

2011 年度業績 ―廣瀬 明夫

学術論文・解説記事

1. Masashi Tsujino, Tomokazu Sano, Tomo Ogura, Masayuki Okoshi, Narumi Inoue, Norimasa Ozaki, Ryosuke Kodama, Kojiro F. Kobayashi, and Akio Hirose, Formation of High-Density Dislocations and Hardening in Femtosecond-Laser-Shocked Silicon, *Applied Physics Express*, 5, 022703, 2012
2. 小椋 智, 里 達雄, Al-Zn-Mg 系合金, *軽金属*, 62, 32-43, 2012
3. T. Ogura, A. Hirose and T. Sato, Effects of Pre-Aging on Bendability of an Asymmetric-Rolled Al-Mg-Si Alloy, *Materials Science Forum*, 706-709, 377-382, 2012
4. A. Hirose, N. Takeda, H. Tatsumi, Y. Akada, T. Ogura, E. Ide and T. Morida, Low Temperature Sintering Bonding Process Using Ag Nanoparticles Derived from Ag₂O for Packaging of High-temperature Electronics, *Materials Science Forum*, 706-709, 2962-2967, 2012
5. Tomo Ogura, Yuichi Saito, Taichi Nishida, Hidehito Nishida, Takumi Yoshida, Noriko Ohmichi, Mitsuo Fujimoto and Akio Hirose, Partitioning evaluation of mechanical properties and the interfacial microstructure in a friction stir welded aluminum alloy/stainless steel lap joint, *Scripta Materialia*, 66, 531-534, 2012
6. 高田慎也, 小椋 智, 井出英一, 守田俊章, 廣瀬明夫, 酸化銀ペーストを用いた接合において還元溶剤が銅ニッケルおよびアルミニウムの接合性に及ぼす影響, 第 18 回エレクトロニクスにおけるマイクロ接合・実装技術シンポジウム(Mate2012)論文集, 181-186, 2012
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9. M. Tsujino, T. Sano, O. Sakata, N. Ozaki, S. Kimura, S. Takeda, M. Okoshi, N. Inoue, R. Kodama, K. F. Kobayashi, and A. Hirose, "Synthesis of submicron metastable phase of silicon using femtosecond laser-driven shock wave", *Journal of Applied Physics*, 110, 126103, 2011
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11. 小椋 智, 廣澤 渉一, 廣瀬 明夫, 里 達雄, Al-Zn-Mg 合金の PFZ 形成および機械的性質に及ぼす Sn 添加ならびに Ag, Sn 複合添加の影響, *軽金属*, 61, 316-321, 2011

12. 西田 太一, 小椋 智, 藤本 光生, 廣瀬 明夫, 亜鉛インサートを用いた 5000 系アルミニウム合金摩擦スタッド接合継手におけるミクロ組織と機械的特性, 軽金属, 61, 322-327, 2011
13. 小椋 智, 上田 佳祐, 斎藤 雄一, 廣瀬 明夫, 合金元素を含んだ 6000 系アルミニウム合金/鋼異種金属接合における界面反応層のナノインデンテーション測定, 軽金属, 61, 250-254, 2011
14. Tomo Ogura, Shoichi Hirose, Akio Hirose and Tatsuo Sato, Effects of Microalloying Tin and Combined Addition of Silver and Tin on the Formation of Precipitate Free Zones and Mechanical Properties in Al-Zn-Mg Alloys, Materials Transactions, 52, 900-905, 2011
15. Keisuke Ueda, Tomo Ogura, Shumpei Nishiuchi, Kenji Miyamoto, Toshikazu Nanbu and Akio Hirose, Effects of Zn-based Alloys Coating on Mechanical Properties and Interfacial Microstructures of Steel /Aluminum Alloy Dissimilar Metals Joints Using Resistance Spot Welding, Materials Transactions, 52, 967-973, 2011
16. Taichi Nishida, Tomo Ogura, Mitsuo Fujimoto and Akio Hirose, Microstructure and Mechanical Properties of 5000 Series Aluminum Stud Joints with Zn Insert Using Friction Welding, Materials Transactions, 52, 960-966, 2011
17. Tomo Ogura, Keisuke Ueda, Yuichi Saito and Akio Hirose, Nanoindentation Measurement of Interfacial Reaction Layers in 6000 Series Aluminum Alloys and Steel Dissimilar Metal Joints with Alloying Elements, Materials Transactions, 52, 979-984, 2011
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国際会議プロシーディングス

1. Masaki Yamamoto, Tomo Ogura, Ryoji Ohashi, Mitsuo Fujimoto and Akio Hirose, Effect of welding parameters on bondability of Al alloy/zinc coated steel joint by friction stir joining, Proc. of ECO-MATES 2011, 299-300, 2011
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4. Taichi Nishida, Tomo Ogura, Hidehito Nishida, Takumi Yoshida, Noriko Ohmichi, Mitsuo

- Fujimoto and Akio Hirose, Interfacial microstructure observation of A3003/SUS304FSW lap joint, Proc. of ECO-MATES 2011, 277-278, 2011
5. Tomoki Matsuda, Tomokazu Sano, Tomo Ogura, Kobayashi F. Kojiro, and Akio Hirose, Microstructure of pure iron hardened using femtosecond laser-driven shock wave, Proc. of ECO-MATES 2011, 297-298, 2011
 6. Tomo Ogura, Taichi Nishida, Hidehito Nishida, Mitsuo Fujimoto and Akio Hirose, Microscale Evaluation of Mechanical Properties in Friction Stir Welded A6061/SUS304 Dissimilar Lap Joint, Proc. of ECO-MATES 2011, 275-276, 2011
 7. K. Miyamoto, S. Nakagawa, S. Iwatani, S. Hojo, T. Tachibana, T. Ogura, A. Hirose, K. F. Kobayashi, Dissimilar Joining of Magnesium Alloy and Steel by Resistance Spot Welding, Proc. of International Seminar on Welding Science and Engineering (WSE2011) & CCWS Seminar 2011, 89-91, 2011
 8. T. Yagishita, T. Ogura and A. Hirose, Bondability of Low Temperature Sinter Bonding Process Using Ag₂O Pastes with Polyethylene Glycols, Proc. International Conference on Electronics Packaging 2011 (ICEP2011), 247-252, 2011

学会発表

1. 廣瀬 明夫, International Workshop on Welding and Joining of Mg alloys, 2011 年 7 月, Waterloo, Canada, 招待講演
2. 廣瀬 明夫, Termec2011, 2011 年 8 月, Quebec, Canada, 招待講演
3. 佐野 智一, Termec2011, 2011 年 8 月, Quebec, Canada, 招待講演

受賞

1. 小椋 智, 第 29 回軽金属奨励賞, 2011 年 11 月
 2. 小椋 智, 溶接学会 平成 22 年度溶接冶金研究委員会 優秀研究賞, 2011 年 5 月
 3. 山本 将貴, 溶接学会 奨学賞, 2011 年 3 月
 4. 廣瀬明夫, 大阪大学功績賞, 2011 年 7 月
- その他 1 件

共同研究

大学：国内 6／国外 3

その他研究機関：国内 5／国外 1

企業：国内 5

シンポジウム開催状況

1. Global COE Program “Center of Excellence for Advanced Structural and Functional Materials Design” Global Seminar, 主な招待講演者 : Prof. Norman Y. Zhou, The University of Waterloo, Canada / Prof. Michael Mayer, The University of Waterloo, Canada / Prof. Anming Hu, The University of Waterloo, Canada / Prof. Gui - sheng Zou, Tsinghua University, China, 参加人数 80 (外国人参加者数 10)