SiC Radiant Tube Including In-situ Joining
- P30 **Xiumin Yao**, Chinese Academy of Science, China
Dry Friction-wear Mechanism and Properties of Silicon Carbide Ceramics
- P31 **Kui Hu**, Tokushima University, Japan
Synthesis and Characterization of Rocksalt-type Oxynitride $\text{LiTi}_2(\text{O,N})_z$ ($z \sim 4$) as an Electrode Material
- P32 **Akira Miura**, Hokkaido University, Japan
Hexane-Assisted Synthesis of BaNbO_2N
- P33 **Xin Xu**, University of Science and Technology of China, China
A Novel Polymer Derived Hydrophobic Layer on Silicon Nitride-based Ceramic Membrane for Water Desalination

August 30 (Wednesday)

Session A9 : Functional (Oxy)Nitrides for Energy & Environment V – Photocatalyst – “Oxynitride Session” supported by “Mixed Anion Project” in MEXT

Chairperson : Kazuhiko Maeda and Xuehua Yan

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| 8:45~9:15 | A9-IL1 | Kazuhiko Maeda , Tokyo Institute of Technology, Japan Photocatalytic Water Splitting and CO ₂ Fixation Using Oxynitrides and Nitrides |
| 9:15~9:30 | A9-O1 | Wenjea J. Tseng , National Chung Hsing University, Taiwan Nitrogen-Doped TiO ₂ Mesoporous Composite Particles with Enclosed Fe ₃ O ₄ /Ag for Magnetically Active Photocatalysis and Bactericide |
| 9:30~9:45 | A9-O2 | Takayoshi Oshima , Tokyo Institute of Technology, Japan Synthesis of Layered Oxynitride Li ₂ LaTa ₂ O ₆ N and the Photocatalytic Performance for H ₂ Evolution and CO ₂ Reduction |
| 9:45~10:00 | A9-O3 | Xuehua Yan , Jiangsu University, China A Simple and Effective Method for Preparing Novel Visible-light-driven CeVO ₄ /Graphitic C ₃ N ₄ Photocatalysts and Their Enhanced Photocatalytic Performances |
| 10:00~10:15 | A9-O4 | Kanemichi Muraoka , Tokyo Institute of Technology, Japan Synthesis of Ta ₃ N ₅ Photocatalysts for Visible Light CO ₂ Reduction with the Aid of a Ru(II) Binuclear Complex |
| 10:15~10:30 | A9-O5 | Ryo Kuriki , Tokyo Institute of Technology, Japan Visible-Light Photocatalytic CO ₂ Reduction Using Hybrids Constructed with Carbon Nitride and Metal Complexes |
| 10:30~11:00 | | Coffee Break |

Session A10 : Mechanical Properties of Silicon (Oxy)Nitrides

Chairperson : Hua-Tay Lin and Manshi Ohyanagi

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| 11:00~11:30 | A10-IL1 | Hua-Tay Lin , Guangdong University of Technology, China Innovative Processing of Silicon Nitride Ceramics for Industrial Applications |
| 11:30~12:00 | A10-IL2 | Oskar Schöppl , SKF Österreich AG, Austria Rolling Contact Response of Silicon Nitride / Silicon Materials |
| 12:00~12:15 | A10-O1 | Seongwon Kim , Korea Institute of Ceramic Engineering and Technology, Korea Effect of Sintering Condition and Additive on Microstructure and Physical Property of SiAlON Ceramics |
| 12:15~12:30 | A10-O2 | Manshi Ohyanagi , Ryukoku University, Japan Spark Plasma Sintering of Silicon Nitride with Transformation without Additive |
| 12:30~14:00 | | Lunch (Univ. COOP north-restaurant) |

Session A11 : Mechanical Properties of Non-Oxides

Chairperson : Pavol Sajgalik and Junichi Tatami

- 14:00~14:30 A11-IL1 **Guo-Jun Zhang**, Donghua University, China
High-Temperature Strength of Diboride-based Ultra-High Temperature Ceramics
- 14:30~15:00 A11-IL2 **Dongliang Jiang**, Chinese Academy of Sciences, China
Research on the Properties of Graphene Doped Silicon Carbide Ceramic
- 15:00~15:15 A11-O1 **Byung-Koog Jang**, National Institute for Materials Science, Japan
Thermo-Chemical Properties of Y_2SiO_5 EBC on SiC Ceramics
- 15:15~15:45 A11-IL3 **Takashi Taniguchi**, National Institute for Materials Science, Japan
Impurity Control of Polymorphic Phase of Boron Nitride to Realize Their Potentials as Super-Hard and Wide-bandgap Materials
- 15:45~16:15 A11-IL4 **Pavol Sajgalik**, Slovak Academy of Sciences, Slovakia
GB Chemistry of Silicon Nitride Based Ceramics – Implications to the Ceramics Properties
- 16:15~16:45 Closing Remark, **Junichi Tatami** (Conference Chair)
Presentation Awards for Students

Session B9 : Polymer-Derived Materials II – Silicon Nitrides & Carbides

Chairperson : Samuel Bernard and Yuji Iwamoto

- 8:45~9:15 B9-IL1 **Ralf Riedel**, Technische Universität Darmstadt, Germany
Single-Source Precursor Synthesis and Properties of Ternary Nitrides in the System Si-M-N (M = Hf, V, Fe)
- 9:15~9:30 B9-O1 **Samuel Bernard**, Universite Montpellier 2, France
From Design to Application of Nanocomposites Derived from Transition Metal SilicoNitrides
- 9:30~10:00 B9-IL2 **Zhaoju Yu**, Xiamen University, China
SiCN-Based Nanocomposites: Synthesis, Microstructure and Electromagnetic Performance
- 10:00~10:15 B9-O2 **Yuji Iwamoto**, Nagoya Institute of Technology, Japan
Hydrogen Absorbing Properties of Amorphous SiAlCN Derived from Al-Modified Polysilylcarbodiimides
- 10:15~10:30 B9-O3 **Masaki Narisawa**, Osaka Prefecture University, Japan
Synthesis and Properties of Silicon Oxycarbides Derived from Cross-linked Organosilicon Precursor
- 10:30~11:00 **Coffee Break**

Session B10 : High Pressure & Related Materials

Chairperson : Ralf Riedel and Ken Niwa

- 11:00~11:15 B10-O1 **Akira Yoshiasa**, Kumamoto University, Japan
High Pressure Phases of Boron Nitride and Crystal Chemistry of Wurtzite-Type Nitrides
- 11:15~11:30 B10-O2 **Hitoshi Yusa**, National Institute for Materials Science, Japan
High-Pressure Syntheses and Compression Measurements of 5d Transition Metal Nitrides
- 11:30~11:45 B10-O3 **Norimasa Nishiyama**, Tokyo Institute of Technology, Japan
Transparent Polycrystalline Silicon Nitride with Spinel Structure
- 11:45~12:00 B10-O4 **Ken Niwa**, Nagoya University, Japan
High Pressure Synthesis of Pyrite-type Group 14 Nitrides
- 12:00~12:15 B10-O5 **Fumio Kawamura**, National Institute for Materials Science, Japan
High-Pressure Synthesis and Properties on Pseudo-III-V Nitride of ZnSnN₂ Crystals
- 12:15~12:30 B10-O6 **Masashi Hasegawa**, Nagoya University, Japan
High Pressure Synthesis and Physical Properties of Novel Anti-perovskite-type Nitrides M₃GaN (M=Co,Ni,Cu)

12:30~14:00 **Lunch** (Univ. COOP north-restaurant)

18:00~20:00 **Conference Banquet**
HOTEL MYSTAYS – Sapporo Aspen –