

Program for Technical Sessions

Symposium A: Ferroelectrics, Pyroelectric and Piezoelectric Ceramics

Monday, Dec. 5, 2016 *Main Hall*

Chair: Toshio Ogawa, Shizuoka Institute of Science and Technology

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| A01 0115 | 10:20 - 10:50 | Enhanced Energy Density of Well-Aligned Barium Titanate-based Nanorod/ Polyvinylidene Fluoride Composites (Keynote) | Haydn Chen University of Macau |
| A02 0022 | 10:50 - 11:10 | Colossal Electrocaloric Effect of Polymer Composites with Nanostructured Ceramic Fillers | Guangzu Zhang Huazhong University of Science and Technology |
| A03 0231 | 11:10 - 11:30 | Glass-ferroic Composite: the Third Class of Ferroic Materials | Yuanchao Ji Xi'an Jiaotong University |
| A04 0365 | 11:30 - 11:50 | Mechanism of aging phenomena in hybrid-doped BaTiO ₃ ceramics: electronegativity and ionic radius | Dingyue Hu Xi'an Jiaotong University |
| 11:50-13:30 | | Lunch | |

Chair: Haydn Chen, University of Macau; Hsiao-Hsuan Hsu, National Taiwan Normal University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| A05 0005 | 13:30 - 14:00 | Sound Velocity Evaluation for Piezoelectric Ceramics and Single Crystals (Keynote) | Toshio Ogawa Shizuoka Institute of Science and Technology |
| A06 0183 | 14:00 - 14:20 | Evaluation of Integrated Piezoelectric Transducers by a Thermal Pulse Method | Gerald U. Gerlach Technische Universität Dresden |
| A07 0116 | 14:20 - 14:40 | Growth of Highly Oriented Barium Titanates Nanorod Array | Lingmin Yao University of Macau |
| 14:40-15:30 | | Coffee Break | |

Chair: Akira Yoshikawa, Tohoku University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| A10 0471 | 15:30 - 15:50 | Processing and Properties of Nonreducible Grain-Oriented Lead-Free (Ba,Ca)TiO ₃ Piezoceramics | Wataru Sakamoto Nagoya University |
| A11 0324 | 15:50 - 16:10 | Phase Formation and Electrical Properties of (Ba _{0.4} Sr _{0.4} Ca _{0.2})(Zr _{0.05} Ti _{0.95})O ₃ Ceramics Prepared by BZT-BCT Seed Induced Method | Jiraporn Dangsak Mae Fah Luang University |
| A12 0416 | 16:10 - 16:30 | Dielectric and Piezoelectric Properties of Lead-free Relaxor Ferroelectric BKT-BT-BNiT and BKT-BT-BMgT Ceramics | Nopsiri Chaiyo King Mongkut's Institute of Technology Ladkrabang |
| A13 0191 | 16:30 - 16:50 | Relaxor-Ferroelectric Composite - A Way of Simultaneously Achieving Large Electrostrain With Slim Hysteresis Over A Broad Temperature Range | Minxia Fang Xi'an Jiaotong University |

Chair: Wataru Sakamoto, Nagoya University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| A15 0063 | 10:20 - 10:40 | Characteristics of Structure and Electrical Properties in 0.70 Bi _{1.05} FeO ₃ - 0.30 BaTiO ₃ Ceramics Modified with Different Additives | Ting Zheng Sichuan University |
| A16 0497 | 10:40 - 11:00 | Piezoelectric and Ferroelectric properties of Bi-excess BiFeO ₃ -BaTiO ₃ by quenching process | Jae Hong Lee Changwon National University |
| A17 0511 | 11:00 - 11:20 | Dielectric and Electrical Properties of Nonstoichiometric Bi _{1±x} FeO _{3±δ} Ceramics | Jeong Wook Woo Changwon National University |
| A18 0529 | 11:20 - 11:40 | Quenching Effect in BiFeO ₃ -BaTiO ₃ Lead-free Piezoelectric Ceramics | Chae Il Cheon Hoseo University |
| A19 0491 | 11:40 - 12:00 | Large strain at low driving fields in Bi(Mg _{0.5} Zr _{0.5})O ₃ -Modified BiFeO ₃ -BaTiO ₃ Ceramics | Rizwan Ahmed Malik Changwon National University |
| 12:00-13:30 | | Lunch | |

Chair: John Fisher, Chonnam National University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| A20 0243 | 13:30 - 13:50 | Modeling and Simulation of Contact Interaction between the Components of USDC | Zili Huang Harbin Institute of Technology |
| A21 0276 | 13:50 - 14:10 | Ab initio Mechanistic Study on Lanthanum-Doped Lead-titanate Ferroelectrics | Juin-Jie Yang National Cheng Kung University |
| A22 0277 | 14:10 - 14:30 | Energetics of lanthanum doped barium titanate on the basis of first-principles calculations. | Wei-Chung Chiu National Cheng Kung University |
| 14:30-15:50 | | Coffee Break | |

Chair: John Fisher, Chonnam National University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| A26 0018 | 15:50 - 16:10 | Reduction of Equivalent Magnetic Noise by In-Plane Series Connection in Magnetoelectric Metglas/ PMN-PT Laminate Composites | Cong Fang Chinese Academy of Sciences |
| A27 0064 | 16:10 - 16:30 | Lead-free (K,Na)NbO ₃ -based Ceramics with Large Piezoelectricity and High Curie Temperature | Tao Hong Sichuan University |
| A29 0073 | 16:50 - 17:10 | A Power-superimposed Longitudinal-torsional Composite Vibrator for Ultrasonic-assisted Wire Drawing | Shen Liu Harbin Institute of Technology |

Chair: Tzong-Lin Jay Shieh, National Taiwan University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|----------------------------------|---------------------|---|--|
| A30 0062 | 10:20 - 10:50 | Past, Present, and Future Piezoelectric Materials and Application-Can we find promising piezoelectric materials and applications after 2020? (Keynote) | Yohachi John Yamashita Toyama Prefectural University |
| A31 0086 | 10:50 - 11:10 | A Longitudinal-bending Composite Ultrasonic Vibrator Based on an Asymmetric Structure for Wire Drawing | Yuancai Yang Harbin Institute of Technology |
| A32 0135 | 11:10 - 11:30 | A novel linear ultrasonic motor with characteristic of variable mode excitation | Xiangyu Zhou Chongqing University of Posts and Telecommunications |
| A33 0099 | 11:30 - 11:50 | Admittance Response and Energy Loss of Piezoelectric Devices | Nien-Ti Tsou National Chiao Tung University |
| 11:50-13:30 | | Lunch | |

Chair: Tzong-Lin Jay Shieh, National Taiwan University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|----------------------------------|---------------------|--|---|
| A35 0342 | 13:30 - 13:50 | Quadruple point as the necessary condition for achieving high piezoelectricity in the BaTiO ₃ -based system | Mengye Yin Xi'an Jiaotong University |
| A36 0421 | 13:50 - 14:10 | Impedance Spectroscopy Study of Bi _{0.5} (Na _{0.74} K _{0.16} Li _{0.10}) _{0.5} TiO ₃ -Ba(Zr _{0.5} Ti _{0.95})O ₃ Ceramics Prepared via Combustion Technique | Sasiporn Prasertpalichat Naresuan University |
| A37 0008 | 14:10 - 14:30 | Role of Time in Ferroelectric Solid Solution | Yaodong Yang Xi'an Jiaotong University |
| A38 0245 | 14:30 - 14:50 | Electrical Properties of Ba _{0.9} Ca _{0.1} Zr _{0.1} Ti _{0.9} O ₃ Ceramics Induced by SFN Heterogeneous Seed | Uraivan Intatha Mae Fah Luang University |
| 14:50-15:30 | | Coffee Break | |

Chair: Nien-Ti Tsou, National Chiao Tung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|----------------------------------|---------------------|---|---|
| A40 0178 | 15:30 - 15:50 | Effect of Additives on Dielectric Properties and Microstructure of Temperature Stable (1-x) BaTiO ₃ - x Ba ₂ LiTa ₅ O ₁₅ Ceramics | Jian Hua Li National Taipei University of Technology |
| A41 0010 | 15:50 - 16:10 | Growth of Lead-Free Piezoelectric Single Crystals by Solid State Single Crystal Growth | John Fisher Chonnam National University |
| A43 0092 | 16:30 - 16:50 | Structural and Vibrational Properties of (Bi _{1-x} La _x)FeO ₃ and (Bi _{1-y} Ba _y)(Fe _{1-y} Ti _y)O ₃ Multiferroic Ceramics Investigated by Raman Scattering | Xin hua Zhu Nanjing University |

Wednesday, Dec. 7, 2016 Main Hall

Chair: Chen-Chia Chou, National Taiwan University of Science and Technology

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| A45 0199 | 13:50 - 14:10 | Investigation of high Curie temperature tetragonal phase Mn-doped ternary single crystals and their application in high performance pyroelectric detectors | Linrong Yang Chinese Academy of Sciences |
| A46 0377 | 14:10 - 14:30 | Crystal Growth and Piezoelectric Properties of Ca ₃ Ta(Ga, R) ₃ Si ₂ O ₁₄ Single Crystals | Yu Igarashi Tohoku University |
| 14:30-15:30 | | Coffee Break | |

Chair: Chen-Chia Chou, National Taiwan University of Science and Technology

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| A49 0589 | 15:30 - 15:50 | Large Low-Field Strain Properties of Bi _{0.5} Na _{0.5} TiO ₃ -SrTiO ₃ Ceramics with Compositional Heterogeneity | Jae-Shin Lee University of Ulsan |
| A50 0543 | 15:50 - 16:10 | Textured (K,Na)NbO ₃ -based Piezoelectric Ceramics | Jae-Ho Jeon Korea Institute of Materials Science |
| A51 0514 | 16:10 - 16:30 | Microwave Sintering for Lead-contain and Lead-free Piezoelectric Ceramics in Microstructures and Electrical Properties | Hu Xiao Xian National Taiwan University of Science and Technology |
| A52 0588 | 16:30 - 16:50 | Effects of LiNbO ₃ -Modification on the Dielectric and Piezoelectric Properties of (Bi _{1/2} Na _{1/2})TiO ₃ -SrTiO ₃ Lead-Free Relaxor Ceramics | Jae-Shin Lee University of Ulsan |

Wednesday, Dec. 7, 2016 R204

Chair: Yohachi John Yamashita, Toyama Prefectural University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| A54 0593 | 13:50 - 14:10 | Ferroelectric-Relaxor Transition Behavior in Lead-Free Bi _{1/2} (Na _{0.82} K _{0.18}) _{1/2} TiO ₃ - Based Relaxor Materials | Jae-Shin Lee University of Ulsan |
| A55 0359 | 14:10 - 14:30 | Investigation of the structure and phase transitions in Bi _{0.5} Na _{0.5} TiO ₃ -based system | Chang Liu Xi'an Jiaotong University |
| A56 0565 | 14:30 - 14:50 | Effect of microwave sintering on a lead free bismuth based piezoelectric ceramic | Gurumayu Robert Kenedy National Taiwan University of Science and Technology |
| 14:50-15:30 | | Coffee Break | |

Symposium B: Dielectric Ceramics for Electronic Devices

Monday, Dec. 5, 2016 R304

Chair: Danilo Suvorov, Jozef Stefan Institute; Shao-Ju Shih, National Taiwan University of Science and Technology

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| B02 0078 | 10:40 - 11:00 | Solution-Processed Ultra-Low-k Thin Films Composed of Single-Walled Aluminosilicate Nanotubes | Dun-Yen Kang National Taiwan University |
| B03 0305 | 11:00 - 11:20 | Processing and properties of a low-fire, high-k dielectric | Minxin Guan National Tsing Hua University |
| B04 0147 | 11:20 - 11:40 | Nonlinear Current Voltage Properties and Giant Dielectric Response in Novel $(\text{Na}_{1/3}\text{Ca}_{1/3}\text{Y}_{1/3})\text{Cu}_3\text{Ti}_4\text{O}_{12}$ Ceramics Prepared by a Simple Sol-Gel Method | Jutapol - Jumptam Khon Kaen University |
| B05 0150 | 11:40 - 12:00 | Chemothermal Pulverization of BaTiO_3 : Effect of Air Content and Heat Treatment Time | Alfian Noviyanto National Institute for Materials Science |
| 12:00-13:30 | | Lunch | |

Chair: Heli Jantunen, Oulu University; I-Ming Hung, Yuan Ze University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| B06 0609 | 13:30 - 14:00 | The Importance of Defined-Shape Ferroelectric Particles for Their Potential Ferro- and Piezoelectric Applications (Keynote) | Danilo Suvorov Jozef Stefan Institute |
| B07 0196 | 14:00 - 14:20 | Constrained and Activated Sintering of TiO_2 | Cheng Feng Wu National Tsing Hua University |
| B09 0428 | 14:40 - 15:00 | Phase Stabilization and Dielectric Enhancement of Lead-Free $(\text{Ba}_{0.4}\text{Sr}_{0.4}\text{Ca}_{0.2})(\text{Zr}_{0.05}\text{Ti}_{0.95})\text{O}_3$ Ceramics Induced by BST-BZT Seeds | Nattaya Tawichai Mae Fah Luang University |
| 15:00-15:30 | | Coffee Break | |

Chair: Mike Chu, TAM Ceramics; Nien-Ti Tsou, National Chiao Tung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|---|
| B10 0061 | 15:30 - 16:00 | Functional Ceramic Thin Films and Epitaxial Super-lattices by Pulsed Laser MBE (Keynote) | Weiguang Zhu Nanyang Technological University |
| B11 0266 | 16:00 - 16:20 | Mechanochemical-Assisted Precipitation of Monodispersed- BaZrO_3 Sub-Micrometer Particles | Thitirat Charoonsuk King Mongkut's Institute of Technology Ladkrabang |
| B12 0515 | 16:20 - 16:40 | Colossal permittivity and low dielectric loss behavior of TiO_2 ceramics co-doped with Nb and TL cation | Guo Bao Chun Shaanxi Normal University |
| B13 0361 | 16:40 - 17:00 | Effects of Synthesis Techniques on Chemical Composition, Microstructure, and Dielectric Properties of Mg-doped Calcium Titanate | Oratai Jongprateep Kasetsart University |

Chair: Shih-Hung Lin, Tunghai University; Chi-Shiung Hsi, National United University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|---|
| B16 0512 | 13:50 - 14:10 | Improvement of microwave dielectric properties of diopside-based glass-ceramics using low temperature co-fired process | Po-Hsien Wu National Taiwan University of Science and Technology |
| B17 0126 | 14:10 - 14:30 | Dielectric Properties of Conductor/Insulator Composite Capacitors Prepared by Solvothermal Method | Shintaro Ueno University of Yamanashi |
| B18 0598 | 14:30 - 14:50 | One-Pot Fabrication of Functionalized Graphene Inks by Soft Processing at Ambient Pressure and Temperature | Masahiro Yoshimura National Cheng Kung University |
| B19 0539 | 14:50 - 15:10 | The effects of Al ₂ O ₃ nano-particle additives on the properties of NaCu ₃ Ti ₃ NbO ₁₂ based ceramics | Wilai Chomchai Naresuan University |
| 15:10-15:30 | | Coffee Break | |

Chair: Shintaro Ueno, University of Yamanashi; Tzong-Lin Jay Shieh, National Taiwan University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| B20 0610 | 15:30 - 16:00 | The Trend of Space Saving by MLCC and the Current Problem (Keynote) | Takeshi Onuma TDK Taiwan Corporation |
| B21 0542 | 16:00 - 16:20 | Microwave Dielectric Properties of [(Mg _{1-x} Zn _x) _{0.95} Co _{0.05}] _{1.02} TiO _{3.02} ceramics | Shih-Hung Lin Tunghai University |
| B23 0488 | 16:40 - 17:00 | Preparation and Characterization of Li _{0.30} Cr _{0.10} Ni _{0.60} O/polyvinylidene fluoride Composites with High Dielectric Constants | Bualan Khumpaitool Udon Thani Rajabhat University |

Symposium C: Microwave Ceramics and Tunable Ceramics

Wednesday, Dec. 7, 2016 R303

Chair: Eung Soo Kim, Kyonggi University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|---|
| C01 0480 | 13:30 - 14:00 | First steps to the microwave applications utilizing ULTCC technology (Keynote) | Heli Jantunen University of Oulu |
| C02 0131 | 14:00 - 14:20 | Low-Fire Processing of Microwave (Ca _{0.9} Sr _{0.1})(Zr _{1-x} Mn _x)O ₃ Dielectric with Li ₂ O-CaO-B ₂ O ₃ -SiO ₂ Glass in H ₂ /N ₂ | Yueh-Ting Shih National Tsing Hua University |
| C04 0444 | 14:40 - 15:00 | Influence of mechanical treatment on the microstructure and microwave characteristics of Ba ₅ Nb ₄ O ₁₅ ceramic | Chung-Ya Tsao National Taiwan University |
| 15:00-15:30 | | Coffee Break | |

Wednesday, Dec. 7, 2016 R303

Chair: Heli Jantunen, University of Oulu

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| C06 0490 | 16:00 - 16:20 | Effect of substituting Ti sites with $(Mg_xNb_{0.8-0.4x})^{4+}$ on the microwave dielectric properties of Mg_2TiO_4 ceramics | Sung Ho Kim Kyonggi University |
| C07 0503 | 16:20 - 16:40 | Dependence of Microwave Dielectric Properties on the Complex Substitution for Ti site of $MgTiO_3$ Ceramics | Eung Soo Kim Kyonggi University |
| C08 0580 | 17:00 - 17:20 | Low temperature sintering and microwave dielectric properties of $Ca_5Ni_4(VO_4)_6$ ceramics | Guoguang Yao Xi'an University of Posts and Telecommunications |

Wednesday, Dec. 7, 2016 R304

Chair: Cheng-Hsing Hsu, National United University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| C10 0587 | 13:50 - 14:10 | Microwave Dielectric Properties of $Mg_4Nb_2O_9$ -based Ceramics with $(B_xW_{1-x})^{5+}$ Substitution for Nb^{5+} site (B = Li, Mg, Al, Ti) | Jeong Hoon Kim Kyonggi University |
| C11 0585 | 14:10 - 14:30 | <i>Ilmenite Sintering Using Oxide Nanotubes and Corresponding Dielectric Properties (Invited)</i> | Chuan-Feng Shih National Cheng-Kung University |
| C12 0087 | 14:30 - 14:50 | Effect of Sintering Conditions on Microstructures and Dielectric Properties of Zn_2TiO_4 Ceramics at Microwave Frequency | Xiang-Fu Ding Lunghua University of Science and Technology |
| 14:50-15:30 | | Coffee Break | |

Chair: Chuan-Feng Shih, National Cheng Kung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| C14 0024 | 15:30 - 16:00 | Ultra-low Temperature Cofiring Ceramics for Microwave Passive Integration (Keynote) | Hong Wang Xi'an Jiaotong University |
| C15 0019 | 16:00 - 16:20 | A new copper borate ceramic: phase formation and microwave dielectric properties | Mingsheng Ma Chinese Academy of Sciences |
| C16 0536 | 16:20 - 16:40 | LTCC development of low-K and high-K co-fired materials | Kuei-Chih Feng Prosperity Dielectric Co., Ltd. |

Symposium D: Magnetic, Semiconductive and Superconductive Ceramics

Monday, Dec. 5, 2016 R303

Chair: Jörg Töpfer, Ernst-Abbe-Hochschule Jena

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| D01 0052 | 10:20 - 10:50 | Exotic Electromagnetic Properties of Metamaterials Based on Ferromagnetic Medium (Keynote) | Yang Bai University of Science and Technology Beijing |
| D03 0112 | 11:10 - 11:30 | Heteroepitaxy of Fe ₃ O ₄ /Muscovite: A new Perspective for Flexible Spintronics | Ping-Chun Wu National Chiao Tung University |
| D04 0098 | 11:30 - 11:50 | Effect of Mg substitution on magnetic properties of Co _{1-x} Mg _x Fe ₂ O ₄ nanoparticles investigated by EXAFS analysis | Ekaphan Swatsitang Khon Kaen University |
| 11:50-13:30 | | Lunch | |

Chair: Chien-Yie Tsay, Feng-Chia University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| D05 0045 | 13:30 - 14:00 | Hard and Soft Ferrites – Search For Better Magnetic Materials (Keynote) | Jörg Töpfer Ernst-Abbe-Hochschule Jena |
| D06 0395 | 14:00 - 14:20 | Neodymium Resources Recycling from Spent Magnets Slurry | Chen-Yao Hung National Cheng Kung University |
| 14:20-16:00 | | Coffee Break | |

Chair: Yang Bai, University of Science and Technology Beijing

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| D11 0120 | 16:00 - 16:20 | Flexible Transparent Spintronics | Yugandhar Bitla National Chiao Tung University |
| D12 0300 | 16:20 - 16:40 | Local structure of Mn impurities in SrTiO ₃ : First principles study | Ittipon Fongkaew Suranaree University of technology |

Chair: Hsing-I Hsiang, National Cheng Kung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| D14 0520 | 10:20 - 10:40 | Synthesis and microwave magnetic properties of spinel ferrite nanowire arrays in polycarbonate templates | Yao Zhang Tsinghua University |
| D15 0025 | 10:40 - 11:00 | A highly sensitive flexible magnetic sensor based on self-assembled magnetoelectric nanocomposite | Tahta Amrillah National Chiao Tung University |
| D17 0201 | 11:20 - 11:40 | Improvement of magnetoelectric properties in metglas/Pb(Mg _{1/3} Nb _{2/3})O ₃ -PbTiO ₃ /metglas laminates with screen-printed ID-electrodes by poling optimization | Jiashuai Ma Chinese Academy of Sciences |
| 11:40-13:50 | | Lunch | |

Symposium E: Optical Ceramics and Single Crystals

Chair: Noboru Ohtani, Kwansai Gakuin University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| E01 0473 | 10:20 - 10:50 | Novel Oxide-based Single Crystals for Optoelectronic Applications (Keynote) | Kiyoshi Shimamura National Institute for Materials Science |
| E02 0268 | 10:50 - 11:10 | Growth and scintillation properties of Ca(Cl, Br, I) ₂ single crystals | Kei Kamada Tohoku University |
| E03 0297 | 11:10 - 11:30 | Growth and scintillation properties of alkali metal ions co-doped Ce:Gd ₃ Ga ₃ Al ₂ O ₁₂ | Akira Yoshikawa Tohoku University |
| E04 0329 | 11:30 - 11:50 | Improvement of Eu Segregation in Eu-Doped LiSrAlF ₆ Single Crystals | Yuui Yokota Tohoku University |
| E05 0344 | 11:50 - 12:10 | Na concentration dependence of luminescence properties of Na:Cs ₂ HfCl ₆ scintillator | Shohei Kodama Tohoku University |
| 12:10-13:30 | | Lunch | |

Chair: Kiyoshi Shimamura, National Institute for Materials Science

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| E06 0340 | 13:30 - 14:00 | Progress in SiC crystal growth technology for power device application (Keynote) | Noboru Ohtani Kwansai Gakuin University |
| E07 0153 | 14:00 - 14:20 | Isothermal Crystallization Kinetics of Transparent Glass-Ceramic Phosphors from Calcium Magnesium Aluminosilicate based system | Wipada Senanon Chiang Mai University |
| E08 0235 | 14:20 - 14:40 | Long Lasting Sr ₄ Al ₁₄ O ₂₅ : Eu ²⁺ , Dy ³⁺ Phosphors Synthesized by Al-source Contained Hydrothermal Method | Kuan-Lin Su National Taiwan Ocean University |
| E10 0369 | 14:40 - 15:00 | Effects of Annealing and Mg-codoping on Luminescence and Scintillation Properties of Ce Doped GGAG Scintillator | Hiroaki Yamaguchi Tohoku University |
| E11 0436 | 15:00 - 15:20 | Optical Properties of Nd-doped (Gd, La) ₂ Si ₂ O ₇ Crystal | Shunsuke Kurosawa Tohoku University |
| 15:20-15:30 | | Coffee Break | |

Chair: Akira Yoshikawa, Tohoku University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| E12 0434 | 15:30 - 15:50 | Scintillation Properties of Lu ₂ Hf ₂ O ₇ Ceramics Prepared by the Spark Plasma Sintering Method | Shunsuke Kurosawa Tohoku University |
| E13 0399 | 15:50 - 16:10 | Effect of ethanolamine interfacial treatment in quantum dot light-emitting diodes | Jiwan Kim Kyonggi University |
| E14 0026 | 16:10 - 16:30 | Ruddlesden–Popper Perovskite sulfides A ₃ B ₂ S ₇ : A new family of ferroelectric photovoltaic materials for the visible spectrum | Gaoyang Gou Xi'an Jiaotong University |
| E15 0263 | 16:30 - 16:50 | Carbon contamination suppression in CaF ₂ transparent ceramics during SPS by Mo foil | Ping Wang Wuhan University of Technology |
| E16 0197 | 16:50 - 17:10 | Creating Recoverable Mechanoluminescence in Piezoelectrics | Jun-Cheng Zhang Qingdao University |

Symposium F: Thin and Thick Films of Electronic Ceramics

Monday, Dec. 5, 2016 R205

Chair: Dinghua Bao, Sun Yat-Sen University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| F01 0472 | 10:20 - 10:50 | Exploring New Crystal Structures, Multiferroic and Photovoltaic Behavior of Epitaxial BFO and Pb-free Thin Films (Keynote) | John Wang National University of Singapore |
| F03 0195 | 11:10 - 11:30 | <i>Domain Pattern Control in Pb(Zr,Ti)O₃ Nanorods by Charge Screening (Invited)</i> | Tomoaki Yamada Nagoya University |
| F04 0033 | 11:30 - 11:50 | An Investigation of Aluminum Nitride Coatings on Alumina Substrate Using Sol Gel Method | Ying-Chieh Lee National PingTung University of Science and Technology |
| 12:50-13:30 | | Lunch | |

Chair: John Wang, National University of Singapore

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|---|
| F06 0582 | 13:30 - 13:50 | <i>Advanced Oxide Thin Film by Photo Reaction of Chemical Solution for Green Device (Invited)</i> | Tetsuo Tsuchiya National Institute of Advanced Industrial Science and Technology |
| F07 0109 | 13:50 - 14:10 | Electric Properties Tuning by All-Solid-State Electric Double Layer Transistor | Takashi Tsuchiya National Institute for Materials Science |
| F08 0142 | 14:10 - 14:30 | Nanoionics devices with a neuromorphic function achieved by in-situ interface nanoarchitectonics. | Kazuya Terabe National Institute for Materials Science |
| F09 0144 | 14:30 - 14:50 | Process study on SmBCO films deposited on LaAlO ₃ substrate by MOCVD | Ting Wang Wuhan University of Technology |
| 14:50-15:30 | | Coffee Break | |

Chair: Ni Qin, Sun Yat-Sen University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| F11 0440 | 15:30 - 15:50 | <i>Host sensitized lanthanide luminescence in Eu-doped bismuth pyrochlore thin films (Invited)</i> | Ni Qin Sun Yat-Sen University |
| F12 0284 | 15:50 - 16:10 | Crystalline Polarity Control of ZnO Thin Films Grown Under External Electric Bias During Magnetron Sputtering | Takeo Ohsawa National Institute for Materials Science |
| F13 0107 | 16:10 - 16:30 | Fabrication, Structural Characterization and Physical Properties of Ferroelectric Oxide Nanostructures | Weiren Xia Nanjing University |

Chair: Tomoaki Yamada, Nagoya University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| F15 0058 | 13:30 - 14:00 | Resistive Switching and Magnetic Properties of Spinel Structure Ferrite Thin Films (Keynote) | Dinghua Bao Sun Yat-Sen University |
| F16 0331 | 14:00 - 14:20 | <i>Synthesis of $(La_{1-x}Sr_x)MnO_{3-\delta}$ Thin Films for Application to Smart Radiation Device (Invited)</i> | Tadashi Shiota Tokyo Institute of Technology |
| 14:20-15:30 | | Coffee Break | |

Chair: Tseung-Yuen Tseng, National Chiao Tung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| F19 0314 | 15:30 - 15:50 | Deposition of perovskite-type $LaTiO_2N$ layer by RF magnetron sputtering | Eishiro Murakami National Institute for Materials Science |
| F20 0326 | 15:50 - 16:10 | Rapid Synthesis of Tin Oxide Nanostructures by Microwave-assisted Thermal Oxidation for Sensor Applications | Surachet Phadungthitidhada Chiang Mai University |
| F21 0383 | 16:10 - 16:30 | Effect of elastic fields on phase stability in the vicinity of MPB composition in PMN-PT superlattice thin films | Cangyu Fan Tohoku University |
| F23 0523 | 16:50 - 17:10 | Effect of Processing Parameters on Soft Regime Behavior of Plasma Electrolytic Oxidation of Magnesium | Li-Wei Ye National Taiwan University of Science and Technology |

Symposium G: Ceramics for Energy and Environment

Monday, Dec. 5, 2016 R201

Chair: Tatsumi Ishihara, Kyushu University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| G01 0278 | 10:20 - 10:40 | <i>Reversible Operation of Solid Oxide Fuel Cells for Fe-air Rechargeable Solid State Battery (Invited)</i> | Tatsumi Ishihara Kyushu University |
| G02 0616 | 10:40 - 11:00 | AlN-Cu Substrates for Heat Dissipation | Chun-Ting Yeh National Taiwan University |
| G03 0067 | 11:00 - 11:30 | A Status Review of High Temperature Oxide Thermoelectric Materials, Technology, Application, and Market (Keynote) | Mike Chu TAM Ceramics |
| G04 0085 | 11:20 - 11:50 | Improvement of the conductivity of sol-gel derived Li-La-Zr-O thin films by the addition of surfactant | Rujun Chen Tsinghua University |
| 11:50-14:10 | | Lunch | |

Chair: Chin-Yi Chen, Feng Chia University; Chung-Ta Ni, National Cheng Kung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| G08 0049 | 14:10 - 14:40 | Prospects of Ceramics Microturbines for Small-Scale High Efficiency Distributed Energy Applications (Keynote) | Hua-Tay Lin Guangdong University of Technology |
| G09 0332 | 14:40 - 15:00 | Preparation and Characterization of WO ₃ /BiVO ₄ Heterostructures | Chien Nguyen Van National Chiao Tung University |
| G10 0599 | 15:00 - 15:20 | <i>Zirconia Mystery? Why and how Zirconia studies have been misunderstood for a long time? (Invited)</i> | Masahiro Yoshimura National Cheng Kung University |
| 15:20-15:30 | | Coffee Break | |

Chair: Chin-Yi Chen, Feng Chia University; Chung-Ta Ni, National Cheng Kung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| G11 0160 | 15:30 - 15:50 | <i>Composite Mixed Ionic-electronic Conducting Ceramic for Intermediate Temperature Oxygen Transport Membrane(Invited)</i> | Ming-Wei Liao Institute of Nuclear Energy Research |
| G14 0574 | 16:30 - 16:50 | Synthesis and characterization of sol-gel derived highly conductive lithium ion conductive membranes of lithium aluminum titanium phosphates | Hsin-Chun Lu Chang Gung University |
| G15 0579 | 16:50 - 17:10 | <i>Influence of Oxygen Defects on Properties of Li₄Ti₅O₁₂ for Lithium Ion Batteries (Invited)</i> | Chung-Ta Ni National Cheng Kung University |

Chair: Chin-Lung Kuo, National Taiwan University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| G16 0237 | 10:20 - 10:40 | <i>Lithiation Mechanism and Origin of Enhanced Lithium Storage Capacity for Functionalized Graphene Nanoribbons : A First-Principles Study (Invited)</i> | Chin-Lung Kuo National Taiwan University |
| 10:40-13:30 | | Lunch | |

Chair: Winie Tan, Universiti Teknologi MARA; Wei-Ja Shong, Institute of Nuclear Energy Research

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| G21 0125 | 13:30 - 13:50 | <i>Characteristics of Glass Sealants for Intermediate Temperature Solid Oxide Fuel Cell Applications (Invited)</i> | Sea-Fue Wang National Taipei University of Technology |
| G22 0572 | 13:50 - 14:10 | Interfacial Reaction between YSZ Electrolyte and $\text{La}_{0.7}\text{Sr}_{0.3}\text{VO}_3$ Perovskite Anode for SOFC Applications | Chi-Yang Liu National Cheng Kung University |
| G24 0269 | 14:30 - 14:50 | Correlation between Microstructure and Thermal Analysis during redox cycling for Ni-BCY and Ni-BCZY in proton conducting ITSOFC | Chin-Tien Shen National Central University |
| G25 0154 | 14:50 - 15:10 | <i>Nano-sized 8YSZ Interlayer for IT-SOFCs (Invited)</i> | Chieh Chiu National Taiwan University |
| 15:10-15:30 | | Coffee Break | |

Chair: Winie Tan, Universiti Teknologi MARA; Wei-Ja Shong, Institute of Nuclear Energy Research

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| G26 0604 | 15:30 - 15:50 | <i>Identification of polarization processes in Solid Oxide Electrolyzers (SOEC) (Invited)</i> | Jakub Karczewski Gdansk University of Technology |
| G28 0601 | 16:10 - 16:30 | <i>Chitosan and Its Derivatives for Energy Devices (Invited)</i> | Winie Tan Universiti Teknologi MARA |
| G29 0531 | 16:30 - 16:50 | Electrocaloric Properties of $\text{K}(\text{Ta},\text{Nb})\text{O}_3$ Crystals and BaTiO_3 -based Ceramics | Hiroshi Maiwa Shonan Institute of Technology |
| G30 0103 | 16:50 - 17:10 | <i>Electrical Performance of Mn-Co and Ni-Co Metal Powders Mixed with Oxides as Contact Materials in SOFC (Invited)</i> | Wei-Ja Shong Institute of Nuclear Energy Research |

Chair: Piotr Jasinski, Gdansk University of Technology; Tai-Nan Lin, Institute of Nuclear Energy Research

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| G31 0041 | 13:30 - 13:50 | <i>Solid Oxide Fuel Cell Functional Layers Plasma-Deposited onto Thin Alloy Support (Invited)</i> | Sheng-Fu Yang Institute of Nuclear Energy Research |
| G34 0248 | 14:30 - 14:50 | Interlayer Impregnation by Ultrasonic Spray Pyrolysis to Enhance Triple Phase Boundaries of Ceria-based SOFC | Fu-Yin Ko National Taiwan Ocean University |
| G35 0605 | 14:50 - 15:10 | <i>Thin functional layers for solid oxide fuel cells (Invited)</i> | Piotr Jasinski Gdansk University of Technology |
| 15:10-15:30 | | Coffee Break | |

Chair: Piotr Jasinski, Gdansk University of Technology; Tai-Nan Lin, Institute of Nuclear Energy Research

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| G36 0148 | 15:30 - 15:50 | <i>MoS₂-MoO₂ Composite Electrocatalysts by Hot-injection Method for Hydrogen Evolution Reaction (Invited)</i> | Chia-Ling Wu National Cheng Kung University |
| G37 0162 | 15:50 - 16:10 | Synthesis of LSGM powders by Glycine Nitrate Combustion Process and the electrochemical evaluation for the LSGM-based Electrolyte-supported SOFC | Yu-Ming Chen Institute of Nuclear Energy Research |
| G38 0354 | 16:10 - 16:30 | Rate-Determining Steps of Electrode Reaction on (La,Sr)(Co,Ni)O ₃ Thin Films at Low Temperatures | Kazuto Nagahara Tokyo Institute of Technology |
| G39 0384 | 16:30 - 16:50 | LaFeO ₃ -based Oxide Cathode for High temperature Co-electrolysis of Steam/CO ₂ | Kuan-Ting Wu Kyushu University |
| G40 0155 | 16:50 - 17:10 | <i>Two-stage performance and durability evaluation of anode-supported solid oxide fuel cell with 15,000 hours operation (Invited)</i> | Tai-Nan Lin Institute of Nuclear Energy Research |

Wednesday, Dec. 7, 2016 R201

Chair: Dusan Galusek, Institute of Inorganic Chemistry SAS

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|--|
| G41 0455 | 13:30 - 14:00 | Visible Broadband Luminescence of Transition Metals Doped Aluminates and Aluminosilicates (Keynote) | Dusan Galusek Institute of Inorganic Chemistry SAS |
| G42 0309 | 14:00 - 14:20 | Thermally Stable Luminescence Properties And Energy Transfer Of Green-emitting LiBaPO ₄ : Tb ³⁺ , Ce ³⁺ Phosphor | Ru-Yuan Yang National Pingtung University of Science and Technology |
| 14:20-15:50 | | Coffee Break | |

Chair: Dusan Galusek, Institute of Inorganic Chemistry SAS

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|---|
| G47 0385 | 15:50 - 16:10 | A comprehensive study on KOH activation of activated carbon and their supercapacitor application | Chia-Chu Wu Feng Chia University |
| G49 0009 | 16:30 - 16:50 | Increasing Energy Density of Polymer Nanocomposites via Designed Formation of BaTiO ₃ based fillers | Yaodong Yang Xi'an Jiaotong University |

Wednesday, Dec. 7, 2016 R205

Chair: Qingbo Meng, Chinese Academy of Sciences; Tzung Yuh Yeh, National University of Kaohsiung

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| G51 0059 | 13:30 - 13:50 | <i>Application of Functional Ceramics in New Solar Energy Conversion Devices (Invited)</i> | Qingbo Meng Chinese Academy of Sciences |
| G52 0608 | 13:50 - 14:10 | The Modification of TiO ₂ Nanopaste by Ammonium Salts for Application of Dye-Sensitized Solar Cells | Pedaballi Sireesha National Taipei University of Technology |
| G53 0299 | 14:10 - 14:30 | Design and Experiment of Piezoelectric Multimodal Energy Harvester for Low Frequency Vibration | Muhammad Toyabur Rahman Kwangwoon University |
| G54 0146 | 14:30 - 14:50 | An Impact-Based Frequency Up-Converting Hybrid Vibration Energy Harvester For Low Frequency Application | Zhenlong Xu Hangzhou Dianzi University |
| G55 0294 | 14:50 - 15:10 | A High-Temperature BiScO ₃ -PbTiO ₃ Piezoelectric Energy Harvester | Jingen Wu Peking University |
| 15:20-15:30 | | Coffee Break | |

Symposium H: Functional Ceramics for Bio-Applications

Tuesday, Dec. 6, 2016 R303

Chair: Ji Ho Park, Korea Advanced Institute of Science and Technology; Hsi-Chin Wu, Tatung University

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| H01 0102 | 10:20 - 10:50 | Leveraging Biological Nanoparticles to Improve Cancer Therapy (Keynote) | Ji Ho Park Korea Advanced Institute of Science and Technology |
| H02 0558 | 10:50 - 11:10 | Magnetic Bioceramic Nanocrystals in Cancer Therapy | Hsi-Chin Wu Tatung University |
| H03 0438 | 11:10 - 11:30 | Effect of Carbon-assisted Synthesis on Metastability of Tetragonal Zirconia | Rong Tan Huang National Taiwan Ocean University |
| H04 0469 | 11:30 - 11:50 | Fabrication of Ag/TiO ₂ Foams via Pickering Emulsion: A Study on Bactericide and Photocatalysis | Chih-Wei Chen National Chung Hsing University |
| 12:10-13:30 | | Lunch | |

Chair: Sadhasivam Subramaniam, Bharathiar University; Ren-Jei Chung, National Taipei University of Technology

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|---|---|
| H05 0466 | 13:30 - 14:00 | Laccase stabilized with polymer-iron oxide nanoparticles for biohydrogen production – A novel strategy (Keynote) | Sadhasivam Subramaniam Bharathiar University |
| H06 0553 | 14:00 - 14:20 | Structure and Mechanical Properties of Hot Pressed Hydroxyapatite Ceramics from synthesized Hydroxyapatite powder | Krai Kulpetchdara ChiangMai University |
| H07 0050 | 14:20 - 14:40 | Pore-Size Dependent Cell Viability of 3D Pore-Connected Calcium Phosphate Bone Blocks for Bone Regeneration | Jen-Chang Yang Taipei Medical University |
| H08 0568 | 14:40 - 15:00 | Study of Strontium Doped Tricalcium Silicate/Hydroxyapatite Composite Prepared through Sol-gel Processes | Ren-Jei Chung National Taipei University of Technology |
| H09 0526 | 15:00 - 15:20 | Structural Characterization of Cerium-Doped Hydroxyapatite Nanoparticle Synthesized by Sonochemical Technique | Piaw Phatai Udon Thani Rajabhat University |
| 15:20-15:30 | | Coffee Break | |

Chair: Jun Ohta, Nara Institute of Science and Technology; Po-Chun Chen, National Taipei University of Technology

| Program no. Paper no. | Time | Topic | Corresponding Author Affiliation |
|--------------------------|---------------------|--|--|
| H10 0583 | 15:30 - 16:00 | Electrical Stimulator for Retinal Prosthesis (Keynote) | Jun Ohta Nara Institute of Science and Technology |
| H11 0575 | 16:00 - 16:20 | IrO _x Films on Ti-coated Si Substrate for High-Performance Bioelectrodes | Po-Chun Chen National Taipei University of Technology |
| H12 0577 | 16:20 - 16:40 | Fabrication and Application of Amorphous Indium Gallium Zinc Oxide Thin Film Transistor Biosensors | Chen Huseh Chin Chang Gung University |
| H13 0594 | 16:40 - 17:00 | Developments of Macroporous Tricalcium Phosphate with Hyaluronic Acid as the Cell Scaffold for the Subcutaneous Filler | Yung-Chin Yang National Taipei University of Technology |