Poster Session

*All posters should be displayed throughout Poster Sessions 1 & 2. Authors of poster presentation are needed to put their posters on the board before Poster Session 1 on Aug.30.

Aug. 30 (Fri.)

Poster Session 1 : Rohm Plaza 1st Floor Hall

Session Chair: Takeshi Yoshimura (Osaka Metropolitan Univ.)

18:00-19:45 Posters P1-1 - P1-35

P1-1 Defect-Mediated Stabilization of HfO_2

Yeongrok Jin and Jaekwang Lee

P1-2 Synthesis method and composition control for decreasing secondary phase of $K_{1-x}Li_xNbO_3$ (KLN), and dielectric characteristics of KLN according to composition change and Li amount

Tae-Soo Yeo, Ju-Hyeon Lee, and Wook Jo

P1-3 Infrared and Raman Spectroscopy of Hafnium dioxide Polymorphs

Seongmun Kim, Jaekwang Lee

P1-6 Flexible HZO/LSMO Memristor, Evaluating Memristive Performance under Mechanical Strain for Wearable Electronics

Turgun Boynazarov, Joonbong Lee, Hyunbin Chung, Dae Haa Ryu, Taekjib Choi

P1-7 Measurements of output characteristics of vertical nanowire transistors with $(Hf,Zr)O_2$ thin films

Yui Hamamoto, Ai I. Osaka, Seiji Nakashima and Hironori Fujisawa

P1-8 Theoretical studies on the surface functionalization of Cr_2M (M=C, N) MXenes with oxygen and fluorine

Bakhtiar Ul Haq, Se-Hun Kim

P1-9 Correlation between surface topography and charge gradient current signal at ferroelectric domain walls

Uichang Jeong, Seongwoo Cho, Seungbum Hong

P1-10 Exploration of novel dielectric materials with 1D-octahedral chains

Hiroki Taniguchi

P1-11 Construction of Circularly Polarized Hyper Raman Spectroscopy System

Yugo Kusano, Akitoshi Koreeda, Eiichi Oishi, Yasuhiro Fujii

P1-12 First-principles theoretical study on polaronic dielectrics: Electronic structures and dynamics of defect induced polarons in $SrTiO_3$ perovskite

Inkyung Kim, Ju Hun Park, Kang-Sahn Kim, Yonghwan Yun, Gi Joo Bang, Eunjung Kim, and Shin'ichi G. Higai

P1-13 Structural Inhomogeneity of Relaxor Ferroelectric PMN in the Paraelectric Phase Revealed by Synchrotron Radiation X-ray Diffraction

Kayoko Sakaguchi, Sangwook Kim, Hidehiro Ohwa, Kenji Ohwada, Norihiro Oshime, Shinya Tsukada, and Yoshihiro Kuroiwa

P1-14 Non-equilibrium phase HfO_2 thin films on Si substrate by ALD method

Ryuto Ichikawa, Takeshi Yoshimura, and Norifumi Fujimura

P1-15 Charging and Discharging Currents along Non-ferroelectric Crystallographic Axis in TGS

Toshio Kikuta

P1-16 Surface-Engineered $BaNiO_3$ Perovskite as Promising Electrocatalyst for Oxygen Evolution Reaction

Jun-Yong Choi and Wook Jo

P1-17 Low-frequency Raman spectroscopy in layered ferroelectric WTe_2

Hirofumi Nema, Yasuhiro Fujii, Eiichi Oishi, Akitoshi Koreeda

P1-18 Self-poling in Modified $Pb(Mg,Nb)O_3$-$PbTiO_3$ Single Crystals

Ga Hui Hwang, Ye Rok Choi, Ho-Yong Lee and Chae Il Cheon

P1-19 Enhancement in Polarization of Al-doped HfO_2 Thin Films Crystallized by Flash Lamp Annealing

T. Mifune , H. Tanimura , Y. Ueno , H. Fujisawa , S. Nakashima , Ai I. Osaka , S. Kato , T. Mikawa

P1-21 Effect of Surface Treatment on the Structural and Chemical Properties of Nb-doped $SrTiO_3$ Substrates

Minjae Son, Karishma Sualiheen, Sangjin Choi, Seung Gyo Jeong, Jong-Seong Bae, Seungyong Eom, Do Hyung Kim, Joonghoe Dho, Bharat Jalan, Dooyong Lee, Kyeong Tae Kang

P1-22 Volatile Threshold Switching Induced by Charge Trapping on Interface-Engineered Hafnia-based Ferroelectric Ultra-thin Films

Joonbong Lee, Myeong Seop Song, Hojin Lee, Dae Haa Ryu, Young-Min Kim, Seung Chul Chae, Taekjib Choi

P1-23 Mechanical Switching of Epitaxial Ferroelectric $Hf_{0.5}Zr_{0.5}O_2$ Thin films

Heechan Bang and Chan-Ho Yang

P1-25 Epitaxial growth of Ce, Mn substituted ZnO thin films by combinatorial sputtering

Moe Sakaguchi, Hiroya Oiso, Norifumi Fujimura and Takeshi Yoshimura

P1-26 Strain-induced ferroelectric phase transition in $SrFe_{12}O_{19}$

Seungjae Hwang, Yeongrok Jin, Jaejin Hwang, Jaekwang Lee

P1-27 Enhancement of Dielectric Permittivity for $(1-x)Pb(In_{1/2}Nb_{1/2})O_3-0.05Pb(Mg_{1/3}Nb_{2/3})O_3- xPbTiO_3$ Morphotropic Phase Boundary Composition by Single Phase Poling

Woo-Jin Choi, Jeong-Woo Sun, Temesgen Tadeyos Zate and Wook Jo

P1-28 Reversible hydrogen control of the superconducting state in the $La_{2-x}Ce_xCuO_4$ thin films

Jaehyun Lee, Chan-Ho Yang

P1-29 Low Temperature Sintering of $BiFeO_3$-$BaTiO_3$ Ceramics with Enhanced Piezoelectric Properties by Optimizing Calcination Conditions

Ye Rok Choi, Ga Hui Hwang, Jeong-Seog Kim and Chae Il Cheon

P1-30 Ferroelectric Synaptic Device by Controlling Oxygen Vacancy Migration in $Hf_{0.3}Zr_{0.7}O_2$/ $La_{0.7}Sr_{0.3}MnO_3$ Thin Films

Hyunbin Chung, Dae Haa Ryu, A Young Cho, Hojin Lee, Joonbong Lee and Taekjib Choi

P1-31 Optimization of the 4-nm-thick $Hf_{1-x}Zr_xO_2$ film with low operating voltage and high endurance for ferroelectric random access memory

Han Sol Park, Seungheon Choi, Kyung Do Kim, Min Kyu Yeom, Suk Hyun Lee, Seung Kyu Ryoo, and Cheol Seong Hwang

P1-32 Role of a YSZ-buffer layer for epitaxial oxide thin films on Si substrates

Gwancheol Ji, Suji Im, Sungkyun Park, Jong Mok Ok

P1-33 Catalytic support effect of PdO/ZrO_2 in the acetylene trimerization

Masashi Nakamoto, Teruki Yano, Tomoko Okubo, Jun Kano, Yuta Nishina, Satoshi Hinokuma, Tatsuo Fujii

P1-34 In-Situ Observation of Bi Atoms in Mn-Doped $BiFeO_3$ Thin Films under Electric Field by X-Ray Fluorescence Holography

Kazuki Arima, Seiji Nakashima, Ai I. Osaka, Koji Kimura, Halubai Sekhar, Naohisa Happo, Koichi Hayashi, and Hironori Fujisawa

P1-35 Bandgap Engineering of ZnO@CdS Nanocomposite for Efficient Visible Light-Driven H2 Evolution via Photocatalysis

Asim Ali, Kyeong Tae Kang

Aug. 31 (Sat.)

Poster Session 2 : Rohm Plaza 1st Floor Hall

Session Chair: Kenji Ohwada (QST)

11:45-13:15 Posters P2-1 - P2-34

P2-1 Cancelled

P2-2 Control of the phase formation of strongly correlated ferroelectric $YbMnO_3$ thin films and effect on dielectric characteristics

Sodai Ichikawa, Kento Shimamoto, Takeshi Yoshimura and Norifumi Fujimura

P2-3 Preparation of freestanding films using barium titanate nanoparticles

Hiroshi Takashima, Tetsuhiro Katsumata, Yoshihiro Takebayashi, Takumi Ono, Kiwamu Sue

P2-4 High-resolution Brillouin scattering spectroscopy on relaxor PMN-PT by using a new offset-stabilizing technique of a tandem Fabry-Perot interferometer

Kodai Kadono, Yasuhiro Fujii , Akitoshi Koreeda

P2-5 Vibrational, Optical and Elastic Properties of Cs_2AgBiX_6 (X= Br, Cl) Double Perovskites

Furqanul Hassan Naqvi, Jae-Hyeon Ko, Tae Heon Kim, Chang Won Ahn, Younghun Hwang

P2-6 Enhancement of Negative Capacitance Effects via Structural Phase Optimization in $Hf_xZr_{1-x}O_2$ Capacitors

Yoon-Ki Kim, Jae-Heon Lee, Yu-Bin Park, Sang-Won An, Ji-Sung Oh, Hyun-Jung Kim and Sang-Mo Yang

P2-7 Unipolar Mechanical Fatigue of Piezoelectric Energy Harvester

Seongmun Eom, Jeongjae Ryu, Seungwoo Cho, Jiwon Yeom, and Seungbum Hong

P2-8 Correlation between Charge Ordering, Crystal Phase, and Magnetic Properties of Ilmenite-hematite Solid-Solution Films

Hyeonyu Kim, Sehwan Song, Hyunkyung Lee, Jisung Lee, Minjae Kim, Jinbae Lee, Sang Won Hwang, Sangmoon Yoon, Younjung Jo, Jong Mok Ok, Jae-Ho Chung, Sungkyun Park, Dooyong Lee

P2-9 Enhanced Charge Generation in Flexible $Cu(In,Ga)Se_2$ Solar Cells under Stress via Alkali Treatment: Maximizing the Piezoelectric Effect

Ha Kyung Park, Kanghoon Yim, Jiyoon Lee, Yunae Cho, Inyoung Jeong, Donghyeop Shin, Jihye Gwak, Kihwan Kim, Aron Walsh, William Jo

P2-10 Room-temperature multiferroicity induced by composition-dependent spin exchange interaction in $Pb(Fe_{1/2}Nb_{1/2})O_3$

Ji-Hun Park, Wook Jo

P2-11 Investigation of the surface chemical state of $SrFeO_{2.5}$ films during topotactic phase transition using ambient pressure X-ray photoelectron spectroscopy

Yunzyne Kim, Hyeonyu Kim, Sehwan Song, Beomgyun Jeong, Jong-Seong Bae, Woo Seok Choi, Dooyong Lee, Sungkyun Park, Kyeong Tae Kang.

P2-12 Piezoelectrically Engineered Scaffolds for Accelerating Bone Regeneration

Soyun Joo, Yonghyun Gwon, Soyeon Kim, Sunho Park, Jangho Kim, and Seungbum Hong

P2-13 Changes of Piezoelectric and Optical properties in $K_{0.52}Na_{0.48}NbO_3$ ceramics by Sm^{3+}/Sr^{2+} co-doping

Jiwoo Seo, Sangwon Wi, Haiin Choi, Jinseok Chung, Yunsang Lee

P2-14 Ferroelectric Materials Studies using First-principles Calculations and Materials Informatics

Hiroki MORIWAKE

P2-15 Impulsive Stimulated Thermal Scattering in Potassium Tantalate

Takahiro Okada, Hideaki Oe, Kazuto Kamata, Akitoshi Koreeda, Yasuhiro Fujii

P2-17 Probabilistic Processing of Experimentally Obtained Preisach Density Mapping for modeling ferroelectric switching dynamics

Seungyong Byun and Cheol Seong Hwang

P2-18 Conformal Nanocrystalline Oxide Hard Coatings for 3D Complex Cutting Tools

Dae Haa Ryu, Joonbong Lee, Hyunbin Chung, A Young Cho, Sangwoo Lee, Boynazarov Turgun, Heeseo Yun, Yoonseong Kim, Ki Buem Kim and Taekjib Choi

P2-19 Apparatus for Bragg Coherent X-ray Diffraction Imaging at QST/SPring-8

K. Ohwada, N. Oshime, K. Sugawara, A. Shimada, M. Shao, A. Machida, T. Watanuki and Y. Kuroiwa

P2-21 Influence of $HfN_{0.4}$ Bottom Electrode Oxidation on AlScN Thin Films: A Comparative Study of In-situ and Ex-situ Deposition at Bottom and Top Interfaces

Seung Kyu Ryoo and Cheol Seong Hwang

P2-22 Yttria-stabilized bismuth oxide based ferroelectric thin film for Ferroelectric Tunnel Junction Device

Heeseo Yun, Hyunbin Chung, Dae Haa Ryu, Sangwoo Lee, A Young Cho, Joonbong Lee and Taekjib Choi

P2-24 Stress-induced crystallization of $(Hf,Zr)O_2$ thin films and their application to ferroelectric thin-film transistors

Takeshi Asuka, Ai I. Osaka, Seiji Nakashima and Hironori Fujisawa

P2-25 Measurement of the elastic and piezoelectric constants of $BiFeO_3$ by Brillouin scattering

Hiromu Ishida, Akitoshi Koreeda, Eiichi Oishi, Yasuhiro Fujii, Takuya Satoh, Toshimitsu Ito

P2-26 Structural and ferroelectric properties of $SnTiO_3$ thin films

Jihun Kim, Yong-Jun Kwon, Ducy-Duy Lee, and Chan-Ho Yang

P2-27 Preliminary Experiments for Photovoltaic Effect in TGS

Kango Miyazaki, Toshio Kikuta

P2-28 Two-Dimensional Electron Confinement in Antipolar Ordered Metallic $SrFeO_3$

Jaejin Hwang, Jaekwang Lee

P2-29 Molybdenum-based Hard Coating for High Precision MEMS Probe Pins

Hyunbin Chung, A Young Cho, Sangwoo Lee, Boynazarov Turgun, Dae Haa Ryu, Heeseo Yun, Yoonseong Kim, Joonbong Lee and Taekjib Choi

P2-30 Enhanced Poling Efficiency of a Piezoelectric Nanocomposite via a Maximized Organic-Inorganic Interfacial Effect

Yeongyu Kim, Kyung Tae Kim, Sung Cheol Park, Dong Hun Heo, Dong Yeol Hyeon, Siva Pratap Reddy Mallem, Seungbum Hong, Kwi-Il Park

P2-31 Effect of A-site cation on the Structural Distortions and Phase Transitions in Mixed Lead Chloride Perovskite Single Crystals

Syed Bilal Junaid, Furqanul Hassan Naqvi, Jae-Hyeon Ko, Shon Wonhyuk, Seongsu Lee

P2-32 Strain control of $(K, Na)NbO_3$ films for the enhanced piezoelectric property

Nagi Chujo, Kohei Kawade, Takanori Nagasaki, Jingwei He, Isaku Kanno, Tomoaki Yamada

P2-33 Composition Control of $YbFe_2O_4$ Electronic Ferroelectric Thin Films with PLD Growth Process Monitoring

Kento Shimamoto, Takaumi Hayama, Sodai Ichikawa, Takeshi Yoshimura, and Norifumi Fujimura

P2-34 High-performance Hafnia-based Ferroelectric Synaptic device with Anti-ferroelectric Interfacial Layer

Dae Haa Ryu, Joonbong Lee, A Young Cho, Juhyeong Lee and Taekjib Choi