



Symposium 1

Symposium 1: Advanced Structure Analysis and Characterization of Ceramic Materials

Main Organizers

- Masatomo Yashima, Tokyo Institute of Technology, Japan
- Scott T. Misture, Alfred University, USA

Co-Organizers

- Xiaolong Chen, Institute of Physics, CAS, China
- Takashi Ida, Nagoya Institute of Technology, Japan
- Isao Tanaka, Kyoto University, Japan

Oral Session

Tuesday, November 16

Room: 1201

9:00 - 10:30: Nano and Micro Structures: from Nanowire to Sintering

Chairs: Scott Misture (Alfred University, USA) and Fumihiro Wakai (Tokyo Institute of Technology, Japan)

9:00 - 9:30

S1-001 The Mechanism of Catalyzed Nanowire Growth (Invited)

M. Kirrham, Z. L. Wang, R. L. Snyder; Georgia Institute of Technology, USA

9:30 - 9:45

S1-002 Three-Dimensional Computer Simulation of Time-Dependent Skeletal Structure Evolution

Z. S. Nikolic¹, M. M. Ristic², K. Shinagawa³; ¹University of Nish, Serbia, ²Serbian Academy of Sciences and Arts, Serbia, ³Kagawa University, Japan

9:45 - 10:00

S1-003 Computer Study of Liquid Phase Sintering – Three-Dimensional Time Dependent Rearrangement

Z. S. Nikolic¹, F. Wakai²; ¹University of Nish, Serbia, ²Tokyo Institute of Technology, Japan

10:00 - 10:15

S1-004 Three-Dimensional Quantification of Mesopore Networks in Ceramics

A. Suzuki, R. Miura, H. Tsuboi, N. Hatakeyama, A. Endou, H. Takaba, A. Miyamoto; Tohoku University, Japan

10:15 - 10:30

S1-005 Sintering of Laser-Fused Microspheres in the System Al₂O₃-Y₂O₃-ZrO₂

C. Oelgardt, J. G. Heinrich; Clausthal University of Technology, Germany

10:30 - 10:45 Break

10:45 - 11:30: Structure Aspects under Compression and High Pressure

Chairs: Isao Tanaka (Kyoto University, Japan) and Nigel Marks (Curtin University, Australia)

10:45 - 11:15

S1-006 Mechanism of Amorphization in Boron Carbide (B₄C) Under Uniaxial Compression (Invited)

W.-Y. Ching, S. Aryal; University of Missouri-Kansas City, USA

11:15 - 11:30

S1-007 Crystal Structure of Yttria and Scandia Under Isothermal Pressure

I. Halevy^{1,2}, S. Barzilai^{2,3}, M. L. Winterrose¹, S. Ghose⁴, E. Tiferet², O. Yeheskel²; ¹California Institute of Technology, USA, ²Nuclear Research Centre - Negev, Israel, ³Ben-Gurion University, Israel, ⁴Brookhaven National Laboratory NSLS, USA

Symposium 1

14:30 - 16:00: Magnetic, Crystal and Micro-Structures

Chairs: Xiaolong Chen (The Institute of Physics, China) and Takashi Ida (Nagoya Institute of Technology, Japan)

14:30 - 15:00

S1-008 The Validity of Neutron Magnetic and Crystal Structure Analysis Using Single Crystals on Material Science (Invited)

Y. Noda; Tohoku University, Japan

15:00 - 15:15

S1-009 High-Coercivity Iron Oxide Based Nanocomposites - Particle Shape and Magnetic Structure by Synchrotron and Neutron Scattering

J. P. Vejpravova¹, S. Danis¹, J. Prokleska¹, P. Brazda², V. Vales¹, S. Doyle³, C. Ritter⁴, A. Mantlikova¹, D. Niznansky¹; ¹Charles University Prague, Czech Republic, ²CAS, Czech Republic, ³ANKA, Germany, ⁴Institute Laue Langevin, France

15:15 - 15:30

S1-010 Magnetism Behaviors of Nano-sized Iron Oxide Contented Glass Ceramics

C.-S. Hsi¹, F.-C. Hsu¹, M.-C. Wang², Y.-S. Chen³; ¹National United University, Taiwan, ²Kaohsiung Medical University, Taiwan, ³I-Shou University, Taiwan

15:30 - 15:45

S1-011 Identification and Lattice Location of Oxygen in Bulk α -Si₃N₄ and β -Si₃N₄/SiO₂ Interfaces

J. C. Idrobo^{1,2,3}, M. P. Oxley^{1,2}, W. Walkosz³, R. F. Klie³, S. Ögüt³, B. Mikijelj⁴, S. J. Pennycook^{2,1}, S. T. Pantelides^{1,2}; ¹Vanderbilt University, USA, ²Oak Ridge National Laboratory, USA, ³University of Illinois at Chicago, USA, ⁴Ceradyne Inc., USA

15:45 - 16:00

S1-012 Precise XPS Depth Profile of Float Glass Surface Using C₆₀ Ion Beam

Y. Yamamoto, K. Yamamoto; Asahi Glass, Co., LTD., Japan

16:00 - 16:15 Break

16:15 - 18:15: New Materials, Defects, Thermodynamics and Phase Equilibria

Chairs: Takashi Ida (Nagoya Institute of Technology, Japan) and Vasily Lutsyk (Buryat Scientific Centre of RAS, Russia)

16:15 - 16:45

S1-013 New Functional Material Exploration in Borate and Carbonate Systems (Invited)

X. L. Chen, S. F. Jin, Y. P. Sun, J. G. Guo, G. Wang, W. Y. Wang; Chinese Academy of Sciences, China

16:45 - 17:00

S1-014 New Defect-Crystal-Chemistry Model for Coupled Non-Vegardianity and Non-Random Defect Structure of Defect-Fluorite MO₂-LnO_{1.5} Solid Solutions.

Part II: Local-Structure and Ionic Conductivity Analysis

A. Nakamura; Japan Atomic Energy Agency, Japan

17:00 - 17:15

S1-015 New Defect-Crystal-Chemistry Model for Coupled Non-Vegardianity and Non-Random Defect Structure of Defect-Fluorite MO₂-LnO_{1.5} Solid Solutions.

Part III: Toward Quantitative Defect-thermodynamic Description

A. Nakamura; Japan Atomic Energy Agency, Japan

17:15 - 17:30

S1-016 Crystals of Different Dispersity Competition in 4-Phase Invariant Reactions and Peritectical Stages of 3-Phase Reactions with Mass Increment Sign Changing

V. Lutsyk^{1,2}, E. Nasrulin^{1,2}; ¹RAS, Russia, ²Buryat State University, Russia

17:30 - 17:45

S1-017 Three-Phase Reaction Type Changing Determination in Global Baricentric Coordinates

V. Lutsyk^{1,2}, A. Zyryanov²; ¹RAS, Russia, ²Buryat State University, Russia

17:45 - 18:00

S1-018 Phase Equilibria and Ceramic Materials in the Systems Based on Ceria, Zirconia, Hafnia with Lanthanides and Yttria

E. R. Andrievskaya; National Ukrainian Academy of Sciences, Ukraine

18:00 - 18:15

S1-037 Structural and Dielectric Properties of $Mg_{0.95}Zn_{0.05}TiO_3$ - $Ca_{0.8}Sr_{0.2}TiO_3$ Ceramic Composites

S. Keshri, S. S. Rajput; Birla Institute of Technology, India

Wednesday, November 17

Room: 1201

9:00 - 10:30: Radiation-Driven Processes, Crystallite Size and Microstructure

Chairs: Isao Tanaka (Kyoto University, Japan) and Wai-Yim Ching (University of Missouri-Kansas City, USA)

9:00 - 9:30

S1-019 Atomistic Simulation of Novel Solid-State Chemistry and Radiation-Driven Processes in Oxides (Invited)

N. A. Marks¹, D. J. Carter¹, G. R. Lumpkin², K. R. Whittle², C. Jiang³, B. P. Uberuaga³, C. R. Stanek³, K. E. Sickafus³; ¹Curtin University of Technology, Country, ²Australian Nuclear Science and Technology Organisation, Australia, ³Los Alamos National Laboratory, USA

9:30 - 10:00

S1-020 Evaluation of Crystallite Size Distribution by Capillary Spinner-Scan Method in Synchrotron Powder Diffractometry (Invited)

T. Ida, T. Goto, H. Hibino; Nagoya Institute of Technology, Japan

10:00 - 10:15

S1-021 Grain Boundary Transition in α - Al_2O_3 Ceramics and the Correlated Effect on Bi-modal Microstructure

H. Gu, P. Qian; Chinese Academy of Sciences, China

10:15 - 10:30

S1-022 Effect of Uniaxial Pressing on Changes in the Microstructure of SiC

M. Beata, G. Agnieszka, S. Arkadiusz; AGH –University of Science and Technology, Poland

10:30 - 10:45 **Break**

10:45 - 12:00: Crystal Structure Analysis and in Situ Measurements

Chairs: Fujio Izumi (National Institute for Materials, Japan) and Masatomo Yashima (Tokyo Institute of Technology, Japan)

10:45 - 11:15

S1-023 Analysis of Unknown and Disordered Crystal Structures from X-Ray Powder Diffraction Data (Invited)

K. Fukuda; Nagoya Institute of Technology, Japan

11:15 - 11:30

S1-024 Structural Analysis on Non-stoichiometric Lithium Cuprates ($Li_{2+x}CuO_{2+x/2}$)

L. M. Palacios-Romero, G. González, H. Pfeiffer; Universidad Nacional Autónoma de México, Mexico

11:30 - 11:45

S1-025 Study of Influence of Temperature on Domain Switchability Using *In-Situ* Neutron Diffraction

S. Pojprapai¹, H. Simons², A. Ngamjarujana³, A. Studer⁴, M. Hoffman²; ¹Suranaree University of Technology, Thailand, ²UNSW, Australia, ³Chiang Mai University, Thailand, ⁴Australian Nuclear Science and Technology Organisation, Australia

Symposium 1

11:45 - 12:00

S1-026 In-Situ Diffraction Study of the Spinel System $\text{Ni}_x\text{Mg}_{1-x}\text{Al}_2\text{O}_4$ Under Reducing Conditions
S. T. Misture, B. E. Hill, M. E. Miller; Alfred University, USA

13:15 - 15:00 Precise Structure Analysis by Diffraction and NMR

Chairs: Scott Misture (Alfred University, USA) and Koichiro Fukuda (Nagoya Institute of Technology, Japan)

13:15 - 13:45

S1-027 Three-Dimensional Visualization of Electron- and Nuclear-Density Distributions in Inorganic Materials by MEM-Based Technology (Invited)
E. Izumi, K. Momma; National Institute for Materials Science, Japan

13:45 - 14:00

S1-028 Crystal Structure, Oxygen Diffusion Pathway and Oxygen Permeability of Pr_2NiO_4 -Based Mixed Conductors
M. Yashima¹, H. Yamada¹, T. Ishihara², N. Sirikanda²; ¹Tokyo Institute of Technology, Japan, ²Kyushu University, Japan

14:00 - 14:15

S1-029 Increasing Sensitivity in Solid State NMR Applied to Ceramics and Biomaterials: the Magic Angle Coil Spinning Technique (MACS)
C. Bonhomme¹, F. Baboneau¹, B. Fassbender^{1,2}, D. Sakellariou², P. Aguiar²; ¹Collège de France, France, ²CEA, France

14:15 - 14:30

S1-030 Neutron Diffraction Study on Deuterium-substituted Oxy-hydroxyapatite
H. Fujimori¹, K. Morita¹, K. Okanishi¹, K. Oyama², M. Yashima³; ¹Yamaguchi University, Japan, ²Tohoku University, Japan, ³Tokyo Institute of Technology, Japan

14:30 - 14:45

S1-031 Solid State NMR Characterization of Ceramic Materials : Combined Experimental and *Ab-initio* Investigations
C. Gervais, F. Babonneau, F. Mauri; UPMC Univ Paris 06, France

14:45 - 15:00

S1-032 In-Situ Measurement of Internal Temperature Distribution of Sintered Materials Using Ultrasonic Technique
I. Ihara, T. Tomomatsu; Nagaoka University of Technology, Japan

15:00 - 15:15 Break

15:15 - 16:45: Structure Analysis of Perovskite-Type and Related Materials

Chairs: Masatomo Yashima (Tokyo Institute of Technology, Japan) and Xiaolong Chen (The Institute of Physics, China)

15:15 - 15:45

S1-033 Octahedral Distortions in Layered Perovskites via Combined X-ray and Neutron Powder Diffraction (President-Designated)
E. J. Nichols, S. T. Misture; Alfred University, USA

15:45 - 16:00

S1-034 Structural Phase Transitions in KNbO_3 and $\text{Na}_{0.5}\text{K}_{0.5}\text{NbO}_3$
T. Sakakura, J. Wang, N. Ishizawa, Y. Inagaki, K. Kakimoto; Nagoya Institute of Technology, Japan

16:00 - 16:15

S1-035 Analysis of Order of Structural Phase Transition of $\text{Sr}_{1-x}\text{Ba}_x\text{ZrO}_3$ by Temperature Regulated X-ray Diffraction and Thermal Analysis
T. Sugimoto, T. Hashimoto; Nihon University, Japan

16:15 - 16:30

S1-036 Atomic-Resolution High-Angle Dark-Field Scanning Transmission Electron Microscopy of Microwave Dielectric Ceramics

R. Freer¹, F. Azough¹, B. Schaffer²; ¹University of Manchester, UK, ²STFC, UK

16:30 - 16:45

S1-038 Local Structure and Phase Formation of Perovskite/Pyrochlore Structure of Lead Zinc Niobate Powders

A. Ngamjarujana¹, W. Chaiammad¹, A. Rujiwatra¹, R. Yimnirun², S. Ananta¹; ¹Chiang Mai University, Thailand, ²Suranaree University of Technology, Thailand

Poster Session

Tuesday, November 16

Room: Event Hall

12:00 -14:00

S1-P001 Synthesis of Expansive Mortar Developed in Laboratory for Dismounting of Ornamental Rocks
D. V. Lucena, D. B. C. Campos, H. L. Lira, G. A. Neves; UAEMA/ CCT/ UFCG, Campina Grande –PB, Brazil

S1-P002 Development of Phase Inhomogeneity in the Sol-Gel System Titanium(IV) Alkoxide and Barium Acetate: In-Situ SAXS Study
T. M. Stawski, S. A. Veldhuis, J. E. ten Elshof, H. L. Castricum, D. H. A. Blank; University of Twente, The Netherlands

S1-P003 Electron Density Distribution, Crystal Structure and Luminescence Properties of $\text{Li}_2\text{SrSiO}_4:\text{Eu}^{2+}$
Y. Hirano¹, T. Iwata¹, K. Momma², K. Fukuda¹; ¹Nagoya Institute of Technology, Japan, ²National Institute for Materials Science, Japan

S1-P004 Structural Evolution of FeCO_3 through Decarbonation at Elevated Temperatures
J. Wang¹, T. Sakakura¹, N. Ishizawa¹, H. Eba²; ¹Nagoya Institute of Technology, Japan, ²Tokyo City University, Japan

S1-P005 First Principles Calculation of $\text{La}_3\text{Ta}_{0.5}\text{Ga}_{5.5}\text{O}_{14}$ Crystal with Intrinsic Defects
C-Y. Chung¹, R. Yaokawa^{1,2}, H. Mizuseki¹, S. Uda¹, Y. Kawazoe¹; ¹Tohoku University, Japan, ²Citizen Holdings Co. Ltd., Japan

S1-P006 Detection of Human Serum Albumin Adsorption on Titania Surface Using Surface Plasmon Resonance Under Various pH
K. Ii, S. Ohshio, H. Akasaka, H. Saitoh; Nagaoka Univ. Tech., Japan

S1-P007 +Detection of Titania Film Etching by Phosphate Solutions Using Surface Plasmon Resonance
K. Ii, S. Ohshio, H. Akasaka, H. Saitoh; Nagaoka Univ. Tech., Japan

S1-P008 Synthesis, Disordered Crystal Structure and Twin-Related Domains of a New Compound in Al-Si-O-C System
H. Inuzuka¹, M. Kaga¹, T. Iwata¹, H. Nakano², K. Fukuda¹; ¹Nagoya Institute of Technology, Japan, ²Toyohashi University of Technology, Japan

S1-P009 Structural Disorder and Photoluminescence Properties of Bi^{3+} - and Mn^{2+} -Codoped $\text{Ba}_3\text{MgSi}_2\text{O}_8$ Phosphor
H. Oka, T. Horie, T. Iwata, K. Fukuda; Nagoya Institute of Technology, Japan

S1-P010 Investigation of the Local Structure Distortion in PZT Polycrystals due to Electrical Cyclic Loading via Synchrotron X-ray Absorption Spectroscopy
W. Kempet¹, S. Pojprapai¹, R. Yimnirun¹, W. Klysubun², P. Sombunchoo²; ¹Suranaree University of Technology, Thailand, ²Synchrotron Light Research Institute, Thailand



Symposium 1

- S1-P011 Corrosion of Fe-and Ni-base Alloys between 600 and 800°C in H₂S-H₂O Gases**
M. J. Kim¹, D. B. Lee¹, J.-M. Doh²; ¹Sungkyunkwan University, Korea, ²KIST, Korea
- S1-P012 Observation of Surface Spin Effects In La-doped CoFe₂O₄/SiO₂ Nanocomposites**
S. Burianova, J. P. Vejpravova, D. Niznansky, P. Holec; Charles University, Czech Republic
- S1-P013 Crystal Structure of Exhaust Gas Catalyst Ceria-Zirconia Nanoparticles Ce_xZr_{1-x}O₂ (0≤x≤1)**
D. Sato¹, M. Yashima¹, T. Wakita²; ¹Tokyo Institute of Technology, Japan, ²Daiichi Kigenso Kagaku Kogyo Co.Ltd, Japan
- S1-P014 Magnetic Force Microscopy Studies of Superparamagnetic Nanoparticles**
B. Bittova, J. P. Vejpravova, D. Niznansky; Charles University, Czech Republic
- S1-P015 Preparation and Process Clarification of Metal Nano-Plate by Pulse Wire Discharged Method in Liquid Media**
Y. M. Izuari, K. Josho, Y. Tokoi, T. Suzuki, T. Nakayama, H. Suematsu, K. Niihara; Nagaoka University of Technology, Japan
- S1-P016 Crystal Structure and Electron Density Analysis of Monoclinic and Hexagonal Hydroxyapatites**
Y. Yonehara¹, M. Yashima¹, H. Fujimori²; ¹Tokyo Institute of Technology, Japan, ²Yamaguchi University, Japan
- S1-P017 Crystal Structure and Oxygen Deficiency δ of Perovskite-Type La_{0.4}Ba_{0.6}CoO_{3-δ} through High-Temperature Neutron Diffractometry**
Y.-C. Chen¹, M. Yashima¹, T. Ohta¹, S. Yamamoto¹, T. Takizawa¹, K. Ohoyama²; ¹Tokyo Institute of Technology, Japan, ²Tohoku University, Japan
- S1-P018 Structural Study of Li₂S-P₂S₅ Superionic Glasses by Neutron and X-ray Diffraction**
Y. Onodera¹, K. Mori¹, T. Otomo², A. C. Hannon³, K. Itoh¹, M. Sugiyama¹, T. Fukunaga¹; ¹Kyoto University, Japan, ²High Energy Accelerator Research Organization, Japan, ³ISIS Facility, UK
- S1-P019 Investigation of Electrical Fatigue Behavior of a Soft PZT Ceramic at Elevated Temperature**
S. Kamposiri, B. Marungsri, R. Yimnirun, S. Pojprapai; Suranaree University of Technology, Thailand
- S1-P020 Preparation and Characterization of the Sodium Gallium Titanate Type Na_xGa_{4+x}Ti_{1-x}O₈**
S. Oinuma, S. Kano, S. Ito, K. Fujimoto; Tokyo University of Science, Japan
- S1-P021 Synthesis and Characterization of Bismuth Sodium Zirconate Powders**
P. Jaiban, S. Jiansirisomboon, A. Watcharapasorn; Chiang Mai University, Thailand
- S1-P022 Preparation and Phase Transformation of Bi_{0.5}Na_{0.5}Zr_xTi_{1-x}O₃**
A. Rachakom, S. Jiansirisomboon, A. Watcharapasorn; Chiang Mai University, Thailand
- S1-P023 Structure and Properties of Elemental Substituted Ilmenite, FeM_xTi_{1-x}O₃**
D. Nakatsuka, T. Fujii, M. Nakanishi, J. Takada; Okayama University, Japan
- S1-P024 Distribution of K⁺ and Cs⁺ Ions in the Alkali Layer of (K⁺, Cs⁺)-β-Ferrite**
H. Watarai, K. Fujimoto, S. Ito; Tokyo University of Science, Japan
- S1-P025 Fabrication of Highly Densified Hydroxyapatite Ceramics with Boron Oxide Addition and its Superplastic Deformation**
K. Tsuchiya¹, Y. Sakka², I. J. Davies³, S. Koda¹, K. Itatani¹; ¹Sophia University, Japan, ²National Institute for Materials Science, Japan, ³Curtin University of Technology, Australia
- S1-P026 Identification of Donor Additives in BaTiO₃ by X-Ray Absorption Spectroscopy**
W. Chaibammad, S. Choommaung, S. Anata, A. Ngamjarurojana; Chiang Mai University, Thailand
- S1-P027 Molecular Dynamics Simulation of Lead Borate and Related Glasses in Multicomponent Systems for Low Melting Vitrification of Nuclear Wastes**
S. Kato, Y. Benino, T. Nanba, S. Sakida; Okayama University, Japan
- S1-P028 Effect of Andalusite on Physical and Thermal Properties of High Alumina Low-cement Castables**
S. Emami, S.A. Ahmadi, F. Soleymani; Material and Energy Research Center, Iran

- S1-P029 Size Dependent Structural and Magnetic Properties of CdFe₂O₄ Nanoparticles Synthesized by Sol-gel Auto Combustion Method**
D. R. Mane¹, S. E. Shirsath², R. H. Kadam¹; ¹Shrikrishna Mahavidyalaya Gunjoti, India, ²Dr. Babasaheb Ambedkar Marathwada University, India
- S1-P030 Characterization of Attapulgite for Human Health**
W. Acchar¹, A. C. S. da Costa¹, L. S. Barreto²; ¹Federal University of Rio Grande do Norte, Brazil, ²UFS, Brazil
- S1-P031 In Situ Time-Resolved X-ray Diffraction of Tobermorite Synthesis Process under Hydrothermal Condition**
J. Kikuma¹, M. Tsunashima¹, T. Ishikawa¹, S. Matsuno¹, A. Ogawa², K. Matsui², M. Sato³; ¹Asahi-KASEI Corporation, Japan, ²Asahi-KASEI Construction Materials Corporation, Japan, ³Spring-8/JASRI, Japan
- S1-P032 THz Spectroscopy of Perovskite Oxides as Solid State Chemical Sensors**
K. Tajima, T. Arakawa; Kinki University, Japan
- S1-P033 Theoretical Study on Temperature Regions of Phases of BaTiO₃**
C. Yu-ping, H. Dai-zhao, N. Ru-yun; Mechanical Engineering College, China
- S1-P034 Sintering and Thermal Expansion of Low Expansion Kosnarite Ceramics**
M. V. Sukhanov, V. I. Pet'kov, D. V. Firsov; Nizhni Novgorod State University, Russia
- S1-P035 Low Toughness Fracture in Al 7191-20% SiCp Aluminum Matrix Composite**
M. M. Ranjbarann; Shahid Rajaei University, Iran
- S1-P036 Neutron Diffraction Study on the Xe behavior in Clathrate Hydrate Analyzed by Rietveld/Maximum Entropy Method**
N. Igawa¹, T. Taguchi¹, A. Hoshikawa², H. Yamauchi¹, A. Birumachi¹, Y. Ishii³; ¹Japan Atomic Energy Agency, Japan, ²Ibaraki University, Japan, ³Radiation Application Development Association, Japan
- S1-P037 Effects of Rare Earth and Nb Substitutions on Crystal Structure and Ferroelectric Properties of Pb(Zr,Ti)O₃ Ferroelectric Oxide**
Y. Idemoto, H. Taka, N. Kitamura; Tokyo University of Science, Japan
- S1-P038 Improvement of Strength and Oxidation Resistance for SiC/Graphite Composites by SiC Coating**
W. Yang, H. Li, Z. Shi, Z. Jin, G. Qiao; Xi'an Jiaotong University, China
- S1-P039 Preparation and Characterization of Standard Thin Film Samples for ERDA Measurement by Using Naphthalocyanine**
T. Suzuki, H. Akasaka, T. Miyazaki, A. Harada, H. Saitoh, I. Nishiguchi; Nagaoka University of Technology, Japan
- S1-P040 Synthesis and Crystal Structure of Na₃B_{74.5}Si_{17.5}**
H. Morito¹, B. Eck², R. Dronskowski², H. Yamane¹; ¹Tohoku University, Japan, ²RWTH Aachen University, Germany
- S1-P041 Crystal Structure of Perovskite-type Oxyfluorides, BaMO₂F (M=In, Sc, Fe)**
T. Katsumata¹, R. Suzuki¹, M. Nakashima², S. Suzuki², D. Mori², Y. Inaguma²; ¹Tokai University, Japan, ²Gakushuin University, Japan
- S1-P042 New Defect-Crystal-Chemistry Model for Non-Vegardianity and Non-Random Defect Structure of Defect-Fluorite MO₂-LnO_{1.5} Solid Solutions (M⁴⁺=Ce(Th), Zr(Hf): Ln³⁺=Lanthanide). Part I: Non-Vegardianity Analysis**
A. Nakamura; Japan Atomic Energy Agency, Japan
- S1-P043 Densification of Submicrometric Composites in Al₂O₃-ZrO₂ System**
B. Macherzynska, Z. Pedzich, D. Pryga; AGH – University of Science and Technology, Poland
- S1-P044 A Study of the Dispersant Effect Toward Lead-free Piezoelectric Ceramic Powder Bismuth Sodium Titanate**
W.-P. Weng, P.-C. Chen, H.-Y. Yen, F.-Y. Siao, C.-C. Chang; Lунghwa University of Science and Technology, Taiwan

Symposium 1

- S1-P045 Structure of MgO Thin Film Deposited on Silicon (001) in High Oxygen Pressure by Pulsed Laser Deposition**
S. Kaneko^{1,2}, K. Akiyama¹, T. Ito¹, M. Yasui¹, T. Ozawa¹, M. Soga¹, Y. Motoizumi¹, M. Yoshimoto²; ¹Kanagawa Prefectural Government, Japan, ²Tokyo Institute of Technology, Japan
- S1-P046 Atomistic Simulation of MgO/BaZrO₃ Heterointerfaces**
C. A. J. Fisher, A. Kuwabara, H. Moriwake; Japan Fine Ceramics Center, Japan
- S1-P047 TEM Investigation of Oxynitride Glass-ceramics: Effect of Parent Glass Composition**
E. Dölekçekiç¹, H. Yurdakul¹, S. Turan¹, M. J. Pomeroy², S. Hampshire²; ¹Anadolu University, Turkey, ²University of Limerick, Ireland
- S1-P048 Enerji Filtered Transmission Electron Microscopy and Electron Energy Loss Spectroscopy Analysis of Silicon Nitride-Titanium Joints**
O. Tunçkan, S. Turan, H. Yurdakul; Anadolu University, Turkey
- S1-P049 Tilt Transitions in Ag(Ta_xNb_{1-x})O₃ Thin Films**
R. Johnson-Wilke¹, D. Tinberg¹, S. Troler-McKinstry¹, Y. Han², I. Reaney², M. Telli³, I. Levin⁴, D. Fong⁵, T. Fister⁵, S. Streiffer⁵; ¹Pennsylvania State University, USA, ²University of Sheffield, UK, ³Kocaeli University, Turkey, ⁴National Institute of Standards and Technology, USA, ⁵Argonne National Laboratory, USA