

## 2011 年度業績 — 桐原 聡秀

### 学術論文・解説記事

1. Soshu Kirihara, Katsuya Noritake, Satoko Tasaki, Hiroya Abe, Smart Processing of Solid Electrolyte Dendrites with Ordered Porous Structures for Fuel Cell Miniaturizations, Ceramic Interconnect and Ceramic Microsystems Technology, 7, 17-22, 2011
2. Satoko Tasaki, Soshu Kirihara, Zinc Oxide Modeling to Create Semiconductor Dendrites by Using Micro Stereolithography, Ceramic Interconnect and Ceramic Microsystems Technology, 7, 193-198, 2011
3. Soshu Kirihara, Noritoshi Ohta, Toshiki Niki and Satoko Tasaki, Fabrications of Terahertz Wave Resonators in Micro Liquid Cells Introduced into Alumina Photonic Crystals with Diamond Structures, International Scholarly Research Network Materials Science, 2011, 897235-8, 2011
4. Chiaki Maeda, Satoko Tasaki, Soshu Kirihara, Accurate Fabrication of Hydroxyapatite Bone Models with Porous Scaffold Structures by Using Stereolithography, Materials Science and Engineering, 18, 072017-1-4, 2011
5. Yohei Takinami, Soshu Kirihara, Fabrication of Metaroddielectric Photonic Crystals for Microwave Control, Materials Science and Engineering, 18, 072016-1-4, 2011
6. Noritoshi Ohta, Soshu Kirihara, Fabrication of Terahertz Wave Resonators with Alumina Diamond Photonic Crystals for Frequency Amplification in Water Solvents, Materials Science and Engineering, 18, 072015-1-4, 2011
7. Soshu Kirihara, Noritoshi Ohta, Youhei Takinami, Satoko Tasakai, Smart Processing of Micro Photonic Crystals for Terahertz Wave Control: Freeform Fabrication by Stereolithographic Technique, Materials Science Forum, 706-709, 1925-1931, 2011
8. Soshu Kirihara, Development of Photonic and Thermodynamic Crystals Conforming to Sustainability Conscious Materials Tectonics, WIT Transactions on Ecology and The Environment, 154, 103-114, 2011
9. 桐原聡秀, 微粒子溶射サーマルナノパーティクルスプレーのプロセス開発, 溶接学会誌, 80, 6-9, 2011

### 国際会議プロシーディングス

1. 桐原聡秀, 田崎智子, 誘電体フォトニック結晶のマイクロ光造形とテラヘルツ波デバイスへの応用, Proceeding of 18th Symposium on Microjoining and Assembly Technology in Electronics (MATE 2012), 2012, 349-352, 2012
2. Soshu Kirihara, Katsuya Noritake, Satoko Tasaki and Hiroya Abe, Smart Materials Tectonics:

- Development of Solid Electrolyte Dendrites, Proceeding of the Nineteenth Annual International Conference on Composites / Nano Engineering, Proceeding of the 19th Annual International Conference on Composites / Nano Engineering, 19, 579-580, 2011
3. Soshu Kiriwara, Noritoshi Ohta, Satoko Tasaki, Energy Localizations of Terahertz Waves in Photonic Crystals with Cavity Cells, Proceedings of 3rd International Symposium on Advanced Ceramics and Technology for Sustainable Energy Applications, 3, 91-92, 2011
  4. Soshu Kiriwara, Katsuya Noritake, Naoki Komori, Satoko Tasaki, Visualization of Gaseous Fluid Profiles in Solid Electrolyte Dendrites Fabricated by Micro Patterning Stereolithography, Proceedings of International Seminar on Welding Science and Engineering (WSE2011), 4, 47-50, 2011
  5. Soshu Kiriwara, Yousuke Itakura, Satoko Tasaki, Titania Dielectric Patterning by Using Micro Stereolithography, Proceedings of International Symposium on Materials Science and Innovation for Sustainable Society (ECO-MATES 2011), 2011, 247, 2011
  6. Yasunori Uehara, Soshu Kiriwara, Satoko Tasaki, Fabrication of Intermetallics Micro Networks on Light Metals for Surface Stress Control by Using Reaction Diffusion Joining, Proceedings of International Symposium on Materials Science and Innovation for Sustainable Society (ECO-MATES 2011), 2011, 227-228, 2011
  7. Naoki Komori, Soshu Kiriwara, Satoko Tasaki, Smart Processing of Solid Electrolyte with Dendritic Microstructures for Fuel Cell Miniaturizations, Proceedings of International Symposium on Materials Science and Innovation for Sustainable Society (ECO-MATES 2011), 2011, 229-230, 2011
  8. Maasa Nakano, Soshu Kiriwara, Satoko Tasaki, Fabrication of Photonic Crystals Composed of Metallic and Oxide Glasses by Using Micro Stereolithography, Proceedings of International Symposium on Materials Science and Innovation for Sustainable Society (ECO-MATES 2011), 2011, 249-250, 2011
  9. Satoko Tasaki, Soshu Kiriwara, Fabrication of Zinc Oxide Semiconductor with Dendrite Structure Using Stereolithography, Proceedings of International Symposium on Materials Science and Innovation for Sustainable Society (ECO-MATES 2011), 2011, 127-128, 2011
  10. Yasunori Uehara, Soshu Kiriwara, Fabrication of Intermetallics Micro Networks on Light Metals for Surface Stress Modifications through Reaction Diffusion Joining, Proceedings of Materials Science and Technology 2011, ISBN 978-0-87339-758-2, 1539-1545, 2011
  11. Soshu Kiriwara, Satoko Tasaki, Yasunoari Uehara, Yusuke Itakura, Geometrical Modulations of Alloy Phases in Steel Microstructures by Using Spatial Welding, Proceedings of Materials Science and Technology 2011, ISBN 978-0-87339-758-2, 1587-1592, 2011
  12. Soshu Kiriwara, Satoko Tasaki, Toshiki Niki, Noritoshi Ohta, Ceramics Micro Processing of Photonic Crystals: Geometrical Patterning of Titania Dispersed Polymer for Terahertz Wave

- Control, Proceedings of the 35th International Conference Advanced Ceramics and Composites, 32, 109-120, 2011
13. Satoko Tasaki, Soshu Kirihara, Fabrication of Ceramic Dental Crowns by Using Stereolithography and Powder Sintering Process, Proceedings of the 35th International Conference Advanced Ceramics and Composites, 32, 141-146, 2011
  14. Soshu Kirihara, Katsuya Noritake, Naoki Komori, Satoko Tasaki, Smart Nanoparticles Assembling to Create Micro Dendrite Structures for Energy Storage and Environmental Analysis Applications, Proceedings of The 7th International Conference on Clean Coal Technology and Fuel Cells (CCT&FCS-2011), 7, 152-165, 2011

#### 著書

1. Yoshitake Masuda, Soshu Kirihara, Nanofabrication, INTECH, 2011, 354

#### 学会発表

1. Soshu Kirihara, 6th China International Conference of Surface Engineering, 2011/5/12, Xi'an, 招待講演
2. Soshu Kirihara, International Seminar of Novel Materials Tectonics, 2011/5/26, Shanghai, 招待講演
3. Soshu Kirihara, First International Conference on Sustainable Chemistry, 2011/7/6, Antwerp, 招待講演
4. Soshu Kirihara, 9th International Meeting of Pacific Rim Ceramic Societies, 2011/7/10, Cairns, 招待講演
5. Soshu Kirihara, 19th Annual International Conference on Composites / Nano Engineering, 2011/7/24, Shanghai, 招待講演
6. Soshu Kirihara, International Conference on Processing & Manufacturing of Advanced Materials, 2011/8/1, Quebec, 招待講演
7. Soshu Kirihara, 4th International Workshop on Smart Materials & Structures, 2011/9/14, Morocco, 招待講演
8. Soshu Kirihara, 3rd International Symposium on Advanced Ceramics and Technology for Sustainable Energy Applications, 2011/10/30, Taiwan, 招待講演
9. Soshu Kirihara, The 7th International Conference on Clean Coal Technology and Fuel Cells (CCT&FCS-2011), 2011/11/8, Fukuoka, 招待講演
10. 桐原聡秀, 2011年度第2回粉体接合研究会, 2011/11/22, 長岡, 招待講演
11. Soshu Kirihara, International Conference on Energy Efficient Materials, Manufacturing

- Methods & Machineries for Ceramic Industries (2E4MCI 2011), 2011/12/18, India, 招待講演
12. 桐原聡秀, 石川県次世代産業育成講座新技術セミナー, 2012/2/28, 金沢, 招待講演
  13. 桐原聡秀, 第 66 回新無機膜研究会, 2012/3/6, 大阪, 招待講演

## 受賞

1. 桐原聡秀, "東北大学金属材料研究所附属金属ガラス総合研究センター
2. 共同利用研究課題最優秀賞", 5 月 23 日

## 共同研究

大学：国内 9 / 国外 2

その他研究機関：国内 2 / 国外 1

企業：国内 3

## シンポジウム開催状況

1. 7th International Conference on Clean Coal Technology and Fuel Cells, 主な招待講演者：  
David Harris, CSIRO Energy Technology, Australia / Kook-Young Ahn, Korea Institute of  
Machinery & Materials, Korea / Mingruo Hu, Institute of Fuel Cell, Shanghai Jiao Tong  
University, China, 参加人数 107 (外国人参加者数 32)

## 特許権などの知的財産権

1. 特許, 傾斜構造を有する人工骨の作製方法, 発明者：桐原聡秀, 荘村泰治, 熊澤洋一, 権  
利者：桐原聡秀, 荘村泰治, 熊澤洋一, 特願 P231325, 出願年月日：2011/5/6