

**門脇・柏木研究室2010年度（平成22年度）研究活動状況
（2010年4月1日～2011年3月31日）**

[学術論文]

- [1]. Manabu Tsujimoto, Kazuhiro Yamaki, Kota Deguchi, Takashi Yamamoto, Takanari Kashiwagi, Hidetoshi Minami, Masashi Tachiki, Kazuo Kadowaki and Richard A. Klemm, “*Geometrical Resonance Conditions for THz Radiation from the Intrinsic Josephson Junctions in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$* ”, Phys. Rev. Lett. **105** (July 15th, 2010) 037005, (DOI: 10.1103/PhysRevLett.105.037005).
- [2]. Richard A. Klemm and Kazuo Kadowaki, “*Angular Dependence of the Radiation Power of a Josephson STAR Emitter*”, J. Supercond. Nov. Magn. **23** (July 2010) 613-616, (DOI: 10.1007/s10948-010-0719-7).
- [3]. S V Chong, S Hashimoto and K Kadowaki, “*Upper critical fields and critical current density of $\text{BaFe}_2(\text{As}_{0.68}\text{P}_{0.32})_2$ single crystal*”, Solid State Commun., **150** (July 2010) 1178-1181, (DOI: 10.1016/j.ssc.2010.04.019).
- [4]. Richard A. Klemm and Kazuo Kadowaki, “*Output from a Josephson stimulated terahertz amplified radiation emitter*”, J. Phys. Condens. Matter **22** (22 September 2010) 375701(1-15), (DOI: 10.1088/0953-8984/22/37/375701).
- [5]. R. Yoshizaki, H. Ikeda, and K. Kadowaki, “*Properties of Ca-doped $\text{Bi}_{2+x}\text{Sr}_{2-x}\text{CuO}_{6+\delta}$* ”, Physica C: Superconductivity **470** Special Issue SI Suppl. 1 (December 2010) S193-S194, (DOI: 10.1016/j.physc.2009.10.048), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [6]. M. Tsujimoto, K. Yamaki, T. Yamamoto, H. Minami, and K. Kadowaki, “*Terahertz radiation generated from cylindrical mesas of $\text{Bi}_2\text{212}$* ”, Physica C: Superconductivity **470** Special Issue SI Suppl. 1 (December 2010) S779-S781, (DOI: 10.1016/j.physc.2009.10.035), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [7]. Naoki Orita, Hidetoshi Minami, Takashi Koike, Takashi Yamamoto, and Kazuo Kadowaki, “*Synchronized operation of two serially connected $\text{Bi}_2\text{212}$ emitters*”, Physica C: Superconductivity **470** Special Issue IS Suppl. 1 (December 2010) S786-S787, (DOI: 10.1016/j.physc.2010.01.051), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [8]. Jovan Mirkovic, Takashi Saito, Takanari Kashiwagi, Itsuhiro Kakeya, Yuimaru Kubo, Takashi Yamamoto, Ahmet Oral, and Kazuo Kadowaki, “*Vortex phases in magnetic fields near ab-plane in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ single crystal*”, Physica C: Superconductivity **470** Special Issue SI Suppl. 1 (December 2010) S790-S792, (DOI: 10.1016/j.physc.2009.11.095), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza

- Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [9]. Jovan Mirkovic, Takanari Kashiwagi, Takashi Saito, Takashi Yamamoto, and Kazuo Kadowaki, “*Crossing vortex lattice and lock-in vortex state in mesoscopic $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ crystal*”, *Physica C: Superconductivity* **470** Special Issue SI Suppl. 1 (December 2010) S793-S794 (DOI: 10.1016/j.physc.2010.01.009), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [10]. Kazuhiro Yamaki, Manabu Tsujimoto, Takashi Yamamoto, Hidetoshi Minami, and Kazuo Kadowaki, “*Magnetic field effects on THz radiation from rectangular shape $\text{Bi}2212$ IJJ’s*”, *Physica C: Superconductivity* **470** Special Issue SI Suppl. 1 (December 2010) S804-S805, (DOI: 10.1016/j.physc.2010.01.035), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [11]. Hidetoshi Minami, Naoki Orita, Takashi Koike, Takashi Yamamoto, and Kazuo Kadowaki, “*Continuous and reversible operation of $\text{Bi}2212$ based THz emitters just below T_c* ”, *Physica C: Superconductivity* **470** Special Issue SI Suppl. 1 (December 2010) S822-S823, (DOI: 10.1016/j.physc.2010.01.016), “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [12]. T. Nishio, R. B. G. Kramer, V. H. Dao, L. F. Chibotaru, N. D. Zhigadlo, and J. Karpinski, “*Inhomogeneity of initial flux penetration in MgB_2 single crystals*”, *Physica C: Superconductivity* **470** Special Issue SI Suppl. 1 (December 2010) S932-S934, (DOI: 10.1016/j.physc.2009.10.091) “*Proceedings of the 9th International Conference on Materials and Mechanisms of Superconductivity*”, held at Keio Plaza Hotel, Tokyo, Japan, Sept. 7-12, 2009.
- [13]. S. V. Chong, S. Hashimoto, H. Yamaguchi and K. Kadowaki, “*Neodymium-Doping Induced Superconductivity in 1111-SrFeAsF Iron-Pnictide System*”, *Journal of Superconductivity and Novel Magnetism*, **23** (December 2010) 1479-1484 (DOI 10.1007/s10948-010-0799-4).
- [14]. Richard A. Klemm, Erica R. Laberge, Dustin R. Morley, Takanari Kashiwagi, Manabu Tsujimoto and K. Kadowaki, “*Cavity mode waves during terahertz radiation from rectangular $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ mesas*”, *J. Phys: Condens. Matter* **23** (19 January 2011) 025701(1-11), (DOI: 10.1088/0953-8984/23/2/025701).
- [15]. Masashi Tachiki, Krsto Ivanovic and K. Kadowaki, “*Emission of terahertz electromagnetic waves from intrinsic Josephson junction arrays embedded in resonance LCR circuits*”, *Phys. Rev. B* **83** (19 January 2011) 014508-1, (DOI: 10.1103/PhysRevB.83.014508).
- [16]. Kazuhiro Yamaki, Manabu Tsujimoto, Takashi Yamamoto, Akio Furukawa, Takanari Kashiwagi, Hidetoshi Minami, and Kazuo Kadowaki, “*High-power terahertz electromagnetic wave emission from high- T_c superconducting $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ mesa structures*”, *Optics Express* **19** (No. 4)(February 14, 2011) 3193-3201.
- [17]. Fabio Marchesoni, Sergey Savel'ev, Masashi Tachiki and Franco Nori, “*Model of coherent emission*

from disordered arrays of driven Josephson vortices”, Phys. Rev. **B81** (25th of May, 2010) 174531, (DOI: 10.1103/PhysRevB81.174531).

[雑誌、新聞記事など、その他の著作物]

- [1]. 門脇和男、近接場光のセンシング・イメージング技術への応用—最新のバイオ・化学・デバイス分野への展開」、バイオナノテクノロジー分野、第 22 章「テラヘルツ波の検査への応用」、民谷栄一・朝日剛監修、CMC 出版（2010 年 11 月）。
- [2]. 辻本学、門脇和男、「高温超伝導体の固有ジョセフソン接合系におけるテラヘルツ波発振現象」、日本物理学会誌第 66 巻 (Vol. 66), No.1 (1 月号), (January, 2011) 46-50.

[国際会議招待講演]

- [1]. Kazuo Kadowaki, “*Terahertz Radiation from High Temperature Superconductor Intrinsic Josephson Junctions and Its Applications*”, presented at the “3rd Tsukuba-Hshinchu Workshop on Nano and Bio-Related Materials and Technologies”, April 1-4, 2010, NTHU (National Tsing Hua University), Shinchu, Taiwan.
- [2]. Kazuo Kadowaki, “*Multi-Stacked Intrinsic Josephson Junctions (IJJ’s) as a Coherent Phase Locked (CPL) Quantum Device*”, presented as an invited talk at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [3]. Kazuo Kadowaki, “*Continuous, Coherent and Intense Terahertz Radiation Using Intrinsic Josephson Junctions of High Temperature Superconductor $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ Single Crystal Mesas*”, presented as an invited talk at the “International symposium on “High temperature Superconductors in High Frequency Fields (HTSHHF)”, held in May 17-19, 2010, San Diego, California, USA.
- [4]. Kazuo Kadowaki, “*Angular Dependence of a Powerful THz Emission from Intrinsic Josephson Junctions of High T_c Superconductor $\text{Bi}2212$* ”, presented as an invited talk at the “6th Nanoscience and Nanotechnology Conference”, held at Golden Dolphin Hotel, Cesme, Izmir, Turkey, 15-18, June 2010.
- [5]. Kazuo Kadowaki, “*Coherent and Continuous THz Waves Generated from High T_c Superconductor $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$* ”, presented at the “Symposium 6th International Conference, Science and Engineering of Novel Superconductors”, in the “5th Forum on New Materials” held at Montecatini, Terme, Pistoia, Italy, June 13-18, 2010.
- [6]. Kazuo Kadowaki, “*Coherent THz Radiation from Intrinsic Josephson Junctions*”, presented as an invited talk at the international conference on “Low-Energy Electrodynamics in Solids (LEES 2010)”, held at Eurotel Victoria, Les Diablerets, Switzerland, July 5th - 10th, 2010.
- [7]. Kazuo Kadowaki, “*Coherent THz Radiation from Intrinsic Josephson Junctions (I)*”, presented as an invited lecture at the Institute of Radio-Engineering and Electronics, Russian Academy of Sciences,

Moscow, Russia, on July 19th, 2010.

- [8]. Kazuo Kadowaki, “*Coherent THz Radiation from Intrinsic Josephson Junctions (II)*”, presented as an invited lecture at the Levedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia, on July 20th, 2010.
- [9]. Kazuo Kadowaki, “*Coherent THz Radiation from Intrinsic Josephson Junctions (III)*”, presented as an invited lecture at the Institute of Solid State Physics, Russian Academy of Sciences, Chernogolovka, Russia, on July 21th, 2010.
- [10]. Kazuo Kadowaki, “Coherent terahertz emission from high T_c superconductor Bi₂Sr₂CaCu₂O_{8+δ} and superconductivity in topological insulators”, presented as an invited talk at the “2011 APCTP (Asia Pacific Center for Theoretical Physics) Winter Workshop on Frontiers in Electronic Quantum Matter”, held at Hogil Kim Memorial Bldg. 5th floor, POSTECH, Pohang, Korea, during 16th and 19th February, 2011.

[国際会議口頭発表]

- [1]. M. Tachiki, “*Terahertz Electromagnetic Wave Emission from Intrinsic Josephson Arrays Embedded in Resonant LRC Circuits*”, presented as an oral talk at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High-T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [2]. Hidetoshi Minami, “*Structure Effect on the THz Radiation from the Bi2212 Intrinsic Josephson Junctions*”, presented as an oral talk at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High-T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [3]. Kazuo Kadowaki, “*A Road to High Power Terahertz Radiation from Intrinsic Josephson Junctions*”, presented as an oral talk at the “Applied Superconductivity Conference (ASC) 2010”, August 1st – 6th, 2010, held in Omni Shoreham Hotel, Washington D.C., USA.
- [4]. Kazuo Kadowaki, “*Nanoscience and Engineering in Superconductivity: Emerging New Concept in Solid State Physics from Artificially Engineered Novel Materials*”, presented as a talk at the Japan – EU Workshop “*Superconductivity*”, August 1st, 2010, at Omni Shoreham Hotel, Washington D.C., USA.
- [5]. Kazuo Kadowaki, “*Superconducting THz Emitter: Coherent, Continuous and Intense Terahertz Electromagnetic Wave Generation from a Mesa of High Temperature Superconducting Bi₂Sr₂CaCu₂O_{8+δ} Intrinsic Josephson Junctions*”, presented as an Oral presentation at the “*International Conference on Superconductivity and Magnetism: Hybrid Proximity Nanostructures and Intrinsic Phenomena*”, held at Savoy Beach Hotel, Paestum, Italy, 5-11 September, 2010.
- [6]. Kazuo kadowaki, “*Terahertz radiation from high temperature superconductors: present status and*

future perspective”, presented at the “3rd International Symposium on Interdisciplinary Materials Science (ISIMS-2011)” held at Tsukuba International Congress Center (EPOCHAL), Tsukuba, Ibaraki, Japan, March 9-11, 2011.

[国際会議ポスター発表]

- [1]. Kohta Degichi, “*Sharp Effect of the THz Wave Oscillation Frequency on the Bi2212 Single Crystal Mesa Structure*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [2]. Takanari Kashiwagi, “*Geometrical Full One Wave Length Resonance in Single Crystalline Bi2212 Mesa Structures*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [3]. Takashi Koike, “*Power Enhancement of the THz Emission from Bi2212 Intrinsic Josephson Junctions by Modulated Bias*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [4]. Takashi Yamamoto, “*Terahertz Radiation from Stand-alone Rectangular Mesa of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ Intrinsic Josephson Junctions*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [5]. Manabu Tsujimoto, “*Frequency Jump Phenomena in THz Radiation from Bi2212*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [6]. Krsto Ivanovic, “*Terahertz Electromagnetic Wave Emission from IJJ Array Embedded in the Resonant LCR Circuit*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [7]. Hirohide Asai, “*Switching Behavior of Superconducting Current Manipulated by Magnetic Field in Mesoscopic Samples*”, presented as a poster presentation at the “7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [8]. Shinya Hashimoto, “*Fabrication and Physical Properties of Rare-Earth 123 Based Single Crystalline Whiskers*”, presented as a poster presentation at the “7th International Symposium on Intrinsic

- Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [9]. Tomoki Goya, “*Transport and Magnetic Measurements in $Ba_{1-x}Y_xFe_2As_2$* ”, presented as an poster presentation at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [10]. Hisato Yamaguchi, “*Single Crystal Growth of Sr-122 System*”, presented as an poster presentation at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [11]. Kazuhiro Yamaki, “*Intense THz Wave Emission from Rectangular Mesa of Bi2212*”, presented as an poster presentation at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [12]. Pradip Das, “*Anisotropy Study by Torque Measurements and the Magnetic Relaxation Measurements in a Single Crystal of the Superconductor $FeSe_{0.5}Te_{0.5}$* ”, presented as an poster presentation at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [13]. Yohei Jono, “*Crystal Grpwth of $Ba_{1-x}Tb_xFe_2As_2$* ”, presented as an poster presentation at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [14]. Ryo Nakayama, “*THz Radiation from Asymmetric Rectangular Mesa Structure of High Temperature Superconductor $Bi_2Sr_2CaCu_2O_{8+\delta}$* ”, presented as an poster presentation at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
- [15]. T. Kashiwagi, T. Kitamura, K. Yamaki, S. Hashimoto, M. Tsujimoto, K. Delfanazari, K. Deguchi, N. Orita, T. Koike, R. Nakayama, S. Hagino, H. Minami, T. Yamamoto and K. Kadowaki, “*Electrical Transport Properties of Large Size Mesa Structure of Single Crystalline Bi2212 in Magnetic Fields*”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [16]. T. Kitamura, T. Kashiwagi, K. Yamaki, T. Yamamoto, M. Tsujimoto, K. Deguchi, R. Nakayama, H. Minami and K. Kadowaki, “*Effect of Magnetic Field on THz Emission from Bi2212 Mesa Structures*”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [17]. S. Hagino, T. Yamamoto, T. Kashiwagi, R. Nakayama, M. Tsujimoto, K. Deguchi, N. Orita, T. Koike, S. Sawamura, T. Kitamura, H. Minami and K. Kadowaki, “*Fabrication of Stand-Alone $Bi_2Sr_2CaCu_2O_{8+\delta}$ Mesa for THz Radiation*”, presented s a poster presentation at the “*4th AEARU*

- Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [18]. A. Nozawa, T. Goya, H. Yamaguchi, Y. Jono, Y. Suzuki, P. Das, S. Hashimoto, T. Yamamoto, T. Kashiwagi and K. Kadowaki, “*Synthesis and Study of FeP Single Crystals*”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [19]. Y. Suzuki, P. Das, S. Hashimoto, T. Goya, Y. Jono, T. Yamamoto, H. Yamaguchi, A. Nozawa, T. Kashiwagi and K. kadowaki, “*Single Crystal Growth of Topological Insulator $Cu_xBi_2Se_3$* ”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [20]. Y. Jono, S. V. Chong, T. Goya, H. Yamaguchi, P. das, T. Yamamoto, S. Hashimoto, Y. Suzuki, A. Nozawa, T. Kashiwagi, R. Yoshizaki and K. Kadowaki, “*Synthesis and Physical Properties of $BaFe_2(As_{1-x}P_x)_2$ Single Crystals*”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [21]. R. Nakayama, K. Yamaki, T. Kashiwagi, M. Tsujimoto, K. Deguchi, T. Yamamoto, T. Koike, N. Orita, S. Hagino, T. Kitamura, H. Minami and K. Kadowaki, “*THz Radiation from Asymmetric Rectangular Mesa Structures of High Temperature Superconductor $Bi_2Sr_2CaCu_2O_{8+\delta}$* ”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [22]. H. Yamaguchi, T. Goya, Y. Jono, P. Das and K. Kadowaki, “*Single Crystal Growth of Iron Based Superconductors by Vertical Bridgeman Method*”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [23]. T. Goya, H. Yamaguchi, Y. Joho and K. Kadowaki, “*Crystal Growth of P-Doped $EuFe_2As_2$* ”, presented s a poster presentation at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [24]. M. Tsujimoto, K. Deguchi, N. Orita, T. Koike, R. Nakayama, T. Yamamoto, H. Minami, T. Kashiwagi and K. Kadowaki, “*Geometrical Resonance in a Nearly Square Mesa and the Frequency*

- Spectrum from the Inner Branches of Intrinsic Josephson Junctions in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$* ”, presented s a poster presentation at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [25]. K. Delfanazari, M. Tsujimoto, T. Yamamoto, T. Kashiwagi, H. Minami, T. Hattori and K. Kadowaki, “The Examination of THz Wave Radiation from Triangular Mesa of Single Crystalline Bi-2212 Intrinsic Josephson Junctions”, presented s a poster presentation at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [26]. K. Ivanovic, M. Tachiki and K. Kadowaki, “Theoretical Study of the Mechanism of Terahertz Wave Emission from the $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ Single Crystals”, presented s a poster presentation at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [27]. S. Hashimoto and K. Kadowaki, “Fabrication and Physical Properties of Rare-Earth 123 Based Single Crystalline Whiskers”, presented s a poster presentation at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [28]. P. Das, Y. Suzuki, S. Hashimoto, T. Goya, T. Yamamoto and K. kadowaki, “Topological Insulator $\text{Cu}_x\text{Bi}_2\text{Se}_3$ and $\text{Ca}_x\text{Bi}_{2-x}\text{Se}_3$ ”, presented s a poster presentation at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [29]. H. Asai and K. Kadowaki, “Numerical Analysis of Terahertz Radiation Pattern from $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ Sample”, presented s a poster presentation at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held in August 29th - September 3rd, 2010, in University of Tsukuba, Tsukuba, Japan.
- [30]. Kaveh Delfanazari, Manabu Tsujimoto, Takashi Yamamoto, Takanari Kashiwagi, Hidetoshi Minami, Toshiaki Hattori and Kazuo Kadowaki, “THz Wave Generation from Triangular Mesas of a High Temperature Superconductor Bi2212 Single Crystal”, presented as a poster presentation at the “International Symposium on Frontier of THz Spectroscopy IV: Innovations in THz Spectroscopy and THz-Wave Wireless Communications”, held at Matsumoto campus of Shinshu University, Matsumoto, Nagano prefecture, Japan, 20th – 22nd, October 2010.

- [31]. Hisato Yamaguchi, Tomoki Goya, Yohei Jono, Akihiko Nozawa and Kazuo Kadowaki, “*Synthesis and Physical Properties in Single Crystalline Iron Based Superconductor 122-Systems*”, Abstract book p71, presented as a poster presentation (PS-10) at the “*MANA (Materials Nanoarchitectonics) International Symposium 2011 Jointly with ICYS*”, held at Tsukuba International Congress Center (EPOCHAL), March 2-4, 2011.
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[国際（国内）会議、研究会、セミナーなどの座長、議長、司会、その他]

- [1]. Chairman of the Session E “*THz Radiation and Related Theory II*” at the “*7th International Symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors*”, April 29th – May 2nd, Hirosaki University, Aomori, Japan.
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[受賞]

- [1]. Manabu Tsujimoto has received his Poster Award in collaboration with Naoki Orita, Takashi Koike, Kota Deguchi, Kazuhiro Yamaki, Takashi Yamamoto, Hidetoshi Minami, Takanari Kashiwagi and Kazuo Kadowaki, “*Frequency Jump Phenomena in THz Radiation from Bi2212*”, at the “*7th International symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors, PLASMA-2010*”, April 29th – May 2nd, 2010, held at Hirosaki University, Hirosaki, Aomori, Japan.
- [2]. Takashi Koike has received his Poster Award in collaboration with Naoki Orita, Hidetoshi Minami, Takashi Yamamoto and Kazuo Kadowaki, “*Power Enhancement of the THz Emission from the Bi2212 Intrinsic Josephson Junctions by Modulated Bias*”, at the “*7th International symposium on Intrinsic Josephson Effects and Plasma Oscillations in High- T_c Superconductors, PLASMA-2010*”, April 29th – May 2nd, 2010, held at Hirosaki University, Hirosaki, Aomori, Japan.
- [3]. Tomoki Goya has received his poster Gold Award, in collaboration with Hisato Yamaguchi, Yohei Jono and Kazuo Kadowaki, “*Crystal growth of P-doped EuFe_2As_2* ”, at the “*4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World*”, held at University of Tsukuba, Tsukuba, Ibaraki, Japan, August 29th – September 3rd, 2010.
- [4]. Manabu Tsujimoto has received his poster Silver Award, in collaboration with Kota Deguchi, Naoki

Orita, Takashi Koike, Ryo Nakayama, Takashi Yamamoto, Hidetoshi Minami, Takanari Kashiwagi and Kazuo Kadowaki, “*Geometrical resonance in a nearly square mesa and the frequency spectrum from the inner branches of intrinsic Josephson junctions in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$* ”, at the “4th AEARU Advanced Materials Workshop on Artificial and Self-Organized Nanostructure Sciences and Nano-Technologies for the Sustainable World”, held at University of Tsukuba, Tsukuba, Ibaraki, Japan, August 29th – September 3rd, 2010.