

# Program

August 25th (Sun.)	
17:00–18:00	Registration at Lobby floor, Main building, Jozankei View Hotel
18:00–20:00	Welcome reception

August 26th (Mon.), Room A (Cosmo)		
Chair: Prof. Satoru IWAMORI		
09:00–09:35	1. Plenary	Development of an Optical Fiber Sensor for Polymer Degradation Used in Sodium Hypochlorite Environment, <u>Masatoshi KUBOUCHI</u> <sup>1</sup> , Daiki MATSUZAWA <sup>1</sup> , and Yoshihiko ARAO <sup>1</sup> , Tokyo Institute of Technology, Japan
09:35–10:10	2. Plenary	Perovskite/Silicon Tandem Solar Cells, <u>Donghwan KIM</u> , Department of Materials Science and Engineering, Green School, Korea University, Korea
10:10–10:35	3. Invited	Developments of Iron-based Superconducting Wires, <u>Tsuyoshi TAMEGAI</u> <sup>*</sup> , Daisuke MIYAWAKI <sup>*</sup> , Takahiro SUWA <sup>*</sup> , Sunseng PYON <sup>*</sup> , Katsutoshi TAKANO <sup>**</sup> , Hideki KAJITANI <sup>**</sup> , Norikiyo KOIZUMI <sup>**</sup> , and Satoshi AWAJI <sup>***</sup> , <sup>*</sup> Department of Applied Physics, The University of Tokyo, <sup>**</sup> Naka Fusion Institute, National Institutes for Quantum and Radiological Science and Technology, <sup>***</sup> High Field Laboratory for Superconducting Materials, Institute for Materials Research, Tohoku University, Japan
Chair: Prof. Donghwa LEE		
10:50–11:15	4. Invited	Magnetocapacitance effect in spintronic devices, <u>Hideo KAIJU</u> <sup>*</sup> , Taro NAGAHAMA <sup>**</sup> , Osamu KITAKAMI <sup>***</sup> , Junji NISHII <sup>**</sup> , and Gang XIAO <sup>****</sup> , <sup>*</sup> Keio University, <sup>**</sup> Hokkaido University, <sup>***</sup> Tohoku University, <sup>****</sup> Brown University, Japan
11:15–11:40	5. Invited	Multiphysics study on reset stuck failure in phase-change memory, <u>Yongwoo KWON</u> , Department of Materials Engineering, Hongik University, Korea
Chair: Prof. Takahiro KONDO		
11:40–12:05	6. Invited	Nanoimprinter DOE film for anticounterfeit, <u>Heon LEE</u> , Department of Materials Science and Engineering, Korea University, Korea

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Chair: Prof. Takahiro KONDO		
14:35–15:00	7. Invited	Performance improvement of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ based materials as anode for Li-ion batteries, <u>Jae Hyun KIM</u> , Smart Textile Convergence Research Group, DGIST, Korea
Chair: Prof. Byungha SHIN		
15:00–15:25	8. Invited	Computational Chemical Analysis on Element-Specific Magnetic Phases in a Mixed Anion Layered Compound Superconductor, $\text{Sr}_2\text{VFeAsO}_{3-\delta}$ , Yujiro TOJO*, Manami NAKANISHI*, and <u>Yoichi KAMIHARA</u> ***, *Department of Applied Physics and Physico-Informatics, Faculty of Science and Technology, Keio University, Japan, **CSRN, Keio University, Japan
15:25–15:50	9. Invited	Enhancement of energy storage and thermal stability of relaxor $\text{Pb}_{0.92}\text{La}_{0.08}\text{Zr}_{0.52}\text{Ti}_{0.48}\text{O}_3$ - $\text{Bi}(\text{Zn}_{0.66}\text{Nb}_{0.33})\text{O}_3$ thick films through aerosol deposition, <u>Dae-Yong JEONG</u> , Department of Materials Science and Engineering, Inha University, Korea
Chair: Prof. Do-Kyun KWON		
16:05–16:30	10. Invited	Separation of inert solvent mixtures accentuated by confined spaces, Ayano CHIBA*, Akio OSHIMA**, Kenzaburo OKUBO**, and <u>Ryo AKIYAMA</u> **, *Keio University, **Kyushu University, Japan
16:30–16:55	11. Invited	Measurement and Modeling of Residual Stress in Aluminum Casting, <u>Eunkyung LEE</u> , Department of Ocean Advanced Materials Convergence Engineering, Korea Maritime and Ocean University, Korea
Chair: Prof. Shigeto HIRAI		
16:55–17:20	12. Invited	Electrochromic Properties of $\text{WO}_3$ Films Deposited by Glancing-angle Sputtering, <u>Yasushi INOUE</u> <sup>1</sup> , Naoki ARUGA <sup>1</sup> , and Osamu TAKAI <sup>2</sup> , <sup>1</sup> Chiba Inst. Technol., Japan, <sup>2</sup> Kanto-Gakuin Univ., Japan
17:20–17:45	13. Invited	Dielectric properties and their energy storage performance of the BNT–BT/ST layered 2–2 composite thin films, <u>Do-Kyun KWON</u> , Department of Materials Engineering, Korea Aerospace University, Korea

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August 26th (Mon.), Room B (Pegasus/Sirius)		
Chair: Prof. Mitsuya MOTOHASHI		
10:50–11:15	14. Invited	Supramolecular Complexation of Polyethers with Polyviologen–Based Single–Ion Conductors, <u>U Hyeok CHOI</u> , Department of Polymer Engineering, Pukyong National University , Korea
11:15–11:40	15. Invited	Key issues in increasing efficiency of $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$ thin film solar cells on flexible substrates, <u>Jin Hyeok KIM</u> , Dept. Materials Sci. and Eng., Chonnam National University, Korea
11:40–12:05	16. Invited	Oxygen Reaction Catalysis of Perovskite Ruthenates at the Metal–insulator Boundary, <u>Shigeto HIRAI</u> *, Tomoya OHNO*, Takeshi MATSUDA*, and Shunsuke YAGI**, *School of Earth, Energy and Environmental Engineering, Kitami Institute of Technology, Japan **Institute of Industrial Science, The University of Tokyo, Japan
Chair: Prof. Masatoshi KUBOUCI		
14:35–15:00	17. Invited	Fabrication of new functional micro/nano–structured silicon, <u>Mitsuya MOTOHASHI</u> *, He WANG*, Naoki AOYAMA*, Toshiaki SUZUKI*, and Masaaki NIWA*, *Tokyo Denki Univ., Japan
15:00–15:25	18. Invited	Improved stability of Ag thin films by utilizing Al nanolayers, <u>Midori KAWAMURA</u> , Kitami Institute of Technology, Japan
15:25–15:50	19. Invited	Polystyrene Crystals as Porous Materials: Selective Absorption of Solvents, <u>Ayano CHIBA</u> *, Akio OSHIMA**, Kenzaburo OKUBO**, and Ryo AKIYAMA**, *Keio University, **Kyushu University, Japan
Chair: Prof. Yongwoo KWON		
16:05–16:30	20. Invited	First–principles investigations on I–V hysteresis of $\text{MAPbI}_3$ –based perovskite solarcell, <u>Donghwa LEE</u> , Department of Materials Science and Engineering, POSTECH, Korea
16:30–16:55	21. Invited	Spectroscopy of Single Semiconductor Nanoparticle, <u>Takahiro KONDO</u> , Kenta HIROSE, Mahiro HANAZAWA, Takeru YUMOTO, Ryosuke KOJIMA, and Yuika SAITO, Gakushuin University, Japan

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16:55-17:20	22. Invited	Carrier-resolved photo-hall measurements of halide perovskites, <u>Byungha SHIN</u> , Dept. Materials Sci. and Eng., KAIST, Korea
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# Program

August 26th (Mon.) Poster session (Vega/Polaris), 10:40–14:25 for posting, 12:50–14:20 for discussion	
Chair: Prof. Yasushi INOUE	
P1	Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> thin film solar cells with 8% efficiency on flexible Mo foil substrates, <u>Eun Ae JOE</u> , Dept. Materials Sci. and Eng., Chonnam National University, Korea
P2	Superconductivity in Nb- or Ta-based "1-2-1-2" cuprates, <u>Toshihiko MAEDA</u> , Yoshihiro YAMADA, and Taisei NAKAMURA, Kochi University of Technology, Japan
P3	Synthesis and Superconductivity of Pb- or Bi-based "1-2-0-1" Cuprates, <u>Ryutaro KORESAWA</u> , Aoi Sato, Tamon WADA, and Toshihiko MAEDA, Kochi University of Technology, Japan
P4	Synthesis and Characterization of Bi-based "1-2-1-2" Cuprates, <u>Tamon WADA</u> , Ryutaro KORESAWA, and Toshihiko MAEDA, Kochi University of Technology, Japan
P5	Application gold decorated Titania nanoparticles by laser, <u>Ryosuke MIYAZAKI</u> <sup>*</sup> , Kulinich SERGEI <sup>**</sup> , Satoru IWAMORI <sup>***</sup> , and Stanislav Gulvatov <sup>***</sup> , <sup>*</sup> Graduate school of Engineering, Tokai University, Japan, <sup>**</sup> Department of Engineering, Tokai University, Japan, <sup>***</sup> For Eastern Federal University, Vladivostok, Russia
P6	Application for structure control of TiO <sub>2</sub> nanoparticles and Perovskite Solar Cell (PSC) prepared by electrostatic inkjet, <u>Ning YUZE</u> <sup>*</sup> , Sakuma SHUNJI <sup>**</sup> , Md. SHAHIDUZZANAB <sup>***</sup> , Tomita TSUNEYUKI <sup>****</sup> , Umedzu SHINJIRO <sup>*****</sup> , and Iwamori SATORU <sup>*****</sup> , <sup>*</sup> Graduate school of Engineering, Tokai University, Japan, <sup>**</sup> Department of Engineering, Tokai University, Japan, <sup>***</sup> Nanomaterials Research Institute, Kanazawa University, Japan, <sup>****</sup> School of Science, Tokai University, Japan, <sup>*****</sup> School of Creative Science and Engineering, Waseda University, Japan <sup>*****</sup> Department of Engineering, Tokai University, Japan
P7	Synthesis of the cobalt-based layered oxides and their OER mechanism, <u>Masaya FURUNAKA</u> <sup>*</sup> , Shigeto HIRAI <sup>*</sup> , Tomoya OHNO <sup>*</sup> , and Takeshi MATSUDA <sup>*</sup> , <sup>*</sup> Kitami Institute of Technology, Japan
P8	Several possible electronic phases in FeS and SrTiO <sub>3</sub> Interface based on Density functional Theory, <u>Kentaro WATANABE</u> <sup>*</sup> , Syogo HIGASHI <sup>*</sup> , Manami NAKANISHI <sup>*</sup> , Masanori MATOBA <sup>*</sup> , and Yoichi KAMIHARA <sup>*</sup> , <sup>*</sup> Department of Applied Physics and Physico-Informatics, Keio Univ., Japan

# Program

P9	<p>Spontaneous magnetic polarization of a layered hexagonal compound, <math>\text{EuSn}_2\text{As}_2</math>,  <u>Koki HIRATA</u>*, Ryosuke SAKAGAMI*, Masanori MATOBA*, and Yoichi KAMIHARA**,            *Department of Applied Physics and Physico-Informatics, Keio Univ., Japan,            **CSRN, Keio Univ., Japan</p>
P10	<p>Thermal transport properties of mixed anion layered compound <math>\text{Sr}_2\text{CrFeAsO}_{3-\delta}</math>,  <u>Harunari KARIMATA</u>*, Michitaro YAMAGUCHI*, Suguru IWASAKI*, Ryosuke SAKAGAMI*,            Yosuke GOTO**, Yoshikazu MIZUGUCHI**, Masanori MATOBA*, and Yoichi KAMIHARA****,            *Dep. APPI, Keio Univ., Japan, **Tokyo Metropolitan Univ., Japan, ***CSRN, Keio Univ., Japan</p>
P11	<p>Crystallographic phases in <math>\text{Y}_{0.77}\text{Gd}_{0.23}\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}</math> thin film            annealed in the range of 573 K to 673 K,  <u>Shohei KOZUTSUMI</u>*, Suguru IWASAKI*, Masanori MATOBA*, Yoichi KAMIHARA*,            and Masashi MIURA**,            *Department of Applied Physics and Physico-Informatics, Keio Univ., Japan,            **Department of System Design, Seikei Univ., Japan</p>
P12	<p>Thermoelectric properties of mixed anion layered compound <math>\text{Sr}_2\text{VFeAsO}_{3-\delta}</math> (<math>\delta = 0.150</math>),  <u>S. IWASAKI</u>*, M. YAMAGUCHI*, R. SAKAGAMI*, K. KIHOU**, C. H. LEE**, and Y. KAMIHARA**, ***,            *Keio University, Japan, **AIST, Japan, ***CSRN, Keio University, Japan</p>
P13	<p>Experimental and Theoretical Study on Tunnel Magnetocapacitance            in Fe/MgF<sub>2</sub> Nanogranular Films,  <u>Robin MSISKA</u>*, **, Shusaku HONJO*, Yuki ASAI*, Masashi ARITA*,            Atsushi TSURUMAKI-FUKUCHI*, Yasuo TAKAHASHI*, Norihisa HOSHINO***,            Tomoyuki AKUTAGAWA***, Osamu KITAKAMI***, Masaya FUJIOKA*, Junji NISHII*,            and Hideo KAIJU**,            *Hokkaido University, Japan, **Keio University, Japan, ***Tohoku University, Japan</p>
P14	<p>Fabrication and Structural Analysis of Periodically-Structured Stretchable Carbon Micro-Fibers,  <u>Masahiro ISHIDA</u>*, and Hideo KOHNO**,            *Department of Engineering, Graduate School of Engineering, Kochi University of Technology,            Japan,            **School of Environmental Science and Engineering, Kochi University of Technology/Center for            Nanotechnology, Japan</p>
P15	<p>Molecular Simulation of Interaction between Methylene Blue and Pullulan            by Molecular Dynamic Simulation,  <u>Pasika TEMEERPRASERTKIJ</u>*, Saranya YENCHIT*, Michio IWAOKA**, and Satoru IWAMORI*,            *Graduate School of Science and Technology, Tokai University, Japan            **Department of Chemistry, Tokai University, Japan</p>

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P16	<p>Chemical stability of a colorimetric indicator for detection hydroxyl radical based on methylene blue dyed pullulan thin films,</p> <p><u>Saranya YENCHIT</u>*, Yuta TADOKORO**, Hiromi YAMANAKA**, Yoshiki ODA***, Yosuke OKAMURA*, Toshiyuki INAZU*, and Satoru IWAMORI*,</p> <p>*Graduate School of Science and Technology, Tokai University, Japan</p> <p>**Graduate School of Engineering, Tokai University, Japan</p> <p>***Research Promotion Division, Tokai University, Japan</p>
P17	<p>Evaluation of oxidation in the depth direction of niobium oxide film using anodic oxidation treatment,</p> <p><u>Munenori YOSHIDA</u>*, Hiromi YAMANAKA*, Yuta SHIMOYAMA*, Syuichi MAEDA**, and Satoru IWAMORI***,</p> <p>*Graduate School of Science and Technology, Tokai University, Japan,</p> <p>**Department of Optical and Image Engineering, Tokai University, Japan,</p> <p>***Department of Mechanical Engineering Faculty of Engineering, Tokai University, Japan</p>
P18	<p>Accuracy Estimation of Pitch-catch Method Results for FRP Samples,</p> <p><u>Aaisha AL-AISAE</u>E, Yoshihiko ARAO, and Masatoshi KUBOUCHI,</p> <p>Department of Chemical Science and Engineering, Tokyo Institute of Technology, Japan</p>
P19	<p>Preparation of a-BN films using RF sputtering and their tribological properties,</p> <p><u>Takuya MARUKO</u>* and Yukihiro SAKAMOTO*,</p> <p>*Chiba Institute of Technology, Japan</p>
P20	<p>The Effect of Frequency on Diamond growth by Pulse Microwave Plasma CVD,</p> <p><u>Yi ZENG</u>*, Yukihiro SAKAMOTO**, and Takuya MARUKO*,</p> <p>*Chiba Institute of Technology, Japan</p>
P21	<p>Investigation of growable conditions of AlN grain and Liquid Phase Epitaxial (LPE) growth in Al-Sn flux,</p> <p><u>Yelim SONG</u>*, **, Fumio KAWAMURA**, Takashi TANIGUCHI**, Kiyoshi SHIMAMURA*, **, and Naoki OHASHI**, ***,</p> <p>*Graduate School of Advanced Science and Engineering, Waseda University, Japan,</p> <p>*National Institute for Materials Science, Japan,</p> <p>***Materials Research Center for Element Strategy, Tokyo Institute of Technology, Japan</p>
P22	<p>Eco-friendly narrow gap semiconductor single crystals for short-wavelength infrared sensing,</p> <p><u>Ahmed EL-AMIR</u>*, **, Takeo OHSAWA*, Yoshiki WADA*, Satoshi ISHII*, Masataka IMURA*, Tadaaki NAGAO*, ***, Kiyoshi SHIMAMURA*, **, and Naoki OHASHI*, ***,</p> <p>*National Institute for Materials Science, Japan, **Waseda University, Japan,</p> <p>***Tokyo Institute of Technology, Japan, ****Hokkaido University, Japan</p>

## Program

P23	Evaluation of the inhibitory effect of aromatic components on histamine release, <u>Miho EGUCHI</u> * and Takashi SAITO, *Department of Applied and Biosciences, Graduate School of Engineering, Kanagawa Institute of Technology, Japan
P24	Evaluation of Thrombotic Fibrinolytic Activity of Mushroom Fruit Body, <u>Yuki MATSUOKA</u> * and Takashi SAITO, *Department of Applied and Biosciences, Graduate School of Engineering, Kanagawa Institute of Technology, Japan