Program of The 135th Conference of Japan Institute of Light Metals (November 9-11, 2018, Shibaura Institute of Technology)

1.【Award Lecture】Strengthening and investigation of recrystallization behavior in Al-Mn automotive heat exchanger fin stock using continuous casting method
…… K.Suzuki, T.Sasaki, Y.Owada, T.Anami

2. Effect of solidification rate on material properties of Al-Mn-Si based alloy fin stock for automotive heat exchangers
…… S.Maruno, M.Yoshino, S.Iwao, Y.harada, S.Muraishi, S.Kumai

3. Effect of bonding conditions on production of A3003 / A4045 clad material using a vacuum roll bonding method
…… Y.Hara, T.Yamaguchi

4. Effect of heating condition on joint quality of brazed aluminum- and copper-alloy plates
…… M.Ojiri, H.Hori

5. Effect of preliminary aging on two-step aging properties of die-cast Al-Si-Cu-Mg alloy
…… S.Onuki, R.Matsuda, T.Ando, M.Tejima, Y.Okada

6. TEM observation of T5 processed Al-7Si-0.4Mg casting alloy with aging
…… Y.Makita, T.Tsuchiya, S.Lee, S.Saikawa, S.Ikeno, K.Matsuda

7. Improvement of elastic moduli by aging treatment and elucidation of the mechanism for Al-Zn-Cu alloy
…… H.Iwaoka, R.Kasama, Y.Umeda, Y.Tang, S.Hirosawa

8. Study of Stable Structure of Solute Cluster in Al-Si Based Alloys by using Kinetic Monte Carlo Method
…… K.Sugio, H.Mito, Y.Choi, G.Sasaki

9. The method of determination of Mg additive amount in Al-Mn-Mg alloy for the basket of transport and storage casks of spent nuclear fuels
…… T.Shinozaki, J.Shimojo, H.Akamatsu, K.Matsumoto, T.Shinya

10.【Award Lecture】3DAP characterization of clusters responsible for the bake-hardening response in Al-Mg-Si alloys
…… Y.Aruga, M.Kozuka, T.Sato

11. Cu addition effect on natural aging behavior of Al-Mg-Si alloys studied by muon spin relaxation method
…… K.Nishimura, K.Matsuda, N.Nunomura, S.Lee, T.Namiki, I.Watanabe, T.Matsuzaki

12. Age-hardening behaviour in Al-0.5mol%Mg_2Si alloys added excess Si aged at 473K
…… T.Tsuchiya, Y.Makita, S.Lee, S.Saikawa, S.Ikeno, K.Matsuda

13. Effect of 2 step aging on microstructure evolution of transition metal added Al-Mg-Si alloy
…… S.Lee, Y.Kuroda, T.Tsuchiya, S.Ikeno, K.Matsuda

14. Effect of pre-strain on two step age-hardening behavior of Al-0.62mass%Mg-0.32mass%Si alloy
…… K.Ikeda, S.Sato, T.Sun, S.Miura, K.Takata

15. Microstructure effects on the mechanical properties of 1000 series aluminum alloy foils
…… T.Hara, D.Egusa, M.Mihara, H.Tanaka, E.Abe

16. Effect of friction stir process on material properties of die-cast Al-Si-Cu-Mg alloy
…… R.Enomoto, Y.Yoshida, T.Ando, K.Ito

17. Microstructural observation in Al-1.0mass%Mg_2Ge alloys containing multiple elements
…… T.Kataoka, T.Tsuchiya, S.Lee, K.Matsuda, K.Ikeda, T.Homma, S.Ikeno

18. Effect of Cu concentration on mechanical properties and precipitation of Al-Zn-Mg Alloys
…… T.Yasumoto, T.Tsuchiya, S.Lee, K.Matsuda, S.Nishikawa, K.Shibata, T.Yoshida, S.Murakami, S.Ikeno

19. Microstructure observation of cold-rolled Al-Mg-Si alloy with Cu and Ag addition
…… K.Yatsukura, T.Tsuchiya, S.Lee, K.Matsuda, K.Ikeda, T.Homma, S.Ikeno

20. Effect of reversion treatment on two-step aging behavior of 6061 aluminum alloy
…… K.Yasue, Y.Nakayama

21. 3D analysis of GP zones in Al-Cu alloy by STEM image intensity
…… T.Kobayashi, D.Egusa, E.Abe

22. Aging behavior and microstructure in multi-directionally forged Al-Mg-Sc alloy
…… T. Aoba, M. Kobayashi, H. Miura, C.Watanabe

23. Influence of cold rolling on aging behavior of Al-3Mg-1Cu alloy
…… XL.Chen, M.Mihara, E.Kobayashi

24. Hydrogen removal efficiency of vacuum treatment for molten Al-Cu-Si alloy
…… Y.Yamazaki, T.Hiraki, T.Nagasaka

25. Effects of severe cold rolling on mechanical properties and hydrogen embrittlement susceptibility of Al-8%Zn-2%Mg-2%Cu-0.2%Cr alloy
…… M.Safyari, H.Tadenuma, J.Kobayashi, S.Kuramoto, G.Itoh

26. Effect of hydrogen on small punch test of Al-Zn-Mg-Cu alloy and Al-Mg alloy
…… N.Horikawa, T.Kagose

27. Hydrogen gas evolution during tensile deformation of 6061-T6 aluminum alloys containing deuterium
…… T.Matsubara, K.Horikawa, K.Tanigaki, H.Kobayashi

28. Resistance to hydrogen embrittlement of 5083 aluminum alloy welds
…… T.Ohbuchi, G.Itoh, G.Alireza, T.Kiuchi

29. The influence of cold rolling on the hydrogen embrittlement resistance in Al-8%Zn-2%Mg-2%Cu-0.15%Zr alloy
…… H.Tadenuma, J.Kobayashi, S.Kuramoto, G.Itoh

30. Microstructure decomposition in an as-quenched H charged and subsequently aged Al-Zn-Mg alloy
A.Bendo, T.Tsuchiya, S.Lee, K.Matsuda, K.Nishimura, N.Nunomura, H.Toda, K.Hirayama, K.Shimizu, H.Gao, M.Yamaguchi, K. Ebihara, M.Itakura, T.Tsuru, S. Nishikawa, K. Shibata, T.Yoshida, S. Murakami, S. Ikeno
31. Hydrogen partitioning to particles and hydrogen embrittlement in Al-Zn-Mg alloys
K.Shimizu, H.Toda, H.Su, A.Takeuchi, K.Uesugi
32. Resistance to hydrogen embrittlement in 7075-T6 aluminum alloys pre-deformed at high strain rates
K.Horikawa, H.Kobayashi
33. Effect of a strain rate on hydrogen embrittlement of an Al-10Zn-2.6Mg-1.6Cu-0.2Cr alloy in humid air
T.Manaka, M.Todai, M.Wada
34. Hydrogen production by alcoholysis reaction of AZ31B magnesium alloy chips generated by machining
K.Matsuzaki, Y.Harada
35.【Keynote】Joint interface morphology and thermal history of dissimilar-metal joints fabricated by various joining methods
K.Kumai
36. Lap joint of Aluminum alloy and Zinc-plated steel by magnetic pulse welding and their interfacial microstructure observations
K.Nakamura, K.Okagawa, T.Itoi
37. Investigation of welding condition in high-tensile-strength steel sheet and aluminum alloy by magnetic pulse welding
S.Kitta, K.Nakamura, K.Okagawa, T.Itoi
38.【Keynote】State of the arts aluminum joining technology for body in white of automotive industry
T.Tarui
39. Nanostructural analysis of welded titanium alloys using LFW method
T.Homma, H.Takano, T.Ozaki
40. Numerical analysis on microstructure and deformation behavior of magnetic pulse welded and formed Al sheet
T.Kambe, S.Muraishi, S.Kumai
41. Welding interface of MPW using aluminum plate with different tempering
M.Okihara, S.Muraishi, S.Kumai
42. SPH analysis of MPWed interface formation behavior in Al/Cu joint
S.Kimura, S.Muraishi, S.Kumai
43. Mechanical properties of friction stir welded semi-solid cast AC4CH aluminum alloy joints
M.Takahashi, M.Maeda, K.Yamamoto, K.Kamikubo, Y.Sugiura, S.Iwasawa
44. Temperture measeurement of Friction welding(Rotation side & Fixed side)
T.Okamoto, M.Maeda
45. Softening behavior of joint by friction stir welding on aluminum plate deformed by ECAP
Y.Onizawa, K.Aoki, T.Utsunomiya, Y.Sekine
46. Effect of Electrode Materials on weldability in Resistance Spot welding for aluminum sheets
R.Kouguchi, T.Yamaguchi, T.Tanaka, S.Mukae
47. V-bending properties of various magnesium alloy sheets at various temperatures
Y.Chino, X.Huang, E.Ikutake, T.Ito, M.Sato, H.Ueda, F.Kido
48. Warm bending formability and microstructural evolution during bending of rolled AZ31B magnesium alloy
X.Huang, E.Yukutake, T.Ito, M.Sato
49. V-bending properties of texture controlled AZ31B magnesium alloy sheets at various temperatures
D.Ando, M. Sato, X.Huang, T. Ito, E. Ikutake
50. Bending behavior and its microstructural evolution of AT31 Mg alloy
H.Somekawa, X.S.Huang, T.Ito, E.Ikutake
51. Effect of microstructure on bendability in Mg-Zn-RE (ZE10) sheet alloy
T.Sasaki, T.Ito, E.Yukutake, M.Noda, X.Huang
52. Structure of Mg-3Al-Zn1-1Ca alloy sheet
H.Ueda, M.Inoue, X.Huang, T.Ito, M.Sato, E.Ikutake
53. V-bending formability and microstructural evolution during bending of AZ31 alloy sheet with addition of Ca
T.Ito, X.Huang, E.Yukutake, T.Sasaki
54. Unveiling the formation of rolling texture in Mg-Al-Ca and Mg-Zn-Ca alloys
T.Nakata, S.Kamado
55. Alloy design and preparation by casting process in equi-atomic and non-equi-atomic Mg-Al-Cu-Zn-Sn alloys for the development of new Light-weight High Entropy Alloys (LW-HEAs)
T.Nagase, A.Shibata, M.Matsumuro, M.Takemura
56. Quality of molten metal in AZ31 magnesium alloy with addition of Ca
H.Kazuta, H.Kurosawa, S.Saikawa, Y.Matsumoto, K.Shimizu, H.Ueda
57. Effect of molten metal holding time on corrosion behavior of cast Mg-Al-Zn-Ca alloys
M.Ohara, I.Nakatugawa, Y.Matsumoto, F.Kido, T.Matsumoto, S.Saikawa
58. Fatigue strength and fatigue mechanism in Mg-Al-Ca alloys
Y.Miyashita, M.Kimura, Y.Hagihara, Y.Otsuka
59. Effect of microstructure on plate bending fatigue properties of Mg-8Al-1Zn-1Ca
H.Katagiri, T.Ito
60. Plate bending fatigue properties of Mg-9%Al-1%Zn-2%Ca alloy TIG joints
N.Saito, X.Huang, H.Ueda, M.Inoue, T.Matsumoto, T.Ishikawa, Y.Chino
61.【Award Lecture】Study for deformation mechanism and novel alloy development in Mg alloys
D.Ando
62. Alloying effects for non-basal slips in magnesium single crystals.
S.Ando, K.Arita, H.Kitahara

63. Effect of Ca content on the micro structure and mechanical properties of Mg-Al-Sr-Ca alloy for die casting
M.Mizutani, K.Tanaka, H.Kazuta, S.Saikawa, K.Yoshida, N.Kawabe
64. Effect of grain size on tensile properties of HPTed AZ31B magnesium alloy
Y. Nomura, S. Kuramoto
65. Mechanical properties of friction stir-processed Mg-3%Al-1%Zn alloy with fine grains
N.Ozawa, S.Kuramoto, E.Yukutake
66.【Keynote】Materials science of a mille-feuille structure
E.Abe
67. First-principles calculation of kinks in pure magnesium
M.Itakura, M.Yamaguchi
68. Effects of microstructures on kink strengthening of Millefeuille type magnesium alloys
D.Egusa, M.Yamasaki, Y.Kawamura, E.Abe
69. Rotational fluctuation phenomena on twinning of dilute Mg-Zn-Y alloys
S.Hirata, D.Egusa, E.Abe
70.【Keynote】Analysis of mechanisms of kink formation and strengthening in mille-feuille structural materials: bridging between the past and the future
T.Fujii, K.Higashida
71. Analysis of kink deformation based on rank-1 connection
T.Inamura
72. Deformation mechanisms in direct solidified Mg-LPSO alloy during uniaxial compression
D.Drozdenko, K.Mathis, M.Yamasaki, Y.Kawamura
73. Influence of kink boundary formation on the strain hardening/relaxation in an LPSO-typed Mg-Zn-Y alloy
T.Matsumoto, M.Yamasaki, H.Somekawa, K.Hagihara, Y.Kawamura
74. Deformation banding in LPSO structure single crystal under uniaxial tensile loading
T.Mayama, K.Takagi, Y.Mine, K.Takashima
75.【Keynote】Development of new Mg alloys with mille-feuille structure
Y.Kawamura
76.【Keynote】Microstructure control for the fabrication of MFS (Mille-feuille structure) materials based on two-phase equilibrium
S.Miura, K.Ikeda
77.【Keynote】Fabrication and Its Toughness Evaluation of Polymer Materials with Millefeil Structure
H.Ito, A.Ishigami, S.Nishitsuji, T.Kurose
78. Extended usage of synchrotron radiation scattering/diffraction to understand mille-feulle microstructures
H.Okuda, M.Yamasaki, Y.Kawamura, S.Kimura
79. Investigations of in-plane ordering within dilute LPSO structures with Monte Carlo simulations
K.Yamashita, T.Kawahara, D.Egusa, E.Abe
80.【Keynote】Elucidation of the kink mechanism of the mille-feuille structure
K.Aizawa
81. The dependencies of the deformation behavior of a LPSO phase alloy on the loading orientation, temperature, and strain rate
K.Hagihara, M.Yamasaki, Y.Kawamura, T.Nakano
82. Effects of room temperature pre-straining and stress directions on creep strength in a directionally solidified long-period stacking ordered type Mg-Y-Zn alloy
M.Suzuki, Y.Takahashi, R.Watanabe, K.Hagihara
83. Improvement of the toughness and ductility of the rapidly solidified Mg-Zn-Y-Al alloys with multimodal microstructure
S.Nishimoto, M.Yamasaki, S.Inoue, Y.Kawamura
84. Preparation and microstructure observation of magnesium alloys with long period stacking ordered containing noble metal element (Pt,Au)
S.Uesugi, T.Horiuchi, S.Miura, T.Itoi
85. High temperature oxidation behavior and incombustibility of LPSO type Mg-Zn-RE alloys
S.Inoue, M.Yamasaki, Y.Kawamura
86. Dispersion of Al-Ca phase by addition of tin powder in Mg-9%Al-1%Zn-2%Ca type sintered alloy
T.Iwaoka, K.Date
87. Microstructure analysis of β' phase in Mg-Y-Sc alloy
T.Hiragi, T.Tsuchiya, S.Lee, S.IKeno, K.Matsuda
88. Microstructure observation of $MgZn_2$ and Mg_4Zn_7 in Mg-2.2mol%Zn alloy
T.Maeda, T.Hiragi, T.Tsuchiya, S.Lee, S.Ikeno, K.Matsuda
89. High precision material modeling of 6000 series aluminum alloy sheets in biaxial stress field
Y.Ogasawara, H.Takeda, T.Kuwabara
90. Forming Limit Analysis and Material Modeling for a 5000 Series Aluminum Alloy Sheet Using Non-associated Flow Rule
T.Hakoyama, T.Kuwabara
91. Measurements of plastic flow of prestrained aluminum alloys
N.Okada, K.Yoshida
92. Influence of hardening functions on earing prediction in cup drawing of 3104 aluminum alloy sheet
H.Fukumasu, T.Kuwabara, H.Takizawa, A.Yamanaka
93. Development of evaluation for material properties of aluminum plate by orthogonal turning
K.Inagi, K.Aoki, M.Tsubouchi, S.Horike
94. Deformation texture development of cold rolled 3104 aluminum alloy during deep drawing and ironing
R.Kobayashi, T.Kudo, M.Okada
95. Development of adhesion preventing technology on deep-drawing of TP340 titanium sheet
Y.Okude, T.Iwaoka, I.Nakamura

96. Warm tube hydro forming for taper shape using small diameter A1100 aluminum tube
T.Miyagawa, S.Yoshihara, R.Yamada, Y.Itoh

97. X-ray CT analysis of the crack of Al-Mg-Si alloy after bending test.
T.Hosokawa, T.Nakamura, S.Kimura

98. Control microstructure and Improve mechanical properties of Al-Mg-Si alloys with high Fe contents by Deformation Semi-Solid Forming Process
Y.Higo, E.Kobayashi

99. Effect of Die Coating on Pick-up in Hot Extrusion of 6063 Aluminum Alloy
Y.Watanabe, T.Funazuka, S.Oda, N.Takatsuji, K.Dohda

100. Transient heat-transfer calculation for die in extruding aluminum alloys
P.Lin

【Cancellation】101. Simulation of Quenching of Aluminum Extrusions
E.Hirota

102. Effect of alloy composition on texture development of extruded aluminum alloy
M.Araki, S.Lee, S.Ikeno, K.Matsuda

103. Relation between atmospheric corrosion of aluminum and Cl^- concentration
K.Nishida, Y.Hirohata, T.Haruna

104. Change of aluminum surface during atmospheric corrosion using system for pH distribution measurement
Y.Hirohata, S.Mochizuki, S.Fujikawa, K.Nishida, T.Haruna

105. Influence of load on the humid gas stress corrosion cracking in some 6000 series aluminum alloys
R.Akishino, H.Mokka, G.Itoh, A.Kurumada, S.Kuramoto, J.Kobayashi

106. Formation of scratch-shielding film on aluminum alloy surface and evaluation of corrosion protection by EIS measurements
H.Okuyama, A.Hyono, M.Chiba, H.Takahashi

107. Role of zinc ions on corrosion behavior of aluminum alloy in aqueous media
M.Sakairi, T.Otani

108. Effect of electrolyte concentration on dielectric constants of barrier-type oxide film on high- purity aluminum
Y.Shimizu, S.Enoki, Y.Taguchi

109. Anodic oxidation of aluminum alloy surface with flat-tube shape and corrosion protection by formation of anodic oxide film
M.Sugiura, A.Hyono, M.Chiba, H.Takahashi

110. Crack generation on anodic oxide film formed on aluminum alloy surface and effect of alloy elements
H.Yanagimoto, A.Hyono, M.Chiba, H.Takahashi

111. Effect of boron carbide content on anodic oxidation behavior of aluminum-based composite
D.Nagasawa

112.【Award Lecture】Development of the optimum measurement method for accurate and rapid analysis of Aluminum surface
M.Tomino

113. Antibacterial surface treatment of Ti alloys for dental application by thermal oxidation.
N.Sato, T.Ueda, K.Ueda, K.Ito, K.Ogasawara, T.Narushima

114. Study on surface modification method to titanium alloy by YAG laser irradiation
T.Danjo, T.Yamaguchi

115. Si coating on magnesium alloys to improve corrosion resistance
Y.Kang, T.Ishizaki

116. Improvement of wear resistance of A7075 aluminum alloy by Diamond-Like-Carbon / hardness gradient hybrid coating
T.Ishii, M.Nakamura

117. Fabrication and Examination of Al-base Frozen Emulsion Composite
S.Komarov, T.Yamamoto

118. Effects of casting conditions on microstructure of as-cast Al-8%Si alloy with microstructural refiner
M.Yamada, F.Nakamura, H.Sato, T.Chiba, Y.Watanabe

119. Persistence of modification effect of superheated melt treatment for Al-Si alloys
R.Inoue, I.Yamamoto, K.Oda

120. Effect of holding time after superheated melt treatment on microstructure of Al-Si alloys
I.Yamamoto, R.Inoue, K.Oda

【Cancellation】121. Effect of small amount of element on eutectic structure in Al-7mass%Si-0.3%Mg alloy casting
T.Fukuhara, T.Arisawa, K.Hori, Y.Zhao, H.Kazuta, S.Ikeo, S.Saikawa

122. Effect of mechanical stirring on mass transfer in a melting furnace during flux treatment of molten aluminum
K.Kato, T.Yamamoto, S.komarov, R.Taniguchi, Y.Ishiwata

123. Large-scale simulation and in-situ observation of bubble fragmentation during mechanical stirring of an aluminum melt bath
T.Yamamoto, S.Komarov

124. Effect of eccentricity on free surface deformation during mechanical stirring of molten aluminum bath
T.Yamamoto, S.Komarov

125. Numerical and Experimental Investigation about Butt Curl in Aluminum Alloy Slab Casting
Y.Sanpei, T.Kubo, K.Takahashi

126. The effect of Ti addition on unidirectional solidified structures of aluminum OCC wires
T.Sawaya, Y.Kinoshita, C.Ryu, G.Motoyasu

127. Results of corrosion tests of magnesium alloy plates by atmospheric exposure test and cyclic corrosion test
A.Konno, K.Nishinaka, S.Umino, Y.Hiyamori, T.Asano, H.Umehara, H.Komai

128. Measurement of contact potential difference on Al/Al intermetallic compound interface by means of transmission electron microscopy
K.Sasaki, Y.Kyo, M.Tomino, Y.Oya, H.Sasaki

129. Effect of stress on the corrosion potential of cast aluminum alloy
····· O.Kuwazuru, K.Hira, A.Kawakami
130. Fundamental study on solid electrolytic capacitor using carbon-supported aluminum cathode
····· T.Suzuki, T.Gotoh, T.Shiraishi, T.Ito, K.Tachibana, T.Nishina, H.Inoue, Z.Ashitaka, H.Kusai
131. Fabrication of functionally graded porous aluminum by optical heating and control of foaming time by optimizing light quantity with steel mesh
····· Y.Aihara, Y.Hangai, K.Amagai, R.Nagahiro, T.Utsunomiya, N.Yoshikawa
132. Compression property of functional gradient porous aluminum by sintering and dissolution process and foaming process
····· M.Ando, Y.Hangai, K.Amagai, R.Nagahiro, T.Utsunomiya, N.Yoshikawa
133. Fabrication of an aluminum foam by precursor method using direct molten metal rolling
····· R.S uzuki, S.Nishida, R.Moteki, M.Matsubara
134. Compressive behavior of porous A6061 alloy with aligned unidirectional pores compressed in the direction perpendicular to the pore direction
····· T.Tamai, D.Muto, M.Sawada, S.Suzuki
135. Change in porous structure by bonding porous aluminum with Al-Si alloy brazing sheet
····· T.Kurosaki, M.Kobashi, N.Takata, H.Tanaka, A.Suzuki, T.Minoda
136. Influence of post heat treatment on impact absorption properties of 3D porous Al-10Si-0.3 Mg alloy used for landing leg of Smart Lander Investigation of Moon
····· T.Miura, Y.Sugiyama, K.Kitazono
137. Failure properties on bending tests of aluminum foam core sandwich structure
····· K.Hironishi, T.Utsunomiya, K.Nakatani, Y.Hangai
138. Effects of Si concentration on mechanical properties of Mn added Al-Si alloys additive manufactured by selective laser melting
····· D.Terada, A.Takahashi, S.Yusa, S.Yamazaki, M.Mitsuhara, H.Nakashima, J.Kusui, M.Adachi
139. Effect of volume fraction and dispersibility on thermal properties of TiB_2 particles/ aluminum composites
····· G.Sasaki, S.Kodama, K.Sugio
140. Mechanical properties of sintered porous Mg-Zn alloys
····· R.Tsukane, H.Tamai, Y.Harada, K.Matsuzaki, T.Nagoshi
141. Comparison of stirring states in friction stir diffusion bonded joints of different aluminum alloys / titanium foils
····· T.Kodama, Y.Takayama, H.watanabe
142. Effect of temperature and indentation on friction stir diffusion bonding of 5052Al/metal foils
····· K.Igari, T.Kodama, Y.Takayama, H.Watanabe
143. Relationships between friction-induced reaction of 5052 aluminum alloy/ titanium and processing conditions
····· T.Nakajima, T.Megumi, T.Ogata, Y.Takayama, H.Watanabe
144. Trials of developing a metal matrix composite through friction stir forming
····· H.MofiditabaTabaei, T.Tajima, T.Nishihara, T.Ohashi
145. Evaluation of Surface Smoothing of A5083 Aluminum Alloy Plate by Friction Stir Forming with Employing Maximum Entropy Method (MEM)
····· T.Ohashi, K.Okuda, H.MofidiTabatabaei
146. Fabrication of metal joints using aluminum insert metal
····· T.Aoki, Y.Imamura
147.【Award Lecture】In-situ measurement of dislocation density change by SPring-8 synchrotron raditaion facility during tensile deformation in several aluminum alloys
····· H.Adachi
148. Peculiar Mechanical Properties and Their DIC Analysis of Ultrafine Grained Al-Mg Alloy
····· X.Lan, S.Gao, M.Park, A.Shibata, N.Tsuji
149. Grain size dependence of acoustic emission during tensile deformation in pure aluminum severely deformed by ARB process and subsequently annealed
····· D.Terada
150. Influence of Cu addition on microstructure of HPT-processed Al-Li alloy
····· Y.Haizuka, T.Tsuchiya, S.Lee, S.Saikawa, K.Matsuda, S.Hirosawa, Z.Horita, S.Ikeno
151. Evaluation of local stress distribution in polycrystalline Al by using energy-dispersive X-ray diffraction with synchrotron white X-ray
····· T.Miyazawa, H.Sakuraba, T.Fujii
152. Superplastic deformation behavior of Ti-6Al-2Sn-4Zr-2Mo-0.1Si (Ti-6242S) alloy having the ultrafine-grained microstructure
····· H.Matsumoto, H.Imai, V.Velay, V.Vidal
153. Upsizing severely deformed area for ultrafine grain refinement of Al alloy using incremental feeding technique in high-pressure torsion
····· T.Komatsu, T.Masuda, Y.Takizawa, M.Yumoto, Y.Otagiri, Z.Horita
154. High-pressure sliding for grain refinement of Al alloy in pipe form
····· K.Matsuda, Y.Tang, Y.Takizawa, M.Yumoto, Y.Otagiri, Z.Horita
155. Multi-Pass High Pressure Sliding (MP-HPS) for Grain Refinement for Superplasticity in Al-Mg-Sc Rectangular Rod.
····· Y.Watanabe, Y.Tang, T.Masuda, Y.Takizawa, M.Yumoto, Y.Otagiri, Z.Horita
156. Simultaneous enhancement of strength and ductility in ultrafine grained Al-13.4wt%Mg alloy using spinodal decomposition
····· Y.Tang, S.Hirosawa , Z.Horita, Y.Takizawa, M.Yumoto, Y.Otagiri
157. Influence of a small amount of Fe on intergranular fracture in high-purity Al-7.3Mg alloy
····· R.Ohte, T.Uesugi, Y.Takigawa, K.Higashi
158. Effect of temper on the fatigue crack growth behavior in 2000 and 7000 series aluminum alloys
····· R.Yamada, K.Kizawa, G.Itoh, A.Kurumada, M.Nakai, S.Yoshihara

159. Investigation of mechanical properties in Al-7%Si cast alloys with changing the eutectic Si particles by trace P and Sr
M.Kobayashi, K.Taniguchi, S.Furuta, T.Aoba, H.Miura

160. Effect of rolling and heat treatment on texture formation of an Al-Mg-Si alloy
M.Mihara, T.Kurosaki, A.Hibino

161. Analysis for allotropic phase transformation of titanium by in-situ electrical resistivity measurement
Y.Ikeda, M.Arita, Y.Takizawa, M.Yumoto, Y.Otagiri, Z.Horita

162. In-situ high-energy X-ray analysis of allotropic transformation in Titamium Ti after processing by severe plastic deformation under high pressure
D.Maruno, Y.Ikeda, M.Arita, Y.Higo, Y.Tange, Y.Ohishi, Z.Horita

163. Effect of allotropic phase transformation on mechanical properties of titanium
K.Matsuo, D.Maruno, Y.Ikeda, M.Arita, Z.Horita, Y.Higo, Y.Tange, Y.Ohishi

164. Solid-solution treatment temperature dependence of effects of oxgen addition on martensitic transformation in Ti-Nb alloys
S.Kawano, S.Kobayashi, S.Okano

165. Development of beta type Ti-28Nb-7Al alloy single crystal with extremely low Young's modulus.
M.Todai, P.Wang, T.Nakano

166. The effect of Al on oxidation behavior of alpha-Ti alloys
Y.Yamabe Mitarai, T.Ito, Y.Toda

167. Formation of harded layer on Ti-6Al-4V alloy surface by laser irradiation
S.Li, T.Yamaguchi

168. Development of incremental press forming method of Titanium alloy sheets and controlling thickness of drawn cup
Y.Okude, T.Iwaoka, I.Nakamura

169. Cutting behaviors of fine hole drilling of Ti-6Al-4V Alloy with micro-drills
T.Sawai

170. Evaluation of near-threshold fatigue crack propagation in TiB-reinforced Ti-3Al-2.5V alloy treated with heat extrusion
S.Kikuchi, T.Kawai, Y.Nakai, H.Kurita

171. Effect of oxygen on transformation temperature of titanium alloys from first-principles calculations
T.Uesugi, J.Shimamoto, D.Minami, Y.Takigawa, K.Higashi

172. Influence of strain introduced by High-Pressure Torsion on pressure-induced phase transformation in high-purity titanium
H.Tsukahara, H.Iwaoka, S.Hirosawa, Z.Horita

173. Phase transformation behavior in Ti-Mg alloys by heavy plastic deformation
Y.Todaka, A.TejedaOchoa, N.Kametani, N.Adachi, J.M.HerreraRamirez

174.【Award Lecture】Improvement of mechanical properties of Ti alloys for structural materials through microstructure and deformation behavior control
K.Cho

175. STEM analysis of pre-martensitic phenomena in Ti-based shape memory alloys
R.Kinoshita, D.Egusa, Y.Murakami, E.Abe

P01. Change in microstructures and mechanical properties during static recrystallization in ultra-fine grained AZ31F magnesium alloy
M.Ikeda, K.Kashihara, T.Aoba, M.Kobayashi, H.Miura

P02. Effects of unique layered microstructure on room temperature ductility of TiAl alloys fabricated by electron beam melting
M.Sakata, K.Cho, H.Y.Yasuda, M.Todai, T.Nakano, A.Ikeda, M.Ueda, M.Takeyama

P03. Improvement of fatigue strength for β-type Ti alloys by deformation behavior control focusing on {332}<113> twin.
K.Yuki, K.Cho, M.Niinomi, H.Yasuda

P04. Corrosion behavior of magnesium tubes in 0.9 mass%NaCl fluid flow field
T.Orii, S.Yoshihara, R.Yamada, Y.Ito

P05. Semi-solid forging of aluminum alloy A7075 by melt stirring and using servo press machine
K.Tsunoda, G.Horikiri, H.Harada, T.Tanaka, T.Haga, S.Koyama, M.Inoue, S.Nishida

P06. Effects of Si content for thermal conductivity of Al-Si binary alloy.
Y.Iwasaki, H.Nishida

P07. Soft X-ray XAFS studies of the change in cluster structure by different aging temperature in Al-Mg-Si alloys
T.Nonomura, S.Tanaka, H.Adachi

P08. Twin roll strip casting of aluminum alloy A7075 using commercial scale machine
Y.Horigome, Y.Kashitani, M.Hagiwara, J.Ichikawa, D.Uematsu, R.Omi, H.Harada, S.Nishida

P09. Influence of defect of the die-casting Al-25%Si heatsink on heat dissipation
S.Imamura, M.Terao, H.Fuse, T.Haga

P10. Evaluation of microstructure and mechanical properties of Ti-6Al-4V alloy fabricated by selective laser melting
S.Miyazaki, M.Kusano, S.Kishimoto, Dmitry S. Bulgarevich, A.Yumoto, M.Watanabe

P11. Effect of ethanol addition to sulfuric acid on efficiency of anodic alumina formation
M.Matsumoto, H.Hashimoto, H.Asoh

P12. Porous Al foamed using only the gas inside the die-castings
K.Takada, Y.Hangai, H.Fujii, Y.Aoki, M.Zhou, T.Utsunomiya, N.Yoshikawa

P13. Shaping of sandwich structures consist with porous Al and metal plate
K.Otsuki, Y.Hangai, T.Utsunomiya, N.Yoshikawa

P14. Total quantification of Mg alloys by X-ray fluorescence spectrometry - FP method
W.Matsuda, A.Morikawa, A.Ohbuchi, T.Moriyama, T.Nakamura

P15. Effect of various film thickness on fatigue property of surface treated aluminum alloy
R.Kido, K.Murayama, S.Kurosaka, Y.Oda, T.Kanadani, M.Hino

P16. Effect of various surface treatment on adhesion property for AZ91D and ZM60B magnesium alloy
T.Imaida, A.Saijo, T.Kanadani, M.Hino

P17. Influence of filler metal composition on tensile and fatigue strength in Mg-9Al-1Zn-2Ca alloy MIG welding joint
T.Takahata, Y.Takigawa, T.Uesugi, M.Ueda, Y.Kinomoto, K.Higashi

P18. Influence of microstructure on deep drawing behavior of magnesium alloy
T.Wakabayashi, Y.Tamura

P19. Effect of pre-strain on β'' formation in Al-Mg-Si alloy
R.Inomata, M.Ueda, R.Morishita, K.Takata

P20. Effect of micro-alloying on room-temperature formability and tensile properties of Mg-6Zn-0.3Ca (mass%) alloy sheet
S.Suzuki, T.Nakata, S.Kamado, T.Sasaki

P21. Development of Inversion Friction Stir Welding method for high speed and high quality joining of Aluminum hollow structure
M.Ochi, Y.Morisada, H.Fujii

P22. Evaluation of Activation Volume on Al-Mg Solid Solution Alloy at High Temperatures by Indentation Techniques
H.Igarashi, H.Takagi

P23. Influence of Ca soulte on strain rate sensitivity of flow stress in magnesium.
Y.Chikanari, T.Nakatsuji, N.Ikeo, T.Mukai

P24. Creep behavior and effects of the forest-dislocations in Mg-Y-Zn dilute solid solution alloys
D.Sugita, N.Tsuchida, F.Kondo, M.Suzuki

P25. Preparation of a silane/$Mg(OH)_2$ corrosion resistant composite film on flame-resistant Mg-4Al-1Ca Alloy by steam coating and spin coating
T.Miyashita, M.Inamura, Y.Shimada, T.Ishizaki

P26. Effect of pre-strain on cluster formation in Al-Mg-Si alloy
Y.Ishikawa, K.Takata, K.Ikeda, S.Miura

P27. Microstructure and mechanical properties of A7003 aluminum alloy extruded with various conditions
T.Ikeda, D.Terada

P28. Effects of hydrogen and strain rate on tensile properties of Mg-Al-Zn alloys
S.Izumi, T.Manaka

P29. Effect of heat treatment on corrosion resistance of films formed on Mg-6Al-1Zn-2Ca alloy by steam coating
M.Inamura, T.Miyashita, Y.Shimada, T.Ishizaki

P30. Influence of surface conditions on corrosion behavior of ZM21 magnesium alloy
R.Kobayashi, S.Yoshihara, Y.Mitsui, R.Yamada, B.J.MacDonald, Y.Itou

P31. Effect of pre-strain on precipitation process Al-Mg-Si alloy
Y.Nishimura, K.Takata, T.Maeda, K.kaneko

P32. Formation and characteristic evaluation of AlO(OH) film on microstructure controlled Al-Mg-Si alloy
K.Watanabe, K.Mori, T.Ishizaki, A.Serizawa

P33. Improvement of corrosion resistance of Al-Si-Cu alloy through surface modification by steam process
T.Oda, T.Kim, T.Ishizaki, A.Serizawa

P34. Evaluation of adhesion of AlO(OH) film on an Al-Cu alloy by tensile test
Y.Tai, H.Li, N.Takata, A.Serizawa

P35. Proposal of a small scale evaluation method of Al grain refiner modeled by TP-1
R.Kagimoto, Y.Watanabe, H.Sato, T.Chiba, M.Yamada, S.Shimasaki

P36. Strength and elongation development in Al-Mg-Si alloy during Mg-Si cluster forming
Y.Adachi, K.Takata

P37. Microstructure and strength of A1070 aluminum/PET joints produced by disc friction joining
N.Tajiri, S.Hirose, K.Sugimori, T.Sibayanagi

P38. Preparation and characterization of films prepared on AZ80 Mg alloy by steam coating
Y.Nagashima, T.Miyashita, M.Inamura, T.Ishizaki

P39. Influence of Ag addition on microstructure of Al-Mg-Ge alloy aged at 523K
S.Umemura, T.Tsuchiya, S.Lee, K.Matsuda, K.Ikeda, T.Honma, S.Ikeno

P40. Microstructure and mechanical properties of Al-Fe based alloy wires
K.Todaka, M.Tsushida, H.Kitahara, S.Ando, K.Shinmoto, K.Egoshi, R.Hirata

P41. Orientation dependence on fatigue fracture behavior in uniaxial fatigue tests of pure magnesium single crystals
Y.Kido, M.Tsushida, H.Kitahara, S.Ando

P42. Effect of two step aging on precipitation microstructure and age hardening behavior in A7050 aluminum alloy
Y.Sano, Y.Harada, S.Muraishi, S.Kumai

P43. Effect of pre-strain on age hardenability of Al-1.0%Cu-1.0%Mg (mol%) alloy
M.Matsumoto, T.Tsuchiya, S.Lee, K.Matsuda, K.Ikeda, T.Homma, S.Ikeno

P44. SCC behavior of extruded Mg-Zn-Y alloys with multimodal microstructure
T.Kawakami, M.Yamasaki, S.Inoue, Y.Kawamura

P45. Improvement of incombustibility of high strength LPSO-type Mg-Zn-Gd alloys
R.Omoto, S.Inoue, M.Yamasaki, Y.Kawamura

P46. Relationship between plastic anisotropy and cell regularity of cell structure in AM porous aluminum
Y.Fujimori, T.Hamaguchi, M.Toko, K.Matsuo, K.Kitazono

P47. Fatigue crack growth path analysis in some Mg-Al-Zn-Ca alloys
K. Hashimoto, K. Kizawa, G. Itoh, A. Kurumada, M. Noda, T. Itoh

P48. Effects of universal clusters on precipitation hardening in age hardenable 6000 series aluminum alloys
Y.Asada, A.Amilina, T.Honma, S.Lee, K.Ikeda, K.Matsuda, T.Homma

P49. Effect of solute yttrium on deformation behavior of magnesium under hyper velocity impact
N.Fujita, S.Hasegawa, T.Nakatsuji, N.Ikeo, E.Sato, T.Mukai

P50. Formation of anticorrosive film on an Al-Zn-Mg alloy during steam process
K.Mori, T.Mori, H.Hashimoto, H.Asoh, T.Ishizaki, A.Serizawa

P51. Crack propagation behavior during humid gas stress corrosion cracking test under overloaded conditions in some 6000 series aluminum alloys containing impurities of Pb and Bi
H.Mokka, G.Itoh, A.Kurumada, R.Akishino, S.Kuramoto, J.Kobayashi

P52. Resistance to hydrogen embrittlement of cold-rolled Al-Cu alloy
A.Toyoda, J.Kobayashi, S.Kuramoto, G.Itoh

P53. Fatigue crack propagation properties in a 5000 series aluminum alloy with high Mg content affected by internal hydrogen
K.Kizawa, R.Yamada, G.Itoh, A.Kurumada, M.Nakamura

P54. Effect of steam coating conditions on characterization of films prepared on Al-Zn-Mg alloy
H.Muto, Y.Shimada, T.Ishizaki

P55. Effect of grain boundaries on the deformation behavior of multi-functional titanium alloy
T.Kimura, S.Kuramoto, E.Nakagawa, T.Ohmura

P56. Relationship between the surface crack and microstructure in some Mg-Al-Zn-Ca alloys deformed in humid air
R.Sano, G.Itoh, S.Kuramoto, J.Kobayashi, T.Ito, M.Noda

P57. Production of $MgWO_4$ using corrosion reaction of metallic magnesium
K.Koga, D.Sasaki, H.Fujiki

P58. Evaluation of compression properties for aluminum foam composite with controlled pore structure
M.Kin, T.Utsunomiya, Y.Hangai, R.Kobayashi

P59. Effects of compounds on surface quality of 7000 series aluminum alloy extruded at high speed extrusion
T. Honma, Amalina.A.K, T.Homma

P60. Improvement in rigidity and strength of Al-Cu-Ag alloys by aging treatment
T.Toyoshima, R.Kasama, H.Iwaoka, S.Hirosawa

P61. Effect of cold working on resistance to hydrogen embrittlement in Al-Cu-Mg alloy
R.Fujisawa, J.Kobayashi, S.Kuramoto, G.Itoh

P62. Microstructure observation of extruded Al-Mg-Si alloy with different homogenization treatment
T.Umezawa, T.Tsuchiya, S.Lee, K.Matsuda, K.Ikeda, T.Homma, S.Ikeno

P63. Relation between mechanical properties and position in Al-10Si-0.3Mg alloys fabricated by selective laser melting
K.Sugai, D.Terada, S.Yamazaki, M.Mitsuhara, H.Nakashima, J.Kusui, M.Adachi

P64. Reduction of anodized aluminum film by hydrogen plasma
T.Inoue, G.Itoh, N.Sato, T.Ikehata, R.Kurumada

P65. Mechanical properties of Al-Si-Mg-Mn alloys additive manufactured by selected laser melting
S.Yusa, D.Terada, S.Yamazaki, M.Mitsuhara, H.Nakashima, J.Kusui, M.Adachi

P66. Effect of grain boundary precipitate control by SQ treatment on the resistance to hydrogen embrittlement in an Al-Zn-Mg alloy
G.Akaba, S.Ishizawa, G.Itoh, S.Kuramoto

P67. Effects of solidification microstructure on corrosion resistance of a flame-resistant magnesium alloy
T.Kim, T.Ishizaki, A.Serizawa

P68. High-temperature tensile properties of commercial pure titanium severely deformed
I.Kuboki, K.Yamagiwa, T.Yanaseko

P69. Relationship between abnormal grain growth and joint structure in post friction stir welded heat treatment aluminum alloy 6061
K.Kanda, T.Shibayanagi

P70. Effect of strain induced boundary migration on SSRT tensile properties of a 7075 aluminum alloy
M.Nakajima, G.Itoh, S.Kuramoto, J.Kobayashi

PE01. Effects of traces of sodium and zirconium on intergranular embrittlement of Al-5%Mg alloys
S.Kumeuchi, K.Horikawa, K.Tanigaki, H.Kobayashi

PE02. The effect of natural aging combine with pre-strain on bake hardening response in Al-Mg-Si alloy
T.Sun, K.Ikeda, S.Miura, K.Takata

PE03. Effect of grain boundary properties on the intergranular precipitation in 6022 aluminum alloy
T.Yamaguchi, J.K.Sunde, K.Ihara

PE04. Mechanical properties of high manganese-containing 3xxx aluminum alloy sheets fabricated from high-speed twin-roll cast strips
H.Nguyen, R.Song, K.Otsuka, Y.Harada, S.Muraishi, S.Kumai

PE05. Solid solution hardening and precipitation hardening of near-alpha Titanium alloys
K.Shimagami, T.Ito, Y.Toda, A.Yumoto, Y.Yamabe Mitarai

PE06. Preparation of hetero-structured films containing layered double hydroxide on Al-Zn-Mg alloy by steam coating
Y.Shimada, T.Miyashita, T.ishizaki

PE07. Resistance to humid gas stress corrosion cracking of MIG weld of a 5083 aluminum alloy
A.Ghorani, T.Kiuchi, T.Ohbuchi, G.Itoh

PE08. Effect of solute elements on bio-degradability in magnesium
T.Hoshiba, M.Yamaguchi, N.Ikeo, T.Mukai

PE09. Solidification Behavior of Fe-Intermetallic Compounds in Al-Si-Mg-Fe Alloy
D.Kim, J.Kim, H.Tezuka, E.Kobayashi

PE10. Effect of homogenization on microstructure of excess Si-type Al-Mg-Si alloy
S.S.Qin, T.Tsuchiya, S.Lee, K.Matsuda, K.Ikeda, T.Homma, S.Ikeno

PE11. Mechanoluminescent (ML) material emits light when crystals is distorted by stress. Due to this characteristic, research of ML stress sensors for visualizing of force-applied parts in real time has bee
Y.Ota, T.Tsuchiya, S.Lee, S.IKeno, Y.Horita, T.Oji, K.Amei, K.Shibata, K.Matsuda

PE12. Influence of surface morphology of sample on fatigue life of Cu-added Al-Si-Mg casting alloy
Y.Lim, A.Serizawa, K.Moizumi, T.Takenaka