

## Poster Session

October 25 (Wed) 14:00-15:30  
RIEC Main Building 1F Lounge

### A. Novel Materials and Devices

- A-1 Valley polarized optical absorption in two dimensional materials**  
Ghalamkari Kazu, Yuki Tatsumi, Riichiro Saito, *Department of Physics, Tohoku University*
- A-2 Fluorescence behavior of perylene embedded in polymer thin film: Effect of preparation temperature**  
Koshiro Yoshioka<sup>1</sup>, Tsunenobu Onodera<sup>1</sup>, Shuji Okada<sup>2</sup>, Tadashi Mitsui<sup>3</sup>, and Hidetoshi Oikawa<sup>1</sup>, <sup>1</sup>*IMRAM, Tohoku University*, <sup>2</sup>*Graduate School of Science and Technology, Yamagata University*, <sup>3</sup>*NIMS*
- A-3 Synthesis of spin thermal conductivity La–Ca–Cu–O thin films for micro-thermal management**  
Yuki Machida, Nobuaki Terakado, Ryosuke Takahashi, Yoshihiro Takahashi, and Takumi Fujiwara, *Department of Applied Physics, Tohoku University*
- A-4 Crystallization of nonlinear optical Sr<sub>2</sub>TiSi<sub>2</sub>O<sub>8</sub> by laser irradiation in glass: Microscopic observation and second-harmonic generation**  
Yuta Hayashibara, Kosuke Funajima, Nobuaki Terakado, Yoshihiro Takahashi, and Takumi Fujiwara, *Department of Applied Physics, Tohoku University*
- A-5 In-depth investigation of short/medium-range structure in chemically strengthened glass by X-ray diffraction and micro Raman spectroscopy**  
Ryusei Sasaki, Nobuaki Terakado, Yoichi Okamoto, Yoshihiro Takahashi, and Takumi Fujiwara, *Department of Applied Physics, Tohoku University*
- A-6 Human-body temperature sensing based on optically-stimulated luminescence in ZrO<sub>2</sub> powder**  
Masaharu Ohashi, Nobuaki Terakado, Yoshihiro Takahashi, Noriko Onoue, Tsuyoshi Shinozaki, and Takumi Fujiwara, *Department of Applied Physics, Tohoku University*
- A-7 Fabrication of Nanocrystal using glassy spheres embedded in perfect surface crystallized glass and its confinement effect**  
Shinya Kubota, Nobuaki Terakado, Yoshihiro Takahashi, and Takumi Fujiwara, *Department of Applied Physics, Tohoku University*
- A-8 Dynamically unpolarized single-photon source in diamond with intrinsic randomness**  
Naofumi Abe, Yasuyoshi Mitsumori, Mark Sadgrove, and Keiichi Edamatsu, *RIEC, Tohoku University*
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## B. Nano-structures and Micro-optics

- B-1 Polarization response of a gold nanoparticle coupled to a nanofibre optical interface**  
Masakazu Sugawara, Mark Sadgrove, Yasuyoshi Mitsumori, and Keiichi Edamatsu, *RIEC, Tohoku University*
- B-2 Anomalous wavelength dependence of photoinduced voltage in nanoporous metallic thin films**  
Marjan Akbari and Teruya Ishihara, *Department of Physics, Tohoku University*
- B-3 Luminescence from carbon Nanomaterials Investigated by Scanning Tunneling Microscopy**  
Satoshi Katano, Misaki Aizawa, Hiroto Fujita and Yoichi Uehara, *RIEC, Tohoku University*
- B-4 Micro-machined Varifocal Mirror for Confocal Sensor**  
Kenta Nakazawa, Takashi Sasaki, and Kazuhiro Hane, *Department of Finemechanics, Tohoku University*
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## C. Lasers and Optical Communications

- C-1 3~10 Gsymbol/s, 1024 QAM transmission over 160 km with narrow linewidth ECLD and its injection locking**  
Yixin Wang, Seiji Okamoto, Keisuke Kasai, Masato Yoshida, and Masataka Nakazawa, *RIEC, Tohoku University*
- C-2 QAM digital coherent transmission toward ultrahigh multiplicity**  
Masaki Terayama, Seiji Okamoto, Masato Yoshida, and Masataka Nakazawa, *RIEC, Tohoku University*
- C-3 Large-capacity digital coherent optical transmission using an injection locking technique**  
Takashi Kan, Keisuke Kasai, Masato Yoshida, and Masataka Nakazawa, *RIEC, Tohoku University*
- C-4 High-speed and high spectral-efficiency transmission with coherent optical Nyquist pulses**  
Junpei Nitta, Kosuke Kimura, Masato Yoshida, and Masataka Nakazawa, *RIEC, Tohoku University*
- C-5 Lasing polarization characteristics in spin-injected InAlGaAs VCSELs**  
Nobuhide Yokota and Hiroshi Yasaka, *RIEC, Tohoku University*
- C-6 Stable operation of narrow linewidth semiconductor lasers with coherent optical negative feedback**  
Konosuke Aoyama, Nobuhide Yokota, and Hiroshi Yasaka, *RIEC, Tohoku University*
- C-7 Highly functional silicon photonic tunable lasers**  
Tomohiro Kita, Hikaru Sato, Shotaro Takei, Yuya Chiba, and Hirohito Yamada, *Department of Communication Engineering, Tohoku University*

- C-8 S-matrix analysis of side-coupled type plasmonic Fabry-Perot waveguide filters**  
Jiyao Yu, Yasuo Ohtera, and Hirohito Yamada, *Department of Communication Engineering, Tohoku University*
- C-9 Subtraction Imaging by Higher-Order Vector Beams for Spatial Resolution Enhancement**  
Yuichi Kozawa, Daichi Matsunaga, and Shunichi Sato, *IMRAM, Tohoku University*
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## **D. Terahertz Sources and Devices**

- D-1 Crystal growth of GaSe from solution for High-efficiency THz wave generation**  
Yohei Sato, Tang Chao, Tadao Tanabe, and Yutaka Oyama, *Department of Material Science and Engineering, Tohoku University*
- D-2 Non-destructive testing on coated metal surface by THz-wave imaging**  
Ryo Hasegawa, Kenta Kuroo, Tadao Tanabe, and Yutaka Oyama, *Department of Material Science and Engineering, Tohoku University*
- D-3 Carrier-frequency down-conversion from optical data signal to MMW/THz data signal by using InP-HEMT**  
Y. Omori<sup>1</sup>, T. Hosotani<sup>1</sup>, T. Suemitsu<sup>1,2</sup>, K. Iwatsuki<sup>2</sup>, T. Otsuji<sup>1,2</sup>, K. Higuma<sup>3</sup>, J. Ichikawa<sup>3</sup>, T. Sakamoto<sup>4</sup>, N. Yamamoto<sup>4</sup>, and A. Satou<sup>1,2</sup>, <sup>1</sup>*RIEC, Tohoku University*, <sup>2</sup>*ROEC, Tohoku University, Japan*, <sup>3</sup>*New Technology Research Laboratories, Sumitomo Osaka Cement Co. Ltd.*, <sup>4</sup>*Photonics Devices Research Laboratory, NICT*
- D-4 High-speed pulse response of asymmetric-dual-grating-gate plasmonic THz detector**  
T. Hosotani<sup>1</sup>, F. Kasuya<sup>1</sup>, M. Suzuki<sup>1</sup>, T. Suemitsu<sup>1</sup>, T. Otsuji<sup>1,2</sup>, Y. Takida<sup>3</sup>, H. Ito<sup>3</sup>, H. Minamide<sup>3</sup>, T. Ishibashi<sup>4</sup>, M. Shimizu<sup>5</sup>, and A. Satou<sup>1,2</sup>, <sup>1</sup>*RIEC, Tohoku University*, <sup>2</sup>*ROEC, Tohoku University, Japan*, <sup>3</sup>*RIKEN Center for Advanced Photonics, RIKEN*, <sup>4</sup>*NTT Electronics Techno*, <sup>5</sup>*NTT Electronics*
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