

## Wednesday, 19 April 2017

**Registration: 8:00 am - 16:00 pm**

**Tabletop Exhibition: 10:00 am - 17:00 pm**

*Lunch and Refreshment Breaks will be held in the Exhibit Area*

**8:50**

**Opening**

**Session: Plenary Session**

**Session Chair:** Minoru Osada

**9:00 am - 10:20 am**

**(Plenary)** [Aerosol Deposition of Thick PLZT-based Films for High-Temperature Capacitors](#)

U. (Balu) Balachandran (Argonne National Laboratory)

**(Plenary)** [Growing Integration Layer \[GIL\] Strategy: Direct Coating Films and/or Direct Bonding/Joining of Nanostructured Ceramic on Metallic Materials in Solution](#)

Masahiro Yoshimura (National Cheng Kung University)

**Coffee Break in Exhibit: 10:20 am - 10:40 am**

**Session: Advanced Deposition**

**Session Chair:** Jun Akedo & Roland A. Tacke

**10:40 am - 12:00 pm**

[Combining Fine Line Photo-imageable with Multilayer Thick Film for Improved Circuit Density](#)

Roland A. Tacke (Neways Microelectronics B.V.)

**(Invited)** [Development of high Heat-Resistant Resistor Film by ELAMOD Using Photo-Reaction of Hybrid Solution \(PRHS\)](#)

Tetsuo Tsuchiya (National Institute of Advanced Industrial Science and Technology,)

[Scratch-Resistant Transparency Sapphire Coating by Aerosol Deposition for Smart Phone Application](#)

Jae-Hyuk Park (IONES. Co. Ltd)

[Leakage Current Properties and Polarization Properties for Self-Supported Thick Films of Bismuth Potassium Titanate Prepared by Using AD Method](#)

Muneyasu Suzuki (National Institute of Advanced Industrial Science and Technology, Japan)

**Lunch Break in Exhibits: 12:00 pm - 13:00 pm**

**Session: Direct Write / 3D Printing**

**Session Chair:** Soshu Kiriara & Brandon Cox

**13:00 pm - 14:40 pm**

**(Invited)** [Additive Manufacturing in High-Value Added Ceramic Products Manufacturing Technologies](#)

Tatsuki Ohji (National Institute of Advanced Industrial Science and Technology, Japan)

**(Invited)** [Critical Evaluation of Multi-Material Additively Manufactured Titania & Barium Titanate Electrical Ceramics for Functionally Graded Materials Applications](#)

Brandon Cox (Colorado School of Mines)

**(Invited)** [Ultraviolet Laser Stereolithography of Diamond Photonic Crystals with Alumina Micro Lattices](#)

Soshu Kiriara (Osaka University)

[Stereolithographic Additive Manufacturing of Modulating Environmental Compatible Ceramic Objects with 1/F Fluctuation](#)

Hiroto Nozaki (Osaka University)

[Design and Fabrication of Sound Structures with Fractal Inner Surface by Using Stereolithography](#)

Shoichiro Kisanuki (Osaka University)

**Coffee Break in Exhibits: 14:40 pm – 15:00 pm**

**Session: Dielectric & Piezoelectric Materials**

**Session Chair:** Satoshi Wada & Muneyasu Suzuki

**15:00 pm - 16:20 pm**

Orthorhombic-Pseudocubic Phase Transition and Piezoelectric Properties of  $(\text{Na}_{0.5}\text{K}_{0.5})(\text{Nb}_{1-x}\text{Sb}_x)\text{-SrZrO}_3$  Ceramics

Sahn Nahm (Korea University)

Independent Structure in Order-Disorder Coexistent BLSF Compounds

Faqiang Zhang (Shanghai Institute of Ceramics, Chinese Academy of Sciences)

Dielectric Thickness, Constant, and Loss Tangent Characterization of Ceramic Substrates

A.Ege Engin (SUSD)

High-Throughput Experimental Investigation of the M-Nb-Ti-O (M = Li,Zn) Microwave Dielectric Ceramics

Yongxiang Li (Shanghai Institute of Ceramics, Chinese Academy of Sciences)

**Session: Energy Applications**

**Session Chair:** Ji-Won Choi & Jun Kano

**16:20 pm - 17:40 pm**

**(Invited)** Artificial Photosynthesis Anode Electrode Composed of Nano Particulate Visible Light Responsive Photocatalyst Film

Yoshihiko Imanaka (Fujitsu Laboratories Ltd.)

**(Invited)** Advanced All-Solid-State Microbatteries for Next-Generation Devices

Ji-Won Choi (Korea Institute of Science and Technology)

Oxide Multilayer Thermoelectric Generators

Joerg Toepfer (Ernst-Abbe-Hochschule Jena)

Fabrication of Wavy-Electrolyte for SOFC by Micro Imprint Process

Kazuki Tokumaru (Kyushu University)

**Banquet in Half-Time “葉風泰夢” at Nara National Museum: 18:00 pm - 20:00 pm**

<http://www.tokokuro.jp/cafe/>

**(We invite all the participants and their accompanies)**

## Thursday, 20 April, 2017

**Registration: 9:00 am - 16:00 pm**

**Tabletop Exhibition: 10:00 am - 16:00 pm**

*Lunch and Refreshment Breaks will be held in the Exhibit Area*

### **Session: Plenary Session**

**Session Chair:** Yoshihiko Imanaka (Fujitsu Laboratories Ltd.)

**9:00 am - 9:40 am**

**(Plenary)** Some Critical Issue in Synthesis of Selected High-Q and Low-Permittivity LTCC Ceramic Materials  
Danilo Suvorov (Jozef Stefan Institute)

### **Session: LTCC Processing**

**Session Chair:** Danilo Suvorov & Hsing-I Hsiang

**9:40 am - 10:20 am**

**Mechanical Strength of Low Temperature Co-Fired Ceramic Multi-Layered Substrate**  
Sadaaki Sakamoto (Murata Manufacturing Co., Ltd.)

**Design and Fabrication of LTCC Based Substrate Integrated Waveguide (SIW) Bandpass Filters with CPW Transitions**  
Zhifu Liu (Shanghai Institute of Ceramics, Chinese Academy of Sciences)

**Coffee Break in Exhibits: 10:20 am - 10:40 am**

### **Session: LTCC & Advanced Deposition**

**Session Chair:** Sadaaki Sakamoto & Zhifu Liu

**10:40 am - 12:00 am**

**Micro-Channel Formation on NiCuZn Ferrite Green Sheets with Different Plasticizer and Binder Ratios Using the Hot Embossing Process**  
Hsing-I Hsiang (National Cheng Kung University)

**Low Temperature Co-firing and Dielectric Properties of Ca Doped  $\text{Al}_2\text{O}_3/\text{K}_2\text{O}_3\text{-B}_2\text{O}_3\text{-SiO}_2$  Composite Ceramics for LTCC Applications**  
Zhe Song (Fenghua Advanced Technology Holding Co., Ltd.)

**Low Temperature Co-fired Ceramic Module Packaging in 5G Antenna and Tx/Rx Modules**  
Ton Schless (SIBCO LLC)

**(Invited)** Buffer-layer Enhanced Heteroepitaxy of Wide-bandgap Semiconductor Thin Films by Room-temperature Laser Processing  
Akifumi Matsuda (Tokyo Institute of Technology)

**Lunch Break in Exhibits: 12:00 pm - 13:00 pm**

### **Session: Nanocrystal Technology**

**Session Chair:** Kazuyoshi Sato & Hiroya Abe

**13:00 pm - 14:40 pm**

**(Invited)** Low Temperature Preparation of Oxide-based Nano-complex Ceramics by Solvothermal Solidification Method and Their Piezoelectric and Dielectric Property  
Satoshi Wada (Yamanashi University)

**(Invited)** Enhanced Dielectric Properties of  $\text{BaTiO}_3$  Single-Crystalline Nanocube 3D Architectures

Ken-ichi Mimura (AIST)

**(Invited)** Ferroelectric-Assisted Gold Nanoparticles Array for Centimeter-Scale Highly Reproducible SERS Substrates  
Xiaoyan Liu (Chongqing University of Science & Technology)

**(Invited)** Fine-Tuning of Chemical Composition and Self-Assembled Structure of 2D Inorganic Nanosheets for Energy-Storage Applications  
Joohyun Lim (Ewha Womans University)

High-Temperature Dielectric Responses in Nanosheet-Based Capacitors  
Muhammad Shuaib Khan (NIMS)

**Coffee Break in Exhibits: 14:40 pm - 15:00 pm**

**Session: Nanocrystal Technology**

**Session Chair:** Ken-ichi Mimura & Joohyun Lim  
**15:00 pm - 16:40 pm**

**(Invited)** Aqueous Growth of High Quality Monodispersed Oxide Nanocrystals  
Kazuyoshi Sato (Gunma University)

**(Invited)** Aqueous Route to Ceria Nanocrystals with Tailored Shapes and Compositions  
Takaaki Taniguchi (NIMS)

**(Invited)** Catalysis of Pd Nanoparticles Supported on Ferroelectric BaTiO<sub>3</sub>  
Jun Kano (Okayama University)

Synthesis of Colloidal Magnetorheological Fluid for Passive Haptic Interface  
Hiroya Abe (Osaka University)

Photovoltaic Effect in Bi<sub>0.9</sub>La<sub>0.1</sub>FeO<sub>3</sub> Thin Films  
Chunlin Fu (Chongqing University of Science and Technology)

## Friday, 21 April, 2017

**Registration: 8:30 am - 12:00 pm**

### **Session: Plenary Session**

**Session Chair:** U. (Balu) Balachandran  
**9:00 am - 9:40 am**

**(Plenary)** High Speed Ceramic Coating with Aerosol Deposition Process and their Applications  
Jun Akedo (National Institute of Advanced Industrial Science and Technology)

### **Session: Advanced Deposition**

**Session Chair:** Takaaki Taniguchi & Akifumi Matsuda  
**9:40 am - 10:20 am**

**(Invited)** Fabrication of Transparent Conductive Zinc Oxide Films through an Aqueous Solution Route with Subsequent UV treatment  
Hajime Wagata (Meiji University)

On-Chip Fabrication of Air-Bubble-Containing Glass Microsphere for Low-Threshold Laser Emission by Localized Laser Heating Technique  
Tetsuo Kishi (Tokyo Institute of Technology)

**Coffee Break: 10:20 am - 10:40 am**

### **Session: Emerging Technologies/Microsystem Applications**

**Session Chair:** Franz Bechtold & Robert C Pullar  
**10:40 am - 12:20 pm**

**(Invited)** Porous 3-DOM Magnetic and Dielectric Cork-Derived Biomimetic Ceramic Foams  
Robert C Pullar (University of Aveiro)

Glass Interposer Technology for High Density Packaging  
Satoru Kuramochi (Dai Nippon Printing co;Ltd)

Development of Autonomous  $\mu$ -Flame Ionization Detector for the Explosion Protection in Civil Sewer Networks  
Franz Bechtold (VIA electronic GmbH)

**(Invited)** Microfluidic Control by Using Thermoplasmonic Marangoni Effect around a Microbubble  
Kyoko Namura (Kyoto University)

Determining Fracture Strength and Critical Flaw of the  $ZrB_2/C/SiC$  Composites on High Temperature Oxidation Using Theoretical Method  
Ruzhuan Wang (Chongqing University of Science and Technology)

**Conference Closing Remarks: 12:20 pm**