

V. Achievements

Activities of the Green Asia course students (underlined) during academic years of 2014 and 2015 are listed as follows.

1. Awards

- **Young Researcher Award Kyushu, MMIJ**
Yusei Masaki “インドネシア露天掘り石炭鉱山の廃石堆積場における酸性坑廃水の抑制を目的とした剥土岩石の取り扱いに関する検討” The Mining and Materials Processing Institute of Japan – Kyushu Branch (資源・素材学会九州支部), 2015.6.
- **IGSES Award (総合理工学府賞)**
Tarek Mahmoud Atia Mostafa, Interdisciplinary Graduate School of Engineering Sciences, 2015.9.
- **GSE Award (工学府賞)**
Sendy Dwiki, Graduate School of Engineering, 2015.9.
- **IGSES Award (総合理工学府賞)**
Takayuki Maekura, Graduate School of Engineering, 2016.3.

Presentation Awards

- **The Japan Institute of Metals and Materials The Metals Best Poster Award (優秀ポスター賞)**
Hiroshi Akamine “フェーズフィールド法による立方晶-正方晶変態における単一バリエーション化要件の探索” The Japan Institute of Metals and Materials (日本金属学会), 2015.12.11.
- **The Japan Institute of Metals and Materials Metallography Award (金属組織写真賞)**
Hiroshi Akamine “SEMによる磁気イメージング ~環状検出器による L10 型 CoPt 合金の磁区構造観察” The Japan Institute of Metals and Materials (日本金属学会), 2015.3.23.
- **International Symposium on Earth Science and Technology 2014, Best Presentation**
Yusei Masaki “Microbial Community Structure Analysis of Chinoike-Jigoku (Blood-Pond Hell) Hot Spring and Search for Useful Microorganisms Applicable to Bioremediation of Heavy Metals” Cooperative International Network for Earth Science and Technology, 2014.12.5.
- **第 12 回博士学生交流セミナー 優秀発表賞 (Presentation Award)**
Yusei Masaki “Prevention of Acid Mine Drainage (AMD) by New Cover Systems in Open Cast Coal Mines, Indonesia” Dean of the Graduate School of Engineering, Kyushu University, 2015.8.

- **International Symposium on Earth Science and Technology 2015, Mitsui Matsushima Award for Best Paper**
Yusei Masaki “Fundamental Research on Evaluation of Acid-Topsoil for Effective Revegetation at Post-Mining Land in Indonesian Open Cast Coal Mine” Cooperative International Network for Earth Science and Technology, 2015.12.4.
- **21st International Biohydrometallurgy Symposium 2015, Best Poster**
Masahito Tanaka “Effect of Cu(II) on Bio-Scorodite Crystallization Using Acidianus Brierleyi” 21st International Biohydrometallurgy Symposium, 2015.10.8.
- **The 3rd Asian Conference on Biomass Science, Excellent Paper Award**
Zayda Faizah Zahara “Kinetics and Mechanism of CO₂ Gasification of Char from Indonesian Sugarcane Bagasse” The Japan Institute of Energy, Biomass Division, 2016.1.19.
- **MOC’15 Student Award**
Ryan Imansyah “First Demonstration of Electrically Controlled Mode Switching” The Japan Society of Applied Physics, Microoptics Group, 2015.10.28.
- **CSS-EEST 17 Best Presentation Award**
Azizah Intan Pangesty “Development of Cell Sheet/PLCL Tube Hybrid Structure for vascular Tissue Engineering” The 17th Cross Straits Symposium on Energy and Environmental Science and Technology, Japan, 2015.12.3.
- **CSS-EEST 16 Best Presentation Award**
Khanam Marzia “Feasibility of Solar Energy for Air Conditioning in Chitradurga, India” The 16th Cross Straits Symposium on Energy and Environmental Science and Technology, Korea, 2014.11.13-15.
- **Best Poster Award**
Yuki Uchida “CVD Growth Single-Layer Hexagonal Boron Nitride on Heteroepitaxial Cu Films” Science of Atomic Layers, Grant-in-Aid for Scientific Research on Innovative Areas, MEXT, 2015.11.9-12.
- **CSS-EEST 17 Best Presentation Award**
Shin Sakiyama “p-Type and n-Type Doping in Polymer Semiconductor by Wet Process” The 17th Cross Straits Symposium on Energy and Environmental Science and Technology, Japan, 2015.12.3.
- **JSAP Kyushu Chapter Annual Meeting 2015 発表奨励賞 (Presentation Encouragement Prize)**
Satoshi Takeichi “B ドープ超ナノ微結晶ダイヤモンド/水素化アモルファスカーボン混相膜の化学結合構造への水素化の効果” The Japan Society of Applied Physics, Kyushu Chapter, 2015.12.5.

- **5th CSJ Chemistry Festa 優秀ポスター発表賞 (Poster Award)**
Takaya Fujisaki “Development of Cell Sheet/PLCL Tube Hybrid Structure for vascular Tissue Engineering” The Chemical Society of Japan, 2015.12.24.
- **Best Student Poster**
Takaya Fujisaki “イットリウムを添加した SrZrO₃ の乾燥水素中における電気伝導性” Department of Molecular and Material Sciences, Interdisciplinary Graduate School of Engineering Science, Kyushu University, 2015.4.6.
- **International Symposium on Earth Science and Technology 2015, Mitsui Matsushima Award for Best Paper**
Tomy Alvin Rivai “Preliminary investigation on the quartz veins and host rocks at the River Reef Zone, the Poboya Gold Deposit, Central Sulawesi, Indonesia” Cooperative International Network for Earth Science and Technology, 2015.12.4.
- **Kyushu MMIJ 2015, Presentation Award**
Keishi Oyama “微生物を用いた硫化鉱物の浮遊選別に関する研究” The Mining and Materials Processing Institute of Japan - Kyushu Branch (資源・素材学会 九州支部), 2015.6.12.
- **International Symposium on Earth Science and Technology 2015, Best Presentation Award**
Keishi Oyama “Selective Bioleaching of Enargite (Cu₃AsS₄) over Pyrite (FeS₂) for Cu Recovery” Cooperative International Network for Earth Science and Technology, 2015.12.4.

2. Research Papers and Proceedings (Peer-Reviewed)

- H. Sakaguchi, Hiroshi Akamine “Domain Wall Dynamics in Ginzburg-Landau-Type Equations with Conservative Quantities” *Journal of the Physical Society of Japan*, **2014**, 83, 064006.
- Hiroshi Akamine, K. H. W. van den Bos, N. Gauquelin, S. Farjami, S. Van Aert, D. Schryvers, M. Nishida “Determination of the Atomic Width of an APB in Ordered CoPt Using Quantified HAADF-STEM” *Journal of Alloys and Compounds*, **2015**, 644, 570-574.
- K. Higa, Hiroki Gima “Characteristics of Electron Emission from Cross-Sectional Surface of Porous Si Layer” *Japanese Journal of Applied Physics*, **2014**, 53, 064101.
- A. Zkria, Hiroki Gima, S. Al-Riyami, T. Yoshitake “Fabrication of Heterojunction Diodes Comprising Nitrogen-Doped Ultrananocrystalline Diamond/Amorphous Carbon and p-Type Silicon” *Materials Research Society Symposium Proceedings*, **2015**, 1734, mrsf14-1734-r03-16.

- T. Yoshida, K. Hanada, Hiroki Gima, R. Ohtani, K. Sumitani, H. Setoyama, A. Tominaga, T. Yoshitake “Influences of Repetition Rate of Arc Discharges on Hardness and Modules of Ultrananocrystalline Diamond Films Prepared by Coaxial Arc Plasma Deposition” *Materials Research Express*, **2015**, 2, 015021.
- K. Hanada, T. Yoshida, Y. Nakagawa, Hiroki Gima, A. Tominaga, M. Hirakawa, Y. Agawa, T. Sugiyama, T. Yoshitake “Hardness and Modulus of Ultrananocrystalline Diamond/Hydrogenated Amorphous Carbon Composite Films Prepared by Coaxial Arc Plasma Deposition” *Applied Physics A*, **2015**, 119, 205-210.
- S. Ohmagari, Takanori Hanada, Y. Katamune, S. Al-Riyami, T. Yoshitake “Carrier Transport and Photodetection in Heterojunction Photodiodes Comprising n-Type Silicon and p-Type Ultrananocrystalline Diamond/Hydrogenated Amorphous Carbon Composite Films” *Japanese Journal of Applied Physics*, **2014**, 53, 050307.
- Tsuyoshi Sato, A. Hagishima, N. Ikegaya, J. Tanimoto “庇を有する2次元ストリートキャニオン周囲の気流場に関する風洞実験 (Wind Tunnel Experiment on Turbulent Flow Field Around 2D Street Canyon with Eaves)” *日本建築学会環境系論文集 (Journal of Environmental Engineering (Transactions of Architectural Institute of Japan))*, **2016**, 81, 467-476.
- Shinji Matsumoto, H. Shimada, T. Sasaoka, K. Matsui “Challenges in Acidic Water Control by Considering the Effects of Waste Rock Condition” *Proceedings of 15th International Symposium on Mineral Resources and Mine Development*, **2014**, 427-435.
- A. Hamanaka, N. Inoue, Shinji Matsumoto, H. Shimada, T. Sasaoka, K. Matsui, I. Miyajima, “Revegetation for Utilization of Disturbed Land by Paper Mulberry in Indonesian Open Cut Mine” *Proceedings of 18th Conference on Environment and Mineral Processing, Part I*, **2014**, 1, 29-35.
- N. Inoue, A. Hamanaka, Shinji Matsumoto, H. Shimada, T. Sasaoka, K. Matsui “Effective Assessment Methods of Soil Erosion Control in Indonesian Open Pit Mine” *Proceedings of 18th Conference on Environment and Mineral Processing, Part I*, **2014**, 1, 221-227.
- A. Hamanaka, N. Inoue, Shinji Matsumoto, H. Shimada, T. Sasaoka, M. Kikuo, I. Miyajima “Rehabilitation of Open Cut Coal Mine with Paper Mulberry (*Broussonetia Papyrifera*) in Indonesia” *Journal of the Polish Mineral Engineering Society*, **2014**, 15, 159-163.
- Shinji Matsumoto, H. Shimada, T. Sasaoka, A. Hamanaka, K. Matsui “Evaluation of the Current System for Waste Rock Treatment Considering the Rock Conditions in Open Pit Coal Mine” *Proceedings of the Beijing International Symposium Land Reclamation and Ecological Restoration*, **2014**, 15, 159-163 and 551-555.

- Shinji Matsumoto, A. Hamanaka, H. Shimada, T. Sasaoka, K. Matsui, “Management of a Large Amount of Potentially Acid Forming for the Prevention of Acid Mine Drainage” *Proceedings of International Symposium on Earth Science and Technology 2014*, **2014**, 93-98.
- Shinji Matsumoto, H. Shimada, T. Sasaoka, G. J. Kusuma, R. S. Gautama “The Key Factors for the Improvement of Classification Method of Waste Rocks Aimed at the Prevention of Acid Mine Drainage” *Proceedings of 16th International Symposium on Mineral Resources and Mine Development*, **2015**, 14, 325-333.
- Shinji Matsumoto, H. Shimada, T. Sasaoka, K. Matsui, G. J. Kusuma “The Use of Sulfur-Bearing Rocks for the Cover Layer to Prevent Acid Mine Drainage (AMD) in the Cover System: Characterization of Rocks” *Proceedings of 19th Conference on Environment and Mineral Processing, Part I*, **2015**, 1, 221-226.
- Y. Miyamoto, Shinji Matsumoto, H. Shimada, T. Sasaoka “Study on Construction of Waste Dump by Considering the Change of Physical Properties of Waste Rocks Associated with Acid Mine Drainage in Open Pit Coal Mines in Indonesia” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 32-37.
- Shinji Matsumoto, S. Ogata, Sendy Dwiki, H. Shimada, T. Sasaoka “Fundamental Research on Evaluation of Acid-Topsoil for Effective Revegetation at Post-Mining Land in Indonesian Open Cast Coal Mine” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 65-69.
- S. Sakamoto, Shinji Matsumoto, H. Shimada, T. Sasaoka, S. Fujita, S. Wahyudi, Y. Yoshida, K. Takahashi “New Development Covering Material Using Fly Ash for Construction of Seabed Structures” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 201-204.
- H. Ishimatsu, Shinji Matsumoto, H. Shimada, T. Sasaoka “Fundamental Research of a New Classification of Potentially Acid Forming Aiming at the Prevention of Acid Mine Drainage in Open-Pit Coal Mines in Indonesia” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 346-350.
- Shinji Matsumoto, H. Shimada, T. Sasaoka, S. Ikuta, T. Sakiyama “Application of Chain Conveyor Culler (CCC) method to Construction of Ocean Disposal Sites” *Proceedings of 9th Asian Rock Mechanics Symposium*, **2016**, CD-ROM.
- Shinji Matsumoto, H. Shimada, T. Sasaoka, G. J. Kusuma, R. S. Gautama “Construction of Dry Cover System for Prevention of Acid Mine Drainage at Mine Waste Dump in Open Cast Coal Mines, Indonesia” *Journal of Environmental Protection*, **2016**, 7, 160-169.

- Shinji Matsumoto, H. Ishimatsu, H. Shimada, T. Sasaoka, K. Matsui, G. J. Kusuma “Prevention of Acid Mine Drainage (AMD) by Using Sulfur-Bearing Rocks for a Cover Layer in a Dry Cover System in View of the Form of Sulfur” *Journal of the Polish Mineral Engineering Society*, **2016**, 36, 29-35.
- Yusei Masaki, K. Tsutsumi, T. Hirajima, K. Sasaki, N. Okibe “Microbial Community Structure Analysis of Chinoike-Jigoku (Blood-Pond Hell) Hot Spring and Search for Useful Microorganisms Applicable to Bioremediation of Heavy Metals” *Proceedings of International Symposium on Earth Science and Technology 2014*, **2014**, 222-224.
- Yusei Masaki, T. Hirajima, K. Sasaki, N. Okibe “Bioreduction and Immobilization of Hexavalent Chromium by the Extremely Acidophilic Fe(III)-Reducing Bacterium *Acidocella Aromatica* Strain PFBC” *Extremophiles*, **2015**, 19, 495-503.
- N. Okibe, K. Sueishi, M. Koga, Yusei Masaki, T. Hirajima, K. Sasaki, S. Heguri, S. Asano “Selenium (Se) Removal from Copper Refinery Wastewater Using a Combination of Zero-Valent Iron (ZVI) and Se(VI)-Reducing Bacterium, *Thaurea Selenatis*” *Materials Transactions*, **2015**, 56, 889-894.
- Yusei Masaki, S. Hirano, N. Okibe “Microbial Community Structure Analysis of Blood Pond Hell Hot Spring in Japan and Search for Metal-Reducing Microbes” *Proceedings of 21st International Biohydrometallurgy Symposium*, **2015**, 447-452.
- Yusei Masaki, S. Hirano, N. Okibe “Microbial Community Structure Analysis of Blood Pond Hell Hot Spring in Japan and Search for Metal-Reducing Microbes” *Advanced Materials Research*, **2015**, 1130, 45-49.
- Yusei Masaki, T. Hirajima, K. Sasaki, H. Miki, N. Okibe “Bioleaching of Highly Refractory Chalcopyrite in the Presence of Silver Catalyst” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 189-190.
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- N. Okibe, M. Koga, S. Morishita, Masahiro Tanaka, S. Heguri, S. Asano, K. Sasaki, T. Hirajima, “Microbial Formation of Crystalline Scorodite for Treatment of As(III)-Bearing Copper Refinery Process Solution Using *Acidianus Brierleyi*” *Hydrometallurgy*, **2014**, 143, 34-41.
- Masahito Tanaka, Y. Yamaji, Y. Fukano, K. Shimada, J. Ishibashi, T. Hirajima, K. Sasaki, M. Sawada, N. Okibe “Biooxidation of Gold-, Silver, and Antimony-Bearing Highly Refractory Polymetallic Sulfide Concentrates, and Its Comparison with Abiotic Pre-Treatment Techniques” *Geomicrobiology Journal*, **2015**, 32, 538-548.

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- Masahito Tanaka, T. Hirajima, K. Sasaki, K. Hatano, A. Ohata, N. Okibe “Crystallization of Biogenic Scorodite ($\text{FeAsO}_4 \cdot 2\text{H}_2\text{O}$) from Acidic Wastewaters Containing Diluted Concentrations of Highly Toxic Arsenite” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 161-162.
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- Zayda Faizah Zahara, Karnowo, S. Kudo, K. Norinaga, J. Hayashi “Characteristics of Hydrothermal Treatment of Woody Biomass and Features of Upgraded Solid” *Innovative Energy & Environmental Chemical Engineering*, **2014**, 4, 24-29.
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- M. Takahara, Tarek M. Mostafa, R. Baba, S. Funasaki, M. Shaban, N. Promros, T. Yoshitake “Electric Properties of Carbon-Doped n-Type β -FeSi₂/p-Type Si Heterojunction Diodes” *JJAP Conference Proceedings*, **2015**, 3, 011101.
- Tarek M. Mostafa, M. Takahara, R. Baba, S. Funasaki, M. Shaban, N. Promros, A. Tominaga, M. Nishibori, T. Yoshitake “Epitaxial Growth of n-Type β -FeSi₂ Thin Films on p-Type Si(111) Substrates by Radio-Frequency Magnetron Sputtering and Rectifying Action of Heterojunctions” *JJAP Conference Proceedings*, **2015**, 3, 011102.
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- Sendy Dwiki, H. Shimada, R. S. Gautama, G. J. Kusuma, T. Sasaoka, Shinji Matsumoto, F. Koten “Evaluation of Acid Mine Drainage Characterization for Predicting Post Drainage Water Quality in Coal Mines” *Proceedings of 19th Conference on Environment and Mineral Processing, Part I*, **2015**, *1*, 53-59.
- Cheolyong Choi, Y. M. Sung, G. M. Choi, D. J. Kim “Numerical Analysis of Urea Decomposition with Static Mixers in Marine SCR System” *Journal of Clean Energy Technologies*, **2015**, *3*, 39-42.
- H. Ago, Y. Ohta, H. Hibino, D. Yoshimura, R. Takizawa, Yuki Uchida, M. Tsuji, T. Okajima, H. Mitani, S. Mizuno “Growth Dynamics of Single-Layer Graphene on Epitaxial Cu Surfaces” *Chemistry of Materials*, **2015**, *27*, 5377-5385.
- Shin Sakiyama, T. Kaneko, T. Ootsubo, T. Sakai, K. Nakashima, K. Moto, M. Yoneoka, K. Takakura, I. Tsunoda “Enhanced Au Induced Lateral Crystallization in Electron-Irradiated Amorphous Ge on SiO₂” *Thin Solid Films*, **2014**, *557*, 151-154.
- 茂藤健太, 崎山晋, 酒井崇嗣, 中嶋一敬, 岡本隼人, 高倉健一郎, 角田功 「非晶質 Ge 薄膜の Au 誘起成長に及ぼす電子線照射の影響 (Influence of Electron Irradiation on Au-Induced Crystallization for Amorphous Ge/SiO₂-Substrate)」 電子情報通信学会技術研究報告, **2014**, *114*, 21-25.
- Shin Sakiyama, N. Mizutani, K. Fujita “Controllable p- and n-Type Doping of MEH-PPV Films Prepared by Evaporative Spray Deposition Using Ultra-Dilute Solution Method” *Japanese Journal of Applied Physics*, **2016**, *55*, 04EL03.
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- K. Tomita, Yuta Sato, K. Nishikawa, K. Uchino, T. Yanagida, H. Tomuro, Y. Wada, M. Kunishima, T. Kodama, H. Mizoguchi, A. Sunahara “Development of a Collective Thomson Scattering System for Laser-Produced Tin Plasmas for Extreme-Ultraviolet Light Sources” *Journal of Physics D: Applied Physics*, **2015**, *49*, 055204.

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- Santisak Kijanukit, T. Hirajima, K. Sasaki, N. Okibe “Application of Fe(II)-Oxidizing and Fe(III)-Reducing Abilities of the Thermo-Acidophilic Archaeon, *Sulfolobus Tokodaii* for Bioleaching of Waste Printed Circuit Boards (WPCB) and Formation of Pd(0)-Nanoparticles” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 354-356.
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- Keishi Oyama, T. Hirajima, K. Sasaki, H. Miki, N. Okibe “Selective Bioleaching of Enargite (Cu₃AsS₄) over Pyrite (FeS₂) for Cu Recovery” *Proceedings of International Symposium on Earth Science and Technology 2015*, **2015**, 191-192.

3. Others

- **Academic Challenge 2015**

Shin Sakiyama “フレキシブルグリーンデバイスの実現に向けたポリマー半導体への pn ドーピング技術開発” The Robert T. Huang Entrepreneurship Center, Kyushu University, 2015.6.22.