

## 国内共同研究者との共著査読付学術論文(2015年度)

- (1) "テンパービード工法による多層肉盛補修溶接プロセスの予測シミュレーションモデル"  
圧力技術, 53, 2 (2015), 88-95.  
岡野 成威, 宮坂 史和, 田中 学, 望月 正人
- (2) "Numerical Simulation of Joining Process in a TIG Welding System Using Incompressible SPH Method"  
Quarterly J. Japan Welding Soc., 33, 2 (2015), 34s-38s.  
M. Ito, S. Izawa, Y. Fukunishi and M. Shigeta
- (3) "GMA溶接における溶滴輸送を伴う溶融池対流の非圧縮性SPHシミュレーション"  
溶接学会論文集, 33, 4 (2015), 332-340.  
古免 久弥, 茂田 正哉, 田中 学, 福西 祐
- (4) "Observation of the Behavior of Cathode Spots in AC Tungsten Inert Gas Welding on Aluminum Plate"  
Quarterly J. Japan Welding Soc., 33, 2 (2015), 135s-138s.  
T. Yuji, S. Tashiro, A. Fujimaru, H. Kinoshita, K. Yasui, T. Bouno, T. Methong and M. Tanaka
- (5) "Effects of Gas Flow on Oxidation Reaction in Liquid Induced by a He/O<sub>2</sub> Plasma-Jet Irradiation"  
J. Appl. Phys., 118, 4 (2015), 043301-1-043301-9.  
A. Nakajima, G. Uchida, T. Kawasaki, K. Koga, T. Sarinont, T. Amano, K. Takenaka, M. Shiratani and Y. Setsuhara
- (6) "Gas Flow Rate Dependence of the Discharge Characteristics of a Plasma Jet Impinging Onto the Liquid Surface"  
IEEE Trans. Plasma Sci., 43, 12 (2015), 4081-4087.  
G. Uchida, A. Nakajima, K. Takenaka, K. Koga, M. Shiratani and Y. Setsuhara
- (7) "Quantum Characterization of Si Nano-Particles Fabricated by Multi-Hollow Discharge Plasma Chemical Vapor Depositio"  
Sci. Adv. Mater., 8, 3 (2016), 636-639.  
H. Seo, G. Uchida, N. Itagaki, K. Koga and M. Shiratani
- (8) "Investigation of the Microstructure and Surface Morphology of a Ti6Al4V Plate Fabricated by Vacuum Selective Laser Melting"  
Appl. Phys. A-Mater. Sci. Process., 122 (2016), 439-443.  
Y. Sato, M. Tsukamoto, S. Masuno, Y. Yamashita, K. Yamashita, D. Tanigawa and N. Abe
- (9) "細胞伸展制御のためのPETフィルム表面へのナノ周期構造の形成"  
レーザー学会誌, 43, 11 (2015), 772-776.  
佐藤 雄二, 塚本 雅裕, 篠永 東吾, 原 一之, 河 拓弥, 笹木 隆一郎

- (10) "Femtosecond Laser-Induced Periodic Nanostructure Creation on PET Surface for Controlling of Cell Spreading"  
Appl. Phys. A-Mater. Sci. Process., 122 (2016), 184-189.  
Y. Sato, M. Tsukamoto, T. Shinonaga and T. Kawa
- (11) "Cell Spreading on Titanium Periodic Nanostructures with Periods of 200, 300 and 600 Nm Produced by Femtosecond Laser Irradiation"  
Appl. Phys. A-Mater. Sci. Process., 122 (2016), 120-123.  
M. Tsukamoto, T. Kawa, T. Shinonaga, P. Chen, A. Nagai and T. Hanawa
- (12) "波長388 nm及び775 nmのフェムト秒レーザーにより形成した周期的微細構造が細胞伸展に与える効果"  
電気学会論文誌A, 135, 10 (2015), 587-591.  
篠永 東吾, 塚本 雅裕, 陳 鵬, 塙 隆夫
- (13) "Hierarchical Periodic Micro/nano-Structures on Nitinol and Their Influence on Oriented Endothelialization and Anti-Thrombosis"  
Mater. Sci. Eng. C, 57 (2015), 1-6.  
K. Nozaki, T. Shinonaga, N. Ebe, N. Horiuchi, M. Nakamura, Y. Tsutsumi, T. Hanawa, M. Tsukamoto, K. Yamashita and A. Nagai
- (14) "Numerical Simulation of Combustion Effects during Laser Processing of Carbon Fiber Reinforced Plastics"  
Appl. Phys. A-Mater. Sci. Process., 122 (2016), 196-200.  
T. Ohkubo, M. Tsukamoto and Y. Sato
- (15) "Interfacial Contact Process Controlled by Superplastic Flow in Solid-state Bonding of Superplastic High Carbon Steel"  
Quarterly J. Japan Welding Soc., 33, 2 (2015), 67s-70s.  
Z. Heng, T. Matsushima, Y. Nashiki, M. Maeda, K. Zhang and Y. Takahashi
- (16) "Improvement of Electrical Properties of p-type GaN and Au Contact Interface"  
Quarterly J. Japan Welding Soc., 33, 2 (2015), 84s-87s.  
A. B. M. Halil, K. Tsuchida, M. Maeda and Y. Takahashi
- (17) "Improvement of the Effective Work Function and Transmittance of Thick Indium Tin Oxide/ultrathin Ruthenium Doped Indium Oxide Bilayers as Transparent Conductive Oxide"  
Thin Solid Films, 598 (2016), 126-130.  
K. Taweessup, I. Yamamoto, T. Chikyow, G. Lothongkum, K. Tsukagoshi, T. Ohishi, S. Tungasmita, P. Visuttipitukul, K. Ito, M. Takahashi and T. Nabatame

- (18) "ニッケル基600合金用被覆アーク溶接金属の耐粒界腐食性に及ぼすショットピーニングと熱時効処理の影響"  
溶接学会論文集, 33, 2 (2015), 153-159.  
西川 聡, 大井 浩一, 高橋 誠, 古川 敬
- (19) "Enhanced Age Hardening in an Al-Mg-Si Alloy Using High-Speed Compression"  
Mater. Trans., 56, 7 (2015), 1058-1062.  
K. Horikawa, Y. Kitani, T. Ogura, M. Takahashi, A. Hirose and H. Kobayashi
- (20) "低真空中における高出力ディスクレーザ溶接による高張力鋼厚版の貫通溶接"  
溶接学会論文集, 33, 3 (2015), 262-270.  
片山 聖二, 井戸 諒治, 西本 浩次, 水谷 正海, 川人 洋介
- (21) "Elucidation of Melt Flows and Spatter Formation Mechanisms during High Power Laser Welding of Pure Titanium"  
J. Laser Appl., 27, 3 (2015), 032008-1-5.  
H. Nakamura, Y. Kawahito, K. Nishimoto and S. Katayama
- (22) "Corrosion Resistant Evaluation of Oxygen Solid-Solution Strengthened Pure Titanium"  
Chiang Mai J. Sci., 43 (2016), 381-392.  
S. Sunada, A. Takagi, M. Hatakeyama, J. Umeda, L. Shufeng and K. Kondoh
- (23) "Biological Response to Nanostructure of Carbon Nanotube/titanium Composite Surfaces"  
Nano Biomed., 7, 1 (2015), 11-20.  
E. Nishida, H. Miyaji, J. Umeda, K. Kondoh, H. Takita, I. Kanayama, S. Tanaka, A. Kato, B. Fugetsu, S. Akasaka and M. Kawanami
- (24) "Friction Behavior of Network-Structured CNT Coating on Pure Titanium Plate"  
Appl. Surf. Sci., 357 (2015), 721-727.  
J. Umeda, B. Fugetsu, E. Nishida, H. Miyaji and K. Kondoh
- (25) "Modifications of Grain-Boundary Structure by Friction Stir Welding in the Joint of Nano-Structured Oxide Dispersion Strengthened Ferritic Steel and Reduced Activation Martensitic Steel"  
Scr. Mater., 105 (2015), 2-5.  
W. T. Han, D. S. Chen, Y. Ha, A. Kimura, H. Serizawa, H. Fujii and Y. Morisada
- (26) "Weldability of 9Cr-ODS and JLF-1 Steels for Dissimilar Joining with Hot Isostatic Pressing and Electron Beam Welding"  
Plasma Fusion Res., 10 (2015), 3405015-1-3405015-4.  
H. Fu, T. Nagasaka, T. Muroga, W. Guan, S. Nogami, A. Hasegawa and H. Serizawa

- (27) "Plastic Deformation Behavior and Bonding Strength of An EBW Joint between 9Cr-ODS and JLF-1 Estimated By Symmetric Four-Point Bend Tests Combined With FEM Analysis"  
Fusion Eng. Design, 102 (2016), 88-93.  
H. Y. Fu, T. Nagasaka, T. Muroga, W. H. Guan, S. Nogami, H. Serizawa, S. F. Geng, K. Yabuuchi and A. Kimura
- (28) "Simulation-Based Method for Hierarchical Material Design to Improve Ductile Crack Growth Resistance of Structural Component"  
Int. J. Fract., 192, 2 (2015), 167-178.  
H. Shoji, M. Ohata and F. Minami
- (29) "高強度第二相を有する二相組織鋼の延性損傷メカニズムの考察"  
溶接学会論文集, 33, 4 (2015), 341-348.  
庄司 博人, 日野 慶一, 大畑 充, 篠原 康浩, 南 二三吉
- (30) "Prediction of Ductile Fracture Path in Charpy V-Notch Specimen for Laser Beam Welds"  
Weld. World, 59, 5 (2015), 667-674.  
M. Ohata, G. Morimoto, Y. Fukuda, F. Minami, K. Inose and T. Handa
- (31) "Proposal for a New CTOD Calculation Formula"  
Eng. Fract. Mech., 159 (2016), 16-34.  
T. Kawabata, T. Tagawa, T. Sakimoto, Y. Kayamori, M. Ohata, Y. Yamashita, E. Tamura, H. Yoshinari, S. Aihara, F. Minami, H. Mimura and Y. Hagihara
- (32) "A Crystal Plasticity FE Analysis Considering Mechanically Induced Martensitic Phase Transformation"  
Quarterly J. Japan Welding Soc., 33, 2 (2015), 102s-106s.  
S. Tsutsumi, R. Fincato, K. Ueda and K. Terada
- (33) "ハンマーピーニング処理による残留応力の解析的検討"  
構造工学論文集, 62A (2016), 685-692.  
松本 理佐, 石川 敏之, 堤 成一郎, 河野 広隆, 山田 健太郎
- (34) "Cohesive Crack Model to Reflect Local Chemical Action at Grain and Its Boundaries in Polycrystalline Metals"  
Quarterly J. Japan Welding Soc., 33, 2 (2015), 152s-155s.  
Y. Shintaku, M. Muramatsu, S. Takase, S. Tsutsumi and K. Terada
- (35) "Fatigue Damage Evaluation of Friction Stir Spot Welded Cross-Tension Joints under Repeated Two Step Force Amplitudes"  
J. Mater. Eng. Perform., 24, 6 (2015), 2494-2502.  
S. Joy-A-Ka, Y. Ogawa, H. Akebono, M. Kato, A. Sugeta, Y. Sun and H. Fujii

- (36) "金属流動を利用したアルミニウム合金／溶融亜鉛めっき鋼の重ね異種金属点接合 – 摩擦アンカー接合のアルミニウム合金／亜鉛めっき鋼重ね継手への適用 –"  
溶接学会論文集, 33, 2 (2015), 187-193.  
坂村 勝, 大石 郁, 大田 耕平, 竹保 義博, 水成 重順, 藤井 英俊
- (37) "金属流動を利用したアルミニウム合金／合金化溶融亜鉛めっき鋼の重ね異種金属点接合"  
溶接学会論文集, 34, 1 (2016), 8-19.  
坂村 勝, 大石 郁, 大田 耕平, 竹保 義博, 水成 重順, 藤井 英俊
- (38) "Impacts of Friction Stir Processing on Irradiation Effects in Vacuum-Plasma-Spray Coated Tungsten"  
Fusion Eng. Design, 98-99 (2015), 2054-2057.  
K. Ozawa, H. Tanigawa, Y. Morisada and H. Fujii
- (39) "Modification of Vacuum Plasma Sprayed Tungsten Coating on Reduced Activation Ferritic/martensitic Steels by Friction Stir Processing"  
Fusion Eng. Design, 98-99 (2015), 2080-2084.  
H. Tanigawa, K. Ozawa, Y. Morisada, S. Noh and H. Fujii
- (40) "Friction Stir Processing of a D2 Tool Steel Layer Fabricated by Laser Cladding"  
Mater. Des., 83 (2015), 224-229.  
T. Nagaoka, Y. Kimoto, H. Watanabe, M. Fukusumi, Y. Morisada and H. Fujii
- (41) "摩擦攪拌粉末プロセスによるSiC粒子分散AI基複合材料の作製"  
粉体および粉末冶金, 62, 5 (2015), 258-262.  
木元 慶久, 長岡 亨, 渡辺 博行, 福角 真男, 森貞 好昭, 藤井 英俊
- (42) "摩擦攪拌プロセスによるWC-CrC-Ni溶射超硬合金皮膜の高硬度化"  
粉体および粉末冶金, 62, 5 (2015), 252-257.  
長岡 亨, 木元 慶久, 渡辺 博行, 福角 真男, 森貞 好昭, 藤井 英俊
- (43) "Nanostructurization of Magnesium Alloy via Friction Stir Lap Processing"  
Mater. Sci. Forum, 838-839 (2016), 332-337.  
Y. Kimoto, T. Nagaoka, H. Watanabe, Y. Morisada and H. Fujii
- (44) "Microstructural Evolution of Body-Centred Cubic Fe-Al Alloy by Friction Stir Processing with SiC Particles Addition, Materials Science Forum"  
Mater. Sci. Forum, 838-839 (2016), 326-331.  
T. Nagaoka, Y. Kimoto, M. Fukusumi, Y. Morisada, H. Fujii and H. D. H. Bhadeshia

- (45) "Rapid Thermal Conductivity Measurement of Porous Thermal Insulation Material by Laser Flash Method"  
Adv. Powder Technol., 27 (2016), 882-885.  
T.-W. Lian, A. Kondo, M. Akoshima, H. Abe, T. Ohmura, W.-H. Tuan and M. Naito
- (46) "Stochastic Analysis on Ceramic Granule Collapse in Powder Compact during Cold Isostatic Pressing"  
Adv. Powder Technol., 27 (2016), 940-947.  
K. Yasuda, S. Tanaka and M. Naito
- (47) "Hydrothermal Synthesis of Yttria-Stabilized Zirconia Nanocrystals with Controlled Yttria Content"  
Inorg. Chem., 54, 16 (2015), 7976-7984.  
K. Sato, K. Horiguchi, T. Nishikawa, S. Yagishita, K. Kuruma, T. Murakami and H. Abe
- (48) "Self-organized Formation of Spherical Porous Granules Only by One-Step Heat-Treatment in MgO-Fe<sub>2</sub>O<sub>3</sub>-Nb<sub>2</sub>O<sub>5</sub> System"  
Mater. Lett., 163 (2015), 43-46.  
Y. Suzuki, H. Tokoro and H. Abe
- (49) "Friction Welding Technique and Joint Properties of Thin-Walled Pipe Friction-Welded Joint between Type 6063 Aluminum Alloy and AISI 304 Austenitic Stainless Steel"  
Int. J. Adv. Manuf. Technol., 82 (2016), 489-499.  
M. Kimura, M. Kusaka, K. Kaizu, K. Nakata and K. Nagatsuka

## 国際共同研究員との共著査読付学術論文(2015年度)

- (1) "On Process-Structure-Property Interconnection in Anti-Phase Synchronised Twin-Wire GMAW of Low Carbon Steel"  
Sci. Technol. Weld. Joining (2015), 1124960.  
S. Q. Moinuddin, A. Kapil, K. Kohama, A. Sharma, K. Ito and M. Tanaka
- (2) "Strengthening Behavior of in Situ-Synthesized (TiC-TiB)/Ti Composites by Powder Metallurgy and Hot Extrusion"  
Mater. Des., 95 (2016), 127-132.  
S. Li, K. Kondoh, H. Imai, B. Chen, L. Jia, J. Umeda and Y. Fu
- (3) "Carbon Nanotube Induced Microstructural Characteristics in Powder Metallurgy Al Matrix Composites and Their Effects on Mechanical and Conductive Properties"  
J. Alloy. Compd, 658 (2015), 608-615.  
B. Chen, S. Li, H. Imai, L. Jia, J. Umeda, M. Takahashi and K. Kondoh
- (4) "Investigation into Feasibility of FSW Process for Welding 1600 MPa Quenched and Tempered Steel"  
Mater. Sci. Eng. A., 651 (2016), 904-913.  
A. El-Batahgy, T. Miura, R. Ueji and H. Fujii