FMA-24 program Ver. 2007/4/12

May 23 (Wed.)

Opening Remarks **T. Shiosaki (NAIST)** **10:25--10:30**

Ferroelectric Materials (I) **Chair: T. Tsurumi (Tokyo Inst. of Tech.)** **10:30--12:00**

(23-F-1) Polarization Switching in Defect-engineered $PbTiO_3$ Crystals

Y. Noguchi*, **, M. Tamada**, M. Suzuki**, M. Miyayama**, C. Moriyoshi***, Y. Kuroiwa*** (*RCAST-U-Tokyo, **SORST-JST and ***Hiroshima Univ.)

(23-F-2) Visualization of Sub-Grain Structures and Residual Stresses in Polycrystalline Barium Titanate by Cathodoluminescence Spectroscopy

A. Matsutani, T. Sakashita*, H. Chazono*, G. Pezzotti (Kyoto Inst. of Tech. and *Taiyo Yuden Co. Ltd)

(23-F-3) Growth and Electric Properties of Bismuth Titanate Fiber Crystals

H. Kimura*, R. Tanahashi*, K. Maiwa*, Z. X. Cheng** and C. V. Kannan*** (*NIMS, **Univ. of Wollongong and ***Hokkaido Univ.)

(23-F-4) PTCR Effect of Semiconducting BT-BNT Ceramics Prepared by a Wet-chemistry Route

P.-H. Xiang, H. Takeda and T. Shiosaki (Nara Inst. of Sci. and Tech.)

(23-F-5) Three-Dimensional Domain Structures in $Bi_4Ti_3O_{12}$ Crystals and Their Dynamics

Y. Kitanaka, S. Katayama, Y. Noguchi and M. Miyayama (RCAST, The Univ. of Tokyo)

(23-F-6) Relaxor Behaviour of Layer Structured $SrBi_{1.65}La_{0.35}Nb_2O_9$ Ceramics

C. Feng and S. Huang (Chinese Academy of Sci.)

Fundamentals, Optical Appl. **Chair: Y. Kenji (Japan Atomic Energy** **13:15--14:45**

(23-B-1) Characterization of the Dielectric Property in Nanosized $Pb_{0.7}Sr_{0.3})TiO_3$ Powders Studied by Raman Scattering

J. Kano, S. Tsukada, F. Zhang*, T. Karaki**, M. Adachi**, and S. Kojima (PAS, Univ. of Tsukuba, *Shenyang Inst. of Chem. Tech. and **Toyama Prefectural Univ.)

(23-B-2) Evaluation of Dielectric Properties for Ferroelectric Fine Particles Fabricated by Focused Ion Beam

H. Ogiso, M. Yoshida and J. Akedo (AIST)

(23-B-3) Crystalline Orientation and Optical Constants of (Pb, La)(Zr, Ti)O_3 Thin Films Fabricated by New Sol-gel Process

M. Echizen, T. Kosaka, K. Kubo, T. Tsuchikawa, T. Nishida, H. Takeda, K. Uchiyama and Tadashi Shiosaki (NAIST)

(23-B-4) Fabrication of $Ba_2TiGe_2O_8$ thin film and optical nonlinearity

R. Ogawa, H. Masai, Y. Takahashi, H. Mori, T. Fujiwara, T. Honma*, Y. Benino*, T. Komatsu* (Tohoku Univ. and *Nagaoka Univ. of Tech.)

(23-B-5) Generation of Two Self-Pumped Phase-Conjugated Waves at Different Wavelengths Using Single Photorefractive Crystal

M. Wakui and M. Yamashita (Tokyo Univ. of Science)

(23-B-6) Study of Zn doped $LiNbO_3$ Crystals after Proton Exchange

P.-C. Tsai*, **, P.-J. Chang*, M.-L. Sun*, C.-T. Chia*, H.-L. Liu*, H.-F. Lu**, S.-H. Lin**, *** and M.-L. Hu**** (*Nat'l Taiwan Normal Univ., **Academia Sinica., ***Nat'l Taiwan Univ. and ****Tera Xtal Tech. Co.)

Thin Films (I) **Chair: K. Kato (NIMS)** **15:00--16:15**

(23-T-1) Characteristics and Fabrication of BIT Thin Films by Alcohol-related Materials

M.Yamaguchi, Asa Yamamoto and Y. Masuda* (Shibaura Inst. of Tech. and *Hachinohe Inst. of Tech.)

(23-T-2) Fabrication for high-k Dielectric Nano-films Using Titania Nanosheet a Building Block

M. Osada*, K. Akatsuka*, Y. Ebina*, H. Funakubo**, T. Kiguchi**, K. Takada* and T. Sasaki* (NIMS, *JST-CREST and **Tokyo Inst. Tech.)

(23-T-3) Application of $BaTiO_3$ Film Deposited by Aerosol Deposition to Decoupling Capacitor

H. Hatono, T. Ito and A. Matsumura (TOTO Ltd.)

(23-T-4) Preparation of (1-x)(Ba, Sr)TiO_3-x$MgTiO_3$ Thick Films by Inkjet Printing

Y. Sakai, T. Futakuchi and M. Adachi* (Toyama Industrial Technology Center and *Toyama Pref. Univ.)

(23-T-5) Ferroelectricity in ultrathin $PbTiO_3$ films

H. Fujisawa, Y. Takashima, T. Horii, M. Shimizu, Y. Kotaka* and K. Honda* (Univ. Hyogo and *Fujitsu Lab. Ltd.)

Piezoelectric Materials (I) **Chair: T. Yamamoto (Defence Academy)** **16:30--18:00**

(23-P-1) $BaTiO_3$ Piezoelectric Ceramics Manufactured Using Two-Step Sintering

T. Karaki, K. Yan and M. Adachi (Toyama Pref. Univ.)

(23-P-2) Preparation of [110] Grain Oriented Barium Titanate Ceramics by Templated Grain Growth Method and Their Piezoelectric Properties

S. Wada, K. Takeda, T. Muraishi, H. Kakemoto, T. Tsurumi and T. Kimura* (Tokyo Tech and Keio Univ.*)

(23-P-3) Domain Characteristics of High Performance $BaTiO_3$ Ceramics

H. Takahashi, Y. Numamoto, J. Tani* and S. Tsurekawa** (Fuji Ceramics Co., *Tohoku Univ Niche and **Tohoku Univ)

(23-P-4) Fabrication Process and Electrical Properties of $KNbO_3$ Based Ferroelectric Ceramics

H. Nagata, K. Matsumoto, T. Hirosue, T. Hanagami, Y. Hiruma and T. Takenaka (TUS)

(23-P-5) Processing and Piezoelectric Property of (Li, Na, K)NbO_3 Porous Ceramics and (Li, Na, K)NbO_3/$KNbO_3$ Composite

K. Kakimoto, T. Imura, Y. Fukui, M. Kuno, K. Yamagiwa*, T. Mitsuoka* and K. Ohbayashi* (Nagoya Inst. Tech. and *NGK Spark Plug Co.)

(23-P-6) Dielectric and Piezoelectric Properties of $NaNbO_3$-$LiNbO_3$-$SrTiO_3$ Ceramics

K. Kusumoto (AIST)

May 24 (Thu.)

Thin Films (II) **Chair: M. Okuyama (Osaka Univ.)** **9:00--10:15**

(24-T-6) Fabrication and Properties of (K, Na)NbO_3 Ferroelectric Thin Films Using Metal Alkoxide Precursor Solutions

W. Sakamoto, Y. Nakashima, T. Shimura, T. Yogo and H. Maiwa* (ESI Nagoya Univ. and *Shonan Inst. of Tech.)

(24-T-7) Effect of (Na, K)-excess Precursor Solutions for Alkoxy-derived (Na, K)NbO_3 Powders and Thin Films

K. Tanaka, H. Hayashi, K. Kakimoto, H. Ohsato and T. Iijima* (NIT and *AIST)

(24-T-8) Microstructure of ferroelectric $NaNbO_3$ Films Deposited by Pulsed Laser Deposition

T. Wada, T. Saito and H. Adachi* (Ryukoku Univ. and Matsushita Electric Ind. Co. Ltd.*)

(24-T-9) Piezoelectric Properties of Epitaxial $NaNbO_3$ Thin Films Deposited by rf-magnetron Sputtering

T. Mino, S. Kuwajima, T. Suzuki, I. Kanno and K. Wasa (Kyoto Univ.)

(24-T-10) Preparation and Characterization of Eu:Ti:$LiNbO_3$ Films by the Sol-gel Method

N. Kajitani, M. Kurachi, T. Yagi, M. Takahashi*, T. Yoshiga*, Y. Maeda*, K. Hotta*, S. Sato*, K. Wakita* (Yamaju Ceramics Co., Ltd. and *Chubu Univ.)

Fundamentals (II) **Chair: M. Iwata (Nagoya Inst. of Tech.)** **10:30--12:00**

(24-B-7) Broadband Inelastic Light Scattering Study on Relaxor Ferroelectrics

S. Tsukada, Y. Ike, J. Kano, T. Sekiya*, R. Wang*, Y. Shimojo* and S. Kojima (Univ. of Tsukuba and *AIST)

(24-B-8) Dielectric Responses in Quantum Relaxor $K_{1-x}Li_xTaO_3$

H. Yokota, A. Okada, I. Ishida and Y. Uesu (Waseda Univ.)

(24-B-9) Electric/magnetic Properties and Ferroelectric Domain Structures in $BiFeO_3$-$BaTiO_3$

S. Kitagawa, Y. Horibe*, S. Nishihara, Y. Hosokoshi, S. Teranishi**, Y. Noguchi** and S. Mori (Osaka Pref. Univ., *Rutgers Univ. and **CRCAST, Tokyo Univ.)

(24-B-10) Magnetic and Dielectric Properties of $Tb_{0.5}Ca_{0.5}MnO_3$

K.Yoshii, Y.Hiramitsu, Y. Yoneda, J.Mizuki, A.Nakamura, Y.Shimojo, Y. Ishii, Y. Morii, N. Ikeda* (JAEA and *Okayama Univ.)

(24-B-11) First-principles Study on Alkaline Metal Elements Solution Energy to $BaTiO_3$ with Finite Temperature Effects

H. Moriwake*, T. Hirayama*, Y. Ikuhara* and I. Tanaka** (*JFCC and **Kyouto Univ.)

(24-B-12) Theoretical Consideration for Ferroelectric Properties of Barium Titanate

Y. Aikawa, T. Iwasaki, T. Sakashita and T. Suzuki (Taiyo Yuden Co., Ltd.)

Fundamentals (III) **Chair: S. Kojima (Tsukuba Univ.)** **13:15--14:15**

(24-B-13) Newly Observed Hybridization and Structural Stabilization in Fatigue-Free Layered Ferroelectric $Bi_{3.25}La_{0.75}Ti_3O_{12}$

C. Moriyoshi*, S. Kimura*, S. J. Kim*, Y. Kuroiwa*, ****, Y. Noguchi** and M. Takata***, **** (*Hiroshima Univ., **Univ. of Tokyo, ***RIKEN/SPring-8 and ****CREST/JST)

(24-B-14) Phase Diagram in $Bi_{4-x}Nd_xTi_3O_{12}$

M. Iwata, C.-H. Zhao, Y. Suzuki, R. Aoyagi, M. Maeda and Y. Ishibashi* (Nagoya Inst. of Tec. and *Aichi Shukutoku Univ.)

(24-B-15) Synchrotron X-ray Study on $La_3Ga_5SiO_{14}$ Single Crystal

Y. Yoneda, J. Mizuki, H. Takeda* and T. Shiosaki* (JAEA/SPring-8 and *NAIST)

(24-B-16) Non-Contact Scanning Nonlinear Dielectric Microscopy with Atomic Resolution

R. Hirose and Y. Cho (Tohoku Univ.)

Thin Films (III) **Chair: H. Funakubo (Tokyo Inst. of Tech.)** **14:30--15:30**

(24-T-11) Releasing Characteristics of Dielectric Film and Application for Transfer Technology

M. Ichiki, H. Furue and R. Maeda (AIST)

(24-T-12) Ferroelectric Characteristics of Pb(Zr, Ti)O_3 Thin Films On the IrO_2 Bottom Electrode

K.-M. Lee and I.-W. Kim* (Korea Univ. of Tech. and Edu. and *Samsung Electronics)

(24-T-13) Effect Of Ir_xRu_y/$SrRuO_3$ Top Electrode on Pb(Zr, Ti)O_3 for FRAM Devices

D.H. Im, D.C. Yoo, I.S. Kim, J.E. Heo, H.Y. Ko, S.H. Joo, C.M. Lee, S.O. Park, U.I. Chung and J.T. Moon (Samsung Electronics Co.)

(24-T-14) Characteristics of Nano Scaled Chromium Layers Integrated into (Ba, Sr)TiO_3 Cell Capacitors

D.-C. Shye, M.-W. Kuo*, B.-S. Chiou*, J.-S. Chen**, C.-C. Chou*** and H.-C. Cheng* (Mingchi Univ. of Tech., *Nat'l Chiao Tung Univ., ** ITRC Nat'l Appl. Res. Lab. and ***Nat'l Taiwan Univ. of Sci. and Tech.)

Tutorial **Chair: Y. Uesu (Waseda Univ.)** **15:45--16:45**

(24-TU-1) Growth of Oxide Crystals and Their Composition Control

S. Miyazawa (Waseda Univ.)

Special Lecture **Chair: T. Shiosaki (NAIST)** **16:45--17:45**

(24-S-1) Development and Future of Barium Titanate Ceramics

Y. Sakabe (Murata Mfg. Co.)

May 25 (Fri.) Parallel session (Room 202)

Thin Films (IV) **Chair: M. Noda (Kyoto Inst. of Tech.)** **9:00--10:15**

(25-T-15) Preparation of Single-Phase $BiFeO_3$ Films on Pt Substrates by Metalorganic Chemical Vapor Deposition

S. Yoshizawa, T. Kanoko, T. Tanaka* and Y. Tasaki* (Meisei Univ and, *Toshima MFG Co., Ltd.)

(25-T-16) Role of Sc in $BiFeO_3$-$BiScO_3$ Solid-solution Thin Films

S. Yasui*, **, H. Uchida*, K. Nishida**, ***, T. Katoda***, H. Funakubo** and S. Koda* (*Sophia Univ., **Tokyo tech. and ***Kochi tech.)

(25-T-17) PLD preparation and characterization of multiferroic $Bi_{4+n}Ti_3Fe_nO_{12+3n}$ thin films

S. Nakashima, K. Y. Yun, Y. Nakamura and M. Okuyama (Osaka Univ.)

(25-T-18) Growth of Perovskite (Bi, Ln)($Ni_{0.5}Ti_{0.5}$)O_3 Thin Films by Rf Magnetron Sputtering

K. Fukushima, M. Kobune, T. Yamaji, H. Tada, A. Mineshige, T. Yazawa, H. Fujisawa, M. Shimizu, Y. Nishihata*, D. Matsumura*, J. Mizuki*, H. Yamaguchi**, Y. Kotaka** and K. Honda** (Univ. of Hyogo, *Japan Atomic Agency and **Fujitsu Laboratories Ltd.)

(25-T-19) Ferroelectric and Fluorescent Properties of Rare-earth added Ferroelectric Oxide Films

K. Aizawa (OEDS R&D Center, Kanazawa Inst. of Tech.)

Thin Films (V) **Chair: M. Shimizu (Hyogo Pref. Univ.)** **10:30--12:00**

(25-T-20) Preparation of Ferroelectric layer with Reflected Nano Particles on Aerosol Deposition Method

J. Akedo, M. Lebedev*, H. Tsuda and S. Oh (AIST and *Univ. of Canterbury)

(25-T-21) Preparation and Characterization of $PbZr_{0.5}Ti_{0.5}O_3$ Thick Films by New Slurry Method

T. Takeda, M. Takahashi, S. Sato, M. Kato and K. Wakita (Chubu Univ.)

(25-T-22) Effect of Film Thickness on Electrical Properties of CSD-derived PZT/LNO/Si

Y. Sakamaki, N. Wakiya, H. Suzuki and K. Shinozaki* (Shizuoka Univ. and *Tokyo Inst. of Tech.)

(25-T-23) Piezoelectric and Ferroelectric Properties of Lead Zirconate Titanate Thick Films Fatigued by Pulse Switching

Y. Kobayashi, H. Naganuma , S. Okamura and T. Iijima* (TUS and *AIST)

(25-T-24) Syntheses of $Pb(Sc_{1/2}Nb_{1/2})O_3/xPbTiO_3$ Superlattice Thin Films and Their Structural and Dielectric Properties

S. Asanuma, Y. Uesu, C. Malibert* and J.-M. Kiat (Waseda Univ. and Ecole Centrale Paris*)

(25-T-25) Pyroelectric Property Enhancement of $Pb_{1-x}Ca_xTiO_3$ Thin Films Using Low Temperature Laser Annealing Process

R.-B. Lee, S. Mahboob, M. B. Suresh and C.-C. Chou (National Taiwan Univ. of Sci. and Tech.)

May 25 (Fri.) Parallel session (Room 201)

Piezoelectric Materials (II) **Chair: Y. Cho (Tohoku Univ.)** **9:00--10:15**

(25-P-7) Piezoelectricity of Chiral Polymeric Fibers and its Applications

M. Honda, T. Matsubara, K. Hayashi, S. Kawai, Y. Morimoto and Y. Tajitsu (Kansai Univ.)

(25-P-8) Effect of Sr Substitution on a Nonlinear Piezoelectric Coefficient of Third Higher Term in PZT-based Piezoelectric Ceramics

S. Tashiro and K. Ishii (NDA)

(25-P-9) Effect of pressure on electromechanical properties for PMN-PT ceramics near a MPB composition.

N. Yasuda. T. Banno, K. Ozawa, Md.M. Rahaman, H. Ohwa, Y. Yamashita*, M. Iwata** and Y. Ishibashi*** (Gifu Univ., *Toshiba Co., **Nagoya Inst. Tech. and ***Aichi Shukutoku Univ.)

(25-P-10) Frequency Response Analysis by Finite Element Method in Relaxor Single Crystal-Plates with Giant k_{31}

R. Kato and T. Ogawa (Shizuoka Inst. of Sci. and Tech.)

(25-P-11) Piezoelectric and Dielectric Properties of PMN-PZT Ceramics with the Amount of PZW Substitution

K. Lee, J. Yoo, Y. H. Jeong, D. Kim and S. Lee (Semyung Univ.)

Piezoelectric Materials (II) **Chair: T. Takenaka (Tokyo Univ. of Sci.)** **10:30--12:00**

(25-P-12) Elastic Control of piezoelectric PZT Ceramics using Negative Capacitance Circuit

J. Takarada, K. Tahara, K. Imoto*, **, M. Date*, E. Fukada* and Y. Tajitsu** (Imoto Mech. Eng., *Kobayashi Inst. of Phys. & Chem. and **Kansai Univ..)

(25-P-13) The Relationship between The Driving Direction and The High-power Characteristics for Textured $SrBi_2Nb_2O_9$ Ceramics

S. Kawada, H. Ogawa, M. Kimura, K. Shiratsuyu and Y. Higuchi (Murata Manufacturing Co., Ltd.)

(25-P-14) Sensing Property of Self-sensitive Piezoelectric Micro Cantilever Utilizing $Pb(Zr_{0.52}/Ti_{0.48})O_3$ Thin Film and $LaNiO_3$ Oxide Electrode

T. Kobayashi, R. Kondou*, K. Nakamura*, M. Ichiki and R. Maeda (AIST and *Taiyo Yuden Co. Ltd.)

(25-P-15) More Applicable Formula for Estimating Capacitance Ratio in Electromechanical Coupling System

M. Ohki (Natl. Def. Acad.)

(25-P-16) Design Consideration of Parallel-parallel Connected Piezoelectric Transformer for Thermal Balance

J. H. Park, S. M. Lee, S. J. Choi and B. H. Cho (Seoul National Univ.)

(25-P-17) The Electrical Properties of Thickness Vibration Mode Multilayer Piezoelectric Transformer using Low Temperature Sintering $PbTiO_3$ Ceramics

K. Yoo, D. Kim, J. Yoo, H. Oh and S. Lee (Semyung Univ.)

May 25 (Fri.)

Microwave Materials **Chair: H. Tamura (Murata Mfg. Co.)** **13:15--14:45**

(25-M-1) Synthesis of High Quality Forsterite

M. Ando, K. Himura, T. Tsunooka, I. Kagomiya and H. Ohsato (N.I.T.)

(25-M-2) Diamond Structures Composed of Ceramic Spheres in Resin and Their Microwave Properties

T. Nakagawa, K. Kageyama, H. Takagi, Y. Sakabe, S. Kirihara* and Y. Miyamoto* (Murata Manufacturing Co., Ltd and *JWRI, Osaka Univ.)

(25-M-3) Synthesis and Microwave Dielectric Properties of Silicate Series $Ca_3(Zr_{1-x}Sn_x)Si_2O_9$ Solid Solutions

A. Kan, H. Ogawa and H. Ohsato* (Meijo Univ., *NIT)

(25-M-4) Microwave Dielectric Properties of $Ca_{0.8}Sr_{0.2}TiO_3$-$Li_{0.5}Nd_{0.5}TiO_3$ Ceramics

K. Yan, M. Fujii, T. Karaki, and M. Adachi (Toyama Pref. Univ.)

(25-M-5) High Frequency Dielectric Imaging of Dielectric Device and Its Noise Reduction Analysis Using Two Timensional Fourier Transformation

H. Kakemoto, J. Li, T. Harigai, S.-M. Nam, S. Wada and T. Tsurumi (Tokyo Inst. of Tech.)

(25-M-6) Effect of Crystal Structure on Microwave Dielectric Properties of $(A_{1/3}B_{2/3})_{1-x}Ti_xO_2$

E.S. KIM, D.H. Kang and S.J. Kim (Kyonggi Univ.)

Ferroelectric Materials (II) **Chair: K. Kurihara (Fujitsu)** **15:00--16:00**

(25-F-7) Evaluation of PZT Ceramics Fabricated by Aerosol Deposition Method

T. Miyoshi (FUJIFILM Co.)

(25-F-8) Study on Dielectric Constant Estimation for High Dielectric Powders by AC Impedance Measurement and 2nRC Equivalent Circuit

Y. Nakao (KYOCERA Co.)

(25-F-9) Effects of Particle Agglomeration on the Dielectric Properties of Ceramic Polymer Composites

H.-J. Je, D.-W. Kim, J.-G. Park, and B.-K. Kim (Korea Inst. of Sci. and Tech.)

(25-F-10) Dielectric Property and Crystal Structures of $LiGaTiO_4$ and $(Li_{2/3}Ga_{2/3}Ni_{2/3})TiO_4$ Spinels

C.-I. Cheon and J. S. Kim (Hoseo Univ.)

Ferroelectric Materials (III) **Chair: M. Yamashita (Tokyo Univ. of Sci.)** **16:15--17:15**

(25-F-11) Electrooptic Properties of Epitaxial PZT Films on Silicon Substrates

K. Kurihara, M. Kondo, K. Sato, M. Ishii, N. Wakiya*, K. Shinozaki** (Fujitsu Lab., *Shizuoka Univ. and **TIT)

(25-F-12) Pressure-Temperature Phase Diagram of an Antiferroelectric Liquid Crystal

H. Uehara and J. Hatano* (Aichi Gakuin Univ. and Tokyo Univ. of Sci.*)

(25-F-13) Measurement of Mechanical Resonance in Freely Suspended Ferroelectric Liquid Crystal Film

H. Moritake, R. Ozaki, M. Ozaki*, K. Yoshino** and K. Toda*** (Nat. Def. Acad., *Osaka Univ., **Shimane Univ. and ***Musashi Inst. of Tech.)

(25-F-14) Effect of Polymer Doping on Phase Stability of Liquid Crystal

H. Furue, K. Ikeda and Y. Yamazaki (TUS)

Invited Lecture **Chair: Y. Ishibashi (Aichi Shukutoku Univ.)** **17:30--18:15**

(25-I-1) Hysteretic resistive switching of oxides - the big mystery

R. Waser (Forschungszentrum Julich GmbH)

May 26 (Sat.)

Thin Films (VI) **Chair: T. Nakamura (Rohm)** **9:00--10:15**

(26-T-26) Electrical Characterization Techniques of Dielectric Thin-Films Using Metal-Insulator-Metal Structures

Y. Fukuda*, Y. Otani*, H. Toyota** and T. Ono** (*Tokyo Univ. of Science, Suwa and **Hirosaki Univ.)

(26-T-27) Growth of $SrRuO_3$ Films with Low Electrical Resistivity by RF Magnetron Sputtering

T. Kamo, K. Nishida*, K. Akiyama**, T. Katoda* and H. Funakubo (Tokyo Tech., *Kochi Univ. Tech. and **Kanagawa Ind. Tech. Cent.)

(26-T-28) Effects of the Precursor Solutions on Microstructures and Dielectric Properties of (Y, Yb)MnO_3/HfO_2/Si Structure

K. Suzuki and K. Kato (AIST)

(26-T-29) Impact on SiN Layer Insertion into Pt/$SrBi_2Ta_2O_9$/HfO_2/Si MFIS FETs

T. Horiuchi*, **, M. Takahashi*, S. Wang*, Q.-H. Li*, T. Saito*, K. Ohhashi**, and S. Sakai*, ** (*AIST and **KIT)

(26-T-30) The Electrical Characteristics of MFS Capacitor Structures Based on PVDF (Polyvinylidene Fluoride)

J. H. Kim*, D. W. Kim, H. S. Jeon and B. E. Park (Univ. of Seoul)

Ferroelectric Materials (IV) **Chair: H. Takeda (NAIST)** **10:30--12:00**

(26-F-15) Effects of Microstructure on the Curie Temperature in $BaTiO_3$-Ho_2O_3-MgO-SiO_2 System.

J. Nishikawa, T. Hagiwara, K. kobayashi, Y. Mizuno and H. Kishi (Taiyo Yuden Co., Ltd.)

(26-F-16) Dielectric and Electromechanical Properties of $Ba(Ti_{0.8}Zr_{0.2})O_3$ Ceramics

H. Maiwa (Shonan I. T.)

(26-F-17) Synthesis of Ceramics using $BaTi_2O_5$ Nano Particles and the Physical Properties

Y. Akishige and J. Xu (Shimane Univ.)

(26-F-18) High-resolution Structure Evaluation of MLCC Using the Laser Raman Spectroscopy

K. Nishida, H. Kishi*, H. Funakubo**, T. Katoda and T. Yamamoto*** (Kochi Univ. of Tech., Taiyo Yuden Co. LTD*, Tokyo Inst. of Tech.** and Nat. Def. Acad.***)

(26-F-19) Non-Destructive In-depth Domain Orientation Analysis In $BaTiO_3$ SINGLE-CRYSTAL

M. Higashino, Marco. Deluca, K. Tsuji and G. Pezzotti (Kyoto Inst. of Tech.)

(26-F-20) Ferro- and Piezoelectric Properties of (Pb, La) (Zr, Ti)O_3 Ceramics Modified by $PbTiO_3$

T. Kobayashi, H. Tai and K. Tsuzuki (Nihon Univ.)

Closing Remarks **T. Shiosaki (NAIST)** **12:00--12:10**