

隨時更新

Updated from time to time

すべての重要な情報

All important information

5月24日（月）12:30バージョン

Version of 12:30 on May 24 (Mon)

EM-NANO 2021 事務局

Office of EM-NANO 2021

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Preface

We are very pleased to welcome you to the Eighth International Symposium on Organic and Inorganic Electronic Materials and Related Nanotechnologies (EM-NANO 2021) being held as a completely virtual meeting during June 1–3, 2021. From the first symposium held in Niigata in 2004 to the last symposium held in Nagano in 2019, we had seven EM-NANOs to provide a forum for discussion related to subjects on organic and inorganic materials and nanotechnologies for electronics, which stimulated the activities of the research in the members of the Japan Society of Applied Physics (JSAP), especially for the members of the Hokuriku-Shin'etsu Chapter of JSAP. In this symposium, we are planning two special perovskite solar cell sessions.

Taking into account the COVID-19 pandemic, this symposium is held as an online meeting through Zoom software, because agencies around the world are now issuing restrictions on travel, gatherings, and meetings in an effort to limit the spread of the pandemic. The health and safety of our participants are of top priority to the organizing committee.

On behalf of the organizing committee, we would like to express our sincere thanks to the plenary and invited speakers, who are international renowned researchers from home and abroad. We are also pleased to have 133 contributions to present and share their new research results and/or review reports in this symposium. Authors at EM-NANO 2021 are encouraged to submit original or review papers to the Japanese Journal of Applied Physics (JJAP) Special Issue “Nano Electronic Materials” to be published in January 2022.

This symposium is sponsored by JSAP, administrated by Hokuriku-Shin'etsu Chapter of JSAP, and Co-supported by Toyama Prefectural University.

We would like to express sincere grateful to Prof. K. Matsumoto, Prof. H. Endo, Dr. T. Iwata, and Prof. A. Masuda, organizing committee members and program committee members for their cooperation in program arrangement, organizing and executing this symposium.

We wish you will success and enjoy in this memorable EM-NANO 2021 filled with fruitful discussion of scientific and technological issues.



Tomoaki Karaki
Toyama Prefectural University
The Chairperson of EM-NANO 2021

May 25, 2021

Organizing Committees

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Vice Committee Chair

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- Tadashi Fujii (Toyama Pref. Univ.)
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- Satoshi Sunada (Kanazawa Univ.)
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- Takahiro Kinoshita (Toyama Pref. Univ.)
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- Atsushi Masuda (Niigata Univ.)

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Vice chair

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Program &

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Member & JJAP special issue manager

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- Hiroyuki Okada (Univ. of Toyama)
- Atsushi Masuda (Niigata Univ.)
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Local executive committee members

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- Kimihisa Matsumoto (Toyama Pref. Univ.)
- Hiroshi Endo (Toyama Pref. Univ.)
- Tatsuya Iwata (Toyama Pref. Univ.)

Secretariats

- Hiroshi Endo (Toyama Pref. Univ.)
- Tatsuya Iwata (Toyama Pref. Univ.)

How to get and open the Program&Abstracts

- Download from the link :

https://www.dropbox.com/s/iweia8vnoy2480n/EM-NANO2021_Program%26Abstracts.pdf?dl=0

- Input the **Conference password** to read it. You can also download it. When you open it, the password is needed. The password is sent from EM-NANO 2021 Secretariat <em-nano2021@pcojapan.jp> after you finished the payment.

Information about Presentation

- Conference language

The Conference language is English.

- Timing of the oral talks

In order to for participants to benefit most from the two parallel sessions of the symposium, an exact schedule must be maintained. The session chairs are asked to ensure that speakers respect the allowed times as indicated below.

Plenary talks	50 minutes (43 min. for talk and 7 min. for Q&A)
Invited talks	35 minutes (30 min. for talk and 5 min. for Q&A)
Contributed talks	20 minutes (15 min. for talk and 5 min. for Q&A)
Student oral talks	15 minutes (12 min. for talk and 3 min. for Q&A)

The first bell is 2 minutes before the end of talk; the second bell is the end of talk; the third bell is the end of presentation.

- How to start the oral presentations

It is recommended to use PPT with size of 16:9. Please enter and wait in the lecture room, and open the presentation PPT file. Do the slide-show of the PPT and start your presentation if instructed by the session chair. You can see a countdown digital clock on your screen. [Please finish the talk when the time comes as shown in above table, to secure enough time for Q&A.](#)

- Information for the Poster Presenters

Please enter and wait in the poster room (rest room) indicated by your presentation number, several minutes before the poster session start (12:50). Open the poster presentation PPT file. Then press the share screen button to share the screen. During the poster presentation time (12:50-14:20), if participant(s) come(s) in the room, you can introduce your work, or answer questions using the PPT. [If you are asked in Japanese, answers in Japanese are allowed.](#)

If someone accidentally did the share screen in your room, you can ask him (her) to stop it by voice, or you can ask Zoom host (Poster session Staff) to give an operating help.

If someone tell you that he (she) cannot see your screen, you may need to do the share screen again.

[Presenters Guidelines](#)

How to Enter the Conference Rooms

- The conference rooms will be opened 45 minutes before the conference schedule from June 1 (Tue) to 3 (Thu).
- Enter the Conference website: <https://www.pu-toyama.ac.jp/EM-NANO2021/>
In the unlikely event that Toyama Prefectural University server does down, please connect to the emergency reserve site: <https://sigri.io/EM-NANO2021/>
- Click "Conference main venue entrance", and then a login window will be opened



- Fill the ID (registration number) and password (conference password), then login.
- Click a room in the time table (**green**: Room A, **red**: Room B, and **blue**: Poster Room) to enter.

	Session A1-2	Session B1-2	Session A2-2	Session B2-2	Session A3-2	Session B3-2
11:40	A1-2-1 Invited Talk F. Song	B1-2-1 Invited Talk K. Takei	A2-2-1 Invited Talk M. Muruganathan	B2-2-1 Invited Talk S. Mukherjee	A3-2-1 Invited Talk I. Osake	B3-2-1 Invited Talk T. Ujihara
12:00	A1-2-2 K. Yamagisa	B1-2-2 M. Akabori	A2-2-2 Y. Yaakob	B2-2-2 T. Makino	A3-2-2 S. S. Pandey	B3-2-2 N. Kawaguchi
12:20	Lunch Break				A3-2-3 S. Naka	B3-2-3 T. Iwata
12:50	Poster Session 1 (P1-01 --- P1-38)	Poster Session 2 (P2-01 --- P2-37)			Closing Remarks	
14:20	Short break					
...						

- If you want to change the conference room, please leave the room and then click other room in the time table again.
- After entering the conference room, please refer to the following guidelines.

[**Audience Guidelines**](#)

[**Session Chair Guidelines**](#)

[**Presenters Guidelines**](#)

ポスターPDFデータの作成要領

提出について

- 提出期間：すぐに出してください。
- 提出先：<https://www.dropbox.com/request/sFz3PzqdMx07EdWPYKdL>
- 提出者：講演者
- ファイル名は、「講演番号_登録番号」に変更し、アップロードしてください（例：P2-38_EM-NANO789）。※講演番号は、同封のプログラムから調べられます。登録番号は、参加登録時に自動返信メールにてお知らせしています。
- 講演番号と登録番号が一致しない投稿は無効にする場合があるので、必ず確認してください。
- 提出期間中に同じ演題に対して複数回投稿された場合は、最新のものを使用いたします。
- 提出されたデータは、編集を行わずそのまま掲載いたします。締め切り後の差替え、変更は一切お受けできません。

ファイル形式について

- ファイル形式：サイズは16:9（横向き）のPowerPoint等にてスライドを作成いただき、PDF形式で保存してください。なお、パスワード等PDFのセキュリティは設定しないでください。
- ポスタースライドの枚数：10枚以下
- 表題スライドの左上に講演番号を入れてください。
- PowerPointファイルをPDF化してアップロードしていただくので、事前投稿ポスターファイルの作成時には、原則アニメーション機能は使用しないでください。
- 著作権の点から、全スライドに講演者氏名と所属と講演番号を入れることを勧めます。
- ハイパーリンクは作成環境により無効になることがありますので使用しないでください。
- 図表は単色での作成を推奨します。利用ソフトなど作成環境によりグラデーションが表現できない可能性があります。

Guidelines for creating poster PDF file

About submission

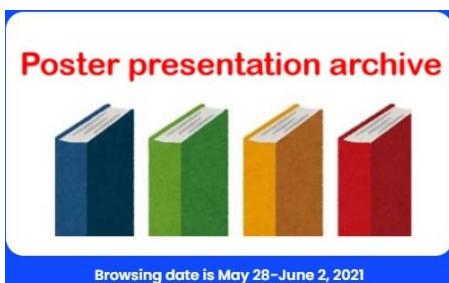
- Submission period : As soon as possible
- Submission destination : <https://www.dropbox.com/request/sFz3PzqdMx07EdWPyKdL>
- Submitter : presenter
- Change the file name to 「presentation number_registration number」 (for example : P2-38_EM-NANO789), and then upload it. ※ The presentation number could be checked from the attached final program. The registration number has been sent by an automatic reply email after your registration.
- Submission which presentation number and registration number do not match may be invalidated. Please be sure to check it.
- If the same file is submitted multiple times during the submission period, the latest one will be used.
- The submitted file will be posted as it is without editing for on-demand reading only. Neither replacements nor changes will be accepted after the deadline.

About file styles

- File style : Prepare PowerPoint with size of 16:9 (sideways) and then save it as pdf style. Please do not set security password.
- PowerPoint page limitation : 10 or less.
- Enter the presentation number in the upper left of the title slide.
- The PowerPoint file is changed to pdf style for on-demand reading only file, so please do not use the animation function.
- From a copyright standpoint, we recommend that you include the speaker's name, affiliation, and presentation number on all slides.
- Do not use hyperlinks. It is recommended to create the graphs and tables in a single color. Gradation may not be expressed depending on the creation environment such as the software used.

How to Read Poster Presentation Files.pdf

- Poster presentation files.pdf are ready for reading from May 28 (Fri) to June 2 (Wed).
- Enter the Conference website: <https://www.pu-toyama.ac.jp/EM-NANO2021/>
In the unlikely event that Toyama Prefectural University server does down, please connect to the emergency reserve site: <https://sigr.io/EM-NANO2021/>
- Click "Poster presentation archive", and then a login window will be opened



- Read the precautions carefully, and then check the "I agree".
- Fill the ID (registration number) and password (conference password), then login.
- There are two holders including P1 and P2 poster presentation files.pdf.
- Precautions for reading poster presentation files.pdf
 1. Use in the name of another person is prohibited.
(他人名義での利用は禁止)
 2. The poster presentation files.pdf are for reading only.
(これらのファイルは読み取り専用)
 3. From a copyright standpoint, please do not download the files.pdf.
(著作権の観点で、ダウンロードしないでください)

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EM-NANO 2021 Time Table

Time	June 1 (Tue)		June 2 (Wed)		June 3 (Thu)			
8:55 9:00 9:50 10:00 10:35 10:55 11:05 11:40 12:00 12:20 12:50 14:20 14:30 15:05 15:40 16:00 16:20 16:30 17:05 17:40 18:15	Room A	Room B	Room A	Room B	Room A	RoomB		
	Opening Address		Session PL2 PL2 Plenary Talk H. Kikuchi	Session PL3 PL3 Plenary Talk S. Zhang	Session PL3 PL3 Plenary Talk S. Zhang			
	Session PL1							
	PL1 Plenary Talk M. Hatano							
	Short break		Short Break		Short break			
	Session A1-1	Session B1-1	Session A2-1	Session B2-1	Session A3-1	Session B3-1		
	A1-1-1 Invited Talk S. Kirihara	B1-1-1 Invited Talk A. Ando	A2-1-1 Invited Talk A. Fujii	B2-1-1 Invited Talk T. Okamoto	A3-1-1 Invited Talk K. Tajima	B3-1-1 Invited Talk Y. Yamashita		
	A1-1-2 K. Matsumoto	B1-1-2 H. Suematsu	A2-1-2 M. Morimoto	B2-1-2 Y. Shimamune	A3-1-2 M. Pandey	B3-1-2 G. Okada		
	Short break							
	Session A1-2	Session B1-2	Session A2-2	Session B2-2	Session A3-2	Session B3-2		
11:05 11:40 12:00	A1-2-1 Invited Talk F. Song	B1-2-1 Invited Talk K. Takei	A2-2-1 Invited Talk M. Muruganathan	B2-2-1 Invited Talk S. Mukherjee	A3-2-1 Invited Talk I. Osaka	B3-2-1 Invited Talk T. Ujihara		
	A1-2-2 K. Yamagiwa	B1-2-2 M. Akabori	A2-2-2 Y. Yaakob	B2-2-2 T. Makino	A3-2-2 S. S. Pandey	B3-2-2 N. Kawaguchi		
					A3-2-3 S. Naka	B3-2-3 T. Iwata		
Lunch Break						Closing Remarks		
Poster Session 1 (P1-01 --- P1-38)		Poster Session 2 (P2-01 --- P2-37)						
Short break								
14:30 15:05 15:40 16:00 16:20 16:30 17:05 17:40 18:15	Session A1-3 Special session 1		Session A2-3 Student oral session 1	Session B2-3 Student oral session 2				
	A1-3-1 Invited Talk T. Kondo		(12+3 min for each)	(12+3 min for each)				
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	A1-3-4 H. Okada							
	Short break							
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	A1-4-2 Invited Talk A. Wakamiya		A2-4-2 R. Muraguchi	B2-4-2 T. Semba				
	A1-4-3 Invited Talk T. Matsushima		A2-4-3 M. Koshimizu	B2-4-3 K. Ohdaira				
18:00			A2-4-4 N. Kawano	B2-4-4 M. Mori				

EM-NANO 2021 Program (1)

Time	June 1 (Tue)	
	Room A	Room B
8:55	Opening Address (Tomoaki Karaki)	
9:00	Session PL1, Session chair: K. Kato PL1 Plenary Talk (Mutsuko Hatano) The potential of diamond solid-state quantum sensors	
9:50	Short break	
10:00	Session A1-1, Session chair: M. Morimoto A1-1-1 Invited Talk (Soshu Kirihara) Stereolithographic Additive Manufacturing of Functional Components for Functional Modulations of Energy Distributions	Session B1-1, Session chair: T. Moriyasu B1-1-1 Invited Talk (Atsushi Ando) Research Development on Thin Film Growth of Transition Metal Dichalcogenides for Electronic Device Applications
10:35	A1-1-2 (Kimihisa Matsumoto) Preparation of undecenoic-acid-terminated Si nanocrystals from rice husks	B1-1-2 (Hisayuki Suematsu) Preparation of Iron Nanosized Powder by Pulsed Wire Discharge
10:55	Short break	
11:05	Session A1-2, Session chair: Y. Otani A1-2-1 Invited Talk (Fengqi Song) Demonstrating the single-molecule ferroelectricity by Gd@C ₈₂ devices	Session B1-2, Session chair: T. Kawae B1-2-1 Invited Talk (Kuniharu Takei) Multi-Functional Flexible Sensor Sheets for IoT Applications
11:40	A1-2-2 (Kiyofumi Yamagawa) Synthesis of carbon nanotube arrays on quartz-based fibrous materials and their morphological characterizations	B1-2-2 (Masashi Akabori) Fabrication of Josephson junctions by single line etching of Nb thin films utilizing nitrogen gas field ion source focused ion beam
12:00		Lunch Break
12:50		Poster Session 1 (P1-01 ---> P1-38) (P1-01* ---> P1-14*: applying for presentation award) Caretakers: Y. Ohdaira, T. Hasegawa, and T. Kinoshita
14:20	Short break	
14:30	Session A1-3, Perovskite solar cell session 1, Session chair: A. Masuda A1-3-1 Invited Talk (Takashi Kondo) Lattice Constants and Bandgap Energies of Lead-Halide Perovskite-Type Semiconductor Alloy CH ₃ NH ₃ Pb(IBr) ₃ -- Toward Bandgap Engineering of Metal-Halide Perovskites	
15:05	A1-3-2 Invited Talk (Weiqiang Liao) Molecular Ferroelectrics-Driven High-Performance Perovskite Solar Cells	
15:40	A1-3-3 (TuThiCam Huynh) Use of n-type amorphous Si films for the electron transport layer of perovskite solar cells	
16:00	A1-3-4 (Hiroyuki Okada) Perovskite Photodiodes with Ultra-thin PEIE as Electron-Injection Layer	
16:20	Short break	
16:30	Session A1-4, Perovskite solar cell session 2, Session chair: H. Okada A1-4-1 Invited Talk (Yuko Takeoka) Preparation and Control of Perovskite Materials for Optical Applications	
17:05	A1-4-2 Invited Talk (Atsushi Wakamiya) Approaches of Materials Chemistry for Efficient Perovskite Solar Cells	
17:40	A1-4-3 Invited Talk (Toshinori Matsushima) Metal halide perovskites for high-performing LEDs and lasers	
18:15		

EM-NANO 2021 Program (2)

Time	June 2 (Wed)	
	Room A	Room B
9:00	Session PL2, Session chair: H. Okada PL2 Plenary Talk (Hirotugu Kikuchi) Liquid Crystal/Polymer Composites for Electro-optics	
9:50	Short Break	
10:00	Session A2-1, Session chair: A. Baba A2-1-1 Invited Talk (Akihiko Fujii) Hetero-Epitaxial Thin Film Growth of Mesogenic Organic Semiconductor by Freezing Process from Supercooled Liquid Crystal State	Session B2-1, Session chair: M. Akabori B2-1-1 Invited Talk (Tamotsu Okamoto) Polycrystalline CdTe Thin-Film Solar Cells and Application to Radiation Tolerant Compact Image Sensor and Dosimeter
10:35	A2-1-2 (Masahiro Morimoto) Low voltage drive effect of modified ITO using polar polymers and poling treatment	B2-1-2 (Yosuke Shimamune) CZTS Polycrystal Formation by Laser Annealing and Demonstration of Solar Cell Fabrication
10:55	Short Break	
11:05	Session A2-2, Session chair: M. Tanemura A2-2-1 Invited Talk (Manoharan Muruganathan) All-2D Graphene Nano-Electro-Mechanical (NEM) Switch and the Progress of High-Sensitive Electric Field Sensing for Thunder Clouds Movements	Session B2-2, Session chair: M. T. Htay B2-2-1 Invited Talk (Shaibal Mukherjee) Oxide-based advanced memory technology for neuromorphic computation
11:40	A2-2-2 (Yazid Yaakob) Waste latex based-preursors as an economic carbon source for carbon nanotubes eco-fabrications	B2-2-2 (Takayuki Makino) Temperature-dependent optical properties and electron-phonon interaction in ϵ -Ga ₂ O ₃ epilayers
12:00	Lunch Break	
12:50	Poster Session 2 (P2-01 ---> P2-37) (P2-01* ---> P2-14*: appling for presentation award) Caretakers: S. Sunada, Y. Shimamune, and M. Sonehara	
14:20	Short break	
14:30	Session A2-3, Student oral session 1, Session chairs: S. Ito & K. Ohdaira (12+3 min for each, *appling for presentation award) A2-3-1* (Viswanath Pamarti) Stable Polarization Writing and Reading in a Self-Assembled Ultrathin Organic Ferroelectric on Graphene Oxide A2-3-2* (Hiroki Kawamoto) Elucidation of electron and hole transfer at high temperature in Ag-doped Na and Al phosphate glasses A2-3-3* (Ashenafi Abadi Elyas) Annealing effect of absorber layer on SnS/CdS heterojunction A2-3-4* (Bhagyashri Todankar) CVD synthesis and trifunctional electrocatalytic properties of nitrogen doped graphitic carbon nanofibers A2-3-5 (Yoji Namioka) Color Centers in K-Na-Cl Crystals Induced by Puled Intense Relativistic Electron Beam Irradiation A2-3-6 (Lanying Yuan) Origin of red BGO scintillators: valence state of Bi ions A2-3-7 (Akira Toyotome) Intrinsic Defect Investigation of n-Type β -Ga ₂ O ₃ Single Crystals Treated by High-Temperature Annealing in Vacuum	Session B2-3, Student oral session 2, Session chairs: N. Kuzuu & Y. Ohtera (12+3 min for each, *appling for presentation award) B2-3-1 (Mohit) Preparation of ferroelectric lanthanum doped hafnium-zirconium oxide thin films by solution process B2-3-2 (Yaru Yang) Effect of Dehydration Time and Air Tightness on Pore Distribution of Potassium And Metakaolin-based Geopolymer B2-3-3 (Minh Chu Ngo) New irradiation target of β -MoO ₃ considered in neutron activation method for synthesizing ⁹⁹ Mo/ ^{99m} Tc B2-3-4* (Anri Suzumura) Heat Generation Behavior in the AC Magnetic Field of Fine MgFe ₂ O ₄ Powder Prepared by Hydrothermal Synthesis B2-3-5* (Jooyoung Pyo) Multi-level 2-bit/cell Operation Utilizing Hf-based MONOS Nonvolatile Memory with HfON Tunneling Layer B2-3-6* (Masakazu Tanuma) Suppression of SiO ₂ interfacial layer formation during ferroelectric nondoped HfO ₂ formation B2-3-7* (Narin Sunthornpan) In-situ observation of low-temperature crystallization process of germanium thin films by gold-induced layer exchange
16:15	Short break	
16:25	Session A2-4, Session chair: K. Shinbo A2-4-1 Invited Talk (Chun-Jen Huang) Functional Zwitterionic Silanes for Controlled Silanization and Medical Implementations	Session B2-4. Session chair: Y. Hashimoto B2-4-1 Invited Talk (Zhengxin Liu) Research and industrialization of silicon heterojunction (SHJ) solar cells: from Japan to China
17:00	A2-4-2 (Ryo Muraguchi) Preparation and properties of antireflection film on plastic film using hollow silica nanoparticles	B2-4-2 (Taeko Semba) Corrosion of the Metallization on the n ⁺ Emitter Side of Bifacial Solar Cells
17:20	A2-4-3 (Masanori Koshimizu) Development of plastic scintillators loaded with perovskite quantum dots	B2-4-3 (Keisuke Ohdaira) Influence of light irradiation on the charge-accumulation-type potential-induced degradation of n-type front-emitter crystalline silicon photovoltaic
17:40	A2-4-4 (Naoki Kawano) Scintillation properties of organic-inorganic layered perovskite-type compounds with a methylphenethylamine	B2-4-4 (Masayuki Mori) Influence of Areal Ratio of InSb and GaSb Bi-layers on Growth of InGaSb Thin Films on Si(111) Substrate
18:00		

EM-NANO 2021 Program (3)

Time	June 3 (Thu)	
	Room A	RoomB
9:00	Session PL3, Session chair: T. Karaki PL3 Plenary Talk (Shujun Zhang) The impact of local structure heterogeneity on electrical properties of perovskite ceramics (Video, live Q&A)	
9:50	Short break	
10:00	Session A3-1, Session chair: K. Kurihara A3-1-1 Invited Talk (Keisuke Tajima) Fundamentals Issues at Interfaces and Applications of Organic Solar Cells	Session B3-1, Session chair: T. Fujii B3-1-1 Invited Talk (Yohachi Yamashita) History of Lead Perovskite Piezoelectric Single Crystals and AC Poling Method
10:35	A3-1-2 (Manish Pandey) Characteristics of Large-Area Floating Films of Oriented Polymeric Semiconductors for Flexible Electronics	B3-1-2 (Go Okada) RPL properties of samarium-doped CaSO ₄
10:55	Short Break	
11:05	Session A3-2, Session chair: E. Itoh A3-2-1 Invited Talk (Itaru Osaka) Development of π -Conjugated Polymers for High-Efficiency Organic Solar Cells	Session B3-2, Session chair: T. Hatakeyama B3-2-1 Invited Talk (Toru Ujihara) Prediction system of CFD simulation in solution growth constructed by machine learning - Application for SiC top-seeded solution growth -
11:40	A3-2-2 (Shyam S. Pandey) Computational Molecular Design of NIR Dyes with Varying Anchoring Groups Aiming for Improved Efficiency & Stability	B3-2-2 (Noriaki Kawaguchi) Scintillation and Dosimetric Properties of LiF/CaF ₂ :Dy Eutectic
12:00	A3-2-3 (Shigeki Naka) Carrier mobilities in amorphous organic semiconductor films varied with film formation process	B3-2-3 (Tatsuya Iwata) Impact of The Composition and Thickness of The Oxygen Scavenging Layer on The Analog Reset Characteristics of Pt/TaO _x /TiO _y /Pt Resistive Switching Devices
12:20	Closing Remarks (Tomoaki Karaki)	

Detailed Program

June 1 (Tue), Room A

8:55 Opening Address: Tomoaki Karaki (Toyama Prefectural University)

Session PL1, Session chair: Keizo Kato (Niigata University) 9:00-9:50
PL1 <Plenary> The potential of diamond solid-state quantum sensors
9:00 Mutsuko Hatano
(Tokyo Institute of Technology)

Session A1-1, Session chair: Masahiro Morimoto (University of Toyama) 10:00-10:55
A1-1-1 <Invited> Stereolithographic Additive Manufacturing of Functional Components for Functional Modulations of Energy Distributions
10:00 Sosho Kirihara
(Osaka University)
A1-1-2 Preparation of undecenoic-acid-terminated Si nanocrystals from rice husks
10:35 Kimihisa Matsumoto, Kazuhide Kamiya, So Ito, Hidehiro Yasuda*
(Toyama Prefectural University, *Osaka University)

Session A1-2, Session chair: Yohei Otani (Suwa University of Science) 11:05-12:00
A1-2-1 <Invited> Demonstrating the single-molecule ferroelectricity by Gd@C₈₂ devices
11:05 Kangkang Zhang, Minhao Zhang, Fengqi Song
(Nanjing University)
A1-2-2 Synthesis of carbon nanotube arrays on quartz-based fibrous materials and their morphological characterizations
11:40 Kiyofumi Yamagawa, Nobutomo Yamaguchi
(Teikyo University of Science)

Session A1-3, Perovskite solar cell special session 1, Session chair: Atsushi Masuda (Niigata University) 14:30-16:20
A1-3-1 <Invited> Lattice Constants and Bandgap Energies of Lead-Halide Perovskite-Type Semiconductor Alloy CH₃NH₃Pb(I_xBr_{1-x})₃ -- Toward Bandgap Engineering of Metal-Halide Perovskites
14:30 Takashi Kondo (The University of Tokyo)
A1-3-2 <Invited> Molecular Ferroelectrics-Driven High-Performance Perovskite Solar Cells
15:05 Weiqiang Liao, Ren-Gen Xiong, Xiao-Li Xu*, Ling-Bo Xiao*, Jie Zhao*, Gui-Fu Zou*
(Nanchang University, *Soochow University)
A1-3-3 Use of n-type amorphous Si films for the electron transport layer of perovskite solar cells
15:40 Zhancheng Song, Yuuka Sumai*, Shoko Fukaya*, Huynh Tu Thi Cam, Md. Shahiduzzaman*, Tetsuya Taima*, Keisuke Ohdaira
(Japan Advanced Institute of Science and Technology, *Kanazawa University)
A1-3-4 Perovskite Photodiodes with Ultra-thin PEIE as Electron-Injection Layer
16:00 Ikuma Hirano, Kazuya Maruyama, Congcong Zhang, Hiroyuki Okada
(University of Toyama)

Session A1-4, Perovskite solar cell special session 2, Session chair: Hiroyuki Okada (University of Toyama) 16:30-18:15
A1-4-1 <Invited> Preparation and Control of Perovskite Materials for Optical Applications
16:30 Yuko Takeoka
(Sophia University)
A1-4-2 <Invited> Approaches of Materials Chemistry for Efficient Perovskite Solar Cells
17:05 Atsushi Wakamiya
(Kyoto University)
A1-4-3 <Invited> Metal halide perovskites for high-performing LEDs and lasers
17:40 Toshinori Matsushima, Chihaya Adachi
(Kyushu University)

June 1 (Tue), Room B

Session B1-1, Session chair: Takeshi Moriyasu (University of Fukui) 10:00-10:55
B1-1-1 <Invited> Research Development on Thin Film Growth of Transition Metal Dichalcogenides for Electronic Device Applications
10:00 Atsushi Ando
(National Institute of Advanced Industrial Science and Technology)
B1-1-2 Preparation of Iron Nanosized Powder by Pulsed Wire Discharge
10:35 Hisayuki Suematsu, Ryo Yamanaka, Thi Mai Dung Do, Tadachika Nakayama
(Nagaoka University of Technology)

Session B1-2, Session chair: Takeshi Kawai (Kanazawa University) 11:05-12:00
B1-2-1 <Invited> Multi-Functional Flexible Sensor Sheets for IoT Applications
11:05 Kuniharu Takei
(Osaka Prefecture University)
B1-2-2 Fabrication of Josephson junctions by single line etching of Nb thin films utilizing nitrogen gas field ion source focused ion beam
11:40 Shinya Sudo, Masashi Akabori, Munenori Uno
(Japan Advanced Institute of Science and Technology)

9:00-9:50

Session PL2, Session chair: Hiroyuki Okada (University of Toyama)

- PL2 <Plenary> Liquid Crystal/Polymer Composites for Electro-optics
 9:00 Hirotsugu Kikuchi
 (Kyushu University)

10:00-10:55

Session A2-1, Session chair: Akira Baba (Niigata University)

- A2-1-1 <Invited> Hetero-Epitaxial Thin Film Growth of Mesogenic Organic Semiconductor by Freezing Process from Supercooled Liquid Crystal State
 10:00 Akihiko Fujii, Masanori Ozaki
 (Osaka University)
- A2-1-2 Low voltage drive effect of modified ITO using polar polymers and poling treatment
 10:35 Masahiro Morimoto, Yoshiki Maegawa, Shigeki Naka
 (University of Toyama)

11:05-12:00

Session A2-2, Session chair: Masaki Tanemura (Nagoya Institute of Technology)

- A2-2-1 <Invited> All-2D Graphene Nano-Electro-Mechanical (NEM) Switch and the Progress of High-Sensitive Electric Field Sensing for Thunder Clouds Movements
 11:05 Manoharan Muruganathan*, Afsal Kareekunnam*, Tatsufumi Agari*, Huynh Van Ngoc*, Takeshi Kudo**, Takeshi Maruyama**, Hiroshi Mizuta*, ***
 (*Japan Advanced Institute of Science and Technology, **OTOWA ELECTRIC CO., LTD., ***Hitachi Europe Ltd.)
- A2-2-2 Waste latex based-preursors as an economic carbon source for carbon nanotubes eco-fabrications
 11:40 Yazid Yaakob*, ***, Mohd Adib Hazan*, Mohd Shuhazzly Mamat*, Shahira Liza**, Kar Fei Chan*, Masaki Tanemura***
 (*Universiti Putra Malaysia, **Universiti Teknologi Malaysia, ***Nagoya Institute of Technology)

14:30-16:15

Session A2-3, Student oral session 1, Session chairs: So Ito (Toyama Prefectural University) & Keisuke Ohdaira (Japan Advanced Institute of Science and Technology)

- A2-3-1* Stable Polarization Writing and Reading in a Self-Assembled Ultrathin Organic Ferroelectric on Graphene Oxide
 14:30 Pamarti Viswanath, K. Kanishka H. De Silva, Yuki Morikuni, Masamichi Yoshimura
 (Toyota Technological Institute)
- A2-3-2* Elucidation of electron and hole transfer at high temperature in Ag-doped Na and Al phosphate glasses
 14:45 Hiroki Kawamoto, Ichiro Kawamura, Hajime Komiya, Masanori Koshimizu, Yutaka Fujimoto, Keisuke Asai
 (Tohoku University)
- A2-3-3* Annealing effect of absorber layer on SnS/CdS heterojunction
 15:00 Ashenafi Abadi, Myo Than Htay, Yoshio Hashimoto, Kentaro Ito, Noritaka Momose*
 (Shinshu University, *NIT, Nagano College)
- A2-3-4* CVD synthesis and trifunctional electrocatalytic properties of nitrogen doped graphitic carbon nanofibers
 15:15 Bhagyashri Todankar, Shuhei Nakanishi, Pradeep Desai, Ajinkya K. Ranade, Tharangattu N. Narayanan*, Masaki Tanemura, Golap Kalita
 (Nagoya Institute of Technology, *Tata Institute of Fundamental Research-Hyderabad)
- A2-3-5 Color Centers in K-Na-Cl Crystals Induced by Pulsed Intense Relativistic Electron Beam Irradiation
 15:30 Yoji Namioka, Hisayuki Suematsu, Do Thi Mai Dung, Takashi Kikuchi, Tadachika Nakayama, Gordon Thorogood*
 (Nagaoka University of Technology, *Australian Nuclear Science and Technology Organisation)
- A2-3-6 Origin of red BGO scintillators: valence state of Bi ions
 15:45 Lanying Yuan*, **, Haihong Ni*, Junfeng Chen*, Guilan Song*, Xuejun Qi*, Xiang Li*, Tomoaki Karaki**, Dong Wang*
 (*Shanghai Institute of Ceramics, Chinese Academy of Sciences, **Toyama Prefectural University)
- A2-3-7 Intrinsic Defect Investigation of n-Type β -Ga₂O₃ Single Crystals Treated by High-Temperature Annealing in Vacuum
 16:00 Akira Toyotome, Yoshitaka Nakano
 (Chubu University)

16:25-18:00

Session A2-4, Session chair: Kazunari Shinbo (Niigata University)

- A2-4-1 <Invited> Functional Zwitterionic Silanes for Controlled Silanization and Medical Implementations
 16:25 Chun-Jen Huang
 (National Central University, Chung Yuan Christian University)
- A2-4-2 Preparation and properties of antireflection film on plastic film using hollow silica nanoparticles
 17:00 Ryo Muraguchi, Wataru Futagami, Yuko Hakoshima
 (JGC Catalysts and Chemicals Ltd.)
- A2-4-3 Development of plastic scintillators loaded with perovskite quantum dots
 17:20 Arisa Magi, Masanori Koshimizu, Atsushi Sato, Yutaka Fujimoto, Shunji Kishimoto*, Takayuki Yanagida**, Keisuke Asai
 (Tohoku University, *High-Energy Accelerator Research Organization, **Nara Institute of Science and Technology)
- A2-4-4 Scintillation properties of organic-inorganic layered perovskite-type compounds with a methylphenethylamine
 17:40 Naoki Kawanou, Masaki Akatsuka*, Daisuke Nakaochi*, Hiromi Kimura*, Takayuki Yanagida*
 (Akita University, *Nara Institute of Science and Technology)

Session B2-1, Session chair: Masashi Akabori (Japan Advanced Institute of Science and Technology)

10:00-10:55

- B2-1-1 <Invited> Polycrystalline CdTe Thin-Film Solar Cells and Application to Radiation Tolerant Compact Image Sensor and Dosimeter
 10:00 Tamotsu Okamoto, Yasuhito Gotoh*, Nobuhiro Sato*, Yasuki Okuno**, Tomohiro Kobayashi***, Mitsuru Imaizumi****, Masafumi Akiyoshi****, Masayoshi Nagao*****
 Nagao*****
 Tomoaki Masuzawa*****
 Yoichiro Neo*****
 Hidenori Mimura*****
 (NIT, Kisarazu College, *Kyoto University, **Tohoku University, ***RIKEN, ****Japan Aerospace Exploration Agency, *****Osaka Prefecture University,
 *****National Institute of Advanced Industrial Science and Technology, *****Shizuoka University)

- B2-1-2 CZTS Polycrystal Formation by Laser Annealing and Demonstration of Solar Cell Fabrication
 10:35 Yosuke Shimamune, Shun Inoue, Kazuo Jimbo
 (NIT, Nagaoka College)

Session B2-2, Session chair: Myo Than Htay (Shinshu University)

11:05-12:00

- B2-2-1 <Invited> Oxide-based advanced memory technology for neuromorphic computation
 11:05 Mangal Das, Sanjay Kumar, Myo Than Htay*, Shaibal Mukherjee
 (Indian Institute of Technology Indore, *Shinshu University)

- B2-2-2 Temperature-dependent optical properties and electron-phonon interaction in ϵ -Ga₂O₃ epilayers
 11:40 Takayuki Makino, Daichi Oka*, Tomoteru Fukumura*
 (University of Fukui, *Tohoku University)

Session B2-3, Student oral session 2, Session chairs: Nobu Kuzu (University of Fukui) & Yasuo Ohtera (Toyama Prefectural University)

14:30-16:15

- B2-3-1 Preparation of ferroelectric lanthanum doped hafnium-zirconium oxide thin films by solution process
 14:30 Mohit, Eisuke Tokumitsu
 (Japan Advanced Institute of Science and Technology)

- B2-3-2 Effect of Dehydration Time and Air Tightness on Pore Distribution of Potassium and Metakaolin-based Geopolymer
 14:45 Yaru Yang*, Thi-Chau-Duyen Le*, Isamu Kudo*,**, Thi-Mai-Dung Do*, Tadachika Nakayama*, Koichi Niihara*, Hisayuki Suematsu*
 (*Nagaoka University of Technology, **ADVAN ENG. Co., Ltd.)

- B2-3-3 New irradiation target of β -MoO₃ considered in neutron activation method for synthesizing ⁹⁹Mo/^{99m}Tc
 15:00 Ngo Minh Chu, Nguyen Duy Hieu, Thi Mai Dung Do, Tadachika Nakayama, Koichi Niihara, Hisayuki Suematsu
 (Nagaoka University of Technology)

- B2-3-4* Heat Generation Behavior in the AC Magnetic Field of Fine MgFe₂O₄ Powder Prepared by Hydrothermal Synthesis
 15:15 A. Suzumura, H. Hirazawa, H. Komoda*, M. Sakamoto, E. Uyanga**, H. Aono***
 (NIT, Niihama College, *SAIJO high school, **Institute of Physics and Technology, Mongolian Academy of Sciences, ***Ehime University)

- B2-3-5* Multi-level 2-bit/cell Operation Utilizing Hf-based MONOS Nonvolatile Memory with HfON Tunneling Layer
 15:30 Jooyoung Pyo, Hiroki Morita, Akio Ihara, Shun-ichiro Ohmi
 (Tokyo Institute of Technology)

- B2-3-6* Suppression of SiO₂ interfacial layer formation during ferroelectric nondoped HfO₂ formation
 15:45 Masakazu Tanuma, Joongwon Shin, Masaki Hayashi, Shun-ichiro Ohmi
 (Tokyo Institute of Technology)

- B2-3-7* In-situ observation of low-temperature crystallization process of germanium thin films by gold-induced layer exchange
 16:00 Narin Sunthornpan, Nairu Tezuka, Kenjiro Kimura, Kentaro Kyuno
 (Shibaura Institute of Technology)

Session B2-4, Session chair: Yoshio Hashimoto (Shinshu University)

16:25-18:00

- B2-4-1 <Invited> Research and industrialization of silicon heterojunction (SHJ) solar cells: from Japan to China
 16:25 Zhengxin Liu*,**, Fanying Meng*,**, Liping Zhang*,**, Wenzhu Liu*, Jianhua Shi*,**, Anjun Han*,**, Junlin Du*,**, Haoxin Fu**, Shihu Lan**, Hongyuan Chen**,
 Jinping Li**, Haichuan Zhang**, Qiang Yuan**, Gongbing Chen**, Tanggui He**, Yi Xie**
 (*Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, **Tongwei Solar Co., Ltd.)

- B2-4-2 Corrosion of the Metallization on the n⁺ Back Surface Field of Bifacial Solar Cells
 17:00 Taeko Semba, Atsushi Masuda
 (Niigata University)

- B2-4-3 Influence of light irradiation on the charge-accumulation-type potential-induced degradation of n-type front-emitter crystalline silicon photovoltaic modules
 17:20 Rongrong Zhao, Huynh Thi Cam Tu, Atsushi Masuda*, Keisuke Ohdaira
 (Japan Advanced Institute of Science and Technology, *Niigata University)

- B2-4-4 Influence of Areal Ratio of InSb and GaSb Bi-layers on Growth of InGaSb Thin Films on Si(111) Substrate
 17:40 Masayuki Mori, Jotaro Inoue, Koichi Maezawa
 (University of Toyama)

Session PL3, Session chair: Tomoaki Karaki (Toyama Prefectural University)

9:00-9:50

- PL3 <Plenary> The impact of local structure heterogeneity on electrical properties of perovskite ceramics
9:00 Shujun Zhang, Fei Li*
(University of Wollongong, *Xi'an Jiaotong University)

Session A3-1, Session chair: Kazuyoshi Kurihara (University of Fukui)

10:00-10:55

- A3-1-1 <Invited> Fundamentals Issues at Interfaces and Applications of Organic Solar Cells
10:00 Keisuke Tajima
(RIKEN)
- A3-1-2 Characteristics of Large-Area Floating Films of Oriented Polymeric Semiconductors for Flexible Electronics
10:35 Manish Pandey, Heriyantho Syafutra, Nikita Kumari, Shyam S. Pandey*, Masakazu Nakamura
(Nara Institute of Science and Technology, *Kyushu Institute of Technology)

Session A3-2, Session chair: Eiji Itoh (Shinshu University)

11:05-12:20

- A3-2-1 <Invited> Development of π -Conjugated Polymers for High-Efficiency Organic Solar Cells
11:05 Itaru Osaka
(Hiroshima University)
- A3-2-2 Computational Molecular Design of NIR Dyes with Varying Anchoring Groups Aiming for Improved Efficiency & Stability
11:40 Shyam S. Pandey, Ajendra Kumar Vats, Shuzi Hayase*
(Kyushu Institute of Technology, *The University of Electro-Communications)
- A3-2-3 Carrier mobilities in amorphous organic semiconductor films varied with film formation process
12:00 Katsuya Miyashige, Masahiro Morimoto, Shigeki Naka
(University of Toyama)

12:20 Closing Remarks: Tomoaki Karaki (Toyama Prefectural University)

Session B3-1, Session chair: Tadasi Fujii (Toyama Prefectural University)

10:00-10:55

- B3-1-1 <Invited> History of Lead Perovskite Piezoelectric Single Crystals and AC Poling Method
10:00 Yohachi (John) Yamashita*, **, ZhungKai Wang*, Yiqin Sun*, Tomoaki Karaki*
(*Toyama Prefectural University, **North Carolina State University)
- B3-1-2 RPL properties of samarium-doped CaSO₄
10:35 Go Okada, Wakako Shinozaki*, Satoshi Ueno*, Yasuhiro Koguchi*, Kazuki Hirasawa, Eiji Kusano, Francesco d'Errico***, Takayuki Yanagida****, Safa Kasap****, Hidehito Nanto
(Kanazawa Institute of Technology, *Chiyoda Technol Corp., **Universita degli Studi di Pisa, ***Yale University, ****Nara Institute of Science and Technology, *****University of Saskatchewan)

Session B3-2, Session chair: Tetsuo Hatakeyama (Toyama Prefectural University)

11:05-12:20

- B3-2-1 <Invited> Prediction system of CFD simulation in solution growth constructed by machine learning - Application for SiC top-seeded solution growth -
11:05 Toru Ujihara*, **, Yosuke Tsunooka*, Masaki Takaishi*, **, Yifan Dang*, Can Zhu*, Koki Suzuki*, Wanchang Yu*, Shunta Harada*, Miho Tagawa*
(*Nagoya University, **National Institute of Advanced Industrial Science and Technology, ***Aixtal Corporation)
- B3-2-2 Scintillation and Dosimetric Properties of LiF/CaF₂:Dy Eutectic
11:40 Noriaki Kawaguchi, Hiromi Kimura, Daisuke Nakachi, Takumi Kato, Takayuki Yanagida
(Nara Institute of Science and Technology)
- B3-2-3 Impact of the Composition and Thickness of the Oxygen Scavenging Layer on the Analog Reset Characteristics of Pt/TaO_x/TiO_y/Pt Resistive Switching Devices
12:00 Tatsuya Iwata, Kenta Yamamoto, Takefumi Yoshikawa, Kazuaki Sawada*
(Toyama Prefectural University, *Toyohashi University of Technology)

Caretakers: Yasuo Ohdaira (Niigata University), Tomoharu Hasegawa (NIT, Fuki College), Takahiro Kinoshita (Toyama Prefectural University)

12:50-14:20

- P1-01* Evaluation of scintillation properties of organic-inorganic perovskite compounds - ($C_6H_5C_2H_4NH_3)_2Pb_{1-x}Ni_xBr_4$
Daichi Onoda, Masaki Akatsuka, Naoki Kawano*, Daisuke Nakauchi, Takumi Kato, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology, *Akita University)
- P1-02* Optical and Radioluminescence Properties of Pr-doped BaTi₄O₉ Single Crystals Synthesized by the Floating Zone Method
Hiromi Kimura, Masaki Akatsuka, Daisuke Nakauchi, Takumi Kato, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology)
- P1-03* Synthesis of particulate electrocatalysts derived from carbonate minerals and their glucose-oxidizing characteristics
Takuya Wakatabe, Kiyofumi Yamagiwa
(Teikyo University of Science)
- P1-04* Effect of AC and DC poling on aging rate of (1-x)Pb(Mg_{1/3}Nb_{2/3})O₃-xPbTiO₃ single crystal
Zhuangkai Wang*, Yiqun Sun*, Tomoaki Karaki*, John Yamashita**, Tadashi Fujii*.
(*Toyama Prefectural University, **North Carolina State University)
- P1-05* Dosimetric Properties of Dy-doped LiCaPO₄
Yuma Takebuchi, Takumi Kato, Daisuke Nakauchi, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology)
- P1-06* Analysis of attenuation behaviour of luminescence in Au-doped CsCl-BaCl₂-ZnCl₂ glasses by X-ray irradiation
Daiki Shiratori, Daisuke Nakauchi, Takumi Kato, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology)
- P1-07* Study on ER fluid blended piezoelectric particles under DC and AC electric fields
Xu Wang, Tomoaki Karaki, Ken'ichi Koyanagi
(Toyama Prefectural University)
- P1-08* MnO₂-Doped Binary NaNbO₃ Ceramics: Study of Phase Transition Free-Energy and Energy Storage Performance
Tao Zhang, Tomoaki Karaki, Tadashi Fujii
(Toyama Prefectural University)
- P1-09* Bio-fuel cell with improved life by absorbing water in the fuel sheet
Koki Someya, Satomitsu Imai
(Nihon University)
- P1-10* Fabrication of self-oriented LaNiO₃ thin films by chemical solution deposition method
Rintaro Ashihara, Masami Kawahara*, Takeshi Kawae
(Kanazawa University, *Kojundo Chemical Lab. Co., Ltd.)
- P1-11* Effect of annealing temperature variation after p-n junction formation in Cu₂SnS₃ thin-film solar cells via co-evaporation
Daiki Mota, Ryota Ohashi, Hideaki Araki
(NIT, Nagaoka College)
- P1-12* Optimization of Pt free counter electrodes for dye sensitized solar cells
Yuki Kurokawa, Ajendra Kumar Vats, Takehito Kato*, Shyam S. Pandey
(Kyushu Institute of Technology, *NIT, Oyama Collage)
- P1-13* Controlling transfer characteristics in a wet-processed organic field-effect transistor based on the oxidation of an electrode surface
Ryuichi Sakai, Kota Takashima, Kazunari Shinbo*, Yusuke Yamanashi**, Masakazu Kondo**, Masahiro Minagawa
(NIT, Nagaoka College, *Niigata University, **JNC Petrochemical Corp.)
- P1-14* CZTS Solar Cell Fabrication by Robust Process Using Annealing
Nanako Mori, Kazuo Jimbo, Yosuke Shimamune
(NIT, Nagaoka College)
- P1-15* Fabrication of Thermochromic Composite Thin Films Using VO₂ (M) Nanoparticles Prepared via Hydrothermal Synthesis Method
Soon-il Kwon, Manabu Hagiwara, Sae-hoon Kim*, Shinobu Fujihara
(Keio University, *Gangneung-Wonju National University)
- P1-16 Ce concentration dependence of optical and scintillation properties on Ce-doped La₂Si₂O₇ single crystal
Prom Kantupit, Daisuke Nakauchi, Takumi Kato, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology)
- P1-17 Effects of B₂O₃ doping on dielectric and piezoelectric properties of (K,Na,Li)NbO₃-BaZrO₃-(Bi,Na)TiO₃ ceramics sintered at low temperature
Nan Wei, Tomoaki Karaki
(Toyama Prefectural University)
- P1-18 Photoluminescence and scintillation properties of Ti-doped CaZrO₃ single crystals
Hiroyuki Fukushima, Daisuke Nakauchi, Takumi Kato, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology)
- P1-19 Evaluation by annealing temperature at pn junction of p-CuCl_{1-x}I_x and n-ZnO:Al
Reiji Kudo, Yuhei Sato, Daisuke Honma, Takeshi Hoga, Katsuhiro Moriya
(NIT, Tsuruoka College)
- P1-20 Selective growth and micropatterning for oxide thin films by sacrificial a-CaO layer
Iwan Dwi Antoro, Takeshi Kawai
(Kanazawa University)

- Caretakers: Yasuo Ohdaira (Niigata University), Tomoharu Hasegawa (NIT, Fuki College), Takahiro Kinoshita (Toyama Prefectural University)
- P1-21 Photoluminescence and scintillation properties Eu-doped Ga_2O_3 single crystals grown by the floating zone method
Takayuki Yanagida, Takumi Kato, Daisuke Nakuchi, Noriaki Kawaguchi
(Nara Institute of Science and Technology)
- P1-22 Defect evaluation of α - Ga_2O_3 thin film on c-plane sapphire substrate fabricated by the mist chemical vapor deposition method
Yuji Nakabayashi, Mayumi Ito, Koichi Higashimine, Satoru Yamada*
(Japan Advanced Institute Science and Technology, *NIT, Ishikawa College)
- P1-23 3D-FDTD Simulation of Voltage-Variable Focusing Lens Effect Using Plasmonic Optical Phased Array
Yuji Kuwamura, Hikaru Kumai
(Kanazawa University)
- P1-24 Solution-processed light-emitting diodes consisting of metal-oxide and organic-inorganic hybrid emissive thin films
Ryota Kasuga, Misato Tachibana, Naoki Ohtani
(Doshisha University)
- P1-25 Preparation of $\text{CuCl}_{1-x}\text{I}_x$ thin film and examination of composition dependence by spin coating method
Daisuke Honma, Yuhei Sato, Kunihiko Tanaka*, Nobuo Saito*, Katsuhiko Moriya
(NIT, Tsuruoka College, *Nagaoka University of Technology)
- P1-26 Deposition of Cu-Sn precursors on Mo-coated substrates by fine channel mist CVD method to prepare Cu_2SnS_3 thin films
Takuya Tomono, Kazuya Okamura, Kunihiko Tanaka
(Nagaoka University of Technology)
- P1-27 Investigation of Cu/IV ratio dependence of $\text{Cu}_x\text{Sn}_{1-y}\text{Ge}_y\text{S}_3$ by photoluminescence observation
Tsukasa Abe, Kunihiko Tanaka
(Nagaoka University of Technology)
- P1-28 Preparation of $\text{CuBr}_{1-x}\text{I}_x$ /buffer layer/ ZnO nanorods transparent solar cell
Kaito Watanabe, Ryota Mori, Kunihiko Tanaka
(Nagaoka University of Technology)
- P1-29 Investigation of the ferromagnetic alloy layer in CPP-GMR devices
Haruka Sato, Keiki Sugano, Katsuhiko Moriya, Takeshi Hoga
(NIT, Tsuruoka College)
- P1-30 Improvement of the film surface of CTS thin film by pure water etching
Yuki Igarashi, Takuya Tomono*, Kunihiko Tanaka*, Katsuhiko Moriya
(NIT, Tsuruoka College, *Nagaoka University of Technology)
- P1-31 Optical and Scintillation properties of Nd-doped LaVO_4 Single Crystals Synthesized by the Floating Zone Method
Masaki Akatsuka, Daisuke Nakuchi, Takumi Kato, Noriaki Kawaguchi, Takayuki Yanagida
(Nara Institute of Science and Technology)
- P1-32 Lattice relaxation around heterointerfaces in MnAs/GaAs/InAs/GaAs(111)B grown by molecular beam epitaxy
Wataru Kanetsuka, Masashi Akabori, Tongmin Chen, Yoshifumi Oshima
(Japan Advanced Institute of Science and Technology)
- P1-33 Assisting Polymer Orientation Using Polymer Blend in FTM
Heriyanto Syafutra*, Manish Pandey*, Nikita Kumari**, Shyam S. Pandey**, Hiroaki Benten*, Masakazu Nakamura**
(*Nara Institute of Science and Technology, **Kyushu Institute of Technology)
- P1-34 Automatic data collection of NIR spectra of the sky and its application to weather parameters prediction
Haruyasu Tanaka, Tomohisa Takaya, Yasuo Ohtera
(Toyama Prefectural University)
- P1-35 Electronic properties and heterojunction formation of Ta_2NiSe_5
Masaya Fukai, Noriyuki Urakami, Yoshio Hashimoto
(Shinshu University)
- P1-36 Discrimination of peripheral blood flow status utilizing snapshot-type NIR spectral imager
Airi Sato, Tomohisa Takaya, Yasuo Ohtera
(Toyama Prefectural University)
- P1-37 Controlling group delay of electromagnetic waves using Brewster metafilms
Hiromu Yamamoto, Yasuhiro Tamayama
(Nagaoka University of Technology)
- P1-38 Carrier transport characteristic of crystalline graphitic carbon nitride film
Kensuke Takashima, Kohei Ogihara, Hatsuki Futamura, Noriyuki Urakami, Yoshio Hashimoto
(Shinshu University)

- Caretakers: Satoshi Sunada (Kanazawa University), Yosuke Shimamura (NIT, Nagaoka College), Makoto Sonehara (Shinshu University) 12:50-14:20
- P2-01* Biofuel cell that produces sugar from cellulose nanofiber to generate electricity
Ryutaro Tanaka, Satomitsu Imai
(Nihon University)
- P2-02* Evaluation of dynamic characteristics of microdroplets of various specifications due to vibration
Kosuke Fujishiro, Satomitsu Imai
(Nihon University)
- P2-03* Fabrication and performance evaluation of cellulose nanofiber electrodes for biofuel cell applications using PEDOT:PSS
Ryo Matsuoka, Masayoshi Hamana and Satomitsu Imai
(Nihon University)
- P2-04* Thermoluminescence properties of $\text{Ca}_3\text{B}_2\text{O}_5:\text{Dy}$ ceramics for neutron measurement
Hajime Komiya, Ichiro Kawamura, Hiroki Kawamoto, Yutaka Fujimoto, Masanori Koshimizu, Go Okada*, Yusuke Koba**, Genichiro Wakabayashi***, Keisuke Asai (Tohoku University, *Kanazawa Institute of Technology, **National Institutes for Quantum and Radiological Science and Technology, ***Kindai University)
- P2-05* Fabrication of Hf-loaded PVK-based plastic scintillators via sol-gel method for high-counting rate measurement of high-energy photons
Atsushi Sato, Masanori Koshimizu, Yutaka Fujimoto, Keisuke Asai (Tohoku University)
- P2-06* Carrier transport properties of diamond (111)-(2x1) reconstructed surfaces
Satoshi Hoshida*, Hisaya Satou*, Xufang Zhang*, Tsubasa Matsumoto*, Satoshi Yamasaki* **, Norio Tokuda, Takao Inokuma (*Kanazawa University, **National Institute of Advanced Industrial Science and Technology)
- P2-07* Investigation of Relationships between Thermal Condition of Synthesis and a Chiral Vector of Multi-Walled Carbon NanoTube by Thermal Chemical Vapor Deposition Method
Taiyu Fukuyama, Syota Akamatsu, Takanori Sasaki (Hachinohe Institute of Technology)
- P2-08* New soft magnetostriuctive materials design based on nanocrystalline/amorphous mixed-phase structure
Kohya Sano, Tatsuya Tomita*, Chiemi Oka, Junpei Sakurai, Seiichi Hata, Takahiro Yamazaki (Nagoya University, *Tohoku Magnet Institute Co., Ltd.)
- P2-09* A micropump for mounting on an internal microcapsule driven by a chemical reaction using agarose gel as a trigger layer
Mizuki Ikeda, Eishiro Koda, Suguru Yoshioka, Satomitsu Imai (Nihon University)
- P2-10* Narrow-Spectral Width Light-Emitting OLED Devices with MoO_3 Cavity Structure
Naoki Nishikawa, Hiroyuki Okada (University of Toyama)
- P2-11* Simpler Microstructural Estimation Using Machine Learning-assisted Magnetic Barkhausen Noise Analysis
Kanna Omae, Chiemi Oka, Junpei Sakurai, Seiichi Hata, Takahiro Yamazaki (Nagoya University)
- P2-12* Effects of Surface Temperatures of Dielectric Substrates on Tetracene Thin Films Deposited by Rapid Expansion of Supercritical Solutions Using CO_2 and the Elucidation of Deposition Mechanism
Takumi Kiyosawa, Yui Sakamoto, Hirohisa Uchida (Kanazawa University)
- P2-13* Aggregation and Optical Properties of Au on Moth-Eye Structures
Ryoto Umezawa, Tatsuya Kamiyama, Yasuo Ohdaira, Akira Baba, Keizo Kato, Kazunari Shinbo (Niigata University)
- P2-14* Bifacial Dye-Sensitized Solar Cells Utilizing NIR Sensitive Novel Unsymmetrical Squaraine Dye
Suraya Shaban, Pritha Roy, Ajendra Kumar Vats, Shyam S. Pandey (Kyushu Institute of Technology)
- P2-15* Millimeter-Wave Electromagnetic Simulation for Conductive Paste Bonding Using Single Fullerene Shaped Model
Nozomi Shimoishika*, **, Kousuke Hishida*, Makoto Sonehara*, Junpei Mochiduki*, Toshiro Sato* (*Shinshu University, **CONNECTEC JAPAN Corporation)
- P2-16* Fabrication of memristors based on ZnO nano pillars encapsulated in porous alumina
Tomoki Kinoshita, Myo Than Htay, Yoshio Hashimoto (Shinshu University)
- P2-17* Microplasma generation in a meta-atom fabricated on a quartz substrate
Takanosuke Sato, Yasuhiro Tamayama (Nagaoka University of Technology)
- P2-18* Fabrication and Characterization of Ph-BTBT-10 Thin Film Transistors by Rapid Expansion of Supercritical Solutions (RESS) Using CO_2
Yui Sakamoto, Wakana Kamata, Kazutoshi Shimamura, Hirohisa Uchida (Kanazawa University)
- P2-19* Production of unidirectional porous materials utilizing self-assembly of magnetic nanoparticles
Atsuki Kobayashi, Junpei Sakurai, Seiichi Hata, Chiemi Oka (Nagoya University)
- P2-20* Evaluation of Termination Structures of Single Crystal Diamond (111) Surface
Akihito Hiramitsu*, Naoki Mikoshiba*, Xufang Zhang*, Tsubasa Matsumoto*, Satoshi Yamasaki*, C.E.Nebel* **, Takao Inokuma*, Norio Tokuda* (*Kanazawa University, **Diamond and Carbon Applications)

Caretakers: Satoshi Sunada (Kanazawa University), Yosuke Shimamura (NIT, Nagaoka College), Makoto Sonehara (Shinshu University)

12:50-14:20

- P2-21 Additive Effect of Lanthanide Compounds into Perovskite Layer on Photovoltaic Properties and Microstructures
Atsushi Suzuki, Kyo Kishimoto, Takeo Oku, Masanobu Okita*, Sakiko Fukunishi*, Tomoharu Tachikawa*
(The University of Shiga Prefecture, *Osaka Gas Chemicals Co., Ltd.)
- P2-22 Capillarity Induced Self-folding 3D Hydrogel Structures of Elastic Wrinkled Film Prepared by One-push Stretching Method
Hiroshi Endo, Hiromichi Inokuchi
(Toyama Prefectural University)
- P2-23 Effect of H₂S annealing for Cu₂SnS₃ thin films
Yoji Akaki, Tomohiro Uchimura, Shigeyuki Nakamura*, Hideaki Araki**
(NIT, Miyakonojo College, *NIT, Tsuyama College, **NIT, Nagaoka College)
- P2-24 Effects of thermal treatments on the electrical properties of sputter-derived HfO₂/Ge interfaces
Daichi Yamada, Yusuke Yamamoto, Hiroshi Okamoto*, Yohei Otani
(Suwa University of Science, *Hiroasaki University)
- P2-25 Suppression Mechanism of Devitrification of Chlorine-containing Vitreous Silica Promoted by Putting on a Sodium Chloride Grain
Naohiro Horii, Nobu Kuze*, Hideharu Horikoshi**
(NIT, Fukui College, *University of Fukui, **Tosoh SGM Corp.)
- P2-26 Effects of Solution Concentrations on Crystal and Electrical Characteristics of TIPS-Pentacene Thin Films Deposited by Spin-Coating Technique
Aoi Okuda, Yui Sakamoto, Hirohisa Uchida
(Kanazawa University)
- P2-27 Multilayered polymer based inverted organic light emitting diode with solution-processed electron injection layers
Masato Katou, Shingo Takada, Reo Taguchi, Eiji Itoh
(Shinshu University)
- P2-28 Improvement of field effect transistor performance of Ph-BTBT-10 FETs fabricated on HfO₂/ alicyclic polyimide double layered gate insulator
Bojun Chen, Fumiya Aikawa, Eiji Itoh
(Shinshu University)
- P2-29 Crystallization of catalytic CVD hydrogenated n-type amorphous silicon films on textured glass substrates by flash lamp annealing
Zheng Wang, Huynh Thi Cam Tu, Keisuke Ohdaira
(Japan Advanced Institute of Science and Technology)
- P2-30 Solution Discrimination Using a Hybrid Sensor of Surface Plasmon Resonance and Quartz Crystal Microbalance
Shotaro Komatsu, Yasuo Ohdaira, Akira Baba, Keizo Kato, Kazuanri Shinbo
(Niigata University)
- P2-31 Photoluminescence from Cu₂SnS₃ thin films depend on sulfurization temperature
Shogo Miyagi, Kunihiko Tanaka, Daiki Motai*, Ryota Ohashi*, Kanata Watanabe*, Yoko Hosokawa*, Hideaki Araki*
(Nagaoka University of Technology, *NIT, Nagaoka College)
- P2-32 Radiation response properties of (C₆H₅C_nH_{2n}NH₃)₂PbBr₄ (n = 2, 3, 4)
Ryo Nagaoka, Naoki Kawano, Daisuke Nakauchi*, Hiromi Kimura*, Masaki Akatsuka*, Takayuki Yanagida*
(Akita University, *Nara Institute of Science and Technology)
- P2-33 Scintillation characteristics of Dy³⁺-doped TeO₂–Al₂O₃–SrO glasses
Ryogo Nakamori, Akito Takaku, Naoki Kawano, Daichi Onoda*, Yuma Takeuchi*, Hiroyuki Fukushima*, Takumi Kato*, Kenji Shinozaki**, Takayuki Yanagida*
(Akita University, *Nara Institute of Science and Technology, **National Institute of Advanced Industrial Science and Technology)
- P2-34 Scintillation properties of Nd-doped TeO₂–Al₂O₃–BaO glasses
Akito Takaku, Naoki Kawano, Hiromi Kimura*, Daisuke Nakauchi*, Masaki Akatsuka*, Kenji Shinozaki**, Takayuki Yanagida*
(Akita University, *Nara Institute of Science and Technology, **National Institute of Advanced Industrial Science and Technology)
- P2-35 Highly Stretchable and Designable Elastomer Sheet with Auxetic Channel Structure
Yukihide Tashiro, Hiroshi Endo
(Toyama Prefectural University)
- P2-36 Fabrication and characterization of GAI-added CH₃NH₃PbI₃ solar cells
Iori Ono, Yugo Asakawa, Shuhei Terada, Takeo Oku, Atsushi Suzuki, Masanobu Okita*, Sakiko Fukunishi*, Tomoharu Tachikawa*
(The University of Shiga Prefecture, *Osaka Gas Chemicals Co., Ltd.)
- P2-37 Analysis of electric-field domain formations and carrier transport phenomena in GaAs/AlAs asymmetric double-quantum-well superlattices
Tomonori Matsui, Seiryu Nishiyama, Shoji Goto, Makoto Hosoda*, Kouichi Akahane**, Naoki Ohtani
(Doshisha University, *Shizuoka University, **National Institute of Information and Communications Technology)