

Please note, Almost all presentation will be given in Japanese.

# The Ceramic Society of Japan

## The 29th Fall Meeting

### Program

#### ■■ September 7 (Wed) (Room A) ■■

##### 01. Special Session for Gender Equality Promotion ~ Ceramics & Diversity ~

(14 : 20) (Chairman 藤原忍)

1A17 ★ Interdisciplinary Ceramic Research among Materials Science, Biology, and Clinical Sciences (Tokyo Medical and Dental University) ○Kimihiro Yamashita

1A18 ★ Stages for Working, Ways of Working (LXIL Corporation) ○Norifumi Isu

(15 : 00) (Chairman 中野裕美)

1A19 ★ Activities and Issues of Female Researchers in the Cement Company (TAIHEIYO CEMENT CORPORATION) ○Keiichi Miura

1A20 ★ Fourth Basic Action Plan for Gender Equality in Japan and Active promotion of women (Japan Association for The Advancement of Working Women)

○Takashi Kashima

16 : 00~16 : 20 総合討論

#### ■■ September 7 (Wed) (Room B) ■■

##### 04. Development and Challenges in Environmental Barrier Ceramic Coatings

###### 耐環境性コーティングにおける物質移動

(9 : 40) (Chairman 伊藤暁彦)

1B03 Effects of Oxygen Potential Gradient and Water Vapor on Mass Transfer in Polycrystalline Alumina Wafer at High Temperatures (JFCC) ○Tsuneaki Matsudaira · Satoshi Kitaoka · Takashi Ogawa · (The University of Tokyo) Miyuki Takeuchi · Naoya Shibata · Yuichi Ikuhara

1B04 Oxygen shielding mechanism of  $\text{Yb}_2\text{Si}_2\text{O}_7$  film at high temperatures (JFCC) ○Masashi Wada · Tsuneaki Matsudaira · Naoki Kawashima · Satoshi Kitaoka · Masasuke Takata · (The University of Tokyo) Miyuki Takeuchi · (Saga University) Takashi Akatsu

1B05 Effect of layered structures on mass-transfer through EBCs at high temperatures (JFCC) ○Satoshi Kitaoka · Tsuneaki Matsudaira · Makoto Tanaka · (Gifu University) Taiga Sato · Osamu Sakurada · (The University of Tokyo) Miyuki Takeuchi · Yutaka Kagawa

###### 耐環境性コーティングのプロセス技術と組織制御

(10 : 40) (Chairman 赤津隆)

1B06 Fabrication and structural characterization of ytterbium silicate coatings by double electron beam physical vapor deposition (JFCC) ○Taishi Yokoi · Norio Yamaguchi · Kenji Nakahira · Tetsushi Matsuda · Satoshi Kitaoka · Masasuke Takata

1B07 Texture Formation of Alumina Coating by Aerosol Deposition and Subsequent Heat Treatment (Yokohama National University) ○Masahiro Komuro · Sinya Sato · Makoto Hasegawa · (JFCC) Makoto Tanaka · Satoshi Kitaoka · (University of Tokyo) Yutaka Kagawa

1B08 ★ Improvement of Interfacial Strength for Thermal Barrier Coatings by Using Extreme High Temperature Oxidation (Tohoku University) ○Kazuhiro Ogawa

###### 耐環境性コーティングの構造設計

(14 : 20) (Chairman 北岡諭)

1B17 ★ Development of design tools for microstructures and performances in ceramics coating (Tohoku University, JFCC) ○Hideaki Matsubara

1B19 Analysis of porous structure and sintering behavior of zirconia film for TBC (Tohoku University) ○Takashi Shirato · Sota Terasaka · Masanobu Kamitakahara · Hideaki Matsubara · (JFCC) Norio Yamaguchi · Taishi Yokoi

1B20 Simulation of porous structure, sintering and delamination of ceramic coating (Tohoku University) ○Sota Terasaka · Hideaki Matsubara · (JFCC) Hiroshi Nomura · Norio Yamaguchi

(15 : 40) (Chairman 垣澤英樹)

1B21 Functional design of high temperature thermal radiation reflection coating (The University of Tokyo) ○Yutaka Kagawa · (JFCC) Satoshi Kitaoka · Makoto Tanaka · (Yokohama National University) Makoto Hasegawa · (National Institute for Materials Science) Yoshihisa Tanaka · (Gifu University) Osamu Sakurada

1B22 Theoretical prediction of damage initiation condition by thermal stress in environmental barrier coatings for ceramics (The University of Tokyo) ○Emi Kawai · Yoshitaka Umeno

1B23 Measurement of Young's modulus of environmental barrier coating at elevated temperatures by nanoindentation test (Tokyo Institute of Technology) ○Kei Tsurumaru · Yutaka Shinoda · Fumihiko Wakai · (Saga university) Takashi Akatsu

1B24 A first-principles study on Raman spectra of Yb silicates (JFCC) ○Takafumi Ogawa · Noriko Otani · Taisi Yokoi · Craig Fisher · Akihide Kuwabara · Hiroki Moriwake · Satoshi Kitaoka

###### 耐環境性コーティングの評価技術

(17 : 00) (Chairman 長谷川誠)

1B25 Development of evaluation method for adhesion of ceramic environmental barrier coating (National Institute for Materials Science) ○Hideki Kakisawa · Toshiyuki Nishimura

1B26 Quantitative measurement of delamination toughness in oxide EBC on SiC/SiC substrate (The University of Tokyo) ○Yuto Aoki · Yutaka Kagawa

1B27 Improvement of mechanical properties and cutting performance of TiCN hard coating by thermal CVD (SUMITOMO ELECTRIC HARDMETAL CORP. · Hokkaido University) ○Anongsack Paseuth · (SUMITOMO ELECTRIC HARDMETAL CORP.) Haruyo Fukui · Kazuo Yamagata · (Hokkaido University) Akira Miura · Kiyoharu Tadanaga

■■ September 7 (Wed) (Room C) ■■

10. Photo-Ceramics—Synthesis, Functions and Applications of Optical and Colorful Ceramics—

(10 : 40) (Chairman 井上幸司)

- 1C06 Mechanism of charging and detrapping process in persistent phosphor of  $\text{Eu}^{2+}$  doped-calcium silicate (Kyoto University) ○Ryomei Maki · Jumpei Ueda · Setsuhisa Tanabe
- 1C07 Synthesis and luminescence property of the phosphorescent material,  $\text{Sr}_{1-x}\text{Eu}_x\text{Al}_2\text{O}_4$  (Chuo University) ○Noriko Kobayashi · Kengo Oka · Katuyoshi Ohishi
- 1C08 Characterization of persistent luminescence properties for  $\text{Ce}^{3+}$ ,  $\text{Yb}^{3+}$  co-doped YAGG transparent ceramics (Kyoto University) ○Shun Miyano · Jumpei Ueda · Setsuhisa Tanabe
- 1C09 Luminescence of rare earth doped  $\text{YAlO}_3$  excited by vacuum ultraviolet rays and energy levels of rare earth ions (Kyushu Institute of Technology) ○Yuhei Shimizu · Kazushige Ueda · (Gakushuin University) Yoshiyuki Inaguma

(14 : 20) (Chairman 早川知克)

- 1C17 Low-temperature synthesis and optical properties of Au-loaded titania nanocomposite coating (Kanto Gakuin University) ○Jun-ichi Hamagami · Aoi Endo · Akari Kanamura · Genki Takaya
- 1C18 Near infrared emission of titanium oxide doped with chromium (Salesian Polytechnic) ○Yuichiro Kuroki · Reo Sakamoto · Yuto Ohshima
- 1C19 Synthesis of the opal-structured films by structural fixation of PS colloidal crystal and hybridization with titania precursor solution (Utsunomiya University) ○Ayano Nagayoshi · Taki Matsumoto · (National Institute for Materials Science) Hiroshi Fudouzi
- 1C20 ★Development of Highly Efficient Perovskite Solar Cells: Materials Chemistry and Development of Printing Method (Kyoto University) ○Atsushi Wakamiya · Masashi Ozaki · Mina Jung · Ai Shimazaki · Yumi Nakaïke · Tomoya Nakamura · Jaehyun Lee · Anesh Gopal · Hidetaka Nishimura · Yasujiro Murata

(16 : 00) (Chairman 増井敏行)

- 1C22 Photoluminescence properties of perovskite-type oxides activated with Mn (Tohoku University) ○Youhei Takeda · Hideki Kato · Makoto Kobayashi · (Kyoto Institute of Technology) Hisayoshi Kobayashi · (Tohoku University) Masato Kakihana
- 1C23 Luminescence from rare earth ions occupying A or B sites in perovskite-type  $\text{LaScO}_3$  (Kyushu Institute of Technology) ○Kazushige Ueda · Yuhei Shimizu · Takuma Aoki · Syuto Tanaka · (Gakushuin University) Yoshiyuki Inaguma
- 1C24 Wavelength Conversion Properties of  $(\text{Ca,Bi})\text{TiO}_3:\text{Pr}^{3+}$  Thin Film Phosphors (Nagoya Institute of Technology) ○Tomokatsu Hayakawa · Hiroshi Nakamori
- 1C25 Heat treatment effects on electroluminescent properties of  $\text{Ca}_{0.6}\text{Sr}_{0.4}\text{TiO}_3:\text{Pr}$  thin films prepared by a chemical solution deposition method (Gunma University) ○Toru Kyomen · Minoru Hanaya · (National Institute of Advanced Industrial Science and Technology) Hiroshi Takashima
- 1C26 Synthesis and photoluminescence properties of Ga- or Zn-substituted spinel-type  $\text{Mg}_2\text{TiO}_4:\text{Mn}^{4+}$  phosphor (Tohoku University) ○Takuya Sasaki · Jun Fukushima · Yamato Hayashi · Hirotugu Takizawa

■■ September 7 (Wed) (Room D) ■■

19. Material Design and Processing Design

プロセスデザイン

(9 : 00) (Chairman 林大和)

- 1D01 ☆Functional Control of Ceramic Nanomaterials by Novel Solvothermal Process (IMRAM, Tohoku University) ○Shu Yin
- 1D03 Composition of  $\text{SiO}/\text{VGCF}$  by Layer-by-Layer Self Assembly (Nagoya Institute of Technology) ○Jeongbin Lee · O. Ikeuchi · T. Shirai · M. Fuji
- 1D04 Synthesis of Perovskite-type Complex Oxides by Hot-water/hydrothermal Conversion of Hydrous Titania (Chiba University) ○Takashi Kojima · Kohsuke Ota · Fatin Rosyadah · Nobuto Onda · Naofumi Uekawa
- 1D05 The activation of mullite-based powder by mechanochemical method and the evaluation of the physical properties (Nagoya institute of technology) ○Takuma Akagi · Kunihiro Kato · Masayoshi Fuji · Takashi Shirai

成形プロセス

(10 : 40) (Chairman 中村貴宏)

- 1D06 "Fabrication of silica/carbon composites by non-firing fabrication process" (Nagoya Institute of Technology) ○Satono Goto · Chika Takai · Hadi Razavi · Takashi Shirai · Masayoshi Fuji
- 1D07 Low Temperature Sintering of Silver Microparticles within an Organic Polymer-based Matrixes (Gunma University) ○Masahiro Inoue · Yoshiaki Sakanawa · Yasunori Tada
- 1D08 Control of Outer Shape and Internal Microstructure in Additive Manufacturing of Metal Object by Electron Beam Melting (Tohoku University) ○Yuichiro Koizumi · A. Okazaki · Kosuke Tominaga · Akihiko Chiba · (Hitachi, Ltd.) Tadashi Fujieda · Takahiko Kato

プロセスデザイン

(14 : 20) (Chairman 林大和)

- 1D17 ☆Development of Ceramics Processing with Nano Second Pulsed Power (Nagaoka University of Tech.) ○Tadachika Nakayama · Minh Triet Huynh Tan · Naoto Matsutani · Hisayuki Suematsu · Tsuneo Suzuki · Koichi Niihara

多孔質材料プロセス

(15 : 00) (Chairman 井上雅博)

- 1D19 Synthesis and characterization of porous alumina using spherical porous powder (JFCC) ○Seiji Takahashi · Satoshi Suehiro · Hajime Okawa · Teiichi Kimura
- 1D20 Synthesis of hollow silica nanoparticles by emulsion template method using polyacrylic acid salts (The University of Nagoya Institute technology) ○Masashi Noritake · M Ando · Chika Takai · Razavi-Khosroshahi Hadi · Takashi Shirai · Masayoshi Fuji
- 1D21 High-temperature *in situ* observation of self-organized formation of spherical porous granules (University of Tsukuba) ○Yoshikazu Suzuki · (Osaka University) Hiroya Abe · Hajime Yamamoto · Kazuhiro Ito · Hiroshige Inoue · (Yonekura MFG. Co. Ltd.) Mayumi Nakamura

## ■■ September 7 (Wed) (Room E) ■■

## 26. Ceramic sensors and transducers—structural design from macro to micro levels for high performance

(10 : 00) (Chairman 伊藤敏雄)

1E04 Solvothermal Synthesis of ZnO Particles and Gas Sensor Application (National Institute for Materials Science) ○Noriko Saito · Isao Sakaguchi (Kyushu University) Ken Watanabe (National Institute for Materials Science) Hajime Haneda

1E05 Response to mercury vapor using n-type metal oxide semiconductors (Ehime University) ○Kohji Shiraishi · Hiroyuki Yamaura · Hidenori Yahiro

(10 : 40) (Chairman 末松昂一)

1E06 Response properties of gas sensor using inorganic/organic hybrid electrolyte (National Institute of Advanced Industrial Science and Technology) ○ Takafumi Akamatsu · Toshio Itoh · Woosuck Shin

1E07 Synthesized MoO<sub>3</sub> Nanostructure Array by Printing Methods Applying for Semiconductor Gas Sensors (Osaka University) ○Tohru Sugahara · Shuren Cong · Katsuaki Suganuma

(11 : 20) (Chairman 高橋誠治)

1E08 Improvement in sensing properties of WO<sub>3</sub>-based semiconductor gas sensors to methylmercaptan by the addition of noble metals (Nagasaki University) ○Takuya Maeda · Taro Ueda · (Figaro Engineering Inc.) Kuniyuki Izawa · (Nagasaki University) Kai Kamada · Takeo Hyodo · Yasuhiro Shimizu

1E09 Hierarchical structure of oxidation catalyst for particulate matter detection by combustion-type sensor (Kyushu University) ○Maiko Nishibori · Tsutomu Itoh · Hongcheng Ruan · Kengo Shimanoe · (Ehime University) Yoshihiko Sadaoka

(14 : 20) (Chairman 島ノ江憲剛)

1E17 ◆Toward Highly Selective Oxide Semiconductor Gas sensors (KOREA UNIVERSITY) ○Jong-Heun Lee

(15 : 20) (Chairman 坂井雄一)

1E20 Synthesis and NO<sub>x</sub> Sensing Evaluation of Hollow/Porous La<sub>0.8</sub>Sr<sub>0.2</sub>MnO<sub>3</sub> Microspheres (JFCC) ○Satoshi Suehiro · Hajime Okawa · Teiichi Kimura · Seiji Takahashi

1E21 Effects of Solid Electrolyte Transducer for Sensing Properties of Impedancemetric Gas Sensor. (Kyushu Institute of Technology) Tsuyoshi Sakai · ○Satoko Takase · Youichi Shimizu

(16 : 00) (Chairman 西堀麻衣子)

1E22 Current oscillation in porous GdBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> based ceramics rod prepared using naphthalene (Nagaoka University of Technology) ○Tokuhiro Narihata · Tomoichiro Okamoto · Yasuyuki Yamada · (Salesian Polytechnic) Yuichiro Kuroki · (JFCC) Masasuke Takata

1E23 Zr-doped cerium oxide gas sensor for monitoring oxygen concentration of simulated exhaled gas (National Institute of Advanced Industrial Science and Technology) ○Toshio Itoh · Noriya Izu · Woosuck Shin · (Minato Medical Science) Kenji Kamihoriuchi · Masao Takizawa · Isao Yoshida

## ■■ September 7 (Wed) (Room F) ■■

## 02. Development and evaluation of ceramics producing harmony with living body

(9 : 20) (Chairman 早川聡)

1F02 The dissolution behavior of phosphosilicate glasses containing six-coordinated silicon (Nagoya Institute of Technology) ○Atsuhiko Miura · Anthony Macon · Hirotaka Maeda · Akiko Obata · Toshihiro Kasuga

1F03 Preparation of Glass Filter by use of Soda-Lime Glass-Beads for Separation of Cancer Cells in the Blood (Tokyo University of Science) ○Hidehiko Matsuura · Kenichiro Iwasaki · Kenta Nomura · Hiroshi Takemura · Babita Shashni · Shin Aoki · Atsuo Yasumori

(10 : 00) (Chairman 小幡亜希子)

1F04 *In vitro* evaluation of scaffolds fabricated with calcium phosphate granules derived from sea urchin test and gelatin (Hokkaido University) ○Naga Vijaya Lakshmi Manchinasetty · (Ibaraki University) Sho Oshima · (Hokkaido University) Masanori Kikuchi

1F05 Fabrication of apatite-fiber scaffold beads and its characterization (Meiji University) ○Erika Morita · (Jikei University) Tomokazu Matsuura · (Meiji University) Mamoru Aizawa

1F06 Structural analysis and biodegradability of chitosan-HAp composite fibers (Kyushu Institute of Technology) ○Takuma Okada · Yuki Shirotsaki · Toshiki Miyazaki

(11 : 00) (Chairman 城崎由紀)

1F07 ☆Evaluation of Ceramic Biomaterials Using Simulated Body Fluid: the Background and Usage (Nagoya University) ○Chikara Ohtsuki

(14 : 20) (Chairman 後藤知代)

1F17 Orientation of hydroxide ions in monoclinic and hexagonal hydroxyapatite (Tokyo Medical and Dental University) ○Naohiro Horiuchi · Kosuke Nozaki · Miho Nakamura · Akiko Nagai · Kimihiro Yamashita

1F18 Electrodeposition of sol-gel silica films by pulse-potential application (Okayama University) ○Tomohiko Yoshioka · Tomoaki Tezuka · Toshiisa Konishi · Satoshi Hayakawa

(15 : 00) (Chairman 相澤守)

1F19 Titania mineralization utilizing peptide and collagen templates: Control of morphology and light-absorption property (Tokyo University of Science) ○Kazuki Murai · Takashi Tomozoe · Keitaro Horiba · (Tokyo University of Agriculture and Technology) Yoshihiro Nomura · (Tokyo University of Science) Mutsuyoshi Matsumoto

1F20 Apatite-forming ability of organic-inorganic composites containing phosphate groups with different molecular structure (Kyushu Institute of Technology) ○Ryo Hamai · Yuki Shirotsaki · Toshiki Miyazaki

(16 : 00) (Chairman 生駒俊之)

1F22 Influence of particle size of hydroxyapatite/collagen bone like nanocomposite powder on its injectable bone paste properties (Meiji University) ○Taira Sato · (Kyushu Institute of Technology) Yuki Shirotsaki · (Meiji University) Mamoru Aizawa · (National Institute for Materials Science) Masanori Kikuchi

1F23 Fabrication and evaluation of Sr-containing low crystalline apatite cement (Nohon University) ○Tomohiro Uchino · Takahito Kasai · Mayumi Imai

1F24 Preparation of calcium-phosphate cements with high compressive strength using meglumine as a water reducer (NGK Spark Plug Co. Ltd.) ○Takenori Sawamura · Masahiko Okuyama · (Nagoya Institute of Technology) Hirotaka Maeda · Akiko Obata · Toshihiro Kasuga

(17 : 00) (Chairman 城崎由紀)

1F25 ☆History of calcium phosphate cement (Kyushu University) ○Kunio Ishikawa

■■ September 7 (Wed) (Room G) ■■

08. Innovation in advanced ceramics from powder processing

微粒子の分散とその制御 I

(9 : 20) (Chairman 多々見純一)

1G02 ◆ Approach from the viewpoint of powder processing to control ceramic slurry and paste (National Institute of Advanced Industrial Science and Technology)  
○Yuji Hotta

1G04 ★ Chemistry and Business, printable material changes the world (Colloidal Ink CO., LTD.) ○Masayuki Kanehara

(10 : 40) (Chairman 小澤隆弘)

1G06 Surface reaction of SiO<sub>2</sub> and organic compound in the mechanical high shear field (Nagoya Institute of Technology) ○Hiroataka Noda · Mamoru Senna · Masayoshi Hujii · Takashi Shirai

1G07 Effect of silane coupling agent co-polymerized acrylic latex addition on the characteristics of hardened cement body (Yokohama National University)

○Shunsuke Mizumoto · Motoyuki Iijima · Junichi Tatami · (Asahi Kasei Corporation) Tuyet Nga Nguyen · Yasuyuki Kamiyama · Motoyoshi Mori

(11 : 20) (Chairman 堀田裕司)

1G08 ★ Low Energy Dispersion of Nanoparticles via Beads Mill and Their Characterization (HIROSHIMA METAL & MACHINERY CO.,LTD.) ○TAKASHI Tahara

粉体の機能化と材料設計

(14 : 20) (Chairman 内藤牧男)

1G17 ★ Densification Process and Defect Control of SiC-Polycrystalline Fiber (Tokyo University of Science, Yamaguchi) ○Toshihiro Ishikawa

1G19 ★ Development of high thermal conductivity aluminum nitride filler (Tokuyama Corp.) ○Yukihiro Kanechika · Yutaka Fukunaga · Meng Wang · Saiko Fujii · Yoshitaka Inaki · Yuuichirou Kawabata

(15 : 40) (Chairman 白井孝)

1G21 Theoretical Analysis of Thermal Conductivity of SiC with Oxide Additive (Kagoshima University) Yoshihiro Hirata · Hideyuki Shirai · ○Taro Shimonosono

1G22 Fabrication and evaluation of AlN/AlN-whisker composite ceramics (Tokyo City University) ○Ryota Kobayashi · Takeyuki Takagi · Yuuki Fukutomi · Naoto Iwamoto · (Tohoku University) Koichi Harata · Takashi Goto

(16 : 20) (Chairman 成澤雅紀)

1G23 Preparation of aragonite-type particles by carbonation process and their strontium collecting behavior from artificial sea water (National Institute for Materials Science) ○Jin Nakamura · Yoshio Sakka · (Nagoya Institute of Technology) Toshihiro Kasuga

1G24 Synthesis of lithium titanate hydrate by planetary ball milling (Osaka University) ○Shinji Suzuki · Takahiro Kozawa · Takeshi Murakami · Makio Naito

(17 : 00) (Chairman 小林亮太)

1G25 Morphology control of calcium silicon nitride phosphor particles synthesized by ultrasonic spray pyrolysis - carbothermal reduction nitridation (Sophia University) ○Satoshi Ono · (Delft University of Technology) Hubertus T. Hintzen · (Sophia University) Kiyoshi Itatani

1G26 Elucidation of the influence that composition and the particle size of Si-O-C (-H) ceramics gives in deterioration mechanism (Osaka Prefecture University)

○Shu Takeuchi · Masaki Narisawa · Hirofumi Inoue

1G27 Pulverization of aggregates of Y<sub>2</sub>O<sub>3</sub> nanoparticles by using nanocomposite particles prepared by mechanical treatment (Yokohama National University)

○Junichi Tatami · Kwangjin Jeong · Motoyuki Iijima · (Kanagawa Academy of Science and Technology) Takuma Takahashi

■■ September 7 (Wed) (Room H) ■■

13. Synthesis and Functional Properties of Mixed ion Compounds

(9 : 00) (Chairman 分島亮)

1H01 ★ Chemistry of Covalent Intermetallic Compounds (Hiroshima University) ○Hiroshi Fukuoka

1H03 High-pressure synthesis of metal chalcogenides and their function (Shibaura Institute of Technology) ○Ayako Yamamoto

1H04 Crystal structure of novel high pressure phase of Li-P-S compounds (Kyushu Institute of Technology) ○Kouichi Shimoyama · Shoya Kawano · Masafumi Fujii · Satoshi Iikubo · (Ehime University) Masafumi Matsushita · Toru Shinmei · (Tohoku University) Hiroshi Ohtani

1H05 Dimensional Control of Conical Magnet HfMnSb<sub>3</sub> with a Metal Ordered NiAs type Structure (Kyoto University) ○Taito Murakami · Takafumi Yamamoto · Hiroshi Takatsu · Hiroshi Kageyama · S. M. Yusuf

(10 : 40) (Chairman 矢島健)

1H06 Physical properties of iron-based superconductors with mixed valence anions (National Institute of Advanced Industrial Science and Technology · The University of Tokyo) ○Hiraku Ogino · (The University of Tokyo) Hiroyuki Yakira · Kouji Kishio · (Aoyama Gakuin University) Jun-ichi Shimoyama · (National Institute of Advanced Industrial Science and Technology) Akira Iyo · Hiroshi Eisaki

1H07 Sulfur substitution effects on P-type superconducting Cuprates Sr<sub>2</sub>La<sub>2-x</sub>CuO<sub>4-y</sub> (Chuo University) ○Katsuyoshi Oh-ishi · Kensuke Shirota · Kengo Oka

1H08 Quasi-one dimensional conducting Strontium Niobates (SrNbO<sub>x</sub>) (Tohoku University) ○Deqiang Yin · Chunlin Chen · Kazutoshi Inoue · Yuichi Ikuhara · (ETH Zürich) Frank Lichtenberg · (Zürich Research Laboratory) Johannes Georg Bednorz

1H09 Magnetic properties and crystal structures of 12R-perovskites Ba<sub>4</sub>LnMn<sub>3</sub>O<sub>12δ</sub> (Hokkaido University) ○Atsuhide Nishiyama · Yoshihiro Doi · Yukio Hinatsu

(14 : 20) (Chairman 荻野拓)

1H17 ◆ A new polytype of monoxide, ε-TiO, and some suboxides containing titanium (Tohoku University) ○Hisanori Yamane · Shinsaku Amano

1H20 Synthesis and physical properties of new iron oxyfluoride with perovskite structure (Kyoto university) ○Fumitaka Takeiri · Takafumi Yamamoto · Koji Fujita · Saburo Hosokawa · Yoji Kobayashi · Hiroshi Kageyama · (Research Institute for Production Development) Naoaki Hayashi · (KEK) Kazutaka Ikeda · Takashi Honda · Toshiya Otomo

1H21 Anion order in pyrochlore oxyfluoride, Pb<sub>2</sub>Ti<sub>2</sub>O<sub>5.4</sub>F<sub>1.2</sub> (Chuo University) ○Kengo Oka · Katsuyoshi OH-Ishi · (Tokyo Institute of Technology) Hajime Hojo · Masaki Azuma

(16 : 20) (Chairman 岡研吾)

1H23 Synthesis and physical properties of new layered oxyfluorides (The University of Tokyo) ○Takuya Kitamura · Hiraku Ogino · Koji Kishio · (Nara Institute of Science and Technology) Takayuki Yanagida · (Aoyama Gakuin University) Junichi Shimoyama

1H24 Synthesis of perovskite type oxynitride SrTaO<sub>2</sub>N by using carbon nitride C<sub>3</sub>N<sub>4</sub> as nitrogen source (Hokkaido University) ○Mikiya Tadaki · Yuji Masubuchi · Shinichi Kikkawa

- 1H25 Evaluation of crystal structure and optical property of  $\text{Sr}_n\text{TaO}_{n+1}\text{N}$  (Tokushima University) ○Yuta Takeuchi · Narendra Sarda · Namiko Sakai · Takanori Hayashi · Kei-ichiro Murai · Toshihiro Moriga
- 1H26 A Novel Oxynitride Perovskite with a High-Temperature-type  $\text{LiNbO}_3$  structure (Kyoto University) ○Cédric Tassel · Yoshinori Kuno · Koji Fujita · Daichi Watabe · (University of Antwerp) Dmitry Batuk · Artem M. Abakumov · (Nanostructures Research Laboratory) Kazuki Shitara · Akihiko Kuwabara · Hiroki Moriwake · (Institut Laue-Langevin) Clemens Ritter · (NIST) Craig M. Brown · (Kyoto University) Takafumi Yamamoto · Ryu Abe · Yoji Kobayashi · Katsuhisa Tanaka · Hiroshi Kageyama

### ■■ September 7 (Wed) (Room J) ■■

#### 14. Crystal Science

- (10 : 00) (Chairman 我田元)
- 1J04 Reaction sintering and scintillation properties of La-substituted  $\text{Gd}_2\text{Si}_2\text{O}_7\text{:Ce}$  (Hokkaido University) Hikaru Fukushima · ○Mikio Higuchi · Takaaki Waki · Junichi Kaneko H. · Akira Miura · Kiyoharu Tadanaga
- 1J05 Development of ceramics scintillators prepared by the SPS method VI (Tohoku University) ○Shunsuke Kurosawa · Koichi Harata · Hiroyuki Chiba · Akihiro Yamaji · Mototaka Arakawa · Yuji Ohashi · Kei Kamada · Yuui Yokota · Akira Yoshikawa
- 1J06 ★Crystallization of chocolate and its edible application (Hiroshima University) ○Satoru Ueno
- (15 : 00) (Chairman 田中功)
- 1J19 ★Growth of the  $\text{Al}_2\text{O}_3/\text{YAG:Ce}$  eutectic by Vertical Bridgman Method (Ube Industries Ltd.) ○Masafumi Yoshimura · Shin-ichi Sakata · (Shinshu University) Seiya Yamada · Toshinori Taishi · Keigo Hoshikawa
- 1J21 Enhanced thermoelectric properties discovered in boride crystals (National Institute for Materials Science · University of Tsukuba) ○Takao Mori · Alif Sussardi · Kantaro Tsuchiya · (Tohoku University) Kunio Yubuta · Toetsu Shishido · (Kokushikan University) Shigeru Okada · (Yamanashi University) Anwar Hossain · Isao Tanaka
- (16 : 00) (Chairman 樋口幹雄)
- 1J22 Crystal growth of lithium ion conductor  $\text{Li}_x\text{La}_{(1-x)/3}\text{NbO}_3$  by TSFZ method (University of Yamanashi) ○Isao Tanaka · Risa Yoshihara · Chie Nakazawa · Masanori Nagao · Satoshi Watauchi
- 1J23 Relationship between surface structure and photocatalytic activity of rutile titanium oxide (001) surface (Kanagawa Inst. of Tech.) ○Yasuro Ikuma · Makoto Yamana · Masahiro Mitsugi · Seiya Ogoe · Koichi Niwa · (SPRING-8) Hiroo Tajiri · Osami Sakata
- 1J24 Growth of  $\text{Zn}_2\text{SiO}_4$  in zinc crystal glaze (Saga University) ○Junya Inada · Takanori Watari · Toshio Torikai · Mitsunori Yada · (Arita College of Ceramics) Hideyuki Matsuo · (Saga Ceramics Research Laboratory) Akihiko Kawahara

### ■■ September 7 (Wed) (Room K) ■■

#### 15. Chemical Design—Novel functionalities, structures and processing

- (10 : 20) (Chairman 瀬川浩代)
- 1K05 ☆Design of cationic polymer-anionic surfactant complex for controlling dispersion and alignment structure of functional nanoparticles (Yokohama National University) ○Motoyuki Iijima · Takaya Tsutsumi · Yasuhiro Kawaharada · Seitaro Morita · Junichi Tatami
- 1K06 Preparation of activated carbon using porous silica as a hard-template (Ehime University) ○Tomoya Matsui · Ryoji Takahashi · Fumiya Sato
- 1K07 Synthesis of nitrogen-containing carbon material from a precursor polymer using ion implantation technique (National Institutes for Quantum and Radiological Science and Technology) ○Akira Idesaki · Masaki Sugimoto · Syunya Yamamoto · Mitsumasa Taguchi · Tetsuya Yamaki
- 1K08 Synthesis of  $\text{SiO}_2/\text{SnO}_2$  nanofibers using templates of TEMPO-oxidized cellulose nanofibers and their gas sensing properties (Kyoto University) ○Shunsuke Gunji · Yasuhiko Shimotsuma · Tetsuya Fujimoto · Kiyotaka Miura
- 1K09 Synthesis and Optical Properties of Luminescent Metal-Cluster Based Compounds:  $\text{Cs}_2[\text{Mo}_6\text{X}_8\text{X}'_6]$  (Tokyo Institute of Technology · National Institute for Materials Science (NIMS) · NIMS-SG-COE) ○Norio Saito · (National Institute for Materials Science (NIMS) · NIMS-SG-COE) Yoshiki Wada · (UMR6226) Stephane Cordier · Pierric Lemoine · (National Institute for Materials Science (NIMS) · NIMS-SG-COE) Takeo Ohsawa · (National Institute for Materials Science (NIMS) · UMI3629) Fabien Grasset · (Tokyo Institute of Technology) Jeffrey S. Cross · (National Institute for Materials Science (NIMS) · NIMS-SG-COE · Materials Research Center for Element Strategy (MCES)) Naoki Ohashi
- (14 : 20) (Chairman 松田厚範)
- 1K17 ★Solution-chemical preparation of oxide semiconductor films and the application to photovoltaic devices (Toyohashi University of Technology) ○Masanobu Izaki
- 1K19 ☆Solid-State Redox Reaction of Oxide ions for Rechargeable Batteries (Tokyo Denki University) ○Naoaki Yabuuchi
- 1K20 Fabrication of laminated NiO-Alumina films by electrodeposition techniques (NIMS) ○Hiroyo Segawa · Takashi Naka · Kenji Wada
- (16 : 20) (Chairman 是津信行)
- 1K23 Si-based nano-flake particles synthesized by a solid state exfoliation method and their optical and photocatalytic properties (Toyota Central R&D Labs., Inc.) ○Hiroshi Itahara · Haruo Imagawa · (Tohoku University) Xiaoyong Wu · Yoshiki Yamazaki · (Tohoku University) Shu Yin · Kazunobu Kojima · F. Shigefusa Chichibu · Tsugio Sato
- 1K24 Photocatalytic properties under visible light irradiation in  $\text{TiO}_2$  with high concentration Nb doping (Hosei University) ○Tomonori Yonezawa · (National Institute for Materials Science) Yoshihiro Tsujimoto · Chenning Zhang · Tetsuo Uchikoshi · (Hosei University) Takamasa Ishigaki
- 1K25 Preparation of  $\text{BiVO}_4$  photoanode films from aqueous solutions of metal salts by low-speed dip coating (Kansai University) ○Seishirou Igarashi · Hiroaki Uchiyama · Hiromitsu Kozuka
- 1K26 Synthesis and characterization of transition-metal cation doped  $\text{SiO}_2\text{-Al}_2\text{O}_3$  material with hydrogen affinity (Nagoya Institute of Technology) ○Shota Saito · Ikuya Ota · Syotaro Tada · Yusuke Daiko · Sawao Honda · Yuji Iwamoto
- 1K27 Synthesis and characterization of polymer-derived  $\text{SiAlON:Eu}^{2+}$  phosphors with controlled photoluminescence properties (Nagoya Institute of Technology) ○Ryo Iwasaki · Koji Mizutani · Yusuke Daiko · Sawao Honda · Yuji Iwamoto

### ■■ September 7 (Wed) (Room L) ■■

#### 18. Hybrid Materials for Next Generation

- (9 : 20) (Chairman 金森主祥)
- 1L02 Preparation of a single-structured cyclic tetrasiloxane containing carboxylate side-chain groups and application to hybrid hydrogels (Kagoshima University) ○Makoto Yanagie · (Fukuoka Institute of Technology) Nobuyoshi Miyamoto · (Kagoshima University) Yoshiro Kaneko

- 1L03 Anisotropic Crystal Growth of Hydroxyapatite in High-Strength Hydrogels (Hokkaido University) ○Kazuki Fukao · Takayuki Nonoyama · Takayuki Kurokawa · Tasuku Nakajima · Jian Ping Gong
- 1L04 ★Preparation and application of "Cellulose Nanofiber" (Kyoto University) ○Kentaro Abe · Hiroyuki Yano  
(10 : 40) (Chairman 金子芳郎)
- 1L06 Preparation of hierarchically porous vanadium phosphate monoliths (Kyoto University) ○Ayumu Tanaka · Yang Zhu · Kazuyoshi Kanamori · Kazuki Nakanishi
- 1L07 Preparation of monolithic macroporous manganese oxides and phosphates from manganese salt (Kyoto University) ○Keisuke Matsuura · Yang Zhu · Kazuyoshi Kanamori · Kazuki Nakanishi  
(11 : 20) (Chairman 増田佳丈)
- 1L08 Development of Multilayer Ceramic Magnetic Circuit Applied to Electromagnetic MEMS Device (The University of Nihon) ○Kazuya Kudo · Kaito Misima · Minami Takato · Ken Saito · Fumio Uchikoba
- 1L09 Wireless Power Transfer by Multilayer Ceramic Coil Formed High-Aspect Ratio Pattern (Nihon University) ○Minami Takato · Ken Saito · Fumio Uchikoba
- 1L17 ★Alkyl-capped Silicon Nanocrystals: Optical Properties, Dynamics and Applications (National Institute for Materials Science) ○Naoto Shirahata  
(15 : 00) (Chairman 河村剛)
- 1L19 Electron transfer through the interface between silicon and chloroauric acid solution described by gold growth (Kyoto University) ○Masayuki Nishi · Koji Okuda · Hiroki Itasaka · Masahiro Shimizu · Kazuyuki Hirao
- 1L20 Surface modification and control of sulfur-doping for zinc oxide by utilizing defects (Nagoya Institute of Technology) ○Yusuke Daiko · Yuji Iwamoto · (FAU) Schmidt Jochen · Wolfgang Peukert
- 1L21 Preparation of spherical cobalt oxide nanoparticles with a good dispersibility for water (National Institute of Advanced Industrial Science and Technology (AIST)) ○Noriya Izu · Ichiro Matsubara · Toshio Uchida · Toshio Itoh · Woosuck Shin  
(16 : 00) (Chairman 西正之)
- 1L22 ★Novel development of hydrogen storage material and thermoset paste by organic-inorganic nanohybrid (Kyoto University) ○Tsuayoshi Takami  
(16 : 40) (Chairman 伊豆典哉)
- 1L24 Preparation of carbon-coated alumina nanoparticles with different surface chemistry and application to filler for rubber (Tohoku University) ○Yasuto Hoshikawa · Rei Kawaguchi · Takafumi Ishii · Takashi Kyotani (Bridgestone) Hidenobu Akahane · Hiroshi Yamada
- 1L25 Effect of surface structure of silica nanoparticles surface modified under bead milling process on the property of composites with epoxy resins (Yokohama National University) ○Takaya Tsutsumi · Motoyuki Iijima · Junichi Tatami · (Hitachi Chemical Co., Ltd.) Toshimitsu Moriya · Hiroyuki Izawa
- 1L26 Development of measurement technique for structure-dependent mechanical properties by indentation test (Toyoashi University of Technology) ○Hiroyuki Muto · Yuuichi Araki · Go Kawamura · Atsunori Matsuda

## ■ September 7 (Wed) (Room M) ■

### 17. Soft-solution process for synthesis and fabrication of ceramics

- (9 : 00) (Chairman 牧秀志)
- 1M01 Synthesis of lanthanum-cerium phosphate gel phosphors (Kyoto Prefectural University) ○Rikuya Suzuki · Hiroaki Onoda · Akito Ishida
- 1M02 Preparation of Sb-doped SnO<sub>2</sub> sols by stirring and dialysis of tin chloride (II) aq. with addition of citric acid in air (Chiba University) ○Yuki Amano · Naofumi Uekawa · Takashi Kojima
- 1M03 Synthesis of Zn-Al layered double hydroxide and oxide sols using high concentration sugar aq. and application for thin film preparation (Chiba University) ○Takahiro Mutoh · Naofumi Uekawa · Takashi Kojima  
(10 : 00) (Chairman 斧田宏明)
- 1M04 Preparation of SmY composite nitrate hydroxides and variation of their crystal phases and morphologies with average cation radius (Ehime University) ○Fumiya Sato · Hironori Ishibashi · Ryoji Takahashi
- 1M05 Charge transfer resistance reduction effect in Ni-MH cathode material by interlayer distance extension Ni-Al layered double hydroxide (Graduate School of Engineering, Kobe University) ○Masayoshi Inoue · Hideshi Maki · Minoru Mizuhata
- 1M06 Continuous synthesis of metal oxide nanoparticles by under the supercritical conditions (ITEC Co.,Ltd.) ○Yoji Itagaki · Shingo Suzuki · Daisuke Iida · Tsuneki Kanzawa · Masayasu Iida · (Osaka Prefecture University) Atsushi Nakahira  
(11 : 00) (Chairman 小林亮)
- 1M07 Preparation of nanostructured WO<sub>3</sub> particles through crystal growth in the presence of gelatin (Kansai University) ○Shota Mizuguchi · Hiroaki Uchiyama · Hiromitsu Kozuka
- 1M08 Synthesis of spherical mesoporous silica using nonionic surfactant (Tokai University) ○Jawad Sarwar · Hiroya Sekine · Masashi Higuchi · Keichi Katayama
- 1M09 Preparation and Crystallization of Ta-Ti Hydrous Oxide Porous Particles via Metal-Alkoxide Method (Chiba University) ○Akiko Takeda · Takashi Kojima · Shunsuke Kobayashi · Naohumi Uekawa  
(14 : 20) (Chairman 平野正典)
- 1M17 Equilibrium Reaction Analysis of Fluorozirconium Complex in the Liquid Phase Deposition Process (Kobe University) ○Minoru Mizuhata · Yutaka Takiguchi · (Faculty of Engineering, Kobe University) Masanao Okamoto · (Kobe University · Center for Environmental Management) Hideshi Maki
- 1M18 Synthesis of gluconate modified layered titanate particles with ability of self-aggregation for formation multi-layer structure and their function (Chiba University) ○Naofumi Uekawa · Yutaka Ono · Shun Tsukamoto · Takashi Kojima  
(15 : 00) (Chairman 水畑穰)
- 1M19 ★Biomimetic synthesis of nanostructured metal oxide particles in an aqueous solution (Kansai University) ○Hiroaki Uchiyama · Reiko Sakaue · Syunsuke Nakanishi · Syouta Mizuguchi · Shiho Hirano · Hiromitsu Kozuka
- 1M21 ★Catalytic performance of rare-earth-iron mixed oxide synthesized by a solvothermal method (Kyoto University) ○Saburo Hosokawa  
(16 : 20) (Chairman 上川直文)
- 1M23 Mn<sup>5+</sup> doped NIR photoluminescent phosphor preparation by solution process (Tottori University) ○Tadashi Ishigaki · Wataru Uehara · (Tottori University · UBE INDUSTRIES, LTD.) Tohru Inagaki · (Tottori University) Kotoku Ohmi
- 1M24 Hydrothermal Synthesis of (Eu,Gd)<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub> Nanocrystals (Aichi Institute of Technology) ○Masanori Hirano · Toshiaki Ohmori

(17 : 00) (Chairman 水畑穰)

1M25 ★A new thermodynamic origin of surface melting on ice crystals (Hokkaido University) ○Ken-ichiro Murata

## ■■ September 7 (Wed) (Room N) ■■

## 21. Novel developments of key technologies for improvement and solution of environmental problems

吸着・光触媒

(9 : 00)

1N01 ◆Explanation of this session and future developments of research on environmental ceramics (University of Yamanashi) ○Takahiro Takei

(9 : 20) (Chairman 西本俊介)

1N02 Surface characteristic of MgO and its adsorption behavior of unsaturated fatty acid (Nagoya Institute of Technology) Kiyotaka Kato · (Ube Material Industries) Shoji Sakai · (Nagoya Institute of Technology) ○Masaaki Haneda

1N03 NOx adsorption observation on SrTiO<sub>3</sub> (110) surface using ISS and UPS (Tokyo University of Science) ○Kenjiro Fujimoto · Yuto Ishiduka · Yuki Yamaguchi · Akihisa Aimi · (National Institute for Materials Science) Isao Sakaguchi · Taku Suzuki

1N04 Kinetic analysis of adsorption and photodecomposition properties of titania for acetaldehyde (Kyushu University) ○Yuko Matsukawa · Shingo Hirata · Miki Inada · Naoya Enomoto · Katsuro Hayashi

(10 : 20) (Chairman 勝又健一)

1N05 ★Applications of photocatalysis in biology for environmental purification and value-added chemicals production (Tokyo University of Science) ○Kazuya Nakata

1N07 Effect of wettability of nozzle surface on dispensed oil droplet size in water (Okayama University) ○Takahiro Takiguchi · Shunsuke Nishimoto · Yoshikazu Kameshima · Michihiro Miyake

1N08 Effects of temperature and humidity on adsorption and photocatalytic activity of titania coated porous glass fiber cloth (Tokyo University of Science) ○Kentarō Hirayama · Kenitiro Iwasaki · Atsuo Yasumoriyasumori

1N09 Visualization of the catalytic reaction sites in Au/TiO<sub>2</sub> plasmonic photocatalyst (ToyoHashi University of Technology) ○Tomoki Arai · Teruhisa Okuno · Go Kawamura · Hiroyuki Muto · Atsunori Matsuda

ゼオライト・シリカ系多孔体

(14 : 20) (Chairman 武井貴弘)

1N17 ★Properties and Application to Environmental-related Technology of Zeolites (Industrial Technology Center of Tochigi Prefecture) ○Taiji Matsumoto

1N19 Structure and characterization of the zeolite surface-modified perlite (MITSUI MINING &amp; SMELTING CO., LTD. · Osaka Prefecture University) ○Makoto Kasai · (MITSUI MINING &amp; SMELTING CO., LTD.) Yosei Kobayashi · (MAKINO CORPORATION) Masataka Kamitani · Mitsunori Kondo · (Osaka Prefecture University) Masakazu Togo · (Osaka Prefecture University · Tohoku University) Atsushi Nakahira

1N20 Preparation of geopolymers using a natural zeolite as a raw material (Okayama University) ○Hiroki Baba · Yoshikazu Kameshima · Shunsuke Nishimoto · Michihiro Miyake

1N21 Preparation and properties of self-set and sintered natural zeolite (Yamagata University) Kenta Miura · Koki Tadano · ○Hidero Unuma · (Zeeklite Co.) Shunsuke Funata · Akihisa Masano · Tomoo Kahara

(16 : 20) (Chairman 前田浩孝)

1N23 ★Chemical formation of silica-based inorganic-organic hybrids through polymer-derived ceramics route (Nagoya Institute of Technology) ○Yuji Iwamoto

1N25 Effect of material properties of silica gel sampling agent on its organic solvent extraction efficiency determined by phase equilibrium method (Japan Organization of Occupational Health and Safety) ○Hironobu Abiko

1N26 Synthesis and characterization of porous silica particles for reduce the radiation heat transfer of vacuum insulation material (Tohoku university) ○Kei Tsukada · Masanobu Kamitakahara · Hideaki Matsubara · (JFCC) Taishi Yokoi · Seiji Takahashi

1N27 Preparation of mesoporous silica-hydroxyapatite hybrid and adsorption property for cation in aqueous solution (University of Yamanashi) ○Takahiro Takei · Fumitake Okabe · Sayaka Yanagida · Nobuhiro Kumada

## ■■ September 7 (Wed) (Room P) ■■

12 : 10~14 : 10

## 99. General Sessions (Only Poster)

1P001 Features of ferroelectric states in the simple-perovskite mixed-oxide system (1-x) Pb (Mg<sub>1/3</sub>Nb<sub>2/3</sub>) O<sub>3</sub>xPbTiO<sub>3</sub> with lower Ti contents (Osaka Prefecture University) ○Hirofumi Tsukasaka · Shigeo Mori · (Waseda University) Yasumasa Koyama

1P002 Effective Charges and Sizes of Cations in Perovskite Dielectric Oxides (Fukuoka University) ○Naohisa Takesue · Kazuya Ishibashi

1P003 Dependence of structure and electronic properties on Pb-substitution for Bi2212 superconductor (Yamagata University) ○Masato Sato · Shiro Kambe · Tomoya Naminoue · Syuto Katsushika

1P004 pH responsivity of 3d-block metal oxide-coated SUS electrodes (Mie University) ○Tadanori Hashimoto · Mariko Miwa · Hiroki Kitabayashi · Hiroyuki Nasu · Atsushi Ishihara · (HORIBA, Ltd.) Yuji Nishio

1P005 Synthesis and characterization of the Pt/WO<sub>3</sub> nano-particles dispersed polymer membrane hydrogen gas sensor (Tokyo University of Science) ○Yoshihiro Makino · Yuki Yamaguchi · Ryo Ishihara · Keishi Nishio

## 19. Material Design and Processing Design

1PD01 Development of VOC gas decomposition catalyst using HAp/TiO<sub>2</sub> composite filter and its efficiency (Nagoya Institute of Technology) ○Kouhei Miyazaki · Hiromichi Ikeuchi · Harumitsu Nishikawa · Masayoshi Fuji · Takashi Shirai

1PD02 Influence of particle size distribution on packing structure in powder compact prepared by centrifugal casting method (Nagaoka University of Technology) ○Akihiro Sato · Zenji Kato · (Nagaoka University of Technology) Satoshi Tanaka

1PD03 Effect of polyelectrolytes modification on the electrophoretic deposition property of complex oxide powder (ToyoHashi University of Technology) ○Kota Aiyama · Hiroyuki Muto · (National Institute of Advanced Industrial Science and Technology) Chika Matsunaga · (National Institute for Materials Science) Tetsuo Uchikoshi · (ToyoHashi University of Technology) Atsunori Matsuda

## 02. Development and evaluation of ceramics producing harmony with living body

1PF01 Mechanical reinforcement of calcium phosphates using a cellulose nanofiber (Industrial Technology Center, Gifu Prefecture Government) ○Shuichi Asakura · Tetsuro Hayashi · (Ueda lime manufacturing Co., Ltd.) Tsutomu Imai

1PF02 Evaluations of lysozyme adsorption on apatite particles with various surface structures (Chubu University · National Institute of Advanced Industrial

Science and Technology) ○Toshio Nagasaki · (National Institute of Advanced Industrial Science and Technology) Fukue Nagata · (Chubu University) Makoto Sakurai · (National Institute of Advanced Industrial Science and Technology) Katsuya Kato

1PF03 Drug release ability of poly (lactic acid) core / apatite crystal shell particles (National Institute of Advanced Industrial Science and Technology) ○Fukue Nagata · Tatsuya Miyajima · Katsuya Kato

#### 08. Innovation in advanced ceramics from powder processing

1PG01 A Study for Operation Optimization of The Spray Drying Process Used for Fine Ceramics by Real Time Particle Size Distribution Analysis. (PRECI CO., LTD.) ○Shinya Kawaguchi · Yuichi Misumi · Hayato Kato · (Malvern Instruments, Div of Spectris Co. Ltd.,) Fumiaki Sato · Daisuke Sasakura · Miyuki Funato

1PG02 Relationship with a compaction behavior in a low pressure range and an internal structure determined by a particle image analysis. (Malvern Instruments, A division of Spectris Co.,Ltd.) ○Daisuke Sasakura · Miyuki Funato · Fumiaki Sato · (Preci.Co.Ltd.,) Shinya Kawaguchi · Yuichi Misumi · Hayato Kato

1PG03 Synthesis and assembly of spherical phosphor particles for directivity control of luminescence (Tokai University) ○Chihiro Shoji · Koji Tomita · (Tohoku University) Makoto Kobayashi · Hideki Kato · Masato Kakihana

1PG04 Effect of sintering temperature on anisotropic shrinkage of c-axis oriented alumina ceramics (Nagaoka University of Technology) ○Tetsuo Igata · Zenji Kato · Satoshi Tanaka (Tokyo Institute of Technology) Humihiro Wakai

1PG05 Additive manufacturing of alumina parts via indirect selective laser melting (Technology Research Institute of Osaka Prefecture) ○Takeshi Suyama · Tomoatsu Ozaki

1PG06 Fabrication and mechanical properties of textured Ti<sub>3</sub>SiC<sub>2</sub> MAX phase systems (Tokyo University of Science · National Institute for Materials Science) ○Yuichi Uchida · Shotaro Musha · (National Institute for Materials Science) Koji Morita · Tohru Suzuki · Toshiyuki Nishimura · (Tokyo University of Science · National Institute for Materials Science) Kenjiro Fujimoto · (National Institute for Materials Science) Yoshio Sakka

1PG07 Molecular Structural Evolution of Polysilsesquioxanes in Hydrogen or Argon Atmosphere (Osaka Prefecture University) ○Kenta Sasakawa · Masaki Narisawa · Hirohumi Inoue

#### 13. Synthesis and Functional Properties of Mixed ion Compounds

1PH01 Crystal structure and magnetic properties of new gaufeyroite-type borates (Hokkaido University) Hiroki Inoue · ○Yoshihiro Doi · Yukio Hinatsu

1PH02 Electrical and magnetic properties of ternary rhodium chalcogenides (Hokkaido University) Takanori Sato · ○Makoto Wakeshima · Yukio Hinatsu

1PH03 Synthesis and crystal structure analysis of TiBi<sub>2</sub> and Ti<sub>3</sub>Bi<sub>2</sub>O (Tohoku University) ○Kei Watanabe · Takahiro Yamada · Hisanori Yamane

1PH04 High pressure synthesis and charge/discharge characteristics of CaFe<sub>2</sub>O<sub>4</sub> type Na (Mn<sub>1-x</sub>Fe<sub>x</sub>)<sub>2</sub>O<sub>4</sub> (The University of Nagoya) ○Eiichi Hirose · Yuichi Shirako · Ken Niwa · Masashi Hasegawa · (Panasonic Corporation) Kensuke Nakura · Ryuichi Natsui

1PH05 Structure and phase transition of perovskite-type oxyfluoride, K<sub>3</sub>TiOF<sub>5</sub> (Tokai University) ○Tetsuhiro Katsumata · Hidehiro Miwa · Koichiro Ueda · (Gakushuin University) Daisuke Mori · Yoshiyuki Inaguma · (Tokyo Univesity of Science) Akihisa Aimi

1PH06 Luminescence properties of layered halide oxide phosphor by vacuum ultraviolet excitation (National Institute of Advanced Industrial Science and Technology · The University of Tokyo) ○Hiraku Ogino · (Tohoku University) Masanori Koshimizu · (NAIST) Takayuki Yanagida · (The University of Tokyo) Kouji Kishio

#### 14. Crystal Science

1PJ01 Nitrided Layered Dion-Jacobson Phase CsBa<sub>2</sub>Ta<sub>3</sub>O<sub>10</sub> and Ruddlesden-Popper Phase KLaTiO<sub>4</sub> and K<sub>2</sub>La<sub>2</sub>Ti<sub>3</sub>O<sub>10</sub> Crystals: Water Oxidation Activity and Fabrication of Their Nanosheets (Shinshu University · The University of Tokyo) ○Mirabbos Hojamberdiev · (Shinshu University) Kenta Kawashima · Hajime Wagata · (Tohoku University) Kunio Yubuta · (The University of Tokyo) Kazunari Domen · (Shinshu University) Katsuya Teshima

1PJ02 Influence of the Valence State of Nb in the Photocatalytic Properties of the Flux Grown BaNbO<sub>2</sub>N Crystals (The University of Shinshu) ○Yukinori Murata · Tetsuya Yamada · Hajime Wagata · Katsuya Teshima

1PJ03 Luminescent Properties of Co-doped Transparent Ceramics Ce:SrHfO<sub>3</sub> by SPS Method (Tohoku University) ○Hiroyuki Chiba · Shunsuke Kurosawa · Kouichi Harata · Akihiro Yamaji · Yuji Ohashi · KEI Kamada · Yuui Yokota · Akira Yoshikawa

1PJ04 Crystal growth and property of Y<sub>2</sub>ReB<sub>6</sub> and YCrB<sub>4</sub>-type compounds by arc-melting method (Kokushikan University) ○Takashi Yamasaki · (Tohoku University) Akiko Nomira · (Kokushikan University) Shigeru Okada · (Tohoku University) Kunio Yubuta · Toetsu Shishido · (NIMS) Takao Mori

1PJ05 Thermoelectric Properties of YbB<sub>66</sub> Single-Crystal (University of Tsukuba · National Institute for Materials Science) ○Kantaro Tsuchiya · (National Institute for Materials Science) Satofumi Maruyama · (University of Tsukuba · National Institute for Materials Science) Takao Mori

1PJ06 Growth of up-conversion LnVO<sub>4</sub>: Er<sup>3+</sup>, Yb<sup>3+</sup> (Ln=Gd, La) single crystals by FZ method (University of Yamanashi) ○Yuka Watanabe · Shiho Minamimure · Yoshinori Yonesaki · Masanori Nagao · Satoshi Watauchi · Isao Tanaka

1PJ07 Preparation and scintillation properties of translucent LiYSiO<sub>4</sub>:Ce polycrystalline thin plates (Hokkaido University) ○Saki Toyoda · Mikio Higuchi · Junichi H. Kaneko · Akira Miura · Kiyoharu Tadanaga

1PJ08 Flux Growth of Li<sub>6.75</sub>La<sub>3</sub>Zr<sub>1.75</sub>Nb<sub>0.25</sub>O<sub>12</sub> Crystals from Li<sub>3</sub>BO<sub>3</sub>-based Fluxes (The University of Shinshu) ○Miho Yamashita · Sakina Kaneko · Nobuyuki Zettsu · Katsuya Teshima

1PJ09 Bonding of Li<sub>4</sub>Ti<sub>5</sub>O<sub>12</sub> / Li<sub>3</sub>BO<sub>3</sub> Interface Based on Glass Flux Growth Approaches (Shinshu University) ○Taisuke Horikawa · Shuhei Uchida · Nobuyuki Zettsu · Katsuya Teshima

1PJ10 Flux Growth of LiCoO<sub>2</sub> Crystal / Li<sub>6.75</sub>La<sub>3</sub>Zr<sub>1.75</sub>Nb<sub>0.25</sub>O<sub>12</sub> Crystal-Li<sub>3</sub>BO<sub>3</sub> Glass Composite Electrodes and Characterization of Their Electrochemical Properties (The University of Shinshu) ○Sakina Kaneko · Miho Yamashita · Nobuyuki Zettsu · Katsuya Teshima

#### 17. Soft-solution process for synthesis and fabrication of ceramics

1PM01 Polymerized complex synthesis and characterization of perovskite-type BaLnO<sub>3</sub> (Ln = Ce, Pr, and Tb) (National Institute of Technology, Gunma College) ○Nobuyuki Taira · Yasuki Yoshida · Hiroki Ubukata

1PM02 Fabrication of p-type Semiconductor Cu<sub>2</sub>O Films on Glass Substrates by CBD Method (Keio University) ○Daichi Tonagi · Manabu Hagiwara · Shinobu Fujihara

1PM03 Synthesis of excellent dispersibility BaTiO<sub>3</sub>-PVP nanoparticles by hydrothermal method (Nagoya Institute of Technology · National Institute of Advanced Industrial Science and Technology) ○Jinhui Li · Woosuck Shin · (National Institute of Advanced Industrial Science and Technology) Akihiro Tsuruta · (Noritake) Koji Inukai · Yosuke Takahashi

1PM04 Synthesis of porous alumina using a polypropylene glycol (Ehime University) ○Akiko Onishi · Ryoji Takahashi · Fumiya Sato

#### 21. Novel developments of key technologies for improvement and solution of environmental problems

1PN01 Low-temperature CO oxidation activity of Fe-Co composite oxide catalyst prepared by hydrothermal method (Nagoya Institute of Technology) ○Yusuke Kawaguchi · (National Institute of Advanced Industrial Science and Technology) Atsuya Towata · (Nagoya Institute of Technology) Masaaki Haneda



- 1PN02 The influence to a waste material by mechanical treatment and the characterization (Nagoya Institute of Technology Advanced Ceramics Research Center) ○Kunihiko Kato · Takuma Akagi · Chiharu Oguro · Masayoshi Huji · Takashi Shirai
- 1PN03 Elucidation of Degradation Reaction of Organic Molecule by Metal-doped Niobate Nanosheet (SHIMANE UNIVERSITY) ○Yuuki Sasaki · Takuya Fujimura · Ryou Sasai
- 1PN04 Silica modification of titania surface by its photocatalytic activity (Shinshu University) ○Shingo Matsunaga · Hiromasa Nishikiori
- 1PN05 Properties of metal ion adsorption on mesoporous silica particles functionalized with carboxyl groups (Mie University · National Institute of Advanced Industrial Science and Technology) ○Ryouichi Hikosaka · (National Institute of Advanced Industrial Science and Technology) Fukue Nagata · (Mie University) Masahiro Tomita · (National Institute of Advanced Industrial Science and Technology) Katsuya Kato
- 1PN06 Chemical reduction and catalysis of Co-EDTA and Co-citrate complexes for hydrolysis reaction of sodium borohydride (King Abdulaziz University) ○Hitoshi Inokawa · Hafedh Driss · (Hiroshima University) Hiroki Miyaoka · Takayuki Ichikawa · Yoshitsugu Kojima · (King Abdulaziz University) Sharif Zaman · Abdulrahim Al-Zahrani · Yahia Alhamed · Lachezar Petrov

## 20. Ceramics Processing through Energy Consumption Reduction (Green Processing)

- 1PQ01 Preparation and Sintering Properties of Silver Powders by High-Pressure Water Atomization (Daiken chemical Co., Ltd) ○Takashi Ogihara · Toshihiko Kubo · Kenji Minami · Hirokazu Yasuda · Yasuaki Sato · Nobuyoshi Aoyagi · Shigehiro Arita · Masahiro Harada · Akio Harada
- 1PQ02 Effects of precursor and fluid condition on film deposition of hafnium oxide in supercritical carbon dioxide (Sophia University) ○Hiroaki Kawashima · Marina Shiokawa · Hiroshi Uchida
- 1PQ03 Design of radiative cooling devices using Si<sub>3</sub>N<sub>2</sub>O particles (Shimane University) ○Hidetoshi Miyazaki · Kazuya Okada · (Shizuoka University) Hisao Suzuki · (Nagoya Institute of Technology) Toshitaka Ota
- 1PQ04 Fabrication and evaluation of V<sub>2</sub>O<sub>5</sub>-based photochromic composite films using peroxy polyvanadic acid and urethane resin. (The University of Shimane) ○Takahiro Matsuura · Hidetoshi Miyazaki · (The University of Nagoya Institute of Technology) Toshitaka Ota · (The University of Shizuoka) Hisao Suzuki
- 1PQ05 Evaluation of water-splitting photocatalysts by fluorescence lifetime measurement (Meiji University) ○Nozomi Koshimizu · Chihiro Izawa · Tomoaki Watanabe
- 1PQ06 Photocatalytic property of Ga-Ti composite compounds (Meiji University) ○Yuta Sasaki · Chihiro Izawa · Tomoko Fukazawa · Tomoaki Watanabe
- 1PQ07 Direct Fabrication of CuFeO<sub>2</sub>/Fe photocathode by Hydrothermal method (Meiji University) ○Mizuki Ito · Chihiro Izawa · Tomoaki Watanabe
- 1PQ08 Synthesis of nitrogen and fluorine co-doped NaTaO<sub>3</sub> (Meiji University) ○Itaru Ohno · Hajime Wagata · Chihiro Izawa · Tomiaki Watanabe

## 25. Novel ceramic technology based on nanocrystals

- 1PS01 Colloidal approach for nano-structured LSCF/GDC cathode of solid oxide fuel cells (Gunma University) ○Chizuru Iwata · Kazuyoshi Sato · (Osaka University) Hiroya Abe
- 1PS02 Size-control of CaF<sub>2</sub> nanocrystal upconversion phosphor by hydrothermal synthesis (Tokai University) ○Masaki Tanaka · Koji Tomita · (Tohoku University) Makoto Kobayashi · Masato Kakihana

## 24. New Evolution of Dielectrics: Fusion and Further Progress of Science and Technology on Dielectric Materials and Devices

- 1PU01 Tunable property of nonstoichiometric Ba<sub>0.8</sub>Sr<sub>0.2</sub>TiO<sub>3.3</sub> and its polarization analysis (Okayama University) ○Koji Osaki · Takashi Teranishi · Hidetaka Hayashi · Akira Kishimoto
- 1PU02 Pulsed Electric Field Response of Electronic States in BaTiO<sub>3</sub> Thin Film (Hiroshima University) ○Sota Ono · Cong Lu · Nobuo Nakajima · (High Energy Accelerator Research Organization) Jun-ichi Adachi · Yasuhiro Niwa · (Tokyo Institute of Technology) Shintaro Yasui
- 1PU03 Effect of substitution by La<sup>3+</sup> and Nb<sup>5+</sup> on electrical conduction of single-crystalline BaTi<sub>2</sub>O<sub>5</sub> (Tohoku University) ○Keiji Shiga · Hirokazu Katsui · Takashi Goto
- 1PU04 Fabrication and characterization of BaTi<sub>2</sub>O<sub>5</sub> by the reverse homogeneous precipitation method (Kyushu University) ○Yuki Ushio · Maiko Nishibori · (University of Tsukuba) Eiji Nishibori · (Kyushu University) Kengo Shimanoe · Ken Watanabe · (NORITAKE CO., LIMITED) Kouji Inukai
- 1PU05 Impedance Spectroscopy of lead-free niobate piezoelectric ceramics under high electric field (Nagoya Institute of Technology) ○Hiroshi Nishiyama · Kenichi Kakimoto · (Taiyo Yuden Co., Ltd.) Keiichi Hatano · Yukihiko Konishi
- 1PU06 Evaluation of dielectric properties for perovskite-type oxides by density functional theory (Nagoya Institute of Technology) ○Masanari Otake · (Nagoya Institute of Technology · ESICB-Kyoto University · JST-PRESTO · NIMS) Masanobu Nakayama
- 1PU07 Fabrication and evaluation of (Li, La) TiO<sub>3</sub>-SrTiO<sub>3</sub>-based boundary layer capacitor (Tokyo Institute of Technology) ○Kiwamu Suzuki · Naoya Nohara · Takuya Hoshina · Hiroaki Takeda · Takaaki Tsurumi · Yukio Sakabe
- 1PU08 Field dependence of electrocaloric effect in ferroelectric (Ba, Sr) TiO<sub>3</sub> thin films (Nagoya University) ○Shogo Matsuo · Tomoaki Yamada · (Tokyo Institute of Technology) Takafumi Kamo · Hiroshi Funakubo · (Nagoya University) Masahito Yoshino · Takanori Nagasaki
- 1PU09 Crystal structure analysis for Fe doped ZrO<sub>2</sub> ultrathin film (Tohoku University) ○Sujin Choi · Takahisa Shiraishi · (Tokyo Institute of Technology) Takao Shimizu · Hiroshi Funakubo · (Tohoku University) Takanori Kiguchi · Toyohiko Konno
- 1PU10 High rate capability at low temperatures for (Ba, Sr) TiO<sub>3</sub>-LiCoO<sub>2</sub> composite cathodes (Okayama University) ○Naoto Katsuji · Yu Zhe · Yumi Yoshikawa · Takashi Teranishi · Hidetaka Hayashi · Akira Kishimoto
- 1PU11 High rate capability of BaTiO<sub>3</sub>-LiCoO<sub>2</sub> nano-layered cathode films (Okayama University) ○Keisuke Chajima · Takashi Teranishi · Hidetaka Hayashi · Akira Kishimoto · (Tokyo Institute of Technology) Sou Yasuhara · Shintaro Yasui · Mitsuru Itoh
- 1PU12 Magnetoresistance effect of tunnel magneto-resistance device using ferroelectric tunnel layer (Nagoya Institute of Technology) ○Takeshi Yokota · Joji Miyabe · Shinsaku Maeda · Manabu Gomi
- 1PU13 Diffuse scattering due to short-ranged ordered structures in layered iron oxides RFeMO<sub>4</sub> (Osaka Prefecture University) ○Shigeo Mori · Wataru Yoshimoto · Yui Ishii (Okayama University) Takamasa Fujiwara · Noboru Kimizuka · Naoshi Ikeda · (JASRI-Spring8) Shogo Kawaguchi · (Osaka Prefecture University) Yoshiki Kubota
- 1PU14 Crystal Structure Analysis of Fe doped HfO<sub>2</sub> Ultra Thin Films Deposited by Solid Phase Epitaxial Growth Method (Tohoku University) ○Takahisa Shiraishi · Sujin Choi · (Tokyo Institute of technology) Takao Shimizu · Hiroshi Funakubo · (Tohoku University) Takanori Kiguchi · Toyohiko Konno
- 1PU15 Growth of tetrahedral ferroelectric thin films and possibility of polarization switching (Tokyo Institute of Technology) ○Shintaro Yasui · (University of Tokyo) Ryota Takahashi · Mikk Lippmaa · (JFCC) Ayako Konishi · Hiroki Moriwake · (Tokyo Institute of Technology) Mitsuru Itoh

## 22. Research Topics on Advanced Ceramic Technology for Energy Conversion, Storage and Control Devices

- 1PV01 Evaluation of Ce<sub>1-x</sub>La<sub>x</sub>O<sub>2.5</sub>-based ceria (0 ≤ x ≤ 0.6) as cell components in electrochemical cells (Central Research Institute of Electric Power Industry) ○Masashi Mori · (National Institute of Advanced Industrial Science and Technology) Hiroshi Sumi · (Anan Kasei Co., Ltd.) Eisaku Suda

- 1PV02 Defect chemistry in  $\text{La}_{1-x}\text{Sr}_x\text{Co}_{1-y}\text{Fe}_y\text{O}_{3-\delta}$  materials for solid oxide fuel cells (Nagoya Institute of Technology) ○Kentaro Watanabe · Takayuki Ohshiro · Tomoaki Nakamura · (Nagoya Institute of Technology · ESICB-Kyoto University · JST-PRESTO · NIMS) Masanobu Nakayama
- 1PV03 Synthesis and electric properties of La-doped  $\text{SrTiO}_3$  (Chiba University) ○Yuta Noguchi · Takahiro Okubo · Shin Nisiyama
- 1PV04 Design of yttria stabilized zirconia fibre network fabricated by sol-gel method for IT-SOFC (National Institute for Materials Science (NIMS)) ○Shipra Chauhan · Toshiyuki Mori · Akira Suzuki · (National Institutes for Quantum and Radiological Science and Technology) Shunya Yamamoto · (National Institute for Materials Science (NIMS)) Andri Rednyk · Hiroshi Okubo
- 1PV05 Effect of A site cation deficiency of SLFC-based layered perovskite mixed ionic–electronic conductors on their electric and thermochemical properties (The University of Hosei) ○Hiromasa Yano · Takaya Akashi · (National Institute Material and Science) Tetuo Uchikoshi · Kiyoshi Kobayashi · Tatushi Suzuki
- 1PV06 Fabrication of cathode layer on  $\text{Li}^+$ -conducting oxide-based solid electrolytes by aerosol deposition method (Tokyo Metropolitan University) ○Hirokazu Munakata · Kyoko Kozuka · Keiko Nitta · Mao Shoji · Takeshi Kimura · Kiyoshi Kanamura
- 1PV07 Effect of YSZ on thermoelectric properties of La-doped  $\text{SrTiO}_3$  ceramics (National Cheng Kung University) Chen Li · ○Chii-Shyang Hwang
- 1PV08 Ultra-low content of Pt modified  $\text{CeO}_x$  nanowire network for Oxygen Reduction Reaction (National Institute for Materials Science (NIMS)) ○Shipra Chauhan · Toshiyuki Mori · (RIKEN (Rikagaku Kenkyusho)) Tomohiro Kobayashi · (National Institutes for Quantum and Radiological Science and Technology) Shunya Yamamoto · (National Institute for Materials Science (NIMS)) Noriko Isaka · Hiroshi Okubo
- 1PV09 Difference of the number of three-phase boundary in the MEA of PEFC which operates at 70 and 150°C by design of the interfaces between binder and electrode active material (National Institute for Materials Science · The University of Hokkaido) ○Kenichi Takahashi · Toshiyuki Mori · (National Institute for Materials Science) Akira Suzuki · Shipra Chauhan · (National Institutes for Quantum and Radiological Science and Technology) Yasunari Maekawa · Akihiro Hiroki · Kimio Yoshimura · Shunya Yamamoto
- 1PV10 Preparation and Characterization of the Bulk-Type Sulfide All-Solid-State Batteries with  $\text{SiO}$ -type Anode Materials (Nara Institute of Science and Technology) ○Takahito Kimoto · (Osaka Municipal Technical Research Institute) Mari Yamamoto · Shingo Ikeda · Yasuyuki Kobayashi · (Nara Institute of Science and Technology · Osaka Municipal Technical Research Institute) Masanari Takahashi
- 1PV11 Crystal Structure, Electrochemical Properties, and Thermodynamic Stability of Spinel Type Cathode Materials  $\text{MgCo}_{2-x}\text{Ni}_x\text{O}_4$  for Mg Secondary Battery (Fac. of Sci. and Tech., Tokyo University of Science) Yasushi Idemoto · ○Hiroki Kasai · Naoto Kitamura · Naoya Ishida
- 1PV12 Sheet-Type All-Solid-State Batteries Fabricated via Slurry Coating Process (National Institute of Advanced Industrial Science and Technology) ○Atsushi Sakuda · Kentaro Kuratani · Tomonari Takeuchi · Hironori Kobayashi · (Osaka Municipal Technical Research Institute) Mari Yamamoto · Masanari Takahashi
- 1PV13 Nano-structure and cell performance of a composite positive electrode using sulfur and phosphorus sulfide in all-solid-state Na/S batteries with high capacity (Osaka Prefecture University) ○Naoto Tanibata · Hirofumi Tsukazaki · (Osaka Prefecture University · Kyoto University ESICB) Akitoshi Hayashi · (Osaka Prefecture University) Shigeo Mori · Masahiro Tatsumisago
- 1PV14 Charge-discharge characteristics of  $\text{Sn}_2\text{Fe}$  nanoparticles as anode for sulfide-type all-solid-state batteries (Osaka Municipal Technical Research Institute) ○Mari Yamamoto · Yasuyuki Kobayashi · Shingo Ikeda · (Osaka Municipal Technical Research Institute · Nara Institute of Science and Technology) Masanari Takahashi
- 1PV15 Characterization of garnet-type oxide solid electrolyte film fabricated by aerosol deposition method (Toyoashi University of Technology) ○Akihiro Bando · Takahiro Akiduki · Tomohiro Tojo · Ryoji Inada · Yoji Sakurai
- 1PV16 Synthesis and characterization of garnet-type  $\text{Li}_{6.5}\text{La}_{3-x}\text{Ba}_x\text{Zr}_{1.5-x}\text{Ta}_{0.5+x}\text{O}_{12}$  solid electrolytes (Toyoashi University of Technology) ○Satoshi Yasuda · Masaru Tojo · Chihiro Yonekura · Tomohiro Tojo · Ryoji Inada · Yoji Sakurai
- 1PV17 Synthesis of Sodium Manganese Oxide Doped with Metallic Ions and Their Electrochemical Characteristic (Tokai university) ○Takumi Sato · Tomohiro Tamura · Masashi Sato · Masashi Higuchi · Keiichi Katayama
- 1PV18 Effects of binder addition on charge-discharge behavior of composite cathode in all-solid-state lithium batteries prepared using  $\text{Li}_6\text{PS}_5\text{Cl}$  precursor solution (Hokkaido University) Takiki Kinoshita · Nataly Carolina Rosero Navarro · Shunjiro Chida · Akira Miura · Mikio Higuchi · ○Kiyoharu Tadanaga
- 1PV19 Microstructural observation of garnet-type lithium ion conducting ceramics sintered at high temperature (Osaka Prefecture University) ○Kousuke Noi · Akitoshi Hayashi · Masahiro Tatsumisago
- 1PV20 Synthesis and electrical characterization of other elements doped  $\text{Li}_3\text{Zn}_{0.5}\text{SiO}_4$  (The University of Tokai) ○Seiji Ono · Syougo Nakamura · Takashi Asaka · Masashi Higuchi · Keiichi Katayama
- 1PV21 Fabrication of  $\text{Li}(\text{Ni}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3})\text{O}_2$  Fiber by Electro-spinning Method and Application to All-solid-state Batteries (Osaka Muni. Tech. Res. Inst. · NAIST) ○Masanari Takahashi · (Osaka Muni. Tech. Res. Inst.) Mari Yamamoto · (NAIST · Osaka Muni. Tech. Res. Inst.) Hiroki Akai · (Osaka Muni. Tech. Res. Inst.) Shingo Ikeda · Yasuyuki Kobayashi · (Osaka Muni. Tech. Res. Inst. · NAIST) Yutaka Fujiwara
- 1PV22 Fabrication of Large Area Dye-Sensitized Solar Cells by Spray Pyrolysis Deposition Applied for Thin Film Formation (SPD Laboratory, Inc.) ○Shoji Kaneko · Viraj Jayaweera · Shun-ichi Ohta
- 1PV23 *In-situ* observation of electrical / mechanical behavior under  $\text{H}^+$  implantation and relaxation time constant analysis (Nagoya Institute of Technology) ○Junki Kato · Sumin Jeong · Yusuke Daiko · Sawao Honda · Yuji Iwamoto · (University of Rennes 1) Rouxel Tanguy
- 1PV24 Syntheses and characterization of perovskite-type thermoelectric oxides (Tokushima University) ○Yuta Kujime · Takuya Nishiura · Shuhei Kori · Kei-ichiro Murai · Toshihiro Moriga
- 1PV25 Investigation of quantum cutting phosphor based on crystal engineering for increase of photon number. (Tokai University) ○Shinpei Sasahara · Sayaka Tamura · Satoshi Ogawa · Koji Tomita · (Tohoku University) Masato Kkihana

## ■■ September 7 (Wed) (Room Q) ■■

### 20. Ceramics Processing through Energy Consumption Reduction (Green Processing)

#### 液相プロセス

(9 : 20) (Chairman 山口修平)

- 1Q02 Immobilization of Cs and Sr absorbed on zeolites using heat treatment (Ehime University) ○Ryuichiro Takahashi · Johan Erni · Naoto Matsue · Yoshiteru Itagaki · Hiromichi Aono
- 1Q03 Fabrication of  $\text{ZnO}$  nanoparticles on bioactive nanostructured ceramic layer for antibacterial property (Tokyo Institute of Technology) ○Ryo Matsudo · Toshiyuki Ikoma · (Tohoku University) Guoqiang Xie · Mitsuo Niinomi · (Tokyo Institute of Technology) Tetsuo Kishi · Tetsuji Yano · Nobuhiro Matsushita
- 1Q04 ★Synthesis and reaction mechanism of Ba-Ti oxide by reverse homogeneous precipitation method (Kyushu University) ○Maiko Nishibori · Yuki Ushio ·

Yasunori Nanri

(10 : 40) (Chairman 古川正仁)

- 1Q06 Preparation of perovskite type oxide supported silica using thermal decomposition method of cyano complex (Ehime University) ○Yuki Hasegawa · Syuhei Yamaguchi · Hidenori Yahiro
- 1Q07 Preparation and Characterization of PLZT thin films by CSD method (Shizuoka University) ○Takeharu Yamada · (National Institute of Technology, Numazu College) Takashi Arai · (Kitami Institute of Technology) Tomoya Ohno · Takeshi Matsuda · (Shizuoka University) Takahiko Kawaguchi · Naonori Sakamoto · Naoki Wakiya · Hisao Suzuki
- 1Q08 Preparation of strain-free PZT thin film on a Si wafer by chemical solution deposition (Kitami Institute of Technology) ○Takamsa Honda · Kentarou Fukumitsu · Shigeto Hirai · Takeshi Matsuda · Tomoya Ohno · (Shizuoka University) Naonori Sakamoto · Naoki Wakiya · Hisao Suzuki
- 1Q09 Preparation of SrRuO<sub>3</sub> thin film electrode by chemical solution deposition (Kitami Institute of Technology) ○Kentarou Fukumitsu · Takama Honda · Shigeto Hirai · Takeshi Matsuda · Tomoya Ohno · (Shizuoka University) Naonori Sakamoto · Naoki Wakiya · Hisao Suzuki

**低エネルギー消費プロセス**

(14 : 20) (Chairman 鈴木久男)

- 1Q17 ★Development of Na-Storage Inorganic Compounds and their Anode Properties for Rechargeable Battery (Tottori University) ○Hiroki Sakaguchi · Hiroyuki Usui · Yasuhiro Domi · Masahiro Shimizu
- 1Q19 Low-temperature particle growth of LiMn<sub>2</sub>O<sub>4</sub> spheres by calcination in water vapor (Osaka University) ○Takahiro Kozawa · Takeshi Murakami · Makio Naito · (Kochi University) Kazumichi Yanagisawa

(15 : 20) (Chairman 脇谷尚樹)

- 1Q20 The search of the descriptor of oxygen reduction activity for manganese oxides (Kitami Institute of Technology) ○Shigeto Hirai · Tomoya Ohno · Takeshi Matsuda · (The University of Tokyo) Shunsuke Yagi · (National Taiwan University) Wei-Tin Chen
- 1Q22 Tunneling-magneto-dielectric effect with high low-field sensitivity in Co/AlF granular multilayers (Tohoku University) ○Yang Cao · (DENJIKEN) Nobukiyo Kobayashi · (Tohoku University) Yiwen Zhang · (Tohoku University · DENJIKEN) Shigehiro Ohnuma · (Tohoku University) Hiroshi Masumoto

**磁性材料**

(16 : 20) (Chairman 増本博)

- 1Q23 Preparation and Characteristic of Multi-ferroic Films with 2D Close-packed Shell Structure (Shizuoka University) ○Hironori Mori · Takahiko Kawaguchi · (Tokyo Institute of Technology) Kazuo Shinozaki · (Shizuoka University) Naonori Sakamoto · Hisao Suzuki · Naoki Wakiya
- 1Q24 Synthesis of a magnetic garnet and metal nano particles composite film using metal colloidal solution (Nagoya Institute of Technology) ○Gaku Igarashi · Toshitaka Ota · Nobuyasu Adachi
- 1Q25 Development of novel ferrite coated soft magnetic materials for the high frequency application (NGK SPARK PLUG CO., LTD.) ○Satoshi Mori · Takeshi Mitsuoaka · (Tokyo Institute of Technology) Nobuhiro Matsushita

**September 7 (Wed) (Room R)****11. Nano-scale atomic correlation: Multi-probe analysis of structure hidden in disorder**

(9 : 00) (Chairman 北村尚斗)

- 1R01 Structure of amorphous P<sub>2</sub>S<sub>5</sub> synthesized by mechanical alloying (Kyoto University Research Reactor Institute · National Institute for Materials Science) ○Yohei Onodera · (National Institute for Materials Science) Shinji Kohara · (Kyoto University Research Reactor Institute) Kazuhiro Mori · Toshiharu Fukunaga
- 1R02 Local Structural Analysis for Anodic Porous Alumina (Kogakuin University) ○Hideki Hashimoto · (JEOL RESONANCE) Koji Yazawa · (JEOL) Masahide Shima · (NIMS) Shinji Kohara · (Kogakuin University) Sachiko Ono · Hidetaka Asoh
- 1R03 Structural investigation of a 54Al<sub>2</sub>O<sub>3</sub>·46Ta<sub>2</sub>O<sub>5</sub> glass by synchrotron x-ray diffraction and molecular dynamics simulations (The University of Tokyo) Gustavo Rosales · Hiroyuki Inoue · (Hiroshima University) Atsunobu Masuno

(10 : 00) (Chairman 小原真司)

- 1R04 Structural analysis of sulfuric acid aqueous solution with Ti and Mn ions (The University of Tokyo) ○Hiroyuki Inoue · (Sumitomo Electric Industries, Ltd.) Kazuya Tokuda · Jyunji Iihara · Yoshihiro Saitou
- 1R05 ★Order - disorder structure analysis with high intensity neutron total scattering (High Energy Accelerator Research Organization · The Graduate University for Advanced Studies) ○Toshiya Otomo · Kazutaka Ikeda · Hidetoshi Ohshita · Takashi Honda · Naokatsu Kaneko · (Japan Atomic Energy Agency) Kentro Suzuya · Katsuaki Kodama · Shinichi Shamoto

(11 : 00) (Chairman 橋本英樹)

- 1R07 Structure of amorphous SiO revealed by synchrotron x-ray diffraction, angstrom-beam electron diffraction, and computer simulations (NIMS · PRESTO-JST) ○Shinji Kohara · (Tohoku University) Akihiko Hirata · (NISSAN ARC) Toshihiro Asada · Masazumi Arao · Chihiro Yogi · Hideto Imai · (Tohoku University) Tan Yongwen · Takeshi Fujita · Mingwei Chen
- 1R08 Structure modelling of SiO<sub>2</sub> glass (NIMS · PRESTO-JST) ○Shinji Kohara · (The university of Tokyo) Hiroyuki Inoue
- 1R09 Defect-distribution simulation of LaSrGa<sub>3</sub>O<sub>7</sub>-based oxide-ion conductor (Tokyo University of Science) ○Naoto Kitamura · Hiroki Masaka · Naoya Ishida · Yasushi Idemoto

(14 : 20) (Chairman 小野寺陽平)

- 1R17 ★Data mining for materials design (Japan Advanced Institute of Science and Technology) ○Hieu Chi Dam · Tien Lam Pham · (HPC SYSTEMS Inc.) Viet Cuong Nguyen
- 1R19 Difference of Battery Characteristics and Atomic Configuration of Li<sub>1.2</sub>Mn<sub>0.6</sub>Ni<sub>0.2</sub>O<sub>2</sub> by Synthetic Condition (Fac. of Sci. & Tech., Tokyo University of Science) ○Yusuke Kubo · Naoto Kitamura · Naoya Ishida · Yasushi Idemoto
- 1R20 Investigation on Electrical Conduction Property and Proton Conduction Mechanism of LaBaGaO<sub>7</sub>-based Protonic conductor (Tokyo University of Science) Naoto Kitamura · ○Ryoji Yugeta · Naoya Ishida · Yasushi Idemoto

(15 : 40) (Chairman 石田直哉)

- 1R21 Structural analysis of binary tellurite glasses using anomalous X-ray scattering (Okayama University) ○Tomoki Motoshita · Shinichi Sakida · Yasuhiko Benino · Tokuro Nanba · (NIMS) Shinji Kohara
- 1R22 Comparison of aluminosilicate structures between glass and zeolite precursors (the University of Tokyo) ○Hiroki Yamada · (Tohoku University) Sohei Sukenaga · (JASRI) Koji Ohara · (Tohoku University) Hiroyuki Shibata · (the University of Tokyo) Tatsuya Okubo · Toru Wakihara

★ = Guest ☆ = Invited ◆ = Plenary ○ = Presenter

- 1R23 Elucidation of Interaction between Organic Structure-Directing Agents and Amorphous Aluminosilicate Species during Zeolite Crystallization (The University of Tokyo) ○Tadashi Umeda · Tatsuya Okubo · (JASRI) Koji Ohara · (The University of Tokyo) Toru Wakihara  
(16 : 40) (Chairman 井上博之)
- 1R24 Synthesis and Structural Study of Metastable  $\text{Li}_x\text{Mn}_{0.9}\text{Ti}_{0.1}\text{O}_2$  by Ion Exchange Method (Tokyo University of Science) ○Kazuki Miyazawa · Naoya Ishida · Naoto Kitamura · Yasushi Idemoto · (National Institute of Advanced Industrial Science and Technology) Junji Akimoto
- 1R25 ★Atomic Dynamics in Disordered systems: ab initio Molecular-Dynamics Simulations (Hiroshima Institute of Technology) ○Satoshi Ohmura · (Okayama Univ.) Kenji Tsuruta · (Kumamoto Univ.) Fuyuki Shimojo

## ■■ September 7 (Wed) (Room S) ■■

### 25. Novel ceramic technology based on nanocrystals

- (9 : 00) (Chairman 加藤一実)
- 1S01 ★Solution synthesis of iron oxide nanosheets having novel microstructure and magnetic properties (Tokyo Institute of Technology) ○Nobuhiro Matsushita · Yuki Kamei · Tetsuo Kishi · Tetsuji Yano · (National Institute of Materials Science) Takaaki Taniguchi
- 1S03 Synthesis and structure control of niobate-based ceramic nanoparticles in sub-critical or supercritical fluid treatment (Nagoya Institute of Technology) ○Teruaki Fuchigami · Ken-ichi Kakimoto  
(10 : 00) (Chairman 佐藤和好)
- 1S04 ★Hydrothermal Synthesis of Titania Polymorph Nanocrystals (Tohoku University) ○Makoto Kobayashi · Hideki Kato · Masato Kakihana
- 1S06 Structure Control from Mesocrystal-Oxide Nanorods and Nanosheets-(Tokyo Institute of Technology) ○Yuta Kubota · Tetsuo Kishi · Tetsuji Yano · Nobuhiro Matsushita  
(11 : 00) (Chairman 長田実)
- 1S07 Dielectric properties of  $\text{Ba}(\text{Zr}, \text{Ti})\text{O}_3$  nanocube assemblies (National Institute of Advanced Industrial Science and Technology) ○Ken-ichi Mimura · Kazumi Kato
- 1S08 Formation process and microstructure of  $\text{BaTiO}_3$ -based multilayer nanofilms at liquid surface (Kyushu Institute of Technology) ○Hirokazu Shimooka · (The University of Tokyo) Makoto Kuwabara
- 1S09 Hydrothermal synthesis of tetragonal  $\text{BaTiO}_3$  micro-order single crystal rods (Kyushu University) ○Shinji Kurata · Miki Inada · Naoya Enomoto · Katsuro Hayashi  
(14 : 20) (Chairman 和田智志)
- 1S17 ★Oriented Assembly of Anisotropic Rectangular Nanoblocks for Direction-Controlled 1D, 2D, and 3D Microarrays (Keio University) ○Hiroaki Imai
- 1S19 Spatially Controlled Formation of Ordered  $\text{Mn}_3\text{O}_4$  Nanoblock Alignments (Keio University) ○Riho Matsumoto · (National Institute of Advanced Industrial Science and Technology) Kazumi Kato · (Keio University) Yuya Oaki · Hiroaki Imai  
(15 : 40) (Chairman 三村憲一)
- 1S21 Colloidal approach for nano-structured  $\text{La}(\text{Sr})\text{MnO}_3$  based cathodes of solid oxide fuel cells (Gunma University) ○Pouy Nanthana · Kazuya Horiguchi · Kazuyoshi Sato · (Osaka University) Hiroya Abe
- 1S22 Preparation and characterization of  $\text{Mo}_{1-x}\text{W}_x\text{S}_2$  nanosheets fabricated by liquid-phase exfoliation using intercalation method (Utsunomiya University) ○Takamori Igarashi · Kazushi Funaki · Yuki Nakamura · Keitarou Tezuka · Yue Jin Shan
- 1S23 Morphological Change Analysis of Needle-like Aragonite Particles Induced by the Phase Transition to Calcite (Shiraishi Central Laboratories) ○Yuki Kezuka · Kosuke Kawai · Kenichiro Eguchi · Masahiko Tajika

## ■■ September 7 (Wed) (Room T) ■■

### 23. Ceramics for next generation power electronics

- (9 : 00) (Chairman 土屋哲男)
- 1T01 ★Development Trend of SiC Bulk Single Crystal Growth and Wafer Process Technology for Next-generation Power Electronics (National Institute of Advanced Industrial Science and Technology) ○Tomohisa Kato
- 1T03 Effect of mechanical property of ceramic substrate on the thermal fatigue of the metallized ceramic substrate (National Institute of Advanced Industrial Science and Technology) ○Hiroyuki Miyazaki · Shinji Fukuda · Kiyoshi Hirao · Hideki Hyuga · (Denka Co., Ltd.) Shoji Iwakiri · Hideki Hirotsuru
- 1T04 Flaw assessment of metallized ceramic substrates for power module (National Institute of Advanced Industrial Science & Technology) ○Kiyoshi Hirao · Hiroyuki Miyazaki · Hideki Hyuga · (Denka Company Limited) Shoji Iwakiri  
(10 : 20) (Chairman 平尾喜代司)
- 1T05 A study of high temperature durability mechanism toward new resistors with high temperature resistance (National Institute of Advanced Industrial Science and Technology) ○Tomohiko Nakajima · Keiko Kouno · Tetsuo Tsuchiya · (KOA Corporation) Takeshi Ito · (KOA Corporation) Koichi Urano · Kiyoshi Tanaka · (The University of Tokyo) Yuki Kitanaka · Yoshinobu Nakamura · Masaru Miyayama
- 1T06 The evaluation of the degradation mechanisms of developing resistor elements for power modules based on the local reflection spectrum analysis (U of Tokyo) ○Yoshinobu Nakamura · Yuki Kitanaka · Masaru Miyayama · (KOA Corporation) Takeshi Ito · Koichi Urano · Kiyoshi Tanaka · (AIST) Tomohiko Nakajima · Tetsuo Tsuchiya
- 1T07 ★Joining technology for wide band gap power devices (Osaka University) ○Katsuaki Suganuma · Shijo Nagao · Toru Sugahara · Jinting Jiu · Hao Zhang
- 1T09 Thermal stress degradation and relaxation structure of the bonding interface for Ag die-attach material (Institute of Scientific and Industrial Research Osaka University) ○Norio Asatani · Yukiharu Kimoto · Shijo Nagao · Tohru Sugahara · Hao Zhang · Katsuaki Suganuma  
(14 : 20) (Chairman 中村吉伸)
- 1T17 ★Ceramic Substrate for Power Electronics --- Solution Clue from History of Package Substrate --- (Fujitsu Laboratories Ltd.) ○Yoshihiko Imanaka
- 1T19 Development of Ceramics Substrate for Next Generation Power Device (Denka Co., Ltd.) ○Shoji Iwakiri · Hideki Hirotsuru · (National Institute of Advanced Industrial Science and Technology) Kiyoshi Hirao
- 1T20 Scribing and Breaking Technique for Cutting Ceramic Substrates (Mitsubishi Diamond Industrial Co., Ltd) ○Naoko Tomei · Kenji Murakami · Taichi Hashimoto · Mitsuru Kitaichi · Shigekazu Hirano · Toshio Fukunishi  
(15 : 40) (Chairman 中島智彦)
- 1T21 ★Development of Silicon Nitride Ceramics for Insulation Heat Dissipation Substrates (Yokohama National University) ○Junichi Tatami · (Kanagawa Academy of Science and Technology) Takuma Takahashi · (Yokohama National University) Motoyuki Iijima
- 1T23 Development of High Thermal Conductivity Silicon Nitride Substrates for Power Modules (Japan Fine Ceramics Co. Ltd.,) ○Dai Kusano · (National

- Institute of Advanced Industrial Science and Technology) Hideki Hyuga · You Zhou · Kiyoshi Hirao
- 1T24 Fabrication of high thermal conductivity silicon nitride ceramics via a rapid reaction-bonding and post-sintering route (National Institute of Advanced Industrial Science and Technology (AIST)) ○Hideki Hyuga · You Zhou · Chika Matsunaga · Kiyoshi Hirao
- (17 : 00) (Chairman 菅原徹)
- 1T25 ★ Structure Control of Porous Ceramics for Heat Sink application (Nihon University) ○Shunkichi Ueno · Jun-Woo Lee · (The Wakasa Wan Energy Research Center) Hideo Nakajima
- 1T27 Deformation of copper-metalized silicon nitride substrates during thermal cycles (National Institute of Advanced Industrial Science and Technology) ○ Shinji Fukuda · Kazuhiko Shimada · Noriya Izu · Hiroyuki Miyazaki · Kiyoshi Hirao · (Denka Co., Ltd) Shoji Iwakiri
- 1T28 Investigation of composition and thermal conductivity of the interlayer between ceramics and aluminum joined by organosilicon polymer (National Institute of Advanced Industrial Science and Technology) ○Ken'ichiro Kita · Naoki Kondo

## ■■ September 7 (Wed) (Room U) ■■

### 24. New Evolution of Dielectrics: Fusion and Further Progress of Science and Technology on Dielectric Materials and Devices

#### 誘電体・強誘電体基礎

(9 : 00) (Chairman 保科拓也)

- 1U01 ★Development of Co-responsive Dielectric Materials Linking Optical, Mechanical, and Dielectric properties (Nagoya University · Tokyo Institute of Technology) ○Hiroki Taniguchi
- 1U03 ☆Ferroelectricity and Annealing Effect in KF-substituted Barium Titanate (Shimane University) ○Shinya Tsukada · Yukikuni Akishige · (Ritsumeikan University) Yasuhiro Fujii · (University of Tsukuba) Seiji Kojima
- (10 : 00) (Chairman 鈴木宗泰)
- 1U04 ☆Ferroelectric materials study by combining precise experiments and first-principles calculations (JFCC · National Institute for Materials Science) ○ Hiroki Moriwake
- 1U05 Structural Phase Transition and Dielectric Property of the Stuffed Tridymite-type Oxides  $Ba_{1-x}Sr_xAl_2O_4$  (Osaka Prefecture University) ○Yui Ishii · Hirofumi Tsukasaki · (JASRI) Shogo Kawaguchi · (Osaka Prefecture University) Eri Tanaka · Shigeo Mori
- 1U06 Electric-field response of ferroelectric  $AgNbO_3$  single crystals (The University of Tokyo) ○Yuuki Kitanaka · Takuya Egawa · Yuji Noguchi · Masaru Miyayama

#### 素子・実装

(11 : 00) (Chairman 木村雅彦)

- 1U07 ★Ceramic Capacitor Technology for Microelectronics Package Substrate (Fujitsu Laboratories Ltd.) ○Yoshihiko Imanaka
- 1U09 ☆Reversible switching from insulator to conductive magnet; toward the high-density information storage device (Hokkaido University) ○Takayoshi Katase · Yuki Suzuki · Hiromichi Ohta

#### MEMS センサ

(14 : 20) (Chairman 山田智明)

- 1U17 ★Shared MEMS Facilities and Recent Programs of Human Resource Development in AIST (National Institute of Industrial Science and Technology (AIST)) ○Masaaki Ichiki · Takeshi Kobayashi · Sohei Matsumoto · Hiroshi Hiroshima · Hidekazu Saito · Ryuichi Naganawa
- 1U19 ☆Piezoelectric MEMS for the application to structural health monitoring (National Institute of Advanced Industrial Science and Technology) ○Takeshi Kobayashi · Takahiro Yamashita · Hironao Okada · (The University of Tokyo) Seiichi Takamatsu · Toshihiro Itoh

#### 電気熱量効果

(15 : 20) (Chairman 谷口博基)

- 1U20 ☆Electrocaloric effects in multilayer capacitors based on ferroelectric oxides. (Murata Manufacturing Company, Ltd.) ○Tomoyasu Usui · Sakyō Hirose · Akira Ando · (University of Cambridge) Crossley Samuel · Nair Bhaskaran · Moya Xavier · Mathur Neil D.
- 1U21 Electrochemical and Electrocaloric Properties of  $K(Ta,Nb)O_3$  Crystals and  $BaTiO_3$ -based Ceramics (Shonan Inst. Tech.) ○Hiroshi Maiwa

#### 構造解析

(16 : 00) (Chairman 清水莊雄)

- 1U22 ☆SXRD study of ferroelectric ceramics with application of electric fields (Hiroshima University) ○Chikako Moriyoshi · (JASRI) Shogo Kawaguchi
- 1U23 Composition dependence of crystal structure, electronic structure, ferroelectric properties of  $(K,Na,Li)NbO_3$  (Fac. of Sci. & Tech., Tokyo University of Science) ○Kenichiro Mizuno · Naoya Ishida · Naoto Kitamura · Yasushi Idemoto

#### 強誘電体新材料

(16 : 40) (Chairman 森分博紀)

- 1U24 ★Zinc Oxide – Innovation in an Old but New Functional Binary Crystal (Hokkaido University) ○Akira Onodera
- (17 : 20) (Chairman 天田英之)
- 1U26 ☆Ferroelectricity in epitaxial and well-oriented textured Y-doped  $HfO_2$  film (Tokyo Institute of Technology) ○Takao Shimizu · Kiliha Katayama · Takanori Mimura · (Tohoku University) Takanori Kiguchi · Takahisa Shiraishi · Akihiro Akama · Toyohiko Konno · (National Institute for Materials Sciences) Osami Sakata · (Tokyo Institute of Technology) Hiroshi Funakubo
- 1U27 ☆Creation of Ferroelectric Materials Science of Organic Compounds (National Institute of Advanced Industrial Science and Technology) ○Sachio Horiuchi · Shoji Ishibashi · (National Institute of Advanced Industrial Science and Technology · The University of Tokyo) Tatsuo Hasegawa · (High Energy Accelerator Research Organization) Reiji Kumai · (Riken) Fumitaka Kagawa

## ■■ September 7 (Wed) (Room V) ■■

### 22. Research Topics on Advanced Ceramic Technology for Energy Conversion, Storage and Control Devices

(9 : 20) (Chairman 森利之)

- 1V02 Identification of the second phase in  $Sr_{1-x}La_xTiO_3$  perovskite matrix appearing after high-temperature annealing (Tokushima University) Ryota Minakata · Ryunosuke Minato · Yuta Higashi · (Tokushima University · National Taiwan University of Science and Technology) Katsuya Nakata · (Tokushima University) Kei-ichiro Murai · (National Taiwan University of Science and Technology) Shao-ju Shih · (Tokushima University) ○Toshihiro Moriga · (Central Research Institute of Electric Power Industry) Masashi Mori
- 1V03 Anisotropic oxide ion-conductivity of highly textured MgO-doped lanthanum silicate oxyapatite dense ceramics (Hosei University) ○Yuki Shimura · (National Institute for Materials Science) Kiyoshi Kobayashi · Tohuru Suzuki · Tetsuo Uchikoshi · Yoshio Sakka · (Hosei University) Takaya Akashi

★ = Guest ☆ = Invited ◆ = Plenary ○ = Presenter

- 1V04 Effect of OH<sup>-</sup> defects on polarization characteristics of hydroxyapatite ceramics (Tokyo University of Science) ○Kento Hakamata · Makito Nakagawa · Yumi Tanaka
- 1V05 Preparation of vanadium oxide xerogel/carbon composites and their catalytic activity for oxide reduction reaction (Tokyo University of Science) ○Kazuki Touma · (Tokyo University of Agriculture and Technology) Morihiko Saitoh · (National Institute of Technology, Tokyo college) Hidenobu Shiroishi · (Tokyo University of Science) Yumi Tanaka
- (10 : 40) (Chairman 鷲見裕史)
- 1V06 Enhancement on the surface reaction of oxygen permeation by formation Pd-loaded perovskite layer (Kyushu University) ○Kohei Momii · Yasuhito Mitani · Ken Watanabe · Maiko Nishibori · Kengo Shimano
- 1V07 Synthesis and evaluation of the niobium carbonitride catalyst of polymer electrolyte fuel cell (Osaka University) ○Kazuki Saita · Satoshi Seino · Takashi Nakagawa · Takao Yamamoto
- 1V08 Effect of extremely low concentration doping of Pt in cermet anode on improvement of performance of intermediate temperature operation SOFCs (National Institute for Materials Science) ○Toshiyuki Mori · Andrii Rednik · (National Institutes for Quantum and Radiological Science and Technology) Shunya Yamamoto · (National Institute for Materials Science) Akira Suzuki · (National Institute for Materials Science · National Institute of Technology, Tsuruoka College) Shigeharu Ito · (National Institute for Materials Science) Noriko Isaka · (Nagoya University) Takayoshi Tanji · (National Institute for Materials Science) Hiroshi Okubo · Shipra Chauhan
- 1V09 Development of nano-composite powders for electrochemical ceramic cells by spray pyrolysis (National Institute of Advanced Industrial Science and Technology) ○Hiroyuki Shimada · Toshiaki Yamaguchi · Hirofumi Sumi · Yuki Yamaguchi · Katsuhiko Nomura · Yoshinobu Fujishiro
- (14 : 20) (Chairman 森昌史)
- 1V17 ★High Performance and Durable Electrodes for Reversible Solid Oxide Electrolysis Cell (SOEC)/Solid Oxide Fuel Cell (SOFC) (University of Yamanashi) ○Hiroyuki Uchida · Kazuki Shimura · Pramote Puengjinda · Manuel Brito
- 1V20 ☆Development of anodes utilizing chemical interaction between Ni and doped ceria for solid oxide fuel cells (Kyoto University) ○Toshiaki Matsui · Kohei Eguchi · Keisuke Shirai · Takeshi Furukawa · Takeou Okanishi · Hiroki Muroyama · Koichi Eguchi
- (16 : 00) (Chairman 島田寛之)
- 1V22 Prevention of Current Leakage for Electrochemical Cells using Ceria-based Electrolytes. (National Institute of Advanced Industrial Science and Technology) ○Hirofumi Sumi · (Anan Kasei) Eisaku Suda · (Central Research Institute of Electric Power Industry) Masashi Mori
- 1V23 Direct ammonia-fueled SOFC with Ni-loaded SDC anode (Ehime University) ○Naoto Ito · Yoshiteru Itagaki · Hiromichi Aono · Hidenori Yahiro
- 1V24 Effect of oxygen defect cluster formation consisted of Frenkel defects in Ba<sub>2</sub>In<sub>2x</sub>(Zn,Zr)<sub>x</sub>O<sub>5</sub> specimens on improvement of anode performance of intermediate temperature operation of SOFCs (National Institute of Technology, Tsuruoka College · National Institute for Materials Science Global Research Center for Environment and Energy based on Nanomaterials Science) ○Shigeharu Ito · Takaya Sato · (National Institute for Materials Science Global Research Center for Environment and Energy based on Nanomaterials Science) Akira Suzuki · Hiroshi Okubo · Toshiyuki Mori
- 1V25 Sr<sup>2+</sup> content dependence of electrical conductivity for mixed ionic-electronic conductor Ba<sub>1-x</sub>Sr<sub>x</sub>Fe<sub>0.9</sub>In<sub>0.1</sub>O<sub>3.6</sub> (Kochi University) ○Chinatsu Sasaoka · Fumito Fujishiro · (Nihon University) Takuya Hashimoto
- 1V26 Electrophoretic deposition of dense BaCe<sub>0.8</sub>Y<sub>0.2</sub>O<sub>3.9</sub> electrolyte thin films (Ehime University) ○Yuga Yamamoto · Yoshiteru Itagaki · Hiromichi Aono · Hidenori Yahiro
- 1V27 Influence of tantalum-doping on proton conductivity of tungsten trioxide 0.33 hydrate (Tokyo University of Science) ○Ryoma Motegi · Yumi Tanaka

## ■■ September 8 (Thu) (Room A) ■■

### 05. Innovative Materials Processing, Properties and Reliability of Bulk Ceramics based on Stress and Strain

#### ガラス1

(9 : 00) (Chairman 安田公一)

- 2A01 Study on thermal structural change of sodium silicate glasses by use of photoluminescence spectra of Eu ions (Tokyo University of Science) ○Yuki Kodama · Kenichiro Iwasaki · Atsuo Yasumori

(9 : 20) (Chairman 安盛敦雄)

- 2A02 ★Entropic Elasticity of an Oxide Glass (Asahi Glass Co., Ltd.) ○Seiji Inaba · (Tokyo Institute of Technology) Hideo Hosono · (Asahi Glass Co., Ltd.) Setsuro Ito
- 2A04 ★Analysis of H<sup>+</sup> implantation dynamics of phosphate glasses based on creep observation utilizing an electrical indentation method (Nagoya Institute of Technology) ○Yusuke Daiko · Junki Kato · Sumin Jeong · Sawao Honda · Yuji Iwamoto

10 : 40~11 : 00 総合討論 1

#### ガラス2

(11 : 00) (Chairman 武藤浩行)

- 2A07 Influence of strontium addition on crystallization and mechanical properties of transparent mica glass-ceramics (Shinshu University) ○Seichi Taruta · Haruka Tanaka · Tomohiko Yamakami · Tomohiro Yamaguchi
- 2A08 ★Observation of crack bifurcation and branching phenomena by Caustics method in tempered glass. (GMS Research Laboratory) ○Shinichi Aratani

#### スマート材料

(14 : 20) (Chairman 宇尾基弘)

- 2A17 ★Smart Dental Materials – Smart Materials & Structure for Dental Applications – (Tokushima University) ○Kenichi Hamada · Noboru Kajimoto · Emi Uyama · Kazumitsu Sekine
- 2A19 ★The Mechanical Properties and Self-Healing effect of Yb<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>/SiC Nanocomposites (Nagaoka Univ of Tech) Thanh Son Nguyen · ○Tadachika Nakayama · Masatoshi Takeda · Hisayuki Suematsu · Tsuneo Suzuki · Koichi Niihara

15 : 40~16 : 00 総合討論 2

#### 粉体プロセス1

(16 : 00) (Chairman 打越哲郎)

- 2A22 ★Rheological property of slurry and its application for manufacturing of ceramics (Nagaoka University of Technology) ○Tsutomu Takahashi
- 2A24 Effect of characteristics of granule on coarse pore evolution during sintering (Nagaoka University of Technology) ○Tsuayoshi Hondo · Zenji Kato · (Tokyo Institute of Technology) Kouichi Yasuda · Fumihiko Wakai · (Nagaoka University of Technology) Satoshi Tanaka

17 : 00~17 : 20 総合討論 3

## ■■ September 8 (Thu) (Room B) ■■

### S2. Emergence of functions in heat-resistant materials and improvement of their stability

(10 : 00) (Chairman 吉田克己)

- 2B04 Microstructural Change of Mullite Coating Under Heat Exposure (Yokohama National University) ○Atsuhisa Iuchi · Taisuke Mizuno · Makoto Hasegawa  
 2B05 The effect of short-time heat-exposure at above melting point of Si for fracture behavior of EBC (The University of Tokyo) Yutaro Arai · Kaoru Yonekura ·  
 ○Yutaka Kagawa  
 (10 : 40) (Chairman 垣澤英樹)  
 2B06 Properties of SiC/SiC CMC by Low Temperature Melt Infiltration Process (IHI Corporation) ○Shingo Kanazawa · Yosuke Mizokami · Akihiro Sato ·  
 Takeshi Nakamura  
 2B07 Oxidation behavior of matrices of composites fabricated by melt infiltration using Si binary alloys (Tokyo Institute of Technology) ○Toru Tsunoura ·  
 Katsumi Yoshida · Toyohiko Yano · (Tokyo University of Agriculture and Technology) Toshio Ogasawara · (Japan Aerospace Exploration Agency)  
 Takuya Aoki  
 2B08 ★One of the most advanced enablers for future civil large aeroengines – Ceramic Matrix Composite (Rolls-Royce Japan) ○Daisuke Koyama

### 03. Science and Technology on Engineering Ceramics—Material Development for Safe and Reliable Society and Functional Stability—

微構造制御による飛躍的特性・機能向上

(14 : 40) (Chairman 吉田克己)

- 2B18 ★Development of Parts for Semiconductor Manufacturing Equipment prepared by Aerosol deposition Method (TOTO LTD.) ○Masakatsu Kiyohara

繊維強化複合材料の新展開

(15 : 20) (Chairman 須山章子)

- 2B20 Role of interaction between crack and heterogeneous microstructure in discontinuous carbon fiber-reinforced SiC matrix composite (The University of  
 Tokyo) ○Kouki Kajihara · Yujiro Atsumi · Yutaka Kagawa · Kaoru Yonekura  
 2B21 Interaction between anisotropic phase and crack in brittle phase (The university of tokyo) ○Yujiro Atsumi · Kouki Kajihara · Yutaka Kagawa · Kaoru  
 Yonekura  
 2B22 Interaction behavior between crack and crack arrest phases in discontinuous carbon fiber-SiC matrix composite (The University of Tokyo) ○Yutaka  
 Kagawa · Kaoru Yonekura · Kouki Kajihara · Yujiro Atsumi  
 (16 : 20) (Chairman 福島学)  
 2B23 Hydrothermal corrosion behaviors of SiC fibers for CVI-SiC/SiC composites (Toshiba) ○Shoko Suyama · Masaru Ukai · Masayuki Uchihashi · Kazuo  
 Kakiuchi · Hideaki Heki  
 2B24 Improvement of Mechanical Properties of SiC Fiber-Reinforced  $Ti_3AlC_2$  Matrix Composites with Ti Barrier Layer (National Institute for Materials Science)  
 ○Shuqi Guo · Hong Gao  
 2B25 Effects of Fiber Orientation and Fiber Volume Fraction on Mechanical Properties of SiC<sub>f</sub>/SiC Composites with Carbon Interphase Formed by EPD Process  
 (Tokyo Institute of Technology) ○Katsumi Yoshida · Hiroyuki Akimoto · Toyohiko Yano · (Japan Aerospace Exploration Agency (JAXA)) Masaki  
 Kotani · Takuya Aoki · (Tokyo University of Agriculture and Technology) Toshio Ogasawara

## ■■ September 8 (Thu) (Room C) ■■

### 10. Photo-Ceramics—Synthesis, Functions and Applications of Optical and Colorful Ceramics—

(9 : 00) (Chairman 濱上寿一)

- 2C01 Black pigments with infrared-reflecting propertie (Tottori University) Ryohei Oka · ○Toshiyuki Masui  
 2C02  $Y_2WO_6:Eu^{3+}$  Smart Phosphors for Redox Monitoring (Keio University) ○Risako Hara · Manabu Hagiwara · Shinobu Fujihara  
 2C03 Photochromic Behavior of Luminescent Eu-Polyoxometalate (Hokkaido University) ○Tsubasa Okai · Takayuki Nakanishi · Yuichi Kitagawa · Koji  
 Fushimi · Yasuchika Hasegawa  
 2C04 Synthesis and optical properties of  $Sr_3Si_6O_{13}N_3:Eu^{2+}$  oxynitride phosphors (Tokushima University) ○Mitsuo Oi · Chih-Wei Hsiao · Koki Shibai · Kei-  
 ichiro Murai · Toshihiro Moriga  
 (10 : 20) (Chairman 戸田健司)  
 2C05 ★Research and Development of Novel Crystal and Glass Phosphor (Sejong University) ○Sun-Woog Kim · (Niigata University) Takuya Hasegawa · Kenji  
 Toda · Mineo Sato  
 2C07 Optical properties of Al nanoparticle array covered by mesoporous silica layer (Kyoto University) ○Hiroyuki Sakamoto · (Kyoto University · JST-  
 PRESTO) Shunsuke Murai · (Kyoto University) Koji Fujita · Katsuhisa Tanaka  
 2C08 Ultraviolet/visible emission from deep level impurities in boron nitride (Kobe University) ○Emi Tsushima · Takashi Uchino  
 2C09 Effect of additives on luminescence of  $Zn_2SiO_4$  crystal in zinc glaze (Saga Unniversity) ○Kotoku Arimura · Takanori Watari · Toshio Torikai · Mitsunori  
 Yada · (Arita College of Ceramics) Hideyuki Matsuo · (Saga Ceramics Research Laboratory) Akihiko Kawahara

(14 : 20) (Chairman 黒木雄一郎)

- 2C17 Fabrication and Low Voltage Cathodoluminescent Properties of Zinc Oxide (s.s.) Thin Films (Mie Prefecture Industrial Research Institute) ○Koji Inoue ·  
 (LIXIL Corporation) Seiji Shinkai  
 2C18 Synthesis and photoluminescence properties of Mo-doped tungstate phosphors (Tohoku University) ○Naoto Watanabe · Jun Fukushima · Yamato  
 Hayashi · Hirotugu Takizawa  
 2C19 PHOTOLUMINESCENCE OF POTASSIUM-DOPED ZINC TUNGSTATE PREPARED USING NITRATE, SULFATE, AND CHLORIDE (Nagaoka  
 University of Technology) ○Prinya Lorchirachoonkul · Masaya Nakata · Yasuyuki Yamada · Tomoichiro Okamoto  
 2C20 ★Development of materials for nitride phosphors (TAIHEIYO CEMENT CORPORATION) ○Katsumi Matsui · Shoji Suzuki

(16 : 00) (Chairman 岡元智一郎)

- 2C22 Evaluate Formation and Relaxation Process of Metastable State in Long Persistent  $ZrO_2$  using ESR Spectroscopy with Photo-irradiation (Tokyo University  
 of Science Faculty of Industrial Department of Materials Science and Technology) ○Kenichiro Iwasaki · Atsuo Yasumori · (Tohoku University School  
 of Engineering Department of Applied Physics) Yoshihiro Takahashi · Takumi Fujiwara  
 2C23 Preparation and evaluation of  $Yb^{3+}$  doped  $CaF_2-LaF_3$  ceramic lasers (Nikon Corporation) ○Hitoshi Ishizawa · Yoshinobu Ezura · Motoi Ueda · (University  
 of Electro-Communications) Shotaro Kitajima · Yuki Higashi · Hiroaki Nakao · Akira Shirakawa · Ken-ichi Ueda  
 2C24 Rapid Screening of  $Ce^{3+}$ -activated Novel Phosphor Using an Arc-imaging Furnace Based on the Combinatorial Chemistry (Niigata University) ○Takuya

Hasegawa · Sun-woog Kim · Tadashi Ishigaki · Kazuyoshi Uematsu · Kenji Toda · Mineo Sato  
 2C25 Synthesis and characterization of novel manganese-doped red phosphor  $Ba_3Ta_4O_{15}:Mn$  (Utsunomiya University) ○Ryota Kasahara · Keitaro Tezuka · Yue Jin Shan

## ■■ September 8 (Thu) (Room D) ■■

### 19. Material Design and Processing Design

#### 無機有機複合プロセス (1)

(9 : 20) (Chairman 吉岡聡)

- 2D02 A Novel Fabrication Process of Polyamide-Imide Resin Surface for Micro Dimple Forming (SUZUKI MOTOR CORPORATION) ○Akio Hikasa · Nobuyuki Suzuki
- 2D03 Microwave synthesis of SiC nanoparticles made from rice husk and the characterization (Nagoya Institute of Technology Advanced Ceramics Research Center) ○Kunihiko Kato · Jin Li · Takashi Shirai · Masayoshi Huji
- 2D04 Carbonization and thermal decomposition behavior of organic compound by using microwave selective heating (Nagoya Institute of Technology) ○Hiroataka Noda · (EMPA) Sébastien Vaucher · (Nagoya Institute of Technology) Mamoru Senna · Masayoshi Huji · Takashi Shirai

#### 多元材料デザイン

(10 : 20) (Chairman 木村禎一)

- 2D05 High-pressure synthesis and magnetic properties of Mn-Al-Ge system new intermetallic compounds (Tohoku University) ○Takashi Kato · Jun Fukushima · Yamato Hayashi · Hirotsugu Takizawa
- 2D06 Local Structure Investigations of Ca-V-Fe Oxide Glasses (Kyushu University) ○Satoru Yoshioka · Yusuke Kobayashi · Tomokazu Yamamoto · Kazuhiro Yasuda · Syo Matsumura · (Tokyo Metropolitan University) Shiro Kubuki
- 2D07 Influence on HAp porous structure by the difference of slurry properties (Nagoya Institute of Technology) ○Kouhei Miyazaki · Harumitsu Nishikawa · Masayoshi Fuji · Takashi Shirai
- 2D08 Properties and Mechanisms of Visible-light Responsible Titania Nanotubes made by Chemical Treatment (Osaka University) ○Tohru Sekino · Kensuke Fujii · Hisataka Nishida · Tomoyo Goto · (Tohoku University) Shu Yin · (Sum Moon University) Soo Wahn Lee

## ■■ September 8 (Thu) (Room E) ■■

### 26. Ceramic sensors and transducers—structural design from macro to micro levels for high performance

(9 : 40) (Chairman 上田太郎)

- 2E03 Response properties on catalytic combustion-type MEMS gas sensor using Pd-loaded Perovskite type oxide (Kyushu University) ○Mao Takayama · Akihiro Tou · Ken Watanabe · Maiko Nishibori · Kengo Shimanoe
- 2E04 Design of  $SnO_2$ -based MEMS gas sensor toward a pulsed driven (Kyushu University) ○Tokiharu Oyama · Nan Ma · (Fukuoka Industrial Technology Center) Koichi Suematsu · (Kyushu University) Ken Watanabe · Maiko Nishibori · Kengo Shimanoe

(10 : 20) (Chairman 橋新剛)

- 2E05 Effects of operation methods and loading of noble metals and/or metal oxides on acetone-sensing properties of  $WO_3$ -based MEMS sensors (Nagasaki University) ○Taro Ueda · Takuya Kaino · (Figaro Engineering Inc.) Kuniyuki Izawa · (Nagasaki University) Kai Kamada · Takeo Hyodo · Yasuhiro Shimizu
- 2E06 Preparation of the PZT thick film by screen printing and application for energy harvesting (Toyama Industrial Technology Center) ○Yasutomo Masugata · Yuichi Sakai · (COSEL Co., Ltd.) Takayuki Yamamoto

(11 : 00) (Chairman 島ノ江憲剛)

- 2E07 ★Improvement in piezoelectricity of aluminum nitride thin films (National Institute of Advanced Industrial Science and Technology) ○Morito Akiyama · Masato Uehara

## ■■ September 8 (Thu) (Room F) ■■

### 02. Development and evaluation of ceramics producing harmony with living body

(9 : 20) (Chairman 堀内尚紘)

- 2F02 Research on alumina powders and binders for 3D printing (Tokyo Institute of Technology) ○Ryohei Hamano · Toshiyuki Ikoma
- 2F03 In vitro apatite formation on zirconium metal substrates using a spatial gap (Okayama University) ○Koji Yamamoto · Toshiisa Konishi · Tomohiko Yoshioka · Satoshi Hayakawa
- 2F04 Evaluation of Ti-OH groups effective for apatite formation on titanium under simulated body environment (Tohoku University) ○Yuta Iwabuchi · (Kyushu Institute of Technology) Toshiki Miyazaki · (Tohoku University) Hiroyasu Kanetaka · Masakazu Kawashita

(10 : 20) (Chairman 吉岡朋彦)

- 2F05 ★Cartilage regeneration using tissue-engineering technique (Hiroshima University) ○Nobuo Adachi · Atsuo Nakamae · Masakazu Ishikawa · Tomoyuki Nakasa · Mitsuo Ochi

(11 : 20) (Chairman 川下将一)

- 2F08 Preparation of a three-dimensional nanoporous carbon monolith for immobilization of enzymes (Tohoku University) ○Yasuto Hoshikawa · Takehiro Imai · Takashi Kyotani · (Shinshu University) Koichi Nozaki · Shohei Yamane · (National Institute of Advanced Industrial Science and Technology) Tetsuji Ito
- 2F09 Effects of counter-ion in phosphate aqueous solution on hydrothermal treatment of starfish-derived calcite (Shinshu University) ○Tomohito Tsuge · Akari Takeuchi · (National Institute for Materials Science) Masanori Kikuchi

(14 : 20) (Chairman 宮崎敏樹)

- 2F17 Photocatalytic decoloration of acidic and basic dyes over  $TiO_2$ -modified hydroxyapatite with various morphologies (Osaka University) ○Tomoyo Goto · Sung Hun Cho · Tohru Sekino
- 2F18 Synthesis of Ca/Mo ferrite nanoparticle-apatite composite materials (Osaka City University) ○Yoshiyuki Yokogawa · Yuichiro Iguchi · (Sree Chitra Tirunal Institute for Medical Sciences and Technology) Harikrishna Varma

(15 : 00) (Chairman 鳴瀧彩絵)

- 2F19 ★Molecular mechanisms underlying bone formation and their application to bone regeneration (The University of Tokyo) ○Shinsuke Ohba



(16 : 00) (Chairman 竹内あかり)

2F22 Anti-bacterial activity and cytotoxicity of porous hydroxyapatite ceramics immobilized with silver ions (Meiji University) ○Shuhei Tsurumi · Kyokei Hazama · Michiyo Honda · (Keio University) Ken Ishii · Morio Matsumoto · (Meiji University) Mamoru Aizawa

2F23 Development of medical drug of combustion synthesized non-oxide ceramics (OSU Co.,Ltd. · Osaka Sangyo University) ○Osamu Yamada · (OSU Co., Ltd.) Junpei Maruo · Noboru Teramoto · (Osaka University) Ryota Nomura · Kazuhiko Nakano

(16 : 40) (Chairman 菊池正紀)

2F24 Doxorubicin loading/release of porous TiO<sub>2</sub> microspheres for transcatheter arterial chemoembolization (Tohoku University) ○Shoji Ueno · Hiroyasu Kanetaka · Masakazu Kawashita

2F25 Gene Delivery Using Calcium Phosphate Nanoparticles Prepared from Infusion Fluids: Process Optimization and Comparison with Commercial Systems (National Institute of Advanced Industrial Science and Technology, AIST) Quazi T. H. Shubhra · Ayako Oyane · Hiroko Araki · Maki Nakamura · (University of Tsukuba) Hideo Tsurushima

(17 : 20) (Chairman 上高原理暢)

2F26 ★Photodynamic Therapy by Using Fullerenes (Hiroshima University) ○Atsushi Ikeda

## ■■ September 8 (Thu) (Room G) ■■

## 08. Innovation in advanced ceramics from powder processing

## 先進成形プロセス

(9 : 20) (Chairman 打越哲郎)

2G02 Development of Ceramics Processing with Nano Second Pulsed Power (Nagaoka Univ of Tech) Naoto Matsutani · ○Tadachika Nakayama · Hisayuki Suematsu · Tsuneo Suzuki · Koichi Niihara

2G03 Fabrication of c-axis oriented polycrystalline Ba<sub>2</sub>NaNb<sub>3</sub>O<sub>15</sub> using colloidal processing in high magnetic field (Nagaoka University of Technology) ○Yuta Kamo · Zenji Kato · Satoshi Tanaka

(10 : 00) (Chairman 松岡光昭)

2G04 Fabrication of grain-oriented ceramics in rotating high magnetic field using UV curable resin (Nagaoka University) ○Shoko Baba · Satoshi Tanaka · (Taiyo Yuden Co.Ltd) Yutaka Doshida · Timohiro Harada · Hiroyuki Shimizu

2G05 Effect of multilayered-graphene composite particles on orientation and property of Si<sub>3</sub>N<sub>4</sub> ceramics by molding in a magnetic field (Yokohama National University) ○Mariko Sado · (Kanagawa Academy of Science and Technology) Takuma Takahashi · (Yokohama National University) Junichi Tatami · Motoyuki Iijima

(10 : 40) (Chairman 高橋拓実)

2G06 Fabrication of β-Sialon:Eu<sup>2+</sup> phosphor layer mixed with SnO<sub>2</sub> nano particles by electrophoretic deposition process (National Institute for Materials Science) ○Tetsuo Uchikoshi · Chenning Zhang · Lihong Liu · Yoshio Sakka · Naoto Hirotsuki

2G07 Visualisation of granule compression by confocal laser scanning microscopy (Nagaoka university of Technology) ○Zenji Kato · Yoshihiro Nagasawa · Satoshi Tanaka

(11 : 20) (Chairman 中村仁)

2G08 Visualisation of granule compaction by confocal laser scanning microscopy (Nagaoka university of Technology) ○Zenji Kato · Yoshihiro Nagasawa · Satoshi Tanaka

## S5. High-performance Ceramics—Novel approach from powder and sintering science—

(14 : 20) (Chairman 西村聡之)

2G17 ◆SPS sintering of diamond core/shell powder (Tohoku University) ○Takashi Goto · Kitiwan Mettaya · Hirokazu Katsui

(15 : 00) (Chairman 多々見純一)

2G19 ★Fabrication of advanced ceramics through developing fine particle processing (NIMS) ○Yoshio Sakka

2G21 Drying shrinkage behavior of agarose gel prepared from zirconia nano suspension (Gifu University) ○Mitsuki Hada · Michiyuki Yoshida · Osamu Sakurada · (Gifu Prefectural Ceramics Research Institute) Seizo Obata

(16 : 00) (Chairman 松岡光昭)

2G22 Effect of sintered grain size on microwave absorption properties of mullite compact (National Institute of Advanced Industrial Science and Technology) ○Daisuke Shimamoto · Yuichi Tominaga · Yuji Hotta

2G23 Fabrication of translucent and red fluorescent CaAlSiN<sub>3</sub>:Eu<sup>2+</sup> ceramics by applying a spark plasma sintering (Kanagawa Academy of Science and Technology) ○Takuma Takahashi · (Yokohama National University of Technology) Junichi Tatami · Motoyuki Iijima

(16 : 40) (Chairman 島本太介)

2G24 Fabrication of Highly Transparent Y<sub>2</sub>O<sub>3</sub>:Eu Ceramics with Hydroxide Nanosheets as the Precursor (National Institute for Materials Science) ○Ji-Guang Li · Yoshio Sakka · (Northeastern University) Xudong Sun

2G25 Fabrication of nitride phosphor particles and transparent α-SiAlON ceramics composite (Yokohama National University) ○Ippei Kokubun · Junichi Tatami · Motoyuki Iijima · (Kanagawa Academy of Science and Technology) Takuma Takahashi · (Kanagawa Industrial Technology Center) Masahiro Yokouchi

(17 : 20) (Chairman 冨永雄一)

2G26 Microstructure control of Al<sub>2</sub>O<sub>3</sub>/ZrO<sub>2</sub> ceramics using nanocomposite particles prepared by mechanical processing (Waseda University) ○Mitsuaki Matsuoka · Chiharu Tokoro · (Yokohama National University) Takuya Uoji · Junichi Tatami · (Osaka University) Makio Naito2G27 Solid solution of TiN-TiB<sub>2</sub> composites fabricated by spark plasma sintering (IMR, Tohoku University) ○Mettaya Kitiwan · Takashi Goto · (Yokohama National University) Akihiko Ito

## ■■ September 8 (Thu) (Room H) ■■

## S1. Inorganic Materials Innovation

(10 : 00) (Chairman 手嶋勝弥)

2H04 ★Twisting and curving growth of mesocrystals (Keio University) ○Hiroaki Imai

(10 : 40) (Chairman 本橋輝樹)

2H06 ★Synthesis of H Conductive Oxyhydrides (Institute for Molecular Science · JST PRESTO) ○Genki Kobayashi

(11 : 20) (Chairman 八島正知)

2H08 ★ Systematic valence distribution change in Bi, Pb – transition metal perovskites (Tokyo Institute of Technology) ○Masaki Azuma

### 13. Synthesis and Functional Properties of Mixed ion Compounds

(14 : 20) (Chairman 土井貴弘)

2H17 Synthesis and Magnetic properties of a new layered oxychalcogenide (Kyoto University) ○Yuki Matsumoto · Takafuki Yamamoto · Fumitaka Takeiri · Hiroshi Kageyama · (Research Institute for Production Development) Naoaki Hayashi · (Tokyo University of Science) Takami Toyama · (Hefei University of Technology) Zhi Li

2H18 Novel oxychalcogenides with an intergrowth structure (The University of Tokyo) ○Takeshi Yajima · Takao Tosu · Daisuke Hamane · Zenji Hiroi · (Nagoya Institute of Technology) Ko Mibu

2H19 Cu incorporation into apatite-type La-Ca-Si-P-O compounds (Akita University) ○Sumio Kato · Tomoyuki Endo · Masataka Ogasawara

2H20 Electrolysis synthesis and physical properties of hollandite-type oxides  $A_xTi_8O_{16}$  ( $A = K, Cs$ ) (Kanagawa University) ○Yusuke Chiba · Miwa Saito · Takeshi Hagiwara · (Kyoto University) Hiroshi Takatsu · Hiroshi Kageyama · (Kanagawa University) Teruki Motohashi

2H21 High-pressure synthesis, structure and ferroelectricity of A-site ordered double perovskite oxide  $CaMn_{1-x}Zn_xTi_2O_6$  (Gakushuin University) ○Daisuke Mori · Yohei Akama · Akihisa Aimi · Yoshiyuki Inaguma

(16 : 00) (Chairman 山本隆文)

2H22 Reaction kinetics study on oxygen intake/release of brownmillerite-type  $(Ca_{1-x}Sr_x)_2AlMnO_{5+\delta}$  (Kanagawa University) ○Miwa Saito · Yusuke Akitaya · Masaki Ogikubo · Teruki Motohashi

2H23 Remarkable oxygen intake/release characteristics of  $YBaCo_4O_{7+\delta}$  obtained by low-temperature synthesis (Kanagawa University) ○Kaihei Komiyama · Erina Endo · Miwa Saito · Teruki Motohashi

2H24 ★ A new approach to material structure search based on Bayesian statistics and first-principles simulations (Japan Advanced Institute of Science and Technology (JAIST) · National Institute for Materials Science (NIMS)) ○Kenta Hongo · (The Graduate University for Advanced Studies) Hisaki Ikebata · (The KAITEKI Institute, Inc.) Tetsu Isomura · (Japan Advanced Institute of Science and Technology (JAIST)) Ryo Maezono · (The Graduate University for Advanced Studies · The Institute of Statistical Mathematics (ISM) · National Institute for Materials Science (NIMS)) Ryo Yoshida

2H26 Density Functional Theory-based Calculations of Hydride-ion Conductors,  $AH_2$  ( $A$ : Alkaline Earths) (Tokyo Institute of Technology) ○Eiki Niwa · Masatomo Yashima

## ■■ September 8 (Thu) (Room J) ■■

### 12. Advanced Structure Science and the Analytical Technique

(14 : 20) (Chairman 加藤丈晴)

2J17 ☆ Crystal structure and magnetic properties of a transition metal chalcogenide by multi-probe experiments (Nagoya Institute of Technology) ○Toru Asaka · Chisato Murayama · Daisuke Urushihara · Koichiro Fukuda · (Max Planck Institute for Solid State Research) Masahiko Isobe · (Teikyo University · Waseda University) Shinich Nakamura · (Waseda University) Akio Fuwa

2J18 Low-temperature crystal structure and magnetic properties of  $CoP_3$  (Nagoya Institute of Technology) ○Kojiro Kasada · Chisato Murayama · Daisuke Urushihara · Toru Asaka · Koichiro Fukuda

2J19 Crystal structure and magnetic properties in a Chromium Sulfide,  $Cr_5S_6$  (Nagoya Institute of Technology) ○Ryo Hashimoto · Chisato Murayama · Daisuke Urushihara · Toru Asaka · Koichiro Fukuda · (Hiroshima University) Tomohiro Abe · Daichi Tsuru · Chikako Moriyoshi · Yoshihiro Kuroiwa

2J20 Atomic structure and magnetic properties of antiphase boundaries in  $Fe_3O_4$  (Tohoku University) ○Chunlin Chen · Hongping Li · Deqiang Yin · Kazutoshi Inoue · Yuichi Ikuhara · (The University of Tokyo) Takehito Seki · Gabriel Sanchez-Santolino · Naoya Shibata · (University of York) Keith P. McKenna

(15 : 40) (Chairman 浅香透)

2J21 Structure and magnetic property of " $\alpha$ "- $Fe_{16}N_2$ " prepared in presence of hard magnetic FePt (Hokkaido University) ○Ryoji Yamauchi · Yuji Masubuchi · Shinichi Kikkawa

2J22 Electric and magnetic properties of dense  $MgO/Mg_2Si/MgB_2$  nanocomposites with coherent interface structure (Kobe University) ○Takashi Uchino · Katsuya Ueno · (Nippon Sheet Glass) Yukihito Nagashima · (Kobe University) Yusuke Seto · Megumi Matsumoto · Takahiro Sakurai · Hitoshi Ohta · Kazuyuki Takahashi

2J23 Three dimensional reconstructions of  $EuBa_2Cu_3O_y$  layer using SEM images taken by serial sectioning method (JFCC) ○Takeharu Kato · Daisaku Yokoe · Ryuji Yoshida · Tsukasa Hirayama · (Industrial Superconductivity Technology Research Association · International Superconductivity Technology Center · National Institute of Advanced Industrial Science and Technology) Akira Ibi · (Industrial Superconductivity Technology Research Association · International Superconductivity Technology Center · Fujikura) Tomo Yoshida · (Industrial Superconductivity Technology Research Association · International Superconductivity Technology Center · National Institute of Advanced Industrial Science and Technology) Teruo Izumi · (Industrial Superconductivity Technology Research Association · International Superconductivity Technology Center) Yuh Shiohara

(16 : 40) (Chairman 籠宮功)

2J24 Grain boundary atomic structure in solid state electrolyte (The University of Tokyo) ○Takuma Higashi · Ryo Ishikawa · Naoya Shibata · Yuichi Ikuhara · (JFCC) Teiichi Kimura · Yumi Ikuhara

2J25 First principles calculation of phonon states at alumina grain boundary (The University of Tokyo) ○Tetsuya Tohei · Yuito Watanabe · Eita Tochigi · Naoya Shibata · (The University of Tokyo · JFCC) Yuichi Ikuhara

## ■■ September 8 (Thu) (Room K) ■■

### 15. Chemical Design—Novel functionalities, structures and processing

(9 : 20) (Chairman 伴隆幸)

2K02 Synthesis of Li-Al Layered Double Hydroxide with a high specific surface area (Osaka Prefecture University) ○Masanori Takemoto · Yasuaki Tokudome · Masahide Takahashi

2K03 Synthesis of Co-Al layered double hydroxide nanoparticles (Osaka Prefecture University) ○Daisuke Kino · Yasuaki Tokudome · Masahide Takahashi

2K04 ☆ Structural and Functional Control of Layered Metal Hydroxides Using Tripodal Ligands (Waseda University) ○Yoshiyuki Kuroda · (The University of Tokyo) Kazuya Yamaguchi · Noritaka Mizuno · (Waseda University) Kazuyuki Kuroda

2K05 Direct synthesis of interlayer modified magnesium hydroxide with tripodal and dipodal ligands (Waseda University) ○Keisuke Muramatsu · Yoshiyuki Kuroda · Tatsuyuki Koichi · Atsushi Shimojima · Hiroaki Wada · Kazuyuki Kuroda

(10 : 40) (Chairman 岩本雄二)

2K06 ★Bottom-up assembly of crystalline molecular nanosheets at liquid interfaces (Osaka Prefecture University · JST-PRESTO) ○Rie Makiura

2K08 Influence of the oxidation states of metallic species on the formation of cobaltate and manganate nanosheets (Gifu University) ○Takahiro Wakita · Takayuki Ban · Yutaka Ohya

2K09 Electronic Structure of Manganese-oxide nanosheets with Vacancy Defects (The University of Tokyo) ○Shinya Suzuki · Masaru Miyayama

## ■■ September 8 (Thu) (Room L) ■■

## 18. Hybrid Materials for Next Generation

(9 : 00) (Chairman 武藤浩行)

2L01 ★Development of Hybrid Materials for Highly Efficient and Low-Power Photon Upconversion (Kyushu University · JST-PRESTO) ○Nobuhiro Yanai

(9 : 40) (Chairman 藏岡孝治)

2L03 Comparison between solid-phase-reaction and liquid-phase-reaction for producing phosphor of Zn<sub>2</sub>(Ti<sub>1-x</sub>Sn<sub>1-x</sub>)<sub>2</sub>O<sub>7</sub>:Eu (Toyohashi University of Technology) ○Shohei Furuya · Hiromi Nakano · (National Institute of Technology, Gunma College) Nobuyuki Taira · (Keio University) Shinobu Fujihara

2L04 Ag nanoparticle deposition on anodized titania nanotubes for electrodes of dye-sensitized solar cells (Toyohashi University of Technology) ○Go Kawamura · Xing Wei · Hiroyuki Muto · Atsunori Matsuda

2L05 Dispersion Process of Metal Nanoparticles into ZnO Sintered Bodies and their Thermoelectric Properties (Kyushu University) ○Kosuke Watanabe · Toshifumi Ogawa · Michitaka Ohtaki

## ■■ September 8 (Thu) (Room M) ■■

## 17. Soft-solution process for synthesis and fabrication of ceramics

(9 : 00) (Chairman 上川直文)

2M01 Synthesis of Neodymium Phosphate from Iron-neodymium Solution Using Sodium Sulfito (Kyoto Prefectural University) ○Hiroaki Onoda · Ryo Fukatsu

2M02 Hydrothermal Synthesis of Pseudocubic Rutile-type Titania Particles (Tohoku University) ○Makoto Kobayashi · Hideki Kato · Masato Kakihana

(9 : 40) (Chairman 水畑穰)

2M03 ★Material development by using control of crystal growth and morphology in solutions (National Institute of Advanced Industrial Science and Technology) ○Eiji Hosono

2M05 ★A novel cancer therapy by combination of titanium dioxide derivatives nano-particle and physical excitation (Kobe University) ○Chiaki Ogino · Kenta Morita · Takahiro Suzuki · Yuya Nishimura · Masao Nakayama · Ryouhei Sasaki · Akihiko Kondo · (Chiba University) Chiya Numako

## S3. Materials Processing

(14 : 00) (Chairman 水畑穰)

2M16 ☆Exploration of Functions of Particles-Based Hybrid Materials Prepared via Liquid-Phase Assembly Process (Hiroshima University) ○Kiyofumi Katagiri

(14 : 20) (Chairman 幸塚広光)

2M17 ★Synthesis of Mesoporous Materials and their Applications to Solar Energy Conversion (Toyota Central R&amp;D Labs., Inc.) ○Shinji Inagaki

2M19 ★What are the key factors for the functionalized ceramics? (Mitsubishi Chemical Science and Technology Research Center Inc.) ○Tohru Setoyama

(15 : 40) (Chairman 金森主祥)

2M21 ★Tough soft materials based on sacrificial bond principle (Hokkaido University) ○Jian Ping Gong

(16 : 20) (Chairman 菅原義之)

2M23 ★Preparation of Bridged Silica Membranes and Applications to Water Separation (Hiroshima University) ○Joji Ohshita

2M25 ☆Organic-inorganic hybrid materials based on caged-silsesquioxanes (Kyoto Institute of Technology) ○Hiroaki Imoto · Kensuke Naka

2M26 ★Chiral Recognition and Interfacial Transportation by Chiral Inorganic Nanoparticle-Polymer Hybrid Nanotubes (Kindai University) ○Hisashi Fujihara

## ■■ September 8 (Thu) (Room N) ■■

## 21. Novel developments of key technologies for improvement and solution of environmental problems

## 触媒系材料

(9 : 00) (Chairman 稲田幹)

2N01 HYBRIDIZATION OF METAL NANOPARTICLE INTO LAYERED DOUBLE HYDROXIDE AND ITS APPLICATION FOR PHENOL DEGRADATION IN WATER (University of Yamanashi) ○Putri Rizka Lestari · Takahiro Takei · Nobuhiro Kumada · Sayaka Yanagida · (Tokyo University of Science) Ken-Ichi Katsumata

2N02 Synthesis and evaluation of Zn-Fe layered double hydroxide (LDH) (Okayama University) ○Masaki Tagashira · Yoshikazu Kameshima · Shunsuke Nishimoto · Michihiro Miyake

2N03 ★Creation of Intercalation Catalysts Using Ni-Zn Layered Hydroxy Double Salt (Chiba University) ○Takayoshi Hara

(10 : 20) (Chairman 井野川人姿)

2N05 Synthesis and Catalytic applications of layered double hydroxide nanocluster (Osaka Prefecture University) ○Yasuaki Tokudome · Tsuyoshi Morimoto · Naoki Tarutani · (Universidade de Lisboa) Pedro D. Vaz · Calra D. Nunes · (CNRS) Vanessa Prevot · (Osaka Prefecture University) Masahide Takahashi

2N06 Liquid Phase Oxidation of 1,4-dioxane Using a Pt/CeO<sub>2</sub>-ZrO<sub>2</sub>-SnO<sub>2</sub>/SBA-16 Catalyst (Osaka University) ○Naoyoshi Nunotani · Pil-Gyu Choi · Nobuhito Imanaka

2N07 ★Ammonia synthesis over inorganic electride based catalyst : Role of electrons and hydride ions (Materials Research Center for Element Strategy, Tokyo Institute of Technology) ○Masaaki Kitano

## 水資源の確保・保全に向けた浄化材料・技術

(14 : 20) (Chairman 中島章)

2N17 ★Resource Recovery from Spent Fuel and Volume Reduction of Radioactive Waste by using Ion Exchange Techniques (Nagaoka University of Technology) ○Tatsuya Suzuki

2N19 Manganese oxide ion-sieves for selective removal of Sr<sup>2+</sup> from radioactive contaminated water (Kagawa University) ○Qi Feng · Mami Uchida · Changdong Chen · (K&A Environmental System) Reiko Kanda

(15 : 20) (Chairman 笹井亮)

2N20 Preparation of porous materials for water purification from LDH gel body (Okayama University) ○Yoshikazu Kameshima · Shunichi Watanabe ·

- Shunsuke Nishimoto · Michihiro Miyake · (Tottori Institute of Industrial Technology) Toshiyuki Tanaka
- 2N21 Development of fluoride ion removal materials using sea urchin shells as a marine waste (Hokkaido University · National Institute for Materials Science)  
○Yuka Takemura · Masanori Kikuchi
- 2N22 Wettability of snail's shells with surface modification (Nagoya Institute of Technology) ○Ryota Yamagishi · Hirota Maeda · Takeshi Yokota · (Hokkaido University) Yasutaka Matsuo · (Nagoya Institute of Technology) Toshihiro Kasuga
- 2N23 Effect of the fatty acid structure on wettability of TiO<sub>2</sub> photocatalyst surface in water (Okayama University) ○Daisuke Yabumoto · Shunsuke Nishimoto · Yoshikazu Kameshima · Michihiro Miyake
- (16 : 40) (Chairman 亀島欣一)
- 2N24 Droplet viscosity effects on dynamic hydrophobicity of a solid-liquid bulk composite prepared from porous glass (Tokyo Institute of Technology) Kota Yokoyama · Toshihiro Isobe · Sachiko Matsushita · ○Akira Nakajima · (Meiji University) Munetoshi Sakai
- 2N25 Decomposition of 2-naphthol in water by TiO<sub>2</sub> modified with MnO<sub>x</sub> and CeO<sub>y</sub> (Tokyo Institute of Technology) ○Mimori Shiohara · Toshihiro Isobe · Sachiko Matsushita · Akira Nakajima
- 2N26 Effects of Metals Doping on Photocatalytic Activity of Titanate Nanosheet (Shimane University) ○Wasusate Soontornchaiyakul · Takuya Fujimura · Ryo Sasai
- 2N27 Development of environmental sensing technology to detect the organic matter adsorption by ceramics surface (Makino Corporation) ○Mitsunori Kondo · Naomi Ban · Kazuya Shima · Masataka Kamitani · (Osaka Prefecture University) Atsushi Nakahira

## ■■ September 8 (Thu) (Room P) ■■

12 : 10~14 : 10

### 99. General Sessions (Only Poster)

- 2P002 Soret coefficients of alkali oxides in alkali germanate glass melts (Kyoto University) ○Hiroshi Kato · Masahiro Shimizu · Masayuki Nishi · Kohji Nagashima · Heidy Visbal · Kazuyuki Hirao
- 2P003 Effect of ultrasonic treatment on preparation of crystallized glasses with lanthanum silicate (University of Hyogo) ○Seiya Ikiki · Atsushi Mineshige · Tetsuo Yazawa
- 2P004 Crystallization of a glass with Y<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>-mullite eutectic composition (Nihon University) ○Naoto Kanno · Yohei Suzuki · Shunkichi Ueno · (National Institute for Materials Science) Byung-Koog Jang
- 2P005 Photoluminescence of SnO-doped Zinc-Phosphate glasses (Okayama University) ○Masahiro Shiota · Shinichi Sakida · Yasuhiko Benino · Tokuro Nanba
- 2P006 Characterization of anti-static coating on glass by MPC/MTEOS copolymer (University of Hyogo) ○Hirota Asada · Tomoko Honda · Atsuni Mineshige · Shinichi Yusa · Tetsuo Yazawa
- 2P007 The effect of minor elements in waste used as raw materials on early hydration of C<sub>3</sub>S (Taiheiyō Cement Corporation) ○Ryota Soga · Merko Paige · Kensuke Hayashi · Shunichiro Uchida
- 2P008 Structure and properties of Ag<sup>+</sup> or Fe<sup>3+</sup>-doped gypsum powders (Kogakuin University) ○Kosuke Watanabe · Naoya Yoshida · Toshinori Okura
- 2P009 Effects of pH and grain size of hardening materials on fabrication of non-fired ceramics with humidity control function (Hokkaido Research Organization)  
○Tatsuhiko Shigyo · Takeshi Mori · Takafumi Nomura
- 2P010 Development of Heat-Resistant Pottery Body with Low Petalite Contents (Mie Prefectural Industrial Research Institute) ○Seiji Nijima
- 2P011 Terahertz Analysis of Pottery Bodies (II) (Mie Prefectural Research Institute) ○Seiji Nijima · Masashi Shoyama · Kazumi Murakami · (Nagoya University) Kodo Kawase
- 2P012 Porosity and gas separation properties of cage octasilsesquioxanes and silicates (Hiroshima University) ○Kazuki Yamamoto · Joji Ohshita · Sayako Koge · Toshinori Tsuru · (MAZDA Motor Corporation) Hiroyuki Kai · (Tokyo University of Science) Takahiro Gunji
- 2P013 Preparation and gas barrier characteristics of the polysilazane derived films on PET using low pressure Hg lamp and excimer lamp (Shibaura Institute of Technology) ○Yoshimi Yamasaki · Tomoji Ohishi
- 2P014 Effect of NO<sub>x</sub> adsorption by zeolite and boiling stone (Kokushikan University) Miho Yoshida · ○Takashi Yamasaki · Souchirou Watanabe · Shigeru Okada · (Tohoku University) Kunio Yubuta · Akiko Nomura · Toetsu Shishido · (NIMS) Takao Mori
- 2P015 Preparation of zeolite/ apatite composite for the radioactive adsorbent and its mechanical and adsorptive properties (The University of Ibaraki) ○Atsuhiko Ono · Yutaro Nomura · Kazuhide Ozeki · (International Apatite Institute) Hideki Aoki
- 2P016 PREPARATION AND CRYSTAL STRUCTURE ANALYSIS OF PYROCHLORE-TYPE OXIDES (University of Yamanashi) ○Isuru Withanage · Nobuhiro Kumada · Sayaka Yanagida · Takahiro Takei
- 2P017 A novel arsenic adsorbent using simultaneous formation of humboldtine and magnetite (University of Hyogo) ○Shinya Nomura · Hiroshi Nishioka
- 2P018 Effect of Preparation Process on Properties of Li<sub>2</sub>PS<sub>4</sub> Synthesised Using Ethyl Propionate (Toyohashi University of Technology) ○Nguyen H.H. Phuc · Eito Hirahara · Kei Morikawa · Hiroyuki Muto · Atsunori Matsuda
- 2P019 Enhancement of the ionic conductivity under millimeter wave irradiation heating and the application for SOFC (The University of Okayama) ○Koyo Shimoyama · Takashi Teranishi · Hidetaka Hayashi · Akira Kishimoto
- 2P020 Influence of quasi-millimeter-wave irradiation heating on the electrical conductivity of rare earth-doped CeO<sub>2</sub> for solid oxide fuel cell (Okayama University)  
○Salmie Suhana Che Abdullah · Takashi Teranishi · Hidetaka Hayashi · Akira Kishimoto
- 2P021 SOFC characteristics of Ni-loaded SDC anode prepared by co-precipitation method (Ehime University) ○Jiang Cui · Yoshiteru Itagaki · Hiromichi Aono · Shyuhei Yamaguchi · Hidenori Yahiro
- 2P022 Preparation of electrode catalyst for water electrolysis using nitrogen-doped carbon (University of Hyogo) ○Shota Katayama · Atsushi Mineshige · Yoshiaki Matsuo · Tetsuo Yazawa
- 2P023 Low temperature growth of crystal-orientation-controlled hydroxyapatite film (Graduate school, Kindai University) ○Tomoya Tsunemine · Yuuki Okada · Masanobu Kusunoki
- 2P024 Selective HAp patterning of DN gel surface for osteoconduction (Hokkaido University) ○Ryuji Kiyama · Takayuki Nonoyama · Tasuku Nakajima · Takayuki Kurokawa · JianPing Gong
- 2P025 Diffusion joining of AlN ceramics under non-vacuum atmosphere using cathode-charge and its discharge of metal (Yamaguchi University) ○Sota Ohashi · (National Institute of Technology, Ube College) Shokichi Kikugawa · (Yamaguchi University) Takuya Murata
- 2P026 Study for solid-liquid separation and density growth performance of ferrous-based polymeric flocculant by electrolyzed process (Yamaguchi University)  
○Tsubasa Sakamoto · (National Institute of Technology, Ube College) Shokichi Kikugawa · (Yamaguchi University) Takuya Murata
- 2P027 Fabrication of spherical silica particles from sodium metasilicate and their application for support materials of ruthenium based catalyst for hydrogenation

- of supercritical carbon dioxide into formic acid (Nihon University) ○Tetsuo Umegaki · Yuta Enomoto · Yoshiyuki Kojima
- 2P028 The role of F ion on the hydrothermal synthesis of GaPO<sub>4</sub>-LTA microporous crystal (National Institute of Advanced Industrial Science and Technology) ○Tetsuya Kodaira · Kyoko Bando
- 2P029 Preparation and properties of phosphate hydrogels (Chubu University) ○Yuhei Okuyama · Makoto Watanabe · Makoto Sakurai
- 2P030 Synthesis of imidophosphate derivatives by hydrothermal process using K<sub>2</sub>Sr(PO<sub>2</sub>NH)<sub>3</sub> (Chubu University) ○Shinnosuke Shamoto · Makoto Watanabe · Makoto Sakurai
- 2P031 Solidification of cerium phosphate and evaluation (Osaka Prefecture University) ○Masakazu Togo · Atsushi Nakahira
- 2P032 Morphological control of Sr<sub>3</sub>Co<sub>2</sub>Fe<sub>24</sub>O<sub>41</sub> Z-type hexaferrite by polymerizable complex method (University of Hyogo) ○Takeyuki Kikuchi · Shotaro Hirano · Masafumi Kobune · (Okayama University) Makoto Nakanishi · Tatsuo Fujii
- 2P033 Synthesis and characterization of titanate nanomaterials loaded with Ag nanoparticles by hydrothermal method (Osaka Prefecture University) ○Chisako Takada · Masakazu Togo · Atsushi Nakahira
- 2P034 Morphology control of ZIF-8 by aqueous solution process (Osaka Prefecture University) ○Takaaki Minami · Rie Makiura · Atsushi Nakahira
- 2P035 Preparation of Cu-doped NiO thin films by sol-gel method (Ishinomaki Senshu University) ○Takashi Ehara · Kohei Sasaki · Marina Abe · Takayoshi Nakanishi
- 2P036 The synthesis of zinc oxide by aqueous process (Osaka prefecture university) ○Momoko Iida · Kohei Yoshikawa · (FUJIKASEI CO.,LTD.) Shoichiro Shio · (Osaka prefecture university) Atsushi Nakahira
- 2P037 The development of the copper fine wiring formation method by a sol-gel method using photo acid generator and organic-inorganic resin (Shibaura Institute of Technology) ○Ikumi Washie · Tomoji Ohishi
- 2P038 Magnethiothermic reduction of silica glass substrates – Reaction of magnesium-deposited silica glass substrates (Kyoto Institute of Technology) ○Takashi Henmi · Arihumi Okada · Takashi Wakasugi · Kohei Kadono
- 2P039 Fabrication of La<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub> epitaxial thin films using pulsed laser deposition (The University of Tokyo) ○Takumi Ohtsuki · Satoru Nakatsuji · Mikko Lippmaa
- 2P040 A Process Study for Additive Manufacturing of Alumina component via Indirect Selective Laser Melting (Technology Research Institute of Osaka Prefecture) ○Tomoatsu Ozaki · Takeshi Suyama
- 2P041 Synthesis of cobalt nitrides by mechanochemical reaction (Kobe University) ○Tomotaka Nagao · Aihiko Kajinami · Hiroyuki Nariai
- 2P042 Solid phase synthesizing method of YbO (Fukuoka Institute of Technology) ○Aoi Goto · Yoshio Ohta · Mikito Kitayama
- 2P043 Study of sintering behaviors of fine calcium carbonate powder (Osaka Prefecture University Graduate School) ○Masako Matsumoto · Masakazu Togo · Atsushi Nakahira · (SHIRAISHI CENTRAL LABORATORIES CO., LTD) Sayaka Hagimura · Kenichiro Eguchi · Masahiko Tajika · (Yamagata University) Hidero Unuma
- 2P044 Characterization of surface alternation and dissolution behavior for the nuclear-waste glass (Chiba University) ○Go Ando · Takahiro Ohkubo · Yasuhiko Iwadate · Shin Nishiyama
- 2P045 The effect of a micro-tubular SOEC's geometric parameters on temperature distributions during steam electrolysis. (Yokohama National University) ○Atsushi Maeda · Takuto Araki · (Central Research Institute of Electric Power Industry) Masashi Mori
- 2P046 Analysis of the thermal stability in the positive electrode for sulfide-based all-solid-state lithium battery by dark-field transmission electron microscopy (Osaka Prefecture University) ○Yota Mori · Hirofumi Tsukasaki · Shigeo Mori · Akitoshi Hayashi · Masahiro Tatsumisago
- 2P047 TEM observation of microstructures of Eu substituted SrAl<sub>2</sub>O<sub>4</sub> with the stuffed-tridymite type structure (Osaka Prefecture University) ○Hirofumi Tsukasaki · Hayato Hirano · Yuki Satofuka · Akitoshi Hayashi · Masahiro Tatsumisago · Yui Ishii · Shigeo Mori
- 2P048 Synthesis of new carbon thin films on cubic boron nitride from three dimensional network polymer (Hokkaido University) ○Toshihiro Shimada · Koki Hasegawa · Takashi Yanase · Taro Nagahama · (Akita University) Makoto Yamaguchi
- 2P049 Synthesis and crystal structure analysis of Na-B binary compounds (Tohoku University) ○Syota Shibano · Haruhiko Morito · Hisanori Yamane
- 2P050 To quantify slag mixing ratio of blast furnace slag cement using by the XRD/PONKCS method and application to the automated quality control system in the cement plant (Taiheiyo Cement co.,Ltd) ○Naoto Nakai · Tomoyuki Hikida · Yoshihumi Ougi · Shunichiro Uchida
- 2P051 Characterization of a grid defect in the translucency Alumina ceramics (Yamaguchi University) ○Hidekazu Tomokiyo · Kenta Yamashita · Koichi Matsuo · Ayako Kai
- 2P052 Electronic structure and magnetic properties of AlN doped with 3d transition metals I – First-principles study (Yamaguchi University) Ryohei Mizuta · ○Toshihiro Abe · Ayako Kai
- 2P053 Magnetic properties and electron states of AlN doped with 3d transition metals II – Study by ESR and XPS (Yamaguchi University) Toshihiro Abe · Kazutaka Miyake · Ryouhei Mizuta · ○Ayako Kai
- 2P054 Informatics approach for ternary phase diagram (Hokkaido University) ○Akira Miura · (Hokkaido Information University) Tsukasa Hokimoto · (Hokkaido University) Takashi Yanase · (University of Yamanashi) Masanori Nagao · (Hokkaido University) Toshihiro Shimada · Kiyoharu Tadanaga

### 03. Science and Technology on Engineering Ceramics—Material Development for Safe and Reliable Society and Functional Stability—

- 2PB01 Experimental Analysis of Thermal Conductivity of SiC with Oxide Additive (Kagoshima University) ○Ryo Ando · Yoshihiro Hirata · Yukako Matsumoto · Taro Shimonosono
- 2PB02 Determination of oxygen content by dissolved oxygen/chlorine method (Yamagata University) ○Takehiro Suzuki · Takuya Takahashi · Shiro Kambe
- 2PB03 Resistivity control of TiO<sub>2</sub>-doped Al<sub>2</sub>O<sub>3</sub> ceramics fabricated by pressureless sintering in air atmosphere (Kagawa University) ○Asuka Fujita · Takashi Kusunose · (Osaka University) Tohru Sekino
- 2PB04 Improvement of properties in textured Alumina by slip casting in a magnetic field and SPS (Shibaura Institute of Technology) ○Takaharu Ashikaga · Hajime Kiyono · (National Institute for Materials Science) Tohru Suzuki
- 2PB06 Evaluation of density and the mechanical strength of Al<sub>2</sub>TiO<sub>5</sub> by substituting Fe (Nihon University) ○Yuusuke Akizuki · Satoshi Yamagata · Hiroki Fujimori · Takayuki Sugimoto

### 10. Photo-Ceramics—Synthesis, Functions and Applications of Optical and Colorful Ceramics—

- 2PC01 Optical and Scintillation Properties of Eu-doped SrAl<sub>2</sub>O<sub>4</sub> Single Crystals Grown by the FZ Method (Nara Institute of Science and Technology) ○Daisuke Nakauchi · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida · (Tohoku University) Masanori Koshimizu
- 2PC02 Optical and Ionizing Radiation Induced Luminescence Properties of Ce-doped Y<sub>4</sub>Al<sub>2</sub>O<sub>9</sub> Crystals grown by the FZ method (Nara Institute of Science and Technology) ○Masaki Mori · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PC03 Dosimeter properties of CaF<sub>2</sub> transparent ceramic by SPS (Nara Institute of Science and Technology) ○Fumiya Nakamura · Takumi Kato · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida · (TOKUYAMA) Kentaro Fukuda
- 2PC04 Radiation Responses and Optical Properties of Pr-doped 12CaO · 7Al<sub>2</sub>O<sub>3</sub> Single Crystals Grown by the Floating Zone Method (Nara Institute of Science

- and Technology) ○Narumi Kumamoto · Daisuke Nakauchi · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PC05 Scintillation properties of Ga<sub>2</sub>O<sub>3</sub> single crystal doped Ce grown by floating zone method (Nara Institute of Science and Technology) ○Yuki Usui · Tomohisa Oya · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PC06 Scintillation and Optical Properties of Ce: (Gd<sub>8</sub>X<sub>2</sub>)(SiO<sub>4</sub>)<sub>6</sub>O<sub>2</sub> (X=Mg,Ca,Sr,Ba) crystals grown by Floating Zone method (Nara Institute of Science and Technology) ○Takuya Igashira · Masaki Mori · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PC07 Development of LiF-CaF<sub>2</sub> and LiF-SrF<sub>2</sub> eutectic scintillators for neutron detectors (NAIST) ○Takayuki Yanagida · Noriaki Kawaguchi · Go Okada · (Tokuyama Corp.) Kentaro Fukuda · (Tohoku University) Yutaka Fujimoto · (Nagoya University) Kenichi Watanabe · Atsushi Yamazaki · Akira Uritani
- 2PC08 Radiophotoluminescence properties of Ag-doped NaPO<sub>3</sub>-R<sub>n</sub>PO<sub>3</sub> (R=Li, K, Rb, Cs, Sr, Al, B, Bi) glasses (Tohoku University) ○Hironori Tanaka · Yutaka Fujimoto · Masanori Koshimizu · Keisuke Asai · (Nara Institute of Science and Technology) Takayuki Yanagida
- 2PC09 X-ray Imaging Plate using Aluminum Nitride Ceramic (NAIST) ○Go Okada · Takayuki Yanagida · (Tokuyama) Kentaro Fukuda · (USask (CAN)) Safa Kasap
- 2PC10 Scintillation properties of Eu doped SrO-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> Glasses Prepared by the Melt-quenching Method (NAIST) ○Noriaki Kawaguchi · Takumi Kato · Go Okada · Takayuki Yanagida · (Tohoku University) Yutaka Fujimoto
- 2PC11 Comparison of scintillation properties of BaF<sub>2</sub> single crystal and transparent ceramics made by SPS (Nara Institute of Science and Technology) ○Takumi Kato · Go Okada · Takayuki Yanagida · (Tokuyama) Kentaro Fukuda
- 2PC12 Scintillation Properties of Lu<sub>3</sub>Al<sub>5</sub>O<sub>12</sub> single crystal co-doped with Nd, Ce and Cr grown by the Floating Zone method (Nara Institute of Science and Technology) ○Tomohisa Oya · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PC13 Optical and scintillation properties of undoped Cs<sub>2</sub>HfCl<sub>6</sub> and Cs<sub>2</sub>ZrCl<sub>6</sub> crystals (Tohoku University) ○Keiichiro Saeki · Yutaka Fujimoto · Masanori Koshimizu · Keisuke Asai · (Nara Institute of Science and Technology) Takayuki Yanagida
- 2PC14 Fabrication and optical characterization of CdSe nanoparticles liganded with Rhodamine molecules (Tohoku University) ○Hiroto Ono · Takuma Yahaba · Masanori Koshimizu · Yutaka Fujimoto · Keisuke Asai
- 2PC15 Lasing of oxygen deficient ZnO crystals derived from exciton-electron scattering process (Kobe University) ○Ryosuke Matsuzaki · Haruka Soma · Kanae Fukuoka · Takashi Uchino
- 2PC16 Luminescence and scintillation properties of Tl-based halide crystals (Tohoku University) ○Yutaka Fujimoto · Keiichiro Saeki · Takuma Yahaba · Masanori Koshimizu · Keisuke Asai · (NAIST) Takayuki Yanagida · Go Okada
- 2PC17 Optical characterization of ZnSe/CdSe nanocrystals with  $\pi$ -conjugated organic ligands to realize the excitation resonance state (The University of Tohoku) ○Takuma Yahaba · Masanori Koshimizu · Yutaka Fujimoto · Hiroto Ono · Keisuke Asai
- 2PC18 Luminescence Properties of Sr<sub>3</sub>Al<sub>2</sub>O<sub>6</sub>:Ln (III) with Coordination Site Variations (Hokkaido University) ○Takafumi Matsui · Takayuki Nakanishi · Yuichi Kitagawa · Koji Fushimi · Mikio Higuchi · Yasuchika Hasegawa

## 26. Ceramic sensors and transducers—structural design from macro to micro levels for high performance

- 2PE01 Development of high-temperature oilless pressure sensors using strain sensitive multilayered films (2) (Technology Research Institute of Osaka Prefecture) ○Yoshiharu Kakehi · Kazuo Satoh · Taizo Oguri · (Nippon Liniax Co., Ltd.) Mitsuteru Matsumoto · Hiroshi Takenaka · Mikio Sawamura
- 2PE02 Effects of impurity doping on the sensing properties of ZnO gas sensors (National Institute for Materials Science) ○Yutaka Adachi · Isao Sakaguchi · Noriko Saito · Taku Suzuki

## 12. Advanced Structure Science and the Analytical Technique

- 2PJ01 Highly grain-oriented polycrystalline lanthanum silicate oxyapatite grown by reactive diffusion between solid La<sub>2</sub>SiO<sub>5</sub> and gases [SiO + 1/2O<sub>2</sub>] (Nagoya Institute of Technology) ○Takuya Kitagawa · Ryo Hasegawa · Hiroshi Nakamori · Toru Asaka · Koichiro Fukuda
- 2PJ02 Structural phase transition in electronic ferroelectric RFe<sub>2</sub>O<sub>4</sub> (R = Lu, Tm, Y) (Nagoya Institute of Technology) ○Daisuke Urushihara · Tomoki Matsumura · Tatsuya Hayakawa · Toru Asaka · Koichiro Fukuda · Nobuo Ishizawa · (Kyoto University) Shinya Konishi · Katsuhisa Tanaka
- 2PJ03 Disordered crystal structure of 16H-SiAlON Si<sub>3-x</sub>Al<sub>5-x</sub>O<sub>2</sub>N<sub>9-x</sub> (x~2.6) (Nagoya Institute of Technology) ○Yuma Suzuki · Hiroki Banno · Toru Asaka · Koichiro Fukuda
- 2PJ04 Evaluation of crystallite size by analysis of two-dimensional diffraction intensity distribution (Nagoya Institute of Technology) ○Shoki Ono · Daiki Hattan · Takehiro Yoshida · Yoshinobu Takatsu · Hisashi Hibino · (Nagoya Institute of Technology · Aichi Synchrotron Radiation Center) Takashi Ida
- 2PJ05 Investigation of phase transition of BaTiO<sub>3</sub> with synchrotron X-ray and two-dimensional detectors (Nagoya Institute of Technology) ○Daiki Hattan · Shoki Ono · Kento Wachi · Yoshinobu Takatsu · Takehiro Yoshida · Hisashi Hibino · (Nagoya Institute of Technology · Aichi Synchrotron Radiation Center) Takashi Ida
- 2PJ06 Crystal structure and conductivity of the layered perovskite Sr<sub>3</sub>Fe<sub>2</sub>O<sub>5</sub>Cl<sub>2</sub> annealed under the moist atmosphere (Nagoya Institute of Technology) ○Yutaro Yagi · Isao Kagomiya · Ken-ichi Kakimoto
- 2PJ07 Investigation of superconductivity of InBa<sub>2</sub>LnCu<sub>2</sub>O<sub>y</sub> (Ln=Sm,Eu,Gd) by DV-X $\alpha$  method (Yamagata University) ○Takumi Masukawa · Shiro Kanbe

## 15. Chemical Design—Novel functionalities, structures and processing

- 2PK01 Preparation and Electrochemical Properties of Compositions Consisting of Liquid-Phase Shaking-derived Li<sub>3</sub>PS<sub>4</sub> Solid Electrolyte and Surface Modified Ternary Cathode Active Material NMC (Toyohashi University of Technology) ○Reiko Matsuda · H.H. Phuc, Nguyen · Shota Azuma · Kei Morikawa · Hiroyuki Muto · Atsunori Matsuda
- 2PK02 Syntheses of La doped CeO<sub>2</sub> abrasive by spray pyrolysis and glass polishing properties (JFCC) ○Toshimasa Suzuki · Koichi Kawahara

## 09. Random Materials—Function and Physical Property Correlated with the Structure—

- 2PS01 Scintillation and Dosimeter properties of non-doped zirconia produced by the SPS method (Nara Institute of Science and Technology) ○Hiroki Tatsumi · Takumi Kato · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PS02 Scintillation and dosimeter properties of Nd doped NaPO<sub>3</sub>-Al(PO<sub>3</sub>)<sub>3</sub> glasses prepared by melt-quenching method (Nara Institute of Science and Technology) ○Tomoaki Kuro · Go Okada · Takayuki Yanagida · (Tohoku University) Yutaka Fujimoto · (Kyoto University, Institute for Chemical Research) Hirokazu Masai
- 2PS03 Scintillation and dosimeter properties of Ce doped 30Zn<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>-70Al(PO<sub>3</sub>)<sub>3</sub> glasses by the melt quenching method (Nara Institute of Science and Technology) ○Shotaro Hirano · Tomoaki Kuro · Go Okada · Noriaki Kawaguchi · Takayuki Yanagida
- 2PS04 Emission properties of Ce-doped barium borate glasses prepared from different starting materials (Institute for Chemical Research, Kyoto University) ○Aya Torimoto · Hirokazu Masai · (Nara Institute of Science and Technology) Go Okada · Noriaki Kawaguchi · Takayuki Yanagida · (Chiba University) Takahiro Ohkubo

- 2PS05 Study of  $Zr_2(WO_4)_2(PO_4)_2$  substituted by Ti on the negative thermal expansion behaviors (Tokushima University) ○Tetsuta Koizumi · Norimasa Inoue · Kei-ichiro Murai · Toshihiro Moriga
- 2PS06 Effect of bonding conditions on enameling glass-metal (Kyoto Institute of Technology) ○Takeshi Summura · Takashi Yumura · Kohei Kadono · Takashi Wakasugi
- 2PS07 Variation of emission spectra of silver-containing glass with melting conditions (Kyoto Institute of Technology) ○Yuya Higashide · Takashi Yumura · Kohei Kadono · Takashi Wakasugi
- 2PS08 Nano-sharpened and  $Ag^+$  ion emission utilizing  $Ag^+$ -ion-conducting AgI glasses (Nagoya Institute of Technology) ○Kyouhei Segawa · Satoshi Mizutani · Yusuke Daikou · Sawao Honda · Yuji Iwamoto
- 2PS09 X-ray Absorption Fine Structure (XAFS) Analysis of Sn-containing Oxide Glass (Kyoto University) ○Hirokazu Masai · (Okayama University) Syuji Matsumoto · (Ritsumeikan University) Akitoshi Koreeda

## ■■ September 8 (Thu) (Room Q) ■■

### 20. Ceramics Processing through Energy Consumption Reduction (Green Processing)

#### 導電性薄膜

(9 : 00) (Chairman 青野宏通)

- 2Q01 Properties of Ga doping  $ZnIn_2O_4$  Thin Film and Epitaxial Growth of PZT (Shizuoka University) ○Koki Suzuki · Takahiko Kawaguchi · (Tokyo Institute of Technology) Kazuo Shinozaki · (Shizuoka University) Naonori Sakamoto · Hisao Suzuki · Naoki Wakiya
- 2Q02 Decreasing in resistivity of solution processed ZnO films by UV irradiation and their application (Tokyo Institute of Technology) ○Kentaro Yonemoto · Tetsuo Kishi · Tetsuzi Yano · Nobuhiro Matsushita
- 2Q03 Electrochemical evaluation of fluorine-doped tin oxide electrodes for biosensor application (Tokyo institute of technology) ○Rina Hashimoto · Fusao Kitamura · Toshiyuki Ikoma · Tetsuo Kishi · Tetsuji Yano · Nobuhiro Matsushita · (Gunma University) Yuta Katayanagi · (National Tsing Hua University) Lee Kuan-Ting · Lu Shih-Yuan

#### 薄膜形成

(10 : 00) (Chairman 松田晃史)

- 2Q04 Direct Fabrication of BaTaO<sub>2</sub>N film on Tantalum substrate by ammonothermal method (Meiji University) ○Yuki Maruyama · Tomoaki Watanabe
- 2Q05 Production of Biomimetic Oriented Calcite Structures on an Organic Sheet (Keio University) ○Yuta Nagai · Yuya Oaki · Hiroaki Imai
- 2Q06 Characterization of epitaxial YSZ thin film on porous silicon (Shizuoka University) ○Yuki Hiyoshi · Takahiko Kawaguchi · (Tokyo University of Agriculture and Technology) Nobuyoshi Koshida · (Tokyo Institute of Technology) Kazuo Shinozaki · (Shizuoka University) Naonori Sakamoto · Hisao Suzuki · Naoki Wakiya

(11 : 00) (Chairman 渡邊友亮)

- 2Q07 Preparation of PZT thin film on porous silicon by RF magnetron sputtering (Shizuoka University) ○Kazuki Takabayashi · Takahiko Kawaguchi · (Tokyo University of Agriculture and Technology) Nobuyoshi Koshida · (Tokyo Institute of Technology) Kazuo Shinozaki · (Shizuoka University) Naonori Sakamoto · Hisao Suzuki · Naoki Wakiya
- 2Q08 Effect of process parameters on low-temperature synthesis of  $\alpha$ -alumina film by sol-gel casting (Shizuoka University) ○Saki Suzuki · Shogo Suzuki · Takahiko Kawaguchi · Naonori Sakamoto · Naoki Wakiya · Hisao Suzuki
- 2Q09 Magnetic field induced effect on structural and magnetic properties of manganese ferrite thin films deposited by "Dynamic Aurora PLD" method (Shizuoka University) ○Nipa Debnath · Wataru Kumasaka · Takahiko Kawaguchi · (Tokyo Institute of Technology) Kazuo Shinozaki · (Shizuoka University) Naonori Sakamoto · Hisao Suzuki · Naoki Wakiya

(14 : 20) (Chairman 松下伸広)

- 2Q17 ☆Development of Hard Al<sub>2</sub>O<sub>3</sub> coatings by the Sol-gel method (Mitsubishi Materials Corporation) ○Kazutaka Fujiwara · Hiroaki Kakinuma · Hidemitsu Takaoka · Akira Osada · (Shizuoka University) Naoki Wakiya · Hisao Suzuki
- 2Q18 Room temperature heteroepitaxy of ultra-smooth  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> (0001) thin film by Laser-MBE (Tokyo Institute of Technology) ○Akifumi Matsuda · Daishi Shiojiri · Hiroki Uchida · Mamoru Yoshimoto · (Kanazawa Industrial Technology Center · Tokyo Institute of Technology) Satoru Kaneko
- 2Q19 Strong Fluorescence from Ag-Zn-Na type Zeolite X (Ehime University) ○Erni Johan · Shintaro Imamura · Naoto Matsue · Hiromichi Aono

#### 光機能材料

(15 : 20) (Chairman 篠崎和夫)

- 2Q20 ★Low temperature synthesis of oxynitride photocatalyst by ammonothermal method (Meiji University) ○Tomoaki Watanabe
- 2Q22 Hydrothermal synthesis of polyacrylic acid capped copper nanoparticles using supercritical water reduction method (National Institute of Advanced Industrial Science and Technology) ○Hirokazu Hayashi · Takashi Nakamura · Yoshito Wakui · Takeo Ebina · (Tohoku University) Richard Smith

#### ナノ構造形成

(16 : 20) (Chairman 安達信泰)

- 2Q23 Effect of an additional element on MgFe<sub>2</sub>O<sub>4</sub> microstructure (Kyushu University) ○Akane Doi · Maiko Nishibori · Kengo Shimano · (The University of Kitakyushu) Takuya Suzuki · (National Institute of Technology, Kitakyushu College) Kenji Obata · Shigenori Matsushima
- 2Q24 Magneto-optical properties and fabrication of waveguides of silica xerogels containing Fe<sub>3</sub>O<sub>4</sub> nanoparticles (Shizuoka University) ○Ryohei Okabe · (Shizuoka University · RIKEN) Seisuke Nakashima · (Shizuoka University) Akihiro Ishida
- 2Q25 ★Size- and phase-controlled synthesis of iron oxide nanoparticles by thermal decomposition of iron-fatty acid complex (Ehime university) ○Saeki Yamamoto

## ■■ September 8 (Thu) (Room R) ■■

### 06. Refractories Innovation

(9 : 00) (Chairman 前田榮造)

- 2R01 Fabrication and thermal conductivity of highly porous alumina body from platelets with yeast fungi as a pore forming agent (Nagoya Institute of Technology) ○Sawao Honda · Shinobu Hashimoto · Shizuka Yase · Yusuke Daiko · Yuji Iwamoto
- 2R02 Investigation of alumina sintered compact with volume expansion derived from slurry containing alumina, aluminum and polysiloxane (National Institute of Advanced Industrial Science and Technology) ○Ken'ichiro Kita · Naoki Kondo
- 2R03 Fabrication and characterization of porous alumina with denser surface (National Institute of Advanced Industrial Science and Technology) ○Akihiro Shimamura · Manabu Fukushima · Mikinori Hotta · Tatsuki Ohji · Naoki Kondo

- (10 : 00) (Chairman 大矢豊)
- 2R04 ★What is necessary for Japanese refractory technology to maintain the top level of the world (NIPPON STEEL & SUMITOMO METAL CORPORATION)  
○Tadashi Ikemoto
- (10 : 40) (Chairman 田中雅人)
- 2R06 Effect of additives on microwave heating of silica-alumina composite (Kanagawa Inst. of Tech.) ○Yasuro Ikuma · Ken Senga · Yoshitaka Suzuki · Koichi Niwa
- 2R07 Effect of water vapor on the separation and recovery of gallium oxide from gallium nitride-containing mixture by carbothermal reduction and oxidation process (Hosei University) ○Maho Kuriyama · Yuka Sakai · Takaya Akashi
- 2R08 Flexible ceramics established on the mimicry of itacolumite (Nagoya Institute of Technology) ○Masaya Shimayori · Nobuyasu Adachi · Toshitaka Ota · (RWTH Aachen University) Rainer Telle
- 2R09 Improvement of heat resististance for ceramic fiber board (Nagoya Institute of Technology) ○Shinobu Hashimoto · Yusuke Daiko · Sawao Honda · Yuji Iwamoto · (Isolite Insulating Products Co., Ltd.) Takeshi Miyake
- (14 : 20) (Chairman 伊熊泰郎)
- 2R17 ★Evaluation of Fracture Resistance for Refractory Bricks having Nonlinear Deformation Behavior (Shizuoka University) ○Yoshihisa Sakaida
- (15 : 00) (Chairman 本多沢雄)
- 2R19 Evaluation of Thermal Shock Resistance in Ceramic Materials by Elastic Modulus (Kyoto Institute of Technology) ○Jun Arikawa · Takeshi Shiono
- 2R20 Restricting thermal radiation and improving high temperature insulation property by controlling pore size (CoorsTek KK) ○Mitsuhiro Fujita · Shuko Akamine
- 2R21 Deformation measurement of refractories by digital image correlation method (Krosaki Harima Corporation) ○Hidetoshi Kamio · Yutaka Kitazawa · Hatsuo Taira
- 2R22 Thin film microfabrication processes of refractory materials for far infrared metamaterials applications (Hokkaido University) ○Toshihiro Shimada · Takuya Takami · Takahiro Tamura · Takashi Yanase · Taro Nagahama
- (16 : 20) (Chairman 葛西篤也)
- 2R23 Microstructure evolution and its influences on properties of unburned  $Al_2O_3$ -MgO Brick (Reserch Center, Shinagawa Refractories Co.,Ltd.) ○Naoko Doi · Hisashi Tomiya · Atsushi Torigoe
- 2R24 Reaction layer between oxide particle and complex carbide particle on high temperature (Okayama Ceramics Research Foundation) ○Tomohiro Nishikawa · Tomoyuki Maeda · Yasuhiro Hoshiyama · Shigeyuki Takanaga · (Tohoku University) Nobuhiro Maruoka · Kiminori Tashiro · Hiroshi Nogami
- 2R25 Influence of functional group of carbon on oxidation resistance of SiC/C particle (Okayama Ceramics Research Foundation) ○Tomoyuki Maeda · Tomohiro Nishikawa · Yasuhiro Hoshiyama · Shigeyuki Takanaga

## ■■ September 8 (Thu) (Room S) ■■

### 09. Random Materials—Function and Physical Property Correlated with the Structure—

- (9 : 00) (Chairman 正井博和)
- 2S01 ★Atomic and electronic structure of glasses by *ab initio* molecular dynamics and solid state NMR (Chiba University) ○Takahiro Ohkubo
- (9 : 40) (Chairman 篠崎健二)
- 2S03 Effect of Temperature on Boron Coordination Number in  $Li_2O$ - $2B_2O_3$  Glass and Melt by High Temperature Polarized Raman Spectroscopy (Tokyo Institute of Technology) ○Yukihiro Fujiwara · Rikiya Kado · Tetsuo Kishi · Nobuhiro Matsushita · Tetsuji Yano
- 2S04 Effect of the 4th element on the phase separation of sodium borosilicate glasses (The University of Tokyo) ○Yasuhiro Watanabe · Hiroyuki Inoue · Atsuya Makita · Jae Yeop Chung
- (10 : 20) (Chairman 寺門信明)
- 2S05 Optical Property, Glass Structure, and Crystallization of  $MgF_2$ -BaO- $B_2O_3$  Fluoroborate Glasses (AIST) ○Kenji Shinozaki · Masaru Yamashita · Naoyuki Kitamura · Tomoko Akai · (Nagaoka University of Technology) Tsuyoshi Honma · Takayuki Komatsu
- 2S06 Formation of compositional distribution in  $CaO$ - $Al_2O_3$ - $SiO_2$  glass by migration of stainless microsphere using CW laser backside irradiation (Tokyo Institute of Technology) ○Tetsuo Kishi · Tetsuo Kokan · Yukihiro Yoshida · Nobuhiro Matsushita · Tetsuji Yano · (Chiba University) Tatsuki Iwamoto · Hirobumi Hidai
- (11 : 00) (Chairman 岸哲生)
- 2S07 Photo- and thermally-induced structure ordering in thin films of low-dimensional quantum spin system: Patterning and imaging of heat flow paths (Tohoku University) ○Nobuaki Terakado · Ryosuke Takahashi · (IMRAM, Tohoku Univeristy) Yoshiki Yamazaki · (Tohoku University) Yoshihiro Takahashi · Takumi Fujiwara
- 2S08 In-situ electrochemical FTIR analysis for H<sup>+</sup> implantation dynamics of phosphate glasses under hydrogen atmosphere (Nagoya Institute of Technology) ○Yusuke Daiko · Sumin Jeong · Junki Kato · Satoshi Mizutani · Tomokatsu Hayakawa · Yuji Iwamoto · (Kyoto University) Shunsuke Murai · (Toyohashi University of Technology) Hiroyuki Muto · (The University of Shiga Prefecture) Satoshi Yoshida
- 2S09 Cs-bearing microparticulate silicate glass released from Fukushima nuclear reactor and its synthesis (NIMS) ○Hiroyo Segawa · (Tokyo Univ.) Hiroki Mukai · (NIMS) Kotone Hasegawa · Masanori Mitome · Toru Hara · (Tokyo Univ.) Toshihiro Kogure
- (14 : 20) (Chairman 正井博和)
- 2S17 ★Spectroscopic approach for investigating structural and physical properties of oxide glasses (Ritsumeikan University) ○Yasuhiro Fujii
- (15 : 00) (Chairman 大幸裕介)
- 2S19 Structural Analysis of  $Li_2O$ - $SiO_2$  Glasses using Brillouin scattering (Kyoto University) ○Hirokazu Masai · (Ritsumeikan University) Akitoshi Koreeda · Yasuhiro Fujii
- 2S20 Pressure-induced amorphization of  $Ag_2O$ -AgI solid electrolytes and the ionic conductivity (Yamagata University) Kazuto Kato · ○Yuta Matsushima
- (15 : 40) (Chairman 瀬川浩代)
- 2S21 Effects of glass compositions on Ag-photodoping behavior in bulk sulfide halide glasses (Kyoto Institute of Technology) ○Kayo Hosoya · Arifumi Okada · Takashi Wakasugi · Kohei Kadono
- 2S22 Photoluminescence property of silica-based materials prepared by high frequency induction heating (Kobe University) ○Yu Nagayoshi · Takashi Uchino
- (16 : 20) (Chairman 福味幸平)
- 2S23 A Study of Structure and Physicochemical Properties of Amorphous Silica Synthesized by Milling (Kobe University) ○A. Kajinami · T. Taguchi ·



- T. Kyoguchi · H. Nariai
- 2S24 Unique crystallization of sodium manganese phosphate glass and its electrochemical properties (Nagaoka University Tech.) ○Tsuayoshi Honma · Morito Tanabe · Takayuki Komatsu
- 2S25 Perfect surface crystallization in metal-compound-doped SrO—TiO<sub>2</sub>—SiO<sub>2</sub> glasses and formation of inhomogeneous structures (Tohoku University)  
○Shinya Kubota · Nobuaki Terakado · Yoshihiro Takahashi · Takumi Fujiwara
- (17 : 40) (Chairman 北村直之)
- 2S27 Visible light response and defect structure of photocatalytic glass-ceramics (Tohoku University) ○Kazuki Yoshida · Hiroshi Takahashi · Nobuaki Terakado · Yoshihiro Takahashi · Takumi Fujiwara · (IMRAM, Tohoku University) Hideki Kato · Masato Kakihana

### ■■ September 8 (Thu) (Room T) ■■

#### 23. Ceramics for next generation power electronics

- (9 : 00) (Chairman 永田肇)
- 2T01 ★NTC Thermistor properties of Wurtzite (Al,Ti) N Thin Film Material (Mitsubishi Materials Corporation) ○Toshiaki Fujita · Hiroshi Tanaka · Hitoshi Inaba · Kazutaka Fujiwara · Noriaki Nagatomo
- 2T03 Strontium substitution effect of gehlenite single crystals on their electrical and mechanical properties (Tokyo Institute of Technology) ○Hiroaki Takeda · Kyohei Yoshida · (Universite de Lyon 1) Kheirredine Lebbou · (Kanazawa University) Hiroki Okudera · (Tokyo Institute of Technology) Takuya Hoshina · Takaaki Tsurumi
- 2T04 Dielectric properties of Sr<sub>n+1</sub>Ti<sub>n</sub>O<sub>3n+1</sub> Ruddlesden–Popper homologous series (National Institute of Advanced Industrial Science and Technology)  
○Muneyasu Suzuki · Tetsuo Tsuchiya · Jun Akedo
- (10 : 20) (Chairman 武田博明)
- 2T05 ★Electrical conducting ceramics for high temperature application (National Institute of Advanced Industrial Science and Technology) ○Woosuck Shin · (National Institute of Advanced Industrial Science and Technology · Nagoya University) Ichiro Terasaki · (National Institute of Advanced Industrial Science and Technology) Akihiro Tsuruta
- 2T07 Orientation Control of Bi-based Oxide Films by MOCVD Targeting the Power Electronics Applications (Kanazwa Institute of Technology) ○Shinya Kawai · Michiaki Wada · (AIST) Tetsuo Tsuchiya · (NIMS) Shunichi Arisawa · (Kanazwa Institute of Technology) Isao Tsuyumoto · (Furuuchi Chemical Co.) Yasushi Tateno · (Natl. Inst. Mater. Phys.) Badica Petre · (Kanazwa Institute of Technology) Kazuhiro Endo
- 2T08 Preparation and characterization of the resistor thin film by ELAMOD (National Institute of Advanced Industrial Science and Technology) yuko Uzawa · Iwao Yamaguchi · tomohiko nakajima · ○Tetsuo Tsuchiya

#### 19. Material Design and Processing Design

##### マテリアルデザイン

- (14 : 20) (Chairman 木村禎一)
- 2T17 ◆Preparation, Structures and Characteristics of Cellulose Nanofibers, and Their Composites with Organic and Inorganic Compounds (University of Tokyo)  
○Akira Isogai

##### プロセスデザイン

- (15 : 00) (Chairman 林大和)
- 2T19 ★Incidental finding on ceramic processing (Toyota Central R&D Labs. Inc.) ○Akihiko Suda
- 2T22 ★Nanostructure and Processing for Developing Multifunctional Ceramics (Nagaoka University of Technology) ○Koichi Niihara

### ■■ September 8 (Thu) (Room U) ■■

#### 24. New Evolution of Dielectrics: Fusion and Further Progress of Science and Technology on Dielectric Materials and Devices

##### マルチフェロイック材料

- (9 : 00) (Chairman 安井伸太郎)
- 2U01 ★Design and fabrication of magnetoelectric multiferroics (Osaka University) ○Tsuayoshi Kimura · Hiroki Ueda · Kohei Haruki · Koji Okumura · Takuya Aoyama · Yusuke Wakabayashi · Katsuya Shimizu · (Murata Manufacturing Co., Ltd.) Sakyo Hirose · (RIKEN) Yoshikazu Tanaka
- 2U03 ☆Ferromagnetism in BiFe<sub>1-x</sub>Co<sub>x</sub>O<sub>3</sub> thin films and the correlation between ferroelectric and ferromagnetic domains (Tokyo Institute of Technology)  
○Hajime Hojo · Ryo Kawabe · Keisuke Shimizu · Hajime Yamamoto · Masaki Azuma · (Nagoya Institute of Technology) Ko Mibu
- (10 : 00) (Chairman 藤井一郎)
- 2U04 ★Development of Pb-free multiferroic crystals and thin films (National Institute for Materials Science) ○Hideo Kimura · Tingting Jia · (Wuhan Institute of Technology) Hongyang Zhao · (University of Wollongong) Zhenxiang Cheng
- 2U06 ☆Observation of Microstructures in BiFeO<sub>3</sub>-BaTiO<sub>3</sub> Dielectric System by TEM (Technology Research Institute of Osaka Prefecture) ○Tomoatsu Ozaki · (Osaka Prefecture University) Shigeo Mori

##### 微細構造・局所構造

- (11 : 00) (Chairman 森茂生)
- 2U07 ☆Formation mechanism on two phase coexistent microstructure of PMN-PT epitaxial thin films (Tohoku University) ○Takanori Kiguchi · Cangyu Fan · Takahisa Shiraiishi · Toyohiko J. Konno
- 2U08 High-resolution structural analysis of vicinity of surface in barium titanate particle (Kyushu University) ○Yukio Sato · Miki Inada · Ahin Roy · Mai Aoki · Katsuro Hayashi · Kenji Kaneko
- 2U09 Analysis of the effect of elastic fields in PMN-PT thin films on morphotropic phase boundary using transmission electron microscopy (Tohoku University)  
○Cangyu Fan · Takanori Kiguchi · Takahisa Shiraiishi · Akihiro Akama · Toyohiko Konno

#### S4. Technology of dielectric materials to support next-generation power electronics—nanocrystals, thin films, and bulk ceramics

- (14 : 20) (Chairman 土屋哲男)
- 2U17 ★Development of SiC Power Modules for High Temperature and High Speed Operation (National Institute of Advanced Industrial Science and Technology (AIST)) ○Hiroshi Yamaguchi
- 2U19 ◆Fusion between nanocrystal technology and power electronics (MANA, NIMS) ○Minoru Osada
- (15 : 40) (Chairman 和田智志)
- 2U21 ★Development of novel dielectric materials for high temperature use (Tokyo Institute of Technology) ○Hiroshi Funakubo · Jyunichi Kimura · Takao Shimizu

★ = Guest ☆ = Invited ◆ = Plenary ○ = Presenter

- 2U23 ★ Nanoionics Devices Enabling Diverse New Functions (National Institute for Materials Science) ○Kazuya Terabe · Takashi Tsuchiya · Tohru Tsuruoka · Masakazu Aono  
(17 : 00) (Chairman 保科拓也)
- 2U25 ★ Characterization of next generation power semiconductor devices using scanning nonlinear dielectric microscopy (Tohoku University) ○Yasuo Cho

## ■■ September 8 (Thu) (Room V) ■■

### 22. Research Topics on Advanced Ceramic Technology for Energy Conversion, Storage and Control Devices

- (9 : 00) (Chairman 藤本憲次郎)
- 2V01 Investigation on Electrochemical Property and Degradation Mechanism of Si-containing Negative Electrode for LIB (AIST) ○Hironori Kobayashi · Kentaro Kuratani · Toyoki Okumura · Yoshiyasu Saito
- 2V02 Liquid-phase synthesis of  $\text{Li}_6\text{PS}_5\text{Br}$  using ultrasonication and application to cathode composite electrodes in all-solid-state batteries (Hokkaido University) ○Shunjiro Chida · Akira Miura · Mikio Higuchi · Kiyoharu Tadanaga · (Toyoashi University of Technology) Nguyen H.H. Phuc · Hiroyuki Mutoh · Atsunori Matsuda
- 2V03 Synthesis and Crystal Structure Analysis in Charge and discharge process of Delithiated  $\text{Li}_{1.2x}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}\text{O}_2$  Applied to Cathode Materials for Mg Rechargeable Battery (Fac. of Sci. & Tech., Tokyo University of Science) ○Ryuta Nishigami · Naoya Ishida · Naoto Kitamura · Yasushi Idemoto  
(10 : 00) (Chairman 秋本順二)
- 2V04 ★ Development of LGPS-type Electrolyte for Solid State Lithium Ion Battery (Tokyo Institute of Technology) ○Ryoji Kanno  
(11 : 00) (Chairman 湯浅雅賢)
- 2V07 Synthesis and electrochemical properties of a positive electrode material for rechargeable sodium ion batteries using polytetrafluoroethylene (Niigata University) ○Atsushi Tsuura · Takuya Hasegawa · Hirota Torii · (Niigata University · Sejong University) Sun-woog Kim · (Niigata University) Kazuyoshi Uematsu · Kenji Toda · Mineo Sato
- 2V08 Synthesis of  $\text{NiPS}_3$  fine powder as electrodes and its charge-discharge properties in all-solid-state lithium ion batteries (Hokkaido University) ○Yusaku Suto · Yuta Fujii · Akira Miura · Mikio Higuchi · Kiyoharu Tadanaga
- 2V09 Investigation of sintering compatibility of various cathode materials with  $\text{Li}_{6.25}\text{Al}_{0.25}\text{La}_3\text{Zr}_2\text{O}_{12}$  solid electrolyte (Tokyo Metropolitan University) ○Hirokazu Munakata · Shogo Wakasugi · Kiyoshi Kanamura
- 2V10 Effect of Carbon ratio on electrochemical property of C-composite  $\text{H}_2\text{Tl}_2\text{O}_{25}$  synthesized by impregnation method (National Institute of Advanced Industrial Science and Technology) ○Hideaki Nagai · Kunimitsu Kataoka · Junji Akimoto  
(14 : 00) (Chairman 小林弘典)
- 2V16 Molten salt synthesis, crystal structure and electrochemical properties of lithium cobalt manganese oxide (National Institute of Advanced Industrial Science and Technology · Tokyo University of Science) ○Junji Akimoto · Yuki Hamada · (National Institute of Advanced Industrial Science and Technology) Naoki Hamao · Kunimitsu Kataoka · (Tokyo University of Science) Naoya Ishida · Yasushi Idemoto
- 2V17 ☆ High Throughput Computational Screening of Battery Ceramics (FRIMS, Nagoya Institute of Technology · ESICB, Kyoto University · GREEN and Mi2i, National Institute of Materials Science) ○Masanobu Nakayama · (GREEN and Mi2i, National Institute of Materials Science) Randy Jalem
- 2V19 ☆ Electrode Materials Exploration for High Performance Sodium-Ion Batteries (The University of Tokyo · Kyoto University) ○Masashi Okubo · Atsuo Yamada  
(15 : 40) (Chairman 中山将伸)
- 2V21 Air electrode for metal-air secondary battery using titanium dioxide (Kinki University) ○Masayoshi Yuasa
- 2V22 Grain boundary Li ion conductivity by electrochemical strain microscopy (The University of Tokyo) ○Shun Sasano · R. Ishikawa · N. Shibata · Y. Ikuhara (Japan Fine Ceramics Center) T. Kimura · Y. Ikuhara
- 2V23 Influence of Spark Plasma Sintering on Local Structure of Garnet-type Solid Electrolyte by Spark Plasma Sintering (Nagasaki University) ○Hirotohi Yamada · Tomoko Ito · Rajendra Hongahally Basappa
- 2V24 Investigation of Local Structure with Total Scattering and Thermodynamic Stability in Discharge Process of  $0.4\text{Li}_2\text{MnO}_3\text{-}0.6\text{Li}(\text{Mn}_{1/3}\text{Ni}_{1/3}\text{Co}_{1/3})\text{O}_2$  (Fac. of Sci. & Tech., Tokyo University of Science) ○Kaho Otake · Naoya Ishida · Naoto Kitamura · Yasushi Idemoto  
(17 : 00) (Chairman 藤代芳伸)
- 2V25 Charge-discharge property of layered rock-salt type  $\text{Li}(\text{Ni},\text{Co},\text{Fe})_{0.8}\text{Ti}_{0.2}\text{O}_2$  (Tokyo University of Science) ○Kohei Nanbu · Yuki Yamaguchi · Akihisa Aimi · Kenjiro Fujimoto
- 2V26 Structure and ion conductivity of  $\text{Na}_{1-x}\text{Zr}_x\text{Si}_x\text{P}_{3-x}\text{O}_{12}$  ceramics sintered with  $\text{Na}_3\text{BO}_3$  (Osaka Prefecture University) ○Kenji Suzuki · Kousuke Noi · Akitoshi Hayashi · Masahiro Tatsumisago
- 2V27 Crystal Structure Analysis of  $\text{LiMn}_{2-x}\text{Al}_x\text{O}_4$  ( $x=0.0, 0.2$ ) During Charge-Discharge Process by In Situ Neutron Diffraction (Fac. of Sci & Tech., Tokyo University of Science) ○Saki Inoue · Naoya Ishida · Naoto Kitamura · Yasushi Idemoto

## ■■ September 9 (Fri) (Room A) ■■

### 05. Innovative Materials Processing, Properties and Reliability of Bulk Ceramics based on Stress and Strain

#### 粉体プロセス 2

- (9 : 00) (Chairman 田中諭)
- 3A01 Influence of constrained sintering over grain growth during sintering (Tokyo Institute of Technology) ○Koichi Onae · Tomonari Inamura · Fumihiro Wakai
- 3A02 Properties of Anisotropic Alumina Fabricated by Alumina Platelets (Nagoya Institute of Technology) ○Sawao Honda · Kanae Matsubara · Yusuke Daiko · Shinobu Hashimoto · Yuji Iwamoto

9 : 40~10 : 00 総合討論 4

#### 特性評価 1

- (10 : 00) (Chairman 本多沢雄)
- 3A04 ★ Comprehensive evaluation for performance of ball bearing having ceramic balls (Tokyo University of Science) ○Shoji Noguchi · Tomoya Hotta
- 3A06 Low wear rate of AlN ceramics based on tribochemical reactions (Yokohama National University) ○Ayuka Matsugami · Junichi Tatami · Motoyuki Iijima · (Sumitomo Electric Industries, Ltd.) Hideyuki Ohguni
- 3A07 ★ Triboluminescence of nitride ceramics (Yokohama National University) ○Junichi Tatami · Kentaro Iwai · Motoyuki Iijima

11 : 40~12 : 00 総合討論 5

**特性評価 2**

(13 : 00) (Chairman 榎本尚也)

- 3A13 Effect of test condition on the bending strength of ceramic thin substrate (National Institute of Advanced Industrial Science and Technology) ○Hiroyuki Miyazaki · Hideki Hyuga · Kiyoshi Hirao · Tatsuki Ohji
- 3A14 Development of measurement technique for structure-dependent mechanical properties by indentation test (Toyohashi University of Technology) ○Hiroyuki Muto · Syun Ueyama · Go Kawamura · Atsunori Matsuda

**特性評価 3**

(13 : 40) (Chairman 樽田誠一)

- 3A15 Examination of internal structures in porous ceramics by micro x-ray computer tomography (Nagaoka University of Technology) ○Satoshi Tanaka · (Tokyo Institute of Technology) Kouichi Yasuda · (KYOCERA Corp.) Takashi Ono · (Nagoya University) Hideki Kita · (Ehime University) Manabu Takahashi · (Noritake Co. Ltd) Yousuke Takahashi · (Shinshu University) Seiichi Taruta · (Nagoya Institute of Technology) Sawao Honda · (NGK Spark Plug Co. Ltd.) Takeshi Mitsuoka · (Toyohashi University of Technology) Hiroyuki Muto · (Asuzac Inc.) Syuichi Yamamoto · (AIST) Yuuchi Yoshizawa
- 3A16 Bending Test of Porous Ceramics with High Porosity (Tokyo tech.) ○Kouichi Yasuda · (KYOCERA) Takashi Ono · (Nagoya University) Hideki Kita · (Ehime University) Manabu Takahashi · (Noritake Company Limited) Yosuke Takahashi · (Nagaoka University Tech.) Satoshi Tanaka · (Shinshu University) Seiichi Taruta · (Nagoya Tech.) Sawao Honda · (NTK) Takeshi Mitsuoka · (Toyohashi University Tech.) Hiroyuki Muto · (Asuzac) Shuichi Yamamoto · (AIST) Yuichi Yoshizawa

14 : 20~14 : 40 総合討論 6

**September 9 (Fri) (Room B)****03. Science and Technology on Engineering Ceramics—Material Development for Safe and Reliable Society and Functional Stability—****最先端評価・解析技術**

(9 : 20) (Chairman 鈴木達)

- 3B02 Detection of shallow surface defects on ceramics with linear ultrasonics using high frequency components (NTN Co.) ○Yasutake Hayakawa · Kouya Oohira · (Ultrasonic Material Diagnosis Lab.) Koichiro Kawashima
- 3B03 Dependence of fracture toughness of alumina on grain size up to nanometer scale (Tokyo Institute of Technology) ○Risako Sekine · Kimiko Yoshida · Yutaka Shinoda · (Saga University) Takashi Akatsu · (Tokyo Institute of Technology) Masato Sone · (National Institute of Advanced Industrial Science and Technology) Jun Akedo · (Tokyo Institute of Technology) Fumihiko Wakai
- 3B04 Thermal conductivity of wide band-gap nitrides by first principles calculations (Nagoya University) ○Kazuyoshi Tatsumi · (Kyoto University) Atsushi Togo · Isao Tanaka

**微構造制御による飛躍的特性・機能向上**

(10 : 20) (Chairman 楠瀬尚史)

- 3B05 Nitridation behavior of silicon powder compacts with various thicknesses (National Institute of Advanced Industrial Science and Technology) ○Chika Matsunaga · You Zhou · (Japan Fine Ceramics Co.,Ltd.) Dai Kusano · (National Institute of Advanced Industrial Science and Technology) Hideki Hyuga · Yu-ichi Yoshizawa · Kiyoshi Hirao
- 3B06 Microstructure and properties of highly porous thermal insulators prepared by gelation freezing route (National Institute of Advanced Industrial Science and Technology (AIST)) ○Manabu Fukushima · Chika Matsunaga · Hideki Hyuga · Yu-ichi Yoshizawa
- 3B07 ★Development of ceramics substrates for thin film magnetic head (Nippon Tungsten Co.,Ltd.) ○Shinzo Mitomi

(13 : 00) (Chairman 松永知佳)

- 3B13 Corrosion behavior of AlN ceramics by  $CF_4/O_2$  plasma (Yokohama National University) ○Kenta Watanabe · Junichi Tatami · Motoyuki Iijima · (Sumitomo Electric Industries, Ltd.) Ryouhei Fujimi · Akira Mikumo
- 3B14 Fabrication and structure development of  $Ti_2O_3$ -doped  $ZrO_2$  ceramics (Osaka University) ○Yuki Rikiso · Tomoyo Goto · Sung Hun Cho · Hisataka Nishida · Tohru Sekino

(13 : 40) (Chairman 周游)

- 3B15 The effect of the sintering additive ingredients on characteristics of BN particle dispersion SiC composites (Kyoto University) ○Shohei Yanagawa · Tatsuya Hinoki · (National Institute for Materials Science) Kazuya Shimoda
- 3B16 Fabrication of highly resistive TiN ceramics with low temperature dependence of electrical resistivity (Kagawa University) ○Takafumi Kusunose · Shoko Nakagawa · (Osaka University) Tohru Sekino
- 3B17 Improvement of thermal conductivity and translucency in AlN by microstructure control (National Institute for Materials Science) ○Tohru Suzuki · Toshiyuki Nishimura · Yoshio Sakka · (Shibaura Institute of Technology) Kento Imai · Hajime Kiyono

**September 9 (Fri) (Room C)****10. Photo-Ceramics—Synthesis, Functions and Applications of Optical and Colorful Ceramics—**

(9 : 00) (Chairman 黒木雄一郎)

- 3C01 Photocatalytic activity and electronic band structure of  $Y_3Fe_{5-x}M_xO_{12}$  ( $M = Al, Ga$ ) (Utsunomiya University) ○Masaru Tsukada · Keitaro Tezuka · Yue Jin Shan
- 3C02 Analysis of the influence of the Madelung potential on charge transfer transition for transition metal ions in oxides using first-principles calculation (Kwansei Gakuin University) ○Shota Takemura · Kazuyoshi Ogasawara
- 3C03 Development of Novel Phosphor based on Charge Transfer from  $O^{2-}$  to  $Ce^{4+}$  (Tohoku University) ○Dawei Wen · Hideki Kato · Makoto Kobayashi · Masato Kakihana
- 3C04 ★Development of oxynitride phosphors for LED lighting devices (Denka Co., Ltd.) ○Suzuya Yamada · Hideyuki Emoto · Toshiaki Nagumo

(10 : 40) (Chairman 早川知克)

- 3C06 Fabrication of Transparent Polycrystalline  $Yb:Y_2O_3$  by Spark Plasma Sintering (Kitami Institute of Technology) ○Shunsuke Nakasawa · Hiroaki Furuse · Midori Kawamura · Keijiro Hiraga · (National Institute for Materials Science) Hidehiro Yoshida · Koji Morita · Tohru S. Suzuki · Byung-Nam Kim · Yoshio Sakka
- 3C07 Luminescent and thermal properties of  $Sr_3SiO_5$  coated with  $Al_2O_3$  film prepared by atomic layer deposition (Sophia University) ○Shiori Hirano · (Delft University of Technology) Liang-Jun Yin · Hintzen Hubertus T. · Ommen Ruud van · (Sophia University) Kiyoshi Itatani

- 3C08 Photoluminescence properties of rare earth metal-activated (Na, K)<sub>2</sub>CaPO<sub>4</sub>F (Tohoku University) ○Haruka Kudo · Hideki Kato · Makoto Kobayashi · Masato Kakihana  
 3C09 Trend of research and development in the phosphor material field (Niigata University) ○Kenji Toda

## September 9 (Fri) (Room F)

### 02. Development and evaluation of ceramics producing harmony with living body

(10 : 00) (Chairman 都留寛治)

- 3F04 Calcium phosphate deposition on titanium surface under laser irradiation in supersaturated solution – Parameter control and surface temperature calculation – (National Institute of Advanced Industrial Science and Technology) ○Ayako Oyane · Moumita Mahanti · Alexander Pyatenko · Ikuko Sakamaki · Maki Nakamura · Kenji Koga  
 3F05 Osteoblast-like cell responses to Si, Ca and Mg (Nagoya Institute of Technology) ○Akiko Obata · Toru Ogasawara · Toshihiro Kasuga  
 (10 : 40) (Chairman 内野智裕)  
 3F06 Fabrication of antibacterial yttria-stabilized zirconia using silver nanoparticle (Tokyo Medical and Dental University) ○Kosuke Nozaki · Risa Yamada · Hiroyuki Miura · Kimihiro Yamashita · Akiko Nagai  
 3F07 Preparation and biological evaluation of copper-containing hydroxyapatite for development of artificial bones to prevent infection (Tohoku University) ○Masanobu Kamitakahara · Kohki Karasudani · Taishi Yokoi · Chihiro Inoue · Hideaki Matsubara  
 3F08 Fabrication of DCPD coated β-TCP granular bone substitute and the evaluation of *in vivo* osteoconductivity (Kyushu University) ○Kanji Tsuru · Khairul Anuar Shariff · Kunio Ishikawa

## September 9 (Fri) (Room G)

### 08. Innovation in advanced ceramics from powder processing

#### 微粒子の分散とその制御Ⅱ

(9 : 00) (Chairman 神谷秀博)

- 3G01 ★Rheological analysis of dispersion process of slurry for battery electrode (Kobe University · National Institute of Advanced Industrial Science and Technology) ○Yoshiyuki Komoda  
 (9 : 40) (Chairman 飯島志行)  
 3G03 Rheological behavior of h-BN/epoxy composite based on the difference of aspect ratio (National Institute of Advanced Industrial Science and Technology (AIST)) ○Yuichi Tominaga · Yuji Hotta  
 3G04 Dispersion and fluidity of UV curable SiC slurries for three-dimensional SiC ceramics by stereolithography (Gifu Prefectural Ceramics Research Institute) Seizo Obata · (Gifu University) ○Sosuke Azuma · (Gifu Prefectural Ceramics Research Institute) Kenji Tateishi · (Gifu University) Michiyuki Yoshida · Osamu Sakurada

### 07. Science and Technology for Densification—Dynamics of particle compaction, grain growth and functionalization—

#### 高密度化による機能発現

(10 : 20) (Chairman 後藤孝)

- 3G05 ★Novel toughening mechanism by fracture-induced amorphization of high-pressure phase of SiO<sub>2</sub> (stishovite) (Tokyo Institute of Technology) ○Kimiko Yoshida · (Deutsches Elektronen-Synchrotron) Norimasa Nishiyama · (Tokyo Institute of Technology) Fumihiko Wakai

#### フラッシュ焼結

(11 : 00) (Chairman 若井史博)

- 3G07 Effect of oxygen vacancies on the occurrence of flash event in oxide ceramics (Nagoya University) ○Nobuhiro Morisaki · Yu Nakagawa · Tetsuro Kobayashi · (National Institute for Materials Science) Hidehiro Yoshida · (Nagoya University) Tomoharu Tokunaga · Katsuhiko Sasaki · Takahisa Yamamoto  
 3G08 Densification Behavior during Isothermal Sintering of 8YSZ (National Institute for Materials Science) ○Byung-Nam Kim · Tohru Suzuki · Koji Morita · Hidehiro Yoshida · Yoshio Sakka · (Tohoku University) Hideaki Matsubara  
 3G09 Low-Temperature Degradation in Y<sub>2</sub>O<sub>3</sub>-Stabilized Tetragonal ZrO<sub>2</sub> Polycrystal: Grain-Boundary-Segregation Effect of Al<sup>3+</sup> Ions (Tosoh Corporation) ○Koji Matsui · (Tosoh Analysis and Research Center) Kazuto Nakamura · (National Institute for Materials Science) Hidehiro Yoshida · (The University of Tokyo) Akihito Kumamoto · Yuichi Ikuhara

#### 放電プラズマ焼結

(13 : 00) (Chairman 西村聡之)

- 3G13 Optimized densification condition of hollandite-type K<sub>2</sub>Ga<sub>2</sub>Sn<sub>6</sub>O<sub>16</sub> sintered body (Tokyo University of Science) ○Takuya Momose · (Tokyo University of Science, National Institute for Materials Science) Shotaro Musha · Yuichi Uchida · (Tokyo University of Science) Yuki Yamaguchi · Akihisa Aimi · Kenjiro Fujimoto · (National Institute for Materials Science) Yoshio Sakka  
 3G14 Synthesis of transparent, cation-doped yttria ceramics by pulsed electric current-assisted sintering (National Institute for Materials Science) ○Hidehiro Yoshida · Koji Morita · Byung-Nam Kim · (Nagoya University) Takahisa Yamamoto · (Tokyo University of Science) Kohei Soga  
 3G15 Heterogeneity of translucent polycrystalline alumina prepared by pulsed electric current sintering (Nagaoka University of Technology) Makoto Nanko · ○Huu Hien Nguyen · (Hanoi University of Science and Technology) Quoc Khanh Dang  
 3G16 Microstructure evolution in Ti-Zr based carbide and carbonitride by phase decomposition (Tohoku University) ○Hirokazu Katsui · Ying Li · Takashi Goto

#### 焼結理論

(14 : 20) (Chairman 吉田英弘)

- 3G17 Size determination of representative volume in microstructure evolution during sintering (Tokyo Institute of Technology) ○Gaku Okuma · Daiki Kadowaki · (Nagaoka University of Technology) Satoshi Tanaka · (Tokyo Institute of Technology) Fumihiko Wakai  
 3G18 Finite Element Analysis of Sintering Force and Shrinkage in Viscous Sintering of Two Spheres (Tokyo Institute of Technology) ○Shun Kanchika · Yutaka Shinoda · Fumihiko Wakai · (Saga University) Takashi Akatsu

## ■■ September 9 (Fri) (Room H) ■■

### 13. Synthesis and Functional Properties of Mixed ion Compounds

(9 : 00) (Chairman 三浦章)

- 3H01 High Compressibility of Hydride Ion in Oxyhydride (Kyoto university) ○Takafumi Yamamoto · Hiroshi Kageyama · (Nihon University) Takateru Kawakami · (University of Oxford) Michael Hayward · (University of Tokyo) Taku Okada · (KEK) Takumi Kikegawa
- 3H02 Hydride-enhanced CO<sub>2</sub> methanation: BaTiO<sub>2-x</sub>H<sub>0.6</sub> as a new support (Kyoto University) ○Ya Tang · (Kyoto University, PRESTO, Japan Science and Technology Agency (JST)) Yoji Kobayashi · (Kyoto University) Cedric Tassel · Takafumi Yamamoto · (Kyoto University, CREST, Japan Science and Technology Agency (JST)) Hiroshi Kageyama
- 3H03 Synthesis and characterization of proton-containing garnet type oxide using soft-chemical synthesis method (National Institute of Advanced Industrial Science and Technology) ○Naoki Hamao · Kunimitsu Kataoka · Juniji Akimoto
- 3H04 Hydride-based electride material, LnH<sub>2</sub> (Ln=La, Ce, or Y) (Tokyo Institute of Technology) ○Hiroshi Mizoguchi · Masaaki Okunaka · Masaaki Kitano · Satoru Matsushita · (Tokyo Institute of Technology · JST) Toshiharu Yokoyama · Hideo Hosono

(10 : 20) (Chairman 溝口拓)

- 3H05 Hydrogen permeation ability of highly nonstoichiometric TiN<sub>x</sub> nanomembranes (Hokkaid University) ○Chiharu Kura · (Hokkaid University · JST PRESTO) Yoshitaka Aoki · (Hokkaid University) Chunyu Zhu · Hiroki Habazaki · (RWTH Aachen University) Roger de Souza
- 3H06 Preparation of transparent thin films using UV- or IR shielding materials (Tohoku University) ○Mikihiko Kobayashi · Shu Yin · Tsugio Sato
- 3H07 ★Semiconductor optical devices and the constituent elements (Waseda University) ○Gen-ichi Hatakoshi
- 3H09 Crystal structure and up-conversion emission properties of complex oxides (Tokai University) ○Sayaka Tamura · Koji Tomita · (Tohoku University) Makoto Kobayashi · Masato Kakahana

(13 : 00) (Chairman 荻野拓)

- 3H13 ★Development of eutectic scintillators and applications to high resolution radiation imaging (NICHe, Tohoku University · C&A corp.) ○Kei Kamada · Shunsuke Kurosawa · Yuui Yokota · (IMR, Tohoku University) Hiroaki Yamaguchi · Akihiro Yamaji · Yasuhiro Shoji · Yuji Ohashi · Akira Yoshikawa
- 3H15 Design of novel garnet persistent phosphors with red/NIR persistent luminescence for the first bio-imaging window (Kyoto University) ○Jian Xu · Jumpei Ueda · Setsuhisa Tanabe

(14 : 00) (Chairman 本橋輝樹)

- 3H16 Near-infrared persistent luminescent properties of garnet phosphors through persistent energy transfer process (Kyoto University) ○Daisuke Murata · Jian Xu · Jumpei Ueda · Setsuhisa Tanabe
- 3H17 ★Activation and Stabilization of Oxygen Evolution Reaction Catalyst (The University of Tokyo) ○Shunsuke Yagi · (Osaka Prefecture University) Ikuya Yamada
- 3H19 Relationship between oxygen evolution reaction catalytic activity and electronic structure of quadruple perovskites (Osaka Prefecture University) ○Akihiko Takamatsu · Hidekazu Ikeno · Ikuya Yamada · (University of Tokyo) Syunsuke Yagi
- 3H20 Materials informatics for oxygen evolution reaction of perovskite oxides (Osaka Prefecture University) ○Hideo Ohzuku · Akihiro Seno · Takuto Shirakawa · Hidekazu Ikeno · Ikuya Yamada · (Univ Tokyo) Shunsuke Yagi

(15 : 40) (Chairman 森大輔)

- 3H21 Perovskite Oxides with Various Valence States for Oxygen Evolution Reaction Catalysis (Osaka Prefecture University) ○Takuto Shirakawa · Ikuya Yamada · Hideo Ohzuku · Hidekazu Ikeno · Shigeo Mori · (Fujillo) Kohei Wada · (University Tokyo) Shunsuke Yagi
- 3H22 Synthesis of manganese oxynitrides using NaNH<sub>2</sub> molten salt and their catalytic activity for the ORR (Hokkaido University) ○Akira Miura · Carolina Rosero-Navarro · Yuji Masubuchi · Mikio Higuchi · Shinichi Kikkawa · Kiyoharu Tadanaga
- 3H23 NO selective reduction over Pd catalyst supported on Sr<sub>3</sub>Fe<sub>2</sub>O<sub>7-d</sub> (Kyoto University) ○Kosuke Beppu · (Kyoto University · ESICB, Kyoto University) Saburo Hosokawa · Hiroyuki Asakura · Kentaro Teramura · Tsunehiro Tanaka
- 3H24 Control of crystal and electronic structure by Ln substitution in Bi<sub>4</sub>NbO<sub>8</sub>Cl photocatalyst (Kyoyo University) ○Daichi Kato · Hironobu Kunioku · Masanobu Higashi · Takahumi Yamamoto · Ryu Abe · Hiroshi Kageyama

## ■■ September 9 (Fri) (Room J) ■■

### 12. Advanced Structure Science and the Analytical Technique

構造科学と新物質探索ワークショップ

(9 : 00) (Chairman 藤井孝太郎)

- 3J01 Crystal Structure and Chemical Bonding through X-Ray Diffraction (Tokyo Institute of Technology) ○Masatomo Yashima · Kotaro Fujii · Eiki Niwa
- 3J02 ★Development of Structural Study by Synchrotron Radiation X-ray Diffraction on Emergence of Polarization in Ferroelectrics (Hiroshima University) ○Yoshihiro Kuroiwa
- 3J03 Determination of electron-density distributions of ceramics materials, and modification of their structural models by MPF method (Nagoya Institute of Technology · Research Fellow of Japan Society for the Promotion of Science) ○Hiroki Banno · (Nagoya Institute of Technology) Toru Asaka · Koichiro Fukuda

(11 : 00) (Chairman 勝又哲裕)

- 3J07 High-Temperature Powder Diffraction Study of Sodium Transport Pathway in Alluaudite Sodium Iron Sulfate (The University of Tokyo · Kyoto University) ○Shinichi Nishimura · (The University of Tokyo) Yuya Suzuki · Jiechen Lu · (KEK) Shuki Torii · (KEK · SOKENDAI) Takashi Kamiyama · (The University of Tokyo · Kyoto University) Atsuo Yamada
- 3J08 Discovery of a New Type of Oxide-Ion Conductor BaZnHo<sub>2</sub>O<sub>5</sub> (Tokyo Institute of Technology) ○Keigo Nakamura · Kotaro Fujii · Eiki Niwa · Masatomo Yashima
- 3J09 Crystallographic structures and electric and magnetic properties of manganese perovskites Eu<sub>1-x</sub>MnO<sub>3</sub> (Nagoya Institute of Technology) ○Hodaka Ichikawa · Daisuke Urushihara · Momoko Okabe · Toru Asaka · Koichiro Fukuda

(13 : 20) (Chairman 籠宮功)

- 3J14 ★Magnetic and dielectric properties of charge ordered material RFe<sub>2</sub>O<sub>4</sub> (Okayama University) ○Naoshi Ikeda · Kosuke Fujiwara · Tatsuo Fujii · Jun Kano · Mamoru Fukunaga
- 3J16 Structure and Phase transition for LiNbO<sub>3</sub>-type oxides, (1-x)LiTaO<sub>3</sub>-xMn (Mn<sub>1/3</sub>Ta<sub>2/3</sub>)O<sub>3</sub> (Tokai University) ○Tetsuhiro Katsumata · Saki Otobe · Koichiro Ueda · (Gakushuin University) Akihisa Sayama · Daisuke Mori · Yoshiyuki Inaguma · (Tokyo University of Science) Akihisa Aimi

(14 : 20) (Chairman 池田直)

- 3J17 Lead-Free Ferroelectric  $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$  (1) Polymerizable Complex Synthesis Suppressing Evaporation of Bismuth and Sodium (Yamaguchi University)  
○Hiroataka Fujimori · Tomonori Yamatoh · (Fukuoka Industrial Technology Center) Masashi Arimura
- 3J18 Lead-Free Ferroelectric  $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$  (2) Variation of Morphotropic Phase Boundary with the Bi Deficiency (Yamaguchi University) ○Hiroataka Fujimori · Tomonori Yamatoh

## September 9 (Fri) (Room K)

### 15. Chemical Design—Novel functionalities, structures and processing

(9 : 00) (Chairman 石垣隆正)

- 3K01 Flexibility of crystalline and non-crystalline oxide thin films prepared on plastic substrates by sol-gel transfer technique (Kansai University) ○Ryosuke Hamano · Hiromitsu Kozuka · Hiroaki Uchiyama
- 3K02 Fabrication of  $\text{BaTiO}_3\text{-Y}_2\text{O}_3$  nanocomposite thin films using a block-copolymer-templated sol-gel method (Keio University) ○Yuki Miyakawa · Manabu Hagiwara · Shinobu Fujihara
- 3K03 ☆Development of Amorphous  $\text{SiO}_2$  Membrane with Controlled Network Structure for Gas Separation via Sol-Gel Method (Hiroshima University)  
○Masakoto Kanezashi
- 3K04 Zeta potential of  $\text{Al}_2\text{O}_3$  thin films formed on SUS304L substrate by CSD process (Tokyo institute of technology) ○Akio Sayano · Tadashi Shota · Koichi Yasuda · Kazuo Shinozaki
- 3K05 Effect of the amount of  $\text{H}_2\text{O}$  on the crystallization of alkoxide-derived  $\text{TiO}_2$  films : Investigation of the crystallization behavior at low temperature (Kansai University) ○Takahiro Bando · Hiroaki Uchiyama · Hiromitsu Kozuka

## September 9 (Fri) (Room L)

### 18. Hybrid Materials for Next Generation

(9 : 20) (Chairman 瀬川浩代)

- 3L02 ★Developments of polymer foam-silica nanocomposites and their application to thermal insulation materials (National Institute of Advanced Industrial Science and Technology) ○Satoshi Yoda
- (10 : 00) (Chairman 塚田学)
- 3L04 Preparation and Properties of Polymethylsiloxane Aerogels with Ethenylene Crosslinks (Kyoto University) ○Taiyo Shimizu · Kazuyoshi Kanamori · Kazuki Nakanishi
- 3L05 Preparation and properties of polychloromethylsilsesquioxane aerogels (Kyoto University) ○Tomoki Kimura · Taiyo Shimizu · Kazuyoshi Kanamori · Kazuki Nakanishi
- (10 : 40) (Chairman 大幸裕介)
- 3L06 Synthesis of Titanium Phosphonate Clusters comprising Ti-O-P bonds and Hybrid Materials (Tokyo University of Science) ○Satoru Tsukada · Ryohei Hayami · Keisuke Wada · Takahiro Gunji
- 3L07 Preparation and Properties of One-dimensional Polysilsesquioxane Containing Phosphonic Acid Side-chain Groups (Kagoshima University) Akiyuki Harada · (Tokyo University of Agriculture and Technology) Kazuhiro Shikinaka · (Hiroshima University) Joji Ohshita · (Kagoshima University) ○Yoshiro Kaneko
- 3L08 Fundamental studies on the uncracking critical thickness and hardness of silica-organic polymer hybrid thin films prepared from alkoxide solutions (Kansai University) ○Ryo Kumahara · Hiromitsu Kozuka · Hiroaki Uchiyama
- 3L09 Preparation of organic-inorganic hybrid gas barrier membranes using organically modified layered double hydroxide (Kobe University) ○Koji Kuraoka · Tsuyoshi Shiono · Kazumi Miki

## September 9 (Fri) (Room M)

### 16. Element-Blocks: From Their Preparation To Their Applications

(9 : 00) (Chairman 菅原義之)

- 3M01 Synthesis of Side-chain Functionalized Polysiloxanes (Tokyo University of Science) ○Takahiro Gunji · Satoru Tsukada
- 3M02 Preparation of a single-structured ammonium-group-containing cyclic tetrasiloxane capable of forming regularly structured aggregates and application to hybrid hydrogels (Graduate School of Science and Engineering, Kagoshima University) ○Tomotada Hirohara · (Fukuoka Institute of Technology) Nobuyoshi Miyamoto · (Osaka Municipal Technical Research Institute) Seiji Watase · (Kyoto Institute of Technology) Kimihiro Matsukawa · (Graduate School of Science and Engineering, Kagoshima University) Yoshiro Kaneko
- 3M03 Preparation of a separation membrane by sol-gel process of 12-membered ring siloxane with alkoxy groups and its gas permeation property (Waseda University) ○Masashi Yoshikawa · Hiroya Shiba · (Hiroshima University) Xiuxiu Ren · Masakoto Kanezashi · Toshinori Tsuru · (Waseda University) Hiroaki Wada · Atsushi Shimojima · (Waseda University · Kagami Memorial Research Institute for Materials Science and Technology) Kazuyuki Kuroda
- 3M04 ★Film preparation of cyclosiloxane-based hybrid polymers (Tohoku University) ○Masaya Mitsuishi · Huie Zhu · Shunsuke Yamamoto · Tokuji Miyashita
- (10 : 40) (Chairman 松川公洋)
- 3M06 ★Design and Synthesis of Supramolecular Polymeric Assemblies formed via Molecular Recognition (Hiroshima University) ○Takeharu Haino
- 3M08 Solvent effect on the preparation of ammonium-group-containing POSSs (Kagoshima University) ○Kenta Imai · Yoshiro Kaneko
- 3M09 Fabrication of self-healing silica-organic nano composite thin films (Waseda University) ○Shun Itoh · Maho Kobayashi · Hiroaki Wada · (Waseda University · Kagami Memorial Research Institute for Materials Science and Technology, Waseda University) Kazuyuki Kuroda · (Waseda University) Atsushi Shimojima
- (13 : 00) (Chairman 郡司天博)
- 3M13 ★Organic-silica nanocomposites provided from perhydropolysilazane (Tokyo Institute of Technology) ○Reiko Saito
- 3M15 ★Precise Synthesis of Metal Clusters and Their Application for Improvement of Water-Splitting Semiconductor Photocatalysts (Tokyo University of Science) ○Yuichi Negishi
- 3M17 Preparation and magnetic characterization of iron oxide nanoparticles synthesized using oxidants in the non-aqueous solvent (The university of Waseda) ○Atsuo Kamura · (Kagami Memorial Laboratory for Materials Science and Technology) Naokazu Idota · (The university of Waseda · Kagami Memorial Laboratory for Materials Science and Technology) Yoshiyuki Sugahara

(14 : 40) (Chairman 下嶋敦)

- 3M18 ★Solution process for synthesizing inorganic element block with high dispersibility (Tokyo Institute of Technology) ○Nobuhiro Matsushita · Tetsuo Kishi · Tetsuji Yano · (National Institute of Advanced Industrial Science and Technology) Yuki Makinose · (National Institute for Materials Science) Takaaki Taniguchi
- 3M20 Preparation of Janus nanosheets by interlayer surface modification of layered hexianobate (Waseda University) ○Mitsuhiro Sudo · Ryoko Suzuki · (Waseda University Research Institute for Materials Science and Technology) Naokazu Idota · (Kumamoto University) Masashi Kunitake · (Japan Technological Research Association of ArtificialPhotosynthetic Chemical Process) Taisei Nishimi · (Waseda University) Yoshiyuki Sugahara
- 3M21 Preparation of imidazolium-salt-immobilized nanosheets from layered FeOCl (Waseda University) ○Ryo Sugiura · (Waseda University Research Institute for Materials Science and Technology) Naokazu Idota · (Waseda University) Yoshiyuki Sugahara

### ■■ September 9 (Fri) (Room N) ■■

#### 21. Novel developments of key technologies for improvement and solution of environmental problems

##### 廃材・鉱物利用

(9 : 00) (Chairman 武井貴弘)

- 3N01 ★Preparation of compositionally graded hollow spherical particles from waste concrete and carbon dioxide (Nihon University) ○Takeshi Toyama
- 3N03 Fabrication of  $\text{Li}_4\text{SiO}_4/\text{SiO}_2/\text{Si}$  composite material for self-heating  $\text{CO}_2$  absorbent and Evaluation of high temperature stability (Chuo University) ○Kohei Watanabe · Daiki Kotoh · Kengo Oka · Katuyoshi Oh-ishi · (University of Tokyo City) Ryouta Kobayashi · (Tokyo Institute Technology) Yutaka Majima
- 3N04 Thermodynamic and kinetic analysis of  $\text{CO}_2$  absorption property of  $\text{Li}_4\text{SiO}_4$  – dependence of particle size – (Nihon University) ○Shingo Kaniwa · Masatoshi Yoshino · Takuya Hashimoto · (Tokyo Institute of Technology) Eiki Niwa · Masatomo Yashima

(10 : 20) (Chairman 袋布昌幹)

- 3N05 ★Evaluation as a deodorizer of mineral-derived substances modified under mild conditions (Yamagata University) ○Takahiro Kawai
- 3N07 Distribution behavior of constituents in dephosphorization slag at reduction melting (Okayama University) ○Hideto Kita · Sinichi Sakida · Yasuhiko Benino · Tokurou Nanba
- 3N08 Effect of Retarder on Hydration of Cement Paste Containing Fluoride Ion (Tokyo Institute of Technology) ○Kazuki Matsuzawa · Masahiro Miyauchi · Etsuo Sakai

### ■■ September 9 (Fri) (Room R) ■■

#### 06. Refractories Innovation

(9 : 20) (Chairman 橋本忍)

- 3R02 Influence of Silica Addition and Sintering Conditions on Calcium Hexaluminate ( $\text{CaO} \cdot 6\text{Al}_2\text{O}_3$ ) Formation in Monolithic Refractory (Kyoto Institute of Technology) ○Jiraprabha Khajornboon · Kosuke Ota · Takeshi Shiono
- 3R03 The Development of the Microstructure of Alumina-Magnesia Castable Refractories under the Restrained Conditions (Shinagawa Refractories co., Ltd.) ○Kazuya Nakabo · Isamu Matsubara · Shigefumi Nishida
- 3R04 Reaction of yttria and magnesia ceramics with molten Aluminum (Gifu University) ○Yusuke Ishii · Takayuki Ban · Yutaka Ohya
- 3R05 Fabrication of  $\text{Al}_2\text{O}_3$ -base composite with dispersed Ni compound by using oxidation sintering of  $\text{NiAl}_3$  particles (Hosei University) ○Takafumi Yamaguchi · Takaya Akashi
- (10 : 40) (Chairman 星山泰宏)
- 3R06 Investigation of the wear mechanism of  $\text{Al}_2\text{O}_3\text{-ZrO}_2\text{-C}$  SN plate by Ca treated steel (Nippon Steel and Sumitomo Metal) ○Yuichi Kato · Tadashi Ikemoto · Koichiro Kataoka · Kiyoshi Goto
- 3R07 Evaluation for slide surface abrasion of Sliding Nozzle Plate (Krosaki Harima Corporation) ○Keiichiro Akamine · Taro Makino · Katsumi Morikawa · Hatsuo Taira
- 3R08 Microstructural Deterioration of Slide Gate Plate Refractory due to Carbothermic Reduction of Alumina (SHINAGAWA REFRACTORIES Co., Ltd.) ○Fumihiko Mizobuchi · Wei Lin

### ■■ September 9 (Fri) (Room S) ■■

#### 09. Random Materials—Function and Physical Property Correlated with the Structure—

(9 : 00) (Chairman 北村直之)

- 3S01 ★Structure and bulk properties of silicate melts (Tohoku University) ○Sohei Sukenaga
- (9 : 40) (Chairman 高橋儀宏)
- 3S03 Creep behavior of high refractive-index phosphate glasses (National Institute of Advanced Industrial Science and Technology) ○Naoyuki Kitamura · Kohei Fukumi · Kenji Kintaka · Tomoko Akai
- 3S04 Molecular Simulation of Glass Processing (Kogakuin University) ○Hiromitsu Takaba · Hiroshi Setogawa · Alam Md. Khorshed · (AIST) Naoyuki Kitamura · Kohei Fukumi · Tomoko Akai
- 3S05 Time-resolved observation of structural changes inside transparent materials by sequential irradiation of focused femtosecond laser pulses at different points (The University of Kyoto) ○Takuro Okada · Masaaki Sakakura · Yasuhiko Shimotsuma · Kiyotaka Miura
- (10 : 40) (Chairman 本間剛)
- 3S06 Glass Fusion Welding using Shaped-element Distribution in Glass by Fs Laser Pulses (Kyoto University) ○Kiyotaka Miura · Masaaki Sakakura · Akinao Nakamura · Yasuhiko Shimotsuma
- 3S07 Fabrication of 1D periodic fine structure on high refractive index bismuth borate glass (National Institute of Advanced Industrial Science and Technology) ○Kohei Fukumi · Naoyuki Kitamura · Kenji Kintaka · Tomoko Akai
- 3S08 Preparation of Bulk Glass Prepared by Liquid-Phase Reaction (Kyoto University) ○Hirokazu Masai · (Ishizuka Glass Co. Ltd) Satoshi Yamamoto · Toru Nishibe · (Kyoto University) Kiyotaka Miura

## ■■ September 9 (Fri) (Room T) ■■

### 19. Material Design and Processing Design

#### プロセスデザイン

(9:00) (Chairman 木村禎一)

3T01 ★Creation of 3-D functional ceramic devices using micro/nano stereolithography (Yokohama National University) ○Shoji Maruo

#### マテリアルデザイン

(9:40) (Chairman 林大和)

3T03 ★Development of alloys with high strength and high corrosion resistance using the features of Selective Electron Beam Melting (Hitachi, Ltd. Research & Development Group) ○Tadashi Fujieda · Hiroshi Shiratori · Kosuke Kuwabara · M. Hirota · Takahiko Kato · (Institute for Materials Research, Tohoku University) Kenta Yamanaka · Yuichiro Koizumi · Akihiko Chiba · (Faculty of Engineering, Hokkaido University) Seiichi Watanabe

#### 積層造形プロセス (2)

(10:20) (Chairman 白井孝)

3T05 Development of Laser Sintering Process of Oxide Ceramics (JFCC) ○Teiichi Kimura · Satoshi Suehiro

3T06 Microstructure of SiC-CrB<sub>2</sub> composite by melt and solidification using laser irradiation (Tohoku University) ○Hirokazu Katsui · Kishin Morita · Takashi Goto

3T08 Direct writing of sub-100 nm Cr particles by laser induced forward transfer (LIFT) using an annular fs-laser beam (Tohoku University) ○Takahiro Nakamura · Koki Omahi · Shunichi Sato

3T09 Numerical Simulation for Design of Nanofluids and Evaluation of Its Rheological Properties (Tohoku University) ○Masaki Kubo · Shin Usune · Takao Tsukada · (Products Innovation Association) Osamu Koike · (Josai University) Masahiro Fujita · (Tohoku University) Tadafumi Adschiri

#### マテリアルデザイン

(13:00) (Chairman 林大和)

3T13 ★Collaboration examples of Precious metals and Ceramics (Tanaka Kikinzoku Kogyo K.K.) ○Noriaki Hara

#### プロセスデザイン

(13:40) (Chairman 中村貴宏)

3T15 ★Spherical particle fabrication by space selective pulsed heating (Hokkaido University) ○Naoto Koshizaki · Shota Sakaki · Keisuke Yasuda · (National Institute of Advanced Industrial Science and Technology) Yoshie Ishikawa

#### 金属ナノ粒子プロセス

(14:20) (Chairman 久保正樹)

3T17 Inner structural analysis of silver submicron spherical particles fabricated by pulsed laser melting in liquid (Tohoku University) ○Takahiro Nakamura · Hideyuki Magara · Shunichi Sato · (Hokkaido University) Shota Sakaki · Naoto Koshizaki

3T18 Preparation of supported bimetallic nanoparticle catalysts using electron beam reduction method and their structural analysis (Osaka University) ○Hiroaki Otake · Tomohisa Okazaki · Satoshi Seino · Takashi Nakagawa · Takao Yamamoto

3T19 Material and Processing Design of High Capacitance BaTiO<sub>3</sub>/Ag Nanocomposite by Sonochemical Powder (Tohoku University) ○Yamato Hayashi · Kent Seki · Jun Fukushima · Hirotsugu Takizawa

3T20 Sonochemical Synthesis of Metal Nanoparticles onto Cathode Materials for Lithium Ion Battery (Akita University) ○Hirokazu Okawa · Yuki Ono · Takahiro Kato · Katsuyasu Sugawara

## ■■ September 9 (Fri) (Room U) ■■

### 24. New Evolution of Dielectrics: Fusion and Further Progress of Science and Technology on Dielectric Materials and Devices

#### 圧電材料・圧電応用 I

(9:00) (Chairman 渡邊隆之)

3U01 ★Two-dimensional Array of Airborne Ultrasonic Transducers and Its Applications (The University of Tokyo) ○Takayuki Hoshi

3U03 Diffusion Behavior of Ag into (Bi<sub>1/2</sub>Na<sub>1/2</sub>) TiO<sub>3</sub> Ceramics (Tokyo University of Science) ○Hajime Nagata · Naoki Iwagami · Tadashi Takenaka · (NIMS) Isao Sakaguchi

#### プロセッシング

(10:00) (Chairman 寺西貴志)

3U04 ☆Processing and Electrical Properties of Bismuth Potassium Titanate Ceramics (Keio University) ○Manabu Hagiwara · Shinobu Fujihara

3U05 Characterization of crystal-oriented (Li,Na,K) NbO<sub>3</sub> ceramics prepared by magnetic field assisted forming (Nagaoka University of Technology) ○Yuki Ono · Satoshi Tanaka · (Taiyo Yuden Co.ltd) Tomohiro Harada · Hiroyuki Shimizu · Yutaka Doshida

3U06 Polarization properties of bismuth potassium titanate thick films prepared by AD method (National Institute of Advanced Industrial Science and Technology) ○Muneyasu Suzuki · Rintaro Aoyagi · Tetsuo Tsuchiya · Jun Akedo

(11:00) (Chairman 萩原学)

3U07 ☆Synthesis of nano barium titanate using water accelerated solid state reaction at low temperature (Niigata University) ○Kenji Toda · Sun-Woog Kim · Kazuyoshi Uematsu · Mineo Sato

3U08 Chemothermal pulverization of BaTiO<sub>3</sub> and SrTiO<sub>3</sub> (National Institute for Materials Science) ○Alfian Noviyanto · Toshiyuki Nishimura · (National Institute for Materials Science · MCES, Tokyo Institute of Technology) Naoki Ohashi

3U09 Microstructural design of Composite Capacitors with Boundary Layer Structures by Solvothermal Method (University of Yamanashi) ○Shintaro Ueno · Hiroyuki Kakiuchi · Yuya Hattori · Satoshi Wada · (Ibaraki University) Kouichi Nakashima

#### 圧電材料・圧電応用 II

(13:00) (Chairman 廣瀬正和)

3U13 ★Structure Design and Energy Application of Lead-free Niobate Piezoelectrics (Nagoya Institute of Technology) ○Ken-ichi Kakimoto

3U15 ☆Polarization rotation in Bi-based perovskite piezoelectrics (Tokyo Institute of Technology) ○Masaki Azuma · Keisuke Shimizu · Hajime Hojo · Narumi Matsuda · Runze Yu · Ken Tominaga · (Chuo University) Kengo Oka

(14:00) (Chairman 青柳倫太郎)

3U16 ☆Domain Dynamics Studies by PZT Materials (KYOCERA Corporation) ○Minoru Omori · Tsuneo Mishima · Michiaki Nishimura

3U17 Fabrication of (Li<sub>0.05</sub>(Na<sub>0.5</sub>K<sub>0.5</sub>)<sub>0.95</sub>)NbO<sub>3</sub> based transparent ceramics (Ryukoku University) ○Kentarō Hirai · Ichiro Fujii · Takahiro Wada



## 新しい応用への検討

(14 : 40) (Chairman 北中佑樹)

3U18 ☆Catalysis correlated to ferroelectric property (Okayama University, JST PRESTO) ○Jun Kano

3U19 ☆Perovskite dielectric SEIs for lithium ion batteries with high rate capability (Okayama University) ○Takashi Teranishi · Yumi Yoshikawa · Hidetaka Hayashi · Akira Kishimoto

## ■■ September 9 (Fri) (Room V) ■■

## 22. Research Topics on Advanced Ceramic Technology for Energy Conversion, Storage and Control Devices

(9 : 40) (Chairman 岩崎航太)

3V03 Electrical properties of the nano network structures on the surface of titanium metals formed by chemical and heat treatments (Chubu University) ○ Hideki Hashimoto · Seiji Yamaguchi · Ryusuke Nakai · Yoshinori Naruta · Hiroaki Takadama

3V04 Thermoelectric properties of an intermetallic compound in Na-In-Sn system (Tohoku University · Japan Science and Technology Agency) ○Takahiro Yamada · (Tohoku University) Michitake Kamamoto · Masahiro Kanno · Hisanori Yamane · (National Institute of Advanced Industrial Science and Technology) Hideaki Nagai

3V05 Thermal conductivity changes with phase transition phenomena in oxide ceramics (Kyushu University) ○Kei Watanabe · Michitaka Ohtaki · (Asahi Glass Co., Ltd.) Nobuo Tomura · Kenji Kitaoka · Yasuo Shinozaki

3V06 Thermoelectric properties of perovskite type LaCoO<sub>3</sub> (Tokushima University) ○Kei-ichiro Murai · Masaru Takahashi · Toshihiro Moriga

(11 : 00) (Chairman 山田高広)

3V07 Temperature dependence of niobate-based pyroelectric ceramics and composite (Nagoya Institute of Technology) ○Daisuke Ando · Di Xie · Teruaki Fuchigami · Ken-ichi Kakimoto

3V08 Modelling of the two-dimensional strain effect on piezoelectric properties of ZnO predicted by density functional perturbation theory (Central Research Institutet of Electric Power Industry) ○Kaoru Nakamura · Sadao Higuchi · Toshiharu Oonuma

3V13 Crystal structures and optical properties of perovskite oxide semiconductor solid solutions (Tokyo Institute of Technology) ○Yutaro Kobayashi · Hiroshi Mizoguchi · Keisuke Ide · Junghwan Kim · Satoru Matuishi · Hidenori Hiramatu · Hideo Hosono · Toshio Kamiya

3V14 Reduction of the interface resistance in a dye-sensitized solar cell by introducing TNO transparent conductive film (Shizuoka University) ○Jun Sato · Takeshi Endo · Rieko Ono · Viola Nagygyörgy · Masayuki Okuya · (KAST) Shoichiro Nakao · Sohei Okazaki · Enju Sakai · Naoomi Yamada · (Tohoku University) Taro Hitosugi · (The University of Tokyo) Tetsuya Hasegawa

(13 : 40) (Chairman 中村馨)

3V15 FTO glass with a light refractive layer for dye-sensitized solar cells (Shizuoka University · Budapest University of Technology and Economics) ○Viola Nagygyörgy · (Budapest University of Technology and Economics) János Madarász · (Shizuoka University) Jun Sato · Rieko Ono · Masayuki Okuya

3V16 Porous TiO<sub>2</sub> layer deposited by a microwave heating technique and its application to dye-sensitized solar cells (Shizuoka University) Takahiro Aoyama · Takuya Ohashi · Viola Nagygyörgy · (Shizuoka University) ○Masayuki Okuya3V17 Effect of plasma species in depositing SnO<sub>2</sub> thin film by a dielectric barrier discharge (Shizuoka University) Kento Horimizu · Syota Kanezashi · Yuki Masuda · ○Masayuki Okuya