

SIP「統合型材料開発システムによるマテリアル革命」原著論文リスト(2023年3月末〆)

<A1>

論文名・書誌事項・DOI
<p>Numerical investigation of the influence of twinning/detwinning on fatigue crack initiation in AZ31 magnesium alloy Materials Science and Engineering A, 753, pp.79-90, (2019), Fabien Briffod, Takayuki Shiraiwa, Manabu Enoki DOI:https://doi.org/10.1016/j.msea.2019.03.030</p>
<p>Effect of long period stacking ordered phase on the fatigue properties of extruded Mg-Y-Zn alloys International Journal of Fatigue, 128, 105205, (2019), Fabien Briffod, Shin Ito, Takayuki Shiraiwa, Manabu Enoki DOI:https://doi.org/10.1016/j.ijfatigue.2019.105205</p>
<p>Effect of crystallographic orientation and geometrical compatibility on fatigue crack initiation and propagation in rolled Ti-6Al-4V alloy Acta Materialia, 177(15), pp.56-67, (2019), Fabien Briffod, Alexandre Bleusset, Takayuki Shiraiwa, Manabu Enoki, DOI:https://doi.org/10.1016/j.actamat.2019.07.025</p>
<p>Multiscale model prediction of ferritic steel fatigue strength based on microstructural information, tensile properties, and loading conditions (no adjustable material constants) International Journal of Mechanical Sciences, Volume 170, (2020), 105339, Ito, Hiroaki, Yuta Suzuki, Hideaki Nishikawa, Masao Kinoshita, Manabu Enoki, Kazuki Shibanuma, DOI:https://doi.org/10.1016/j.ijmecsci.2019.105339</p>
<p>Evaluation of hydrogen-induced cracking in high-strength steel welded joints by acoustic emission technique Materials & Design, Volume 190, (2020), 108573, Takayuki Shiraiwa, Miki Kawate, Fabien Briffod, Tadashi Kasuya, Manabu Enoki, DOI:https://doi.org/10.1016/j.matdes.2020.108573</p>
<p>Acoustic emission analysis during fatigue crack propagation by Bayesian statistical modeling Materials Science and Engineering: A, Vol. 778, 139087 (2020), T Shiraiwa, H Takahashi, M Enoki DOI:https://doi.org/10.1016/j.msea.2020.139087</p>
<p>Monotonic and cyclic anisotropies of an extruded Mg-Al-Ca-Mn alloy plate: Experiments and crystal plasticity studies Materials Science and Engineering: A, Volume 772, (2020), 138753, Fabien Briffod, Takayuki Shiraiwa, Manabu Enoki, DOI:https://doi.org/10.1016/j.msea.2019.138753</p>
<p>Data Assimilation in the Welding Process for Analysis of Weld Toe Geometry and Heat Source Model ISIJ International (2020) Volume 60 Issue 6, pp.1301-1311, T Shiraiwa, M Enoki, S Goto, T Hiraide DOI:https://doi.org/10.2355/isijinternational.ISIJINT-2019-720</p>
<p>Effect of microstructure of simulated heat-affected zone on low- to high-cycle fatigue properties of low-carbon steels Fatigue & Fracture of Engineering Materials & Structures, Volume 43, Issue 6, (2020) pp.1239-1249, Hide-aki Nishikawa, Yoshiyuki Furuya, Satoshi Igi, Sota Goto, Fabien Briffod, Takayuki Shiraiwa, Manabu Enoki Tadashi Kasuya, DOI:https://doi.org/10.1111/ffe.13217</p>
<p>Prediction of Cyclic Stress–Strain Property of Steels by Crystal Plasticity Simulations and Machine Learning Materials (2019), 12(22), 3668, Yuto Miyazawa, Fabien Briffod, Takayuki Shiraiwa and Manabu Enoki DOI:https://doi.org/10.3390/ma12223668</p>
<p>Prediction of Fatigue Life of Steels in Consideration of Defect-induced Crack Initiation and Propagation ISIJ International, (2020) Volume 60 Issue 4, pp.799-806 DOI:https://doi.org/10.2355/isijinternational.ISIJINT-2019-573</p>
<p>Analysis of kinking and twinning behavior in extruded Mg – Y – Zn alloys by acoustic emission method with supervised machine learning technique Materials Science and Engineering: A, Volume 768, (2019), 138473, Takayuki Shiraiwa *, Kengo Tamura, Manabu Enoki DOI:https://doi.org/10.1016/j.msea.2019.138473</p>
<p>A Comparative Study of Localized Corrosion and Stress Corrosion Cracking of 13Cr Martensitic Stainless Steel Using Acoustic Emission and X-ray Computed Tomography Materials, (2019) Volume 12, Issue 16, Kaige Wu, Kaita Ito, Ippei Shinozaki, Pornthep Chivavibul, Manabu Enoki, DOI:https://doi.org/10.3390/ma12162569</p>
<p>In-Situ Observation and Acoustic Emission Monitoring of the Initiation-to-Propagation Transition of Stress Corrosion Cracking in SUS420J2 Stainless Steel MATERIALS TRANSACTIONS, Volume 60 Issue 10, (2019), Kaige Wu, Fabien Briffod, Kaita Ito, Ippei Shinozaki, Pornthep Chivavibul, Manabu Enoki, DOI:https://doi.org/10.2320/matertrans.MT-MAW2019004</p>
<p>Bayesian inference of grain growth prediction via multi-phase-field models PHYSICAL REVIEW MATERIALS, Volume 5, Issue 3, (2019), Shin-ichi Ito, Hiromichi Nagao, Takashi Kurokawa, Tadashi Kasuya, Junya Inoue, DOI:https://doi.org/10.1103/PhysRevMaterials.3.053404</p>

論文名・書誌事項・DOI

熱処理により模擬した細粒 HAZ 組織を有する低炭素鋼の微小疲労き裂進展寿命評価方法

鉄と鋼 2019 年 105 卷 12 号 pp.1179-1188, 西川 嗣彬、古谷 佳之, DOI:<https://doi.org/10.2355/tetsutohagane.TETSU-2019-072>

Micro-mechanical investigation of fatigue behavior of Al alloys containing surface/superficial defects

Materials Science and Engineering: A, Volume 775, (2020), 138958, Vudit Gaur, Fabien Briffod, Manabu Enoki
DOI:<https://doi.org/10.1016/j.msea.2020.138958>

Effect of overload on fatigue crack growth behavior of thin copper foil

International Journal of Fatigue Volume 126, (2019), pp. 202-209
Takayuki Shiraiwa, Takao Murakami, Manabu Enoki, DOI:<https://doi.org/10.1016/j.ijfatigue.2019.05.012>

Establishment of structure-property linkages using a Bayesian model selection method: Application to a dual-phase metallic composite system

Acta Materialia, Volume 176, (2019), pp. 264-277, Hoheok Kim, Tatsuki Yamamoto, Yushi Sato Junya, Inoue,
DOI:<https://doi.org/10.1016/j.actamat.2019.07.006>

Multiscale Analysis of MnS Inclusion Distributions in High Strength Steel

ISIJ International, (2020) Volume 60 Issue 8, pp.1714-1723, Ryota Sakaguchi, Takayuki Shiraiwa, Pornthep Chivavibul, Tadashi Kasuya, Manabu Enoki, Norio Yamashita, Hideo Yokota, Yutaka Matsui, Akira Kazama, Keita Ozaki, Hiroyuki Takamatsu, DOI:<https://doi.org/10.2355/isijinternational.ISIJINT-2019-739>

Prediction of Charpy impact toughness of steel weld heat-affected zones by combined micromechanics and stochastic fracture model – Part I: Model presentation

Engineering Fracture Mechanics, Volume 230, (2020), 106965, Michihiro Kunigita, Shuji Aihara, Tomoya Kawabata, Tadashi Kasuya, Yoshiomi Okazaki, Masahiro Inomoto, DOI:<https://doi.org/10.1016/j.engfracmech.2020.106965>

Prediction of Charpy impact toughness of steel weld heat-affected zones by combined micromechanics and stochastic fracture model – Part II : Model validation by experiment

Engineering Fracture Mechanics, Volume 230, (2020), 106966, Michihiro Kunigita, Shuji Aihara, Tomoya Kawabata, Tadashi Kasuya, Yoshiomi Okazaki, Masahiro Inomoto, DOI:<https://doi.org/10.1016/j.engfracmech.2020.106966>

Nucleation and propagation modeling of short fatigue crack in rolled bi-modal Ti-6Al-4V alloy

Materials Science and Engineering: A Volume 790, (2020), 139710, Fabien Briffod, Takayuki Shiraiwa, Manabu Enoki
DOI:<https://doi.org/10.1016/j.msea.2020.139710>

AE法と結晶方位解析によるMg合金の低サイクル疲労挙動解析

日本材料強度学会誌, 54巻, 第3号, pp. 54-57 (2020) 岡出健太郎, Fabien Briffod, 白岩隆行, 榎学

Unsupervised microstructure segmentation by mimicking metallurgists' approach to pattern recognition

Scientific Reports volume 10, Article number: 17835 (2020), Hoheok Kim, Junya Inoue, Tadashi Kasuya
DOI:<https://doi.org/10.1038/s41598-020-74935-8>

二相組織鋼の二点空間相関を用いた組織特性関係の導出

日本材料強度学会誌, 54巻, 第3号, pp. 50-53 (2020), 加藤翔也, Fabien Briffod, 白岩隆行, 榎学

Phase prediction method for pattern formation in time-dependent Ginzburg-Landau dynamics for kinetic Ising model without a priori assumptions of domain patterns

Physical Review B, Vol. 103, Issue 9, 094408, (2021), Ryoji Anzaki, Shin-ichi Ito, Hiromichi Nagao, Masaichiro Mizumaki, Masato Okada, Ichiro Akai
DOI:<https://doi.org/10.1103/PhysRevB.103.094408>

Nondestructive evaluation of macro segregation in creep strength enhanced 9Cr-1Mo-V-Nb steel

Scripta Materialia Volume 188, (2020), pp.179-182, Kazuhiro Kimura, Kwangsik Kwak, Shoichi Nambu, Toshihiko Koseki
<https://doi.org/10.1016/j.scriptamat.2020.07.039>

Prediction of the Mechanical Properties of Aluminum Alloy Using Bayesian Learning for Neural Networks

TMS 2021 150th Annual Meeting & Exhibition Supplemental Proceedings pp.473–480, Shimpei Takemoto, Kenji Nagata, Takeshi Kaneshita, Yoshishige Okuno, Katsuki Okuno, Masamichi Kitano, Junya Inoue, Manabu Enoki
DOI:https://doi.org/10.1007/978-3-030-65261-6_43

Micromechanical investigation of the effect of the crystal orientation on the local deformation path and ductile void nucleation in dual-phase steels

Materials Science and Engineering: A, Volume 826, (2021), 141933, Fabien Briffod, Takayuki Shiraiwa, Manabu Enoki
DOI:<https://doi.org/10.1016/j.msea.2021.141933>

鋼板溶接熱影響部の相変態モデル構築とじん性予測

神鋼R&D, vol.71, p31-36,2021/7/5, 井元雅弘、岡崎喜臣、粟飯原周二、糟谷正

論文名・書誌事項・DOI

HAZ hardness prediction of boron-added steels

Welding in the World volume 65, pp.1609–1621 (2021), T. Kasuya, M. Inomoto, Y. Okazaki, S. Aihara & M. Enoki
DOI:<https://doi.org/10.1007/s40194-021-01111-5>

Stress-strain curve prediction of steel HAZ based on hardness

Welding in the World volume 66, pp.273–285 (2022), T. Kasuya, M. Inomoto, Y. Okazaki, S. Aihara, M. Enoki
DOI:<https://doi.org/10.1007/s40194-021-01198-w>

P91 溶接切欠き材のクリープ強度に関する力学的性能定量評価パラメータの提案

日本材料強度学会誌 第55巻 1号, 横堀壽光、尾関 郷

Bayesian inverse design of high-strength aluminum alloys at high temperatures

MRS Advances volume 7, pp.213–216 (2022), Shimpei Takemoto, Takeshi Kaneshita, Kenji Nagata, Yoshishige Okuno, Junya Inoue Manabu Enoki, DOI:<https://doi.org/10.1557/s43580-022-00209-2>

Exploration of outliers in strength–ductility relationship of dual-phase steels

Science and Technology of Advanced Materials: Methods, Volume 2, 2022 - Issue 1, Takayuki Shiraiwa, Shoya Kato, Fabien Briffod, Manabu Enoki, DOI:<https://doi.org/10.1080/27660400.2022.2080483>

Effect of limited retained austenite on the strength–ductility trade-off in low-alloyed TRIP steel

Materials Science and Engineering: A Volume 861, (2022), 144337, Wujun Yin, Fabien Briffod, Kazuhiko Yamazaki, Takayuki Shiraiwa, Manabu Enoki , DOI:<https://doi.org/10.1016/j.msea.2022.144337>

Inverse analysis of the relationship between three-dimensional microstructures and tensile properties of dual-phase steels

Materials Today Communications Volume 33, (2022), 104958, Takayuki Shiraiwa, Fabien Briffod, Manabu Enoki, Kazuhiko Yamazaki, DOI:<https://doi.org/10.1016/j.mtcomm.2022.104958>

Effect of in-lath slip strength on the strain partitioning in a dual-phase steel investigated by high-resolution digital image correlation and crystal plasticity simulations

Materials Science and Engineering: A, Volume 862, (2023), 144413, Fabien Briffod, Haoyu Hu, Takayuki Shiraiwa, Manabu Enoki, DOI:<https://doi.org/10.1016/j.msea.2022.144413>

Correlation of deformation with damage progression behavior around a notch tip under creep and fatigue conditions for W-added 9Cr steel including weld joint

Strength, Fracture and Complexity, vol. 15, no. 1, pp. 141-165, (2022), Yokobori Jr, A. Toshimitsu, Ishikawa Haruki Sugiura Ryuji, Ohmi Toshihito, Tabuchi Masaakie, DOI:<https://doi.org/10.3233/SFC-228010>

The Quantitative Estimation of Mechanical Performance on the Creep Strength and Prediction of Creep Fracture Life for Creep Ductile Materials Based on QL* Parameter

IntechOpen,(2022), A. Toshimitsu Yokobori Jr, Go Ozeki, DOI: <https://doi.org/10.5772/intechopen.106419>

How to lead R&D digital transformation in a chemical corporation

MRS Advances,(2023), Takemoto S., Okuno Y., DOI:<https://doi.org/10.1557/s43580-023-00505-5>

Hardness prediction for sub-critically and inter-critically reheated HAZs of low alloy steels

Welding in the World volume 67, pp.223–234 (2023),T. Kasuya, M. Inomoto, Y. Okazaki, S. Aihara, M. Enoki
DOI:<https://doi.org/10.1007/s40194-022-01434-x>

<A2>

オーステナイト系ステンレス鋼における加工誘起変態挙動に及ぼす結晶粒径および転位密度の影響

鉄と鋼,2019年 105巻 8号 p. 827-836, 古金駿, 烏塚史郎, DOI:<https://doi.org/10.2355/tetsutohagane.TETSU-2019-004>

Strength-ductility improvement of extruded Ti-(N) materials using pure Ti powder with high nitrogen solution

Materials Science and Engineering: A, Volume 779, (2020),139136, Ammarueda Issariyapat, Patama Visuttipitukul, Tingting Song, Junko Umeda, Ma Qian, Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.msea.2020.139136>

多元系合金における界面偏析のフェーズフィールド解析,

第25回計算工学講演会論文集, 25, E-05-02, 2020, 奥川将行, 泉川大智, 小泉雄一郎

The effect of laser scanning strategies on the microstructure, texture and crystallography of grains exhibiting hot cracks in additively manufactured Hastelloy X

Mechanics of Materials Volume 157, (2021), 103816, Kartik Prasad, Mitsuki Obana, Yuki Ishii, Atsushi Ito, Shiro Torizuka
DOI:<https://doi.org/10.1016/j.mechmat.2021.103816>

論文名・書誌事項・DOI

<p>Transmission X ray diffraction characterization of deformation induced martensite in 301 and 304 stainless steels rolled at 77K: Role of grain size Materials Science and Engineering: A Volume 794, (2020), 139984, Yusuke Izuta, Kartik Prasad, Atsushi Ito, Masahiko Tanaka, Shiro Torizuka DOI:https://doi.org/10.1016/j.msea.2020.139984</p>
<p>Effect of Prior Structure to Intercritical Annealing on Rapid Formation of Ultrafine Ferrite + Austenite Structure and Mechanical Properties in 0.1%C-2%Si-5%Mn Steels ISIJ International/Volume 60 (2020) Issue 4, pp.764-773, Takanobu Adachi, Atsushi Ito, Hiroki Adachi, Shiro Torizuka DOI:https://doi.org/10.2355/isijinternational.ISIJINT-2019-401</p>
<p>Effect of plastic strain on the solidification cracking of Hastelloy-X in the selective laser melting process Additive Manufacturing Volume 37, (2021), 101742, Houichi Kitano, Masakazu Tsujii, Masahiro Kusano, Atsushi Yumoto, Makoto Watanabe, DOI:https://doi.org/10.1016/j.addma.2020.101742</p>
<p>Simulations of Non-Equilibrium and Equilibrium Segregation in Nickel-Based Superalloy Using Modified Scheil-Gulliver and Phase-Field Methods(Special Issue on SIP Materials Integration Project) MATERIALS TRANSACTIONS, (2020) Volume 61 Issue 11 pp. 2072-2078, Masayuki Okugawa, Daichi Izumikawa, Yuichiro Koizumi, DOI:https://doi.org/10.2320/matertrans.MT-MA2020005</p>
<p>Detection and location of microdefects during selective laser melting by wireless acoustic emission measurement Additive Manufacturing Volume 40, (2021), 101915, Kaita Ito, Masahiro Kusano, Masahiko Demura and Makoto Watanabe, DOI:https://doi.org/10.1016/j.addma.2021.101915</p>
<p>Predicting the Parabolic Rate Constants of High-Temperature Oxidation of Ti Alloys Using Machine Learning Oxidation of Metals volume 94, pp.205–218 (2020) Somesh Kr. Bhattacharya, Ryoji Sahara, Takayuki Narushima, DOI:https://doi.org/10.1007/s11085-020-09986-3</p>
<p>Evaluating the phase stability of binary titanium alloy Ti-X (X = Mo, Nb, Al, and Zr) using first-principles calculations and a Debye model Calphad Volume 71, (2020), 102207, Wenchong Zhou, Maaouia Souissi, Taichi Abe, Ryoji Sahara, Patrick H.-L.Sit, and Koichi Tsuchiya, DOI:https://doi.org/10.1016/j.calphad.2020.102207</p>
<p>Data analytics approach to predict the hardness of copper matrix composites Metallurgical and Materials Engineering 26, (2020) pp. 357-364. , Somesh Kr. Bhattacharya, Ryoji Sahara, Dušan Božić, Jovana Ružić, DOI:https://doi.org/10.30544/567</p>
<p>Machine learning-driven optimization in powder manufacturing of Ni-Co based superalloy Materials & Design Volume 198, (2021), 109290 Ryo Tamura, Toshio Osada, Kazumi Minagawa, Takuma Kohata, Masashi Hirosawa, Koji Tsuda, and Kyoko Kawagishi, DOI:https://doi.org/10.1016/j.matdes.2020.109290</p>
<p>Data integration for accelerated materials design via preference learning New Journal of Physics, Volume 22, (2020), Xiaolin Sun, Zhufeng Hou, Masato Sumita, Shinsuke Ishihara, Ryo Tamura, and Koji Tsuda Tsuda, DOI:https://doi.org/10.1088/1367-2630/ab82b9</p>
<p>Thermal transport properties of Ni–Co-based superalloy AIP Advances 10, 125118 (2020) Asuka Miura, Toshio Osada, Kyoko Kawagishi, and Ken-ichi Uchida, DOI:https://doi.org/10.1063/5.0030847</p>
<p>Cu–Ni–X (X = Co,Fe)合金における特異な不連続析出現象に対するCALPHAD 法およびフェーズフィールド法に基づく理解 日本国金属学会誌, 85 (2021) 89-94. 後藤潤大, 小山敏幸, 塚田祐貴 DOI:https://doi.org/10.2320/jinstmet.J2020037</p>
<p>Development of a Method for Evaluating Microstructurally Small Fatigue Crack Initiation and Growth by Using an Automatic System for In Situ Observation in Conjunction with a Digital-Image Correlation Technique ISIJ International Volume 60, (2020) Issue 9, Hide-aki Nishikawa , Yoshiyuki Furuya, DOI:https://doi.org/10.2355/isijinternational.ISIJINT-2019-823</p>
<p>Effect of microstructure of simulated heat-affected zone on low- to high-cycle fatigue properties of low-carbon steels Fatigue & Fracture of Engineering Materials & Structures Volume 43, Issue 6 June 2020 Pages 1239-1249, Hide-aki Nishikawa, Yoshiyuki Furuya, Satoshi Igi, Sota Goto, Fabien Briffod, Takayuki Shiraiwa, Manabu Enoki, Tadashi Kasuya, DOI:https://doi.org/10.1111/ffe.13217</p>
<p>Selective Laser Thermoregulation System for Accelerated Degradation Test of SiC/SiC CMCs JLMN-Journal of Laser Micro/Nanoengineering Vol. 15, No. 3, (2020), Hayato Koshiji, Tomomasa Ohkubo, Kenji Azato, Yuki Kameda, Ei-ichi Matsunaga, Takumi Dobashi, Naohiro Shichijo, Ken Goto, Mitsuhiro Sato, Chikara Fujiwara, Yutaka Kagawa, DOI:https://doi.org/10.2961/jlmn.2020.03.2003</p>
<p>Selective laser-melted titanium materials with nitrogen solid solutions for balanced strength and ductility Materials Science and Engineering: A Volume 790, (2020), 139641 Katsuyoshi Kondoh, Ammarueda Issariyapat, Junko Umeda, Patama Visuttipitukul, DOI:https://doi.org/10.1016/j.msea.2020.139641</p>

論文名・書誌事項・DOI

Tensile property enhancement by oxygen solutes in selectively laser melted titanium materials fabricated from pre-mixed pure Ti and TiO₂ powder

Materials Science and Engineering: A Volume 795, (2020), 139983, Katsuyoshi Kondoh Eri Ichikawa Ammarueda Issariyapat, Kazuki Shitara, Junko Umeda, Biao Chen, Shufeng Li, DOI:<https://doi.org/10.1016/j.msea.2020.139983>

Comparison study on mechanical properties of powder metallurgy titanium materials with nitrogen solutes and TiN dispersoids

Journal of Alloys and Compounds Volume 846, (2020), 156455, Junko Umeda, Hiroki Ishizaka, Shufeng Li, Abdulaziz Alhazaa, Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.jallcom.2020.156455>

Refined grain formation behavior and strengthening mechanism of α-titanium with nitrogen fabricated by selective laser melting

Additive Manufacturing Volume 36, (2020), 101537, Ammarueda Issariyapat, Patama Visuttipitkul, Junko Umeda, Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.addma.2020.101537>

Quantitative strengthening evaluation of powder metallurgy Ti-Zr binary alloys with high strength and ductility

Journal of Alloys and Compounds Volume 852, (2021), 156954, Katsuyoshi Kondoh, Mizuki Fukuo, Shota Kariya, Kazuki Shitara, Shufeng Li, Abdulaziz Alhazaa, Junko Umeda DOI:<https://doi.org/10.1016/j.jallcom.2020.156954>

Tensile properties improvement by homogenized nitrogen solid solution strengthening of commercially pure titanium through powder metallurgy process

Materials Characterization Volume 170, (2020), 110700, Ammarueda Issariyapat, Patama Visuttipitkul, Tingting Song, Abdollah Bahador, Junko Umeda, Ma Qian, Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.matchar.2020.110700>

Mechanisms of tensile strengthening and oxygen solid solution in single β-phase Ti-35 at.%Ta+O alloys

Materials Science and Engineering: A, Volume 802, (2021), 140677, Katsuya Yokota, Abdollah Bahador, Kazuki Shitara, Junko Umeda Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.msea.2020.140677>

Acicular microstructure formation and strengthening behavior of Ti-4%Fe alloys by Zr addition

Journal of Alloys and Compounds Volume 858, 25 March 2021, 158292, Takuma Teramae, Takayuki Tanaka, Mizuki Fukuo, Kazuki Shitara, Junko Umeda, Shufeng Li, Abdulaziz Alhazaa, Katsuyoshi Kondoh. DOI:<https://doi.org/10.1016/j.jallcom.2020.158292>

Microstructure globularization of high oxygen concentration dual-phase extruded Ti alloys via powder metallurgy route

Materials Characterization Volume 172, February 2021, 110855 Abdollah Bahador, Junko Umeda Hamidreza Ghandvar, Tuty Asma, Abu Bakar, Ridvan Yamanoglu, Ammarueda Issariyapat, Katsuyoshi Kondoh DOI:<https://doi.org/10.1016/j.matchar.2020.110855>

Microstructures analysis and quantitative strengthening evaluation of powder metallurgy Ti-Fe binary extruded alloys with (α+β)-dual-phase

Materials Science and Engineering: A, Volume 803, 28 January 2021, 140708, Junko Umeda, Takayuki Tanaka, Takuma Teramae, Shota Kariya, Junji Fujita, Hiroshi Nishikawa, Yoji Shibutani, Jianghua Shen, Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.msea.2020.140708>

レーザ積層造形法により作製した酸素固溶チタン材における結晶組織と強化機構

粉体および粉末冶金 68 2 (2021) pp.67-75市川絵理, 設樂一希, 梅田純子, Shufeng LI, Biao CHEN, 近藤勝義 DOI:<https://doi.org/10.2497/jjspm.68.67>

Precipitation and Distribution Behavior of In Situ-Formed TiB Whiskers in Ti64 Composites

Fabricated by Selective Laser Melting Crystals Volume 11 Issue 4 10.3390/crust11040374 ,Junko Umeda, Lei Jia, Biao Chen, Ke Chen, Shufeng Li, Kazuki Shitara, Katsuyoshi Kondoh, DOI:<https://doi.org/10.3390/crust11040374>

Effects of plasma rotating electrode process parameters on the particle size distribution and microstructure of Ti-6Al-4 V alloy powder

Powder Technology Volume 376, October 2020, Pages 363-372 Yujie Cui, Yufan Zhao, Haruko Numata, Huakang Bian, Kimio Wako, Kenta Yamanaka, Kenta Aoyagi, Chen Zhang, Akihiko Chiba DOI:<https://doi.org/10.1016/j.powtec.2020.08.027>

Centrifugal granulation behavior in metallic powder fabrication by plasma rotating electrode process

Scientific Reports volume 10, Article number: 18446 (2020), Yufan Zhao, Yujie Cui, Haruko Numata, Huakang Bian, Kimio Wako, Kenta Yamanaka, Kenta Aoyagi & Akihiko Chiba, DOI:<https://doi.org/10.1038/s41598-020-75503-w>

画像計測引張試験法を用いた Ti-6Al-4V 合金の大ひずみ域までの高温真応力－真ひずみ曲線測定

塑性と加工, 2021 年 62 卷 731 号 p. 177-182, 伊東 篤志, 山戸 正敏, 鳥塚 史郎, DOI:<https://doi.org/10.9773/sosei.62.177>

Formation of Ultrafine Single-Variant Martensite from Prior Ferrite + Cementite Microstructure and Its Mechanical Properties

Materials Performance and Characterization, Volume 11, Issue 2(2021), Shiro Torizuka, Ryusuke Ohya, Kartik Prasad and Atsushi Ito DOI: <https://doi.org/10.1520/MPC20200187>

In situ synchrotron diffraction study of a crack-free additively manufactured Ni base superalloy,

Scripta Materialia Volume 200, (2021), 113896, Kartik Prasad** Yuuki Horita Atsushi Ito Shiro Torizuka, DOI:<https://doi.org/10.1016/j.scriptamat.2021.113896>

論文名・書誌事項・DOI

The possible role of nano sized precipitates on the mechanical properties of additively manufactured IN 718 superalloy, Materials Science and Engineering: A Volume 826, (2021), 141972, Mitsuki Obana KartikPrasad,Atsushilto, ShiroTorizuka, DOI:<https://doi.org/10.1016/j.msea.2021.141972>

付加製造用電子ビーム照射による 316L ステンレス鋼の溶融・凝固挙動

スマートプロセス学会誌 10 卷 (2021) 4 号, p. 208-213, 奥川 将行, 宮田 雄一朗, 王 雷, 能勢 和史, 小泉 雄一郎, 中野 貴由
DOI:<https://doi.org/10.7791/jspmee.10.208>

フェーズフィールド法による Ni 基超合金付加製造における凝固偏析予測 スマートプロセス学会誌/10 卷 (2021) 4 号, pp. 214-219
奥川 将行, 齊藤 賢士, 若林 誠, 小泉 雄一郎, DOI:<https://doi.org/10.7791/jspmee.10.214>

Synchrotron diffraction characterization of dislocation density in additively manufactured IN 718 superalloy Materials Characterization Volume 179, (2021), 111379, Kartik Prasad, Mitsuki Obana, Atsushi Ito, ShiroTorizuka
DOI:<https://doi.org/10.1016/j.matchar.2021.111379>

Non- and Quasi-Equilibrium Multi-Phase Field Methods Coupled with CALPHAD Database for Rapid-Solidification Microstructural Evolution in Laser Powder Bed Additive Manufacturing Condition Metals (2021), 11(4), 626, Sukeharu Nomoto , Masahito SEGAWA, Makoto Watanabe
DOI:<https://doi.org/10.3390/met11040626>

Novel Calibration Strategy for Validation of Finite Element Thermal Analysis of Selective Laser Materials Volume 14 Issue 17, 4948, Masahiro Kusano, Houichi Kitano, Makoto Watanabe
DOI:<https://doi.org/10.3390/ma14174948>

Process Parameter Optimization Framework for the Selective Laser Melting of Hastelloy X Alloy Considering Defects and Solidification Crack Occurrence Crystals(2021), Volume 11 Issue 6, 578, Houichi Kitano,Masahiro Kusano, Masakazu Tsujii, Atsushi Yumoto, Makoto Watanabe, DOI:<https://doi.org/10.3390/crust11060578>

積層造形用粉末床の実験とシミュレーションによる研究

粉体および粉末冶金/68 卷 (2021) 10 号, p. 457-463, 菊池 圭子, 谷藤 優太, 周 健偉, 野村 直之, 川崎 亮,
DOI:<https://doi.org/10.2497/jjspm.68.457>

Electronegativity Difference as a Descriptor for the Oxidation-Inhibiting Effect of the Alloying Element during the Early Stages of Titanium Oxidation Langmuir (2022), 38, 4, 1448–1457, Kanika Kohli, Somesh Kr. Bhattacharya, Kyosuke Ueda, Takayuki Narushima, Ryoji Sahara, and Prasenjit Ghosh
DOI:<https://doi.org/10.1021/acs.langmuir.1c02633>

Lock-in Infrared Thermography for Fatigue Limit Estimation in Ti-6Al-4V Alloy

MATERIALS TRANSACTIONS Volume 62 (2021) Issue 6, 738-743, Tetsuya Matsunaga, Nobuo Nagashima, Shigeaki Sugimoto,
DOI:<https://doi.org/10.2320/matertrans.L-M2021811>

Adjoint model for estimating material parameters based on microstructure evolution during spinodal decomposition

Phys. Rev. Materials 5, 113801 , Yuki Matsuura, Yuhki Tsukada, and Toshiyuki Koyama,
DOI:<https://doi.org/10.1103/PhysRevMaterials.5.113801>

Simple Approach for Evaluating the Possibility of Sluggish Diffusion in High-Entropy Alloys

Journal of Phase Equilibria and Diffusion volume 43, pages 68–77 (2022), Toshiyuki Koyama, Yuhki Tsukada & Taichi Abe,
DOI:<https://doi.org/10.1007/s11669-022-00938-9>

Strength prediction of Ni-base disc superalloys: Modified γ' hardening models applicable to commercial alloys

Materials Science and Engineering: A Volume 799, (2021), 140103
L.Wu,T.Osada, I.Watanabe,T.Yokokawa,T.Kobayashi, K.Kawagishi, DOI:<https://doi.org/10.1016/j.msea.2020.140103>

機械学習に基づく最適化手法を用いた金型 - 素材接触界面における摩擦係数および熱伝達係数の同時自動同定

2021年度塑性加工春季講演会, pp.169-170, (2021),吉田佳典

Effect of macrozones on fatigue crack initiation and propagation mechanisms in a forged ti-6Al-4V alloy under fully-reversed condition Materialia Volume 22, (2022), 101401, Fabien Briffod,Takayuki Shiraiwa, Manabu Enoki, Satoshi Emura, DOI:<https://doi.org/10.1016/j.mtla.2022.101401>

The Role of Crystallographic Texture and Basal Plane Slip on Microstructurally Short Fatigue Crack Initiation and Propagation in Forged Billet and Rolled Bar Ti-6Al-4V Alloy

Metallurgical and Materials Transactions A volume 52, pp.3821–3838 (2021),Kishan Habib, Hideaki Nishikawa, Yoshiyuki Furuya & Satoshi Emura, DOI:<https://doi.org/10.1007/s11661-021-06344-z>

論文名・書誌事項・DOI

<p><i>Ultrafine-grain formation and improved mechanical properties of novel extruded Ti-Fe-W alloys with complete solid solution of tungsten</i></p> <p>Journal of Alloys and Compounds Volume 875, (2021), 160031, Abdollah Bahador, Junko Umeda,RidvanYamanoglu,AstutyAmrin,Abdulaziz Alhazaa, Katsuyoshi Kondoh, DOI:https://doi.org/10.1016/j.jallcom.2021.160031</p>
<p><i>Development of core-shell-structured Ti-(N) powders for additive manufacturing and comparison of tensile properties of the additively manufactured and spark-plasma-sintered Ti-N alloys</i></p> <p>Advanced Powder Technology Volume 32, Issue 7, (2021), Pages 2379-2389, Ammarueda Issariyapat,TingtingSong, PatamaVisuttipitukul, JunkoUmeda, Ma Qian, Katsuyoshi Kondoh</p>
<p><i>Substantial role of charge transfer on the diffusion mechanism of interstitial elements in a-titanium: A First-principles study</i></p> <p>Scripta Materialia Volume 203, (2021), 114065,KazukiShitara,MasatoYoshiya, JunkoUmeda,Katsuyoshi Kondoh, DOI:https://doi.org/10.1016/j.scriptamat.2021.114065</p>
<p><i>Strengthening and deformation mechanism of selective laser-melted high-concentration nitrogen solute a-Ti materials with heterogeneous microstructures via heat treatment</i></p> <p>Materials Science and Engineering: A Volume 826, (2021), 141935, Ammarueda Issariyapat,Abdollah Bahador,Patama Visuttipitukul, Shufeng Li, Junko Umeda,Katsuyoshi Kondoh,DOI:https://doi.org/10.1016/j.msea.2021.141935</p>
<p><i>Strength-ductility balance of powder metallurgy Ti-2Fe-2W alloy extruded at high-temperature</i></p> <p>Journal of Materials Research and Technology Volume 14, (2021), pp.677-691, Abdollah Bahador,Ammarueda Issariyapat, JunkoUmeda, RidvanYamanoglu CatalinPruncu,AstutyAmrin, Katsuyoshi Kondoh, DOI:https://doi.org/10.1016/j.jmrt.2021.06.086</p>
<p><i>Additive Manufacturing and Characterization of High Strength Ti-Zr Gyroid Scaffolds Using Pre-Mixed Ti-ZrH₂ Powders</i></p> <p>JOM volume 73, pp.4166–4176 (2021), Ammarueda Issariyapat, Shota Kariya, Abdulaziz Alhazaa, Junko Umeda & Katsuyoshi Kondoh, DOI:https://doi.org/10.1007/s11837-021-04923-4</p>
<p><i>Effects of process parameters and cooling gas on powder formation during the plasma rotating electrode process</i></p> <p>Powder Technology Volume 393, (2021), pp.301-311, YujieCui,YufanZhao,Haruko Numata, Kenta Yamanaka, Huakang Bian, Kenta Aoyagi, Akihiko Chiba, DOI:https://doi.org/10.1016/j.powtec.2021.07.062</p>
<p><i>Controlling factors determining flowability of powders for additive manufacturing: A combined experimental and simulation study</i></p> <p>Powder Technology Volume 393, (2021), pp.482-493, Yufan Zhao,YujieCui,Yusaku Hasebe,Huakang Bian,Kenta Yamanaka, Kenta Aoyagi,Takehito Hagisawa, AkihikoChiba, DOI:https://doi.org/10.1016/j.powtec.2021.08.006</p>
<p><i>Spreading behavior of Ti single bond48Al single bond2Cr single bond2Nb powders in powder bed fusion additive manufacturing process: Experimental and discrete element method study</i></p> <p>Additive Manufacturing Volume 49, (2022),102489, SeungkyunYim,HuakangBian,KentaAoyagi,KentaYamanaka,Akihiko Chiba DOI:https://doi.org/10.1016/j.addma.2021.102489</p>
<p><i>Ball-milling treatment of gas-atomized Ti single bond48Al single bond2Cr single bond2Nb powder and its effect on preventing smoking during electron beam powder bed fusion building process</i></p> <p>Additive Manufacturing Volume 51, (2022),102634, Seungkyun Yim, Huakang Bian, Kenta Aoyagi, Keiji Yanagihara, Shin-ichi Kitamura, Hironobu Manabe, Yohei Daino, Yuichiro Hayasaka, Kenta Yamanaka, Akihiko Chiba, DOI:https://doi.org/10.1016/j.addma.2022.102634</p>
<p><i>Manufacturing single crystals of pure nickel via selective laser melting with a flat-top laser beam</i></p> <p>Additive Manufacturing Letters Volume 3, (2022), 100066, Dennis Edgard Jodi, Tomonori Kitashima , Yuichiro Koizumi Takayoshi Nakano , Makoto Watanabe, DOI:https://doi.org/10.1016/j.addlet.2022.100066</p>
<p>低炭素 2%Si-5%Mn フレッシュマルテンサイト組織鋼の高強度・高延性化に及ぼす転位挙動の影響</p> <p>鉄と鋼/108巻(2022)11号 pp.877-890, Atsushi Ito,Taiga Fuse, Shiro Torizuka DOI:https://doi.org/10.2355/tetsutohagane.TETSU-2022-057</p>
<p><i>Microstructure control of Hastelloy X by geometry-induced elevation of sample temperature during a laser powder bed fusion process</i></p> <p>Materials & Design Volume 222, October 2022, 111016, Masahiro Kusano, Makoto Watanabe DOI:https://doi.org/10.1016/j.matdes.2022.111016</p>
<p><i>Experimental Characterization and Computational Simulation of Powder Bed for Powder Bed Fusion Additive Manufacturing</i></p> <p>MATERIALS TRANSACTIONS2022 Volume 63 Issue 6 pp.931-938, Keiko Kikuchi, Yuta Tanifugi, Weiwei Zhou, Naoyuki Nomura, Akira Kawasaki, DOI:https://doi.org/10.2320/matertrans.MT-Y2021005</p>
<p>粒子画像流速測定による Ti-6Al-4V 合金粉末の流動解析と離散要素法シミュレーションとの比較</p> <p>粉体および粉末冶金, 2022年69巻10号 p. 432-436, 増田呼人, 鎌田航平, 周偉偉, 野村直之 DOI:https://doi.org/10.2497/jjspm.69.432</p>
<p><i>Simultaneous enhancement of powder properties, additive manufacturability, and mechanical performance of Ti-6Al-4V alloy by 2D-nanocarbon decoration</i></p> <p>Materials Science and Engineering: A Volume 859, (2022), 144215, Mingqi Dong, Weiwei Zhou, Zhenxing Zhou, Naoyuki Nomura, DOI:https://doi.org/10.1016/j.msea.2022.144215</p>

論文名・書誌事項・DOI

Order-disorder competition in equiatomic 3d-transition-metal quaternary alloys: phase stability and electronic structure Science and Technology of Advanced Materials: Methods, Volume 3, (2023) - Issue 1 Hiroshi Mizuseki, Ryoji Sahara, Kenta Hongo, DOI:<https://doi.org/10.1080/27660400.2022.2153632>

Three-dimensional high-resolution crystallographic observation of the entire volume of microstructurally small fatigue cracks in Ni-Co based superalloy

Scripta Materialia Volume 222, (2023), 115026, Hideaki Nishikawa, Yoshiyuki Furuya, Toshio Osada, Kyoko Kawagishi, Toru Hara DOI:<https://doi.org/10.1016/j.scriptamat.2022.115026>

The temperature dependence of strengthening mechanisms in Ni-based superalloys: A newly re-defined cuboidal model and its implications for strength design Journal of Alloys and Compounds

Volume 931, (2023), 167508, Liberty Wu, Toshio Osada, Tadaharu Yokokawa, Yaling Chang, Kyoko Kawagishi, DOI:<https://doi.org/10.1016/j.jallcom.2022.167508>

Prediction of grain boundary chemistry in multicomponent alloys

Science and Technology of Advanced Materials: Methods, Volume 2, (2022) - Issue 1, pp.322-333, Masataka Funamoto, Yusuke Matsuoka, Yuhki Tsukada, Toshiyuki Koyama, DOI:<https://doi.org/10.1080/27660400.2022.2112915>

Virtual heat treatment for γ - γ' two-phase Ni-Al alloy on the materials Integration system, MInt

Materials & Design Volume 226, (2023), 111631, Toshio Osada, Toshiyuki Koyama, Dmitry S. Bulgarevich, Satoshi Minamoto, Makoto Osawa, Makoto Watanabe, Kyoko Kawagishi, Masahiko Demura, DOI:<https://doi.org/10.1016/j.matdes.2023.111631>

First-principles design and experimental validation of β -Ti alloys with high solid-solution strengthening and low elasticities

Materials Science and Engineering: A Volume 843, (2022), 143053, Kazuki Shitara

Katsuya Yokota, Masato Yoshiya, Junko Umeda, Katsuyoshi Kondoh DOI:<https://doi.org/10.1016/j.msea.2022.143053>

Solute-induced near-isotropic performance of laser powder bed fusion manufactured pure titanium

Additive Manufacturing Volume 56, (2022), 102907, Ammarueda Issariyapat, Shota Kariya, Kazuki Shitara, Junko Umeda Katsuyoshi Kondoh, DOI:<https://doi.org/10.1016/j.addma.2022.102907>

The effects of heat treatment and carbon content on the microstructure and mechanical properties of laser powder bed fusion Ti-6Al-4V with dissolved TiC particles

Journal of Alloys and Compounds Volume 920, (2022), 165930, Jack Peterson, Ammarueda Issariyapat, Junko Umeda, Katsuyoshi Kondoh

DOI:<https://doi.org/10.1016/j.jallcom.2022.165930>

Room temperature and high-temperature properties of extruded Ti-4Fe-3W/2TiC composites in α + β and β phases

Materials & Design Volume 220, (2022), 110901, Abdollah Bahador, Ayhan Yurtsever, Astutu Amrin, Shota Kariya, Junko Umeda, Jianghua Shen, Biao Chen, Takeshi Fukuma, Katsuyoshi Kondoh DOI:<https://doi.org/10.1016/j.matdes.2022.110901>

Detection, classification and prediction of internal defects from surface morphology data of metal parts fabricated by powder bed fusion type additive manufacturing using an electron beam

Additive Manufacturing Volume 54, (2022), 102736, Yunwei Gui, Kenta Aoyagi, Huakang Bian, Akihiko Chiba

DOI:<https://doi.org/10.1016/j.addma.2022.102736>

Continuous black-box optimization with an Ising machine and random subspace coding

Phys. Rev. Research 4, 023062 (2022), Syun Izawa, Koki Kitai, Shu Tanaka, Ryo Tamura, and Koji Tsuda

DOI:<https://doi.org/10.1103/PhysRevResearch.4.023062>

Self-learning entropic population annealing for interpretable materials design

Digital Discovery, 2022/6, 1, 3, pp.295-302, Jiawen Li, Jinzhe Zhang, Ryo Tamura, Koji Tsuda

DOI:<https://doi.org/10.1039/D1DD00043H>

自動運転有限要素解析を用いた熱間摩擦係数関数自動生成と摩擦係数関数および熱伝達係数関数の同時自動同定

塑性と加工、Vol.64-No.746 (2023) 吉田佳典

<A3>

A multiscale model for the synthesis of thermosetting resins: From the addition reaction to cross-linked network formation

Chemical Physics Letters 720, pp.64–69, (2019), Jing Li, Sakamoto Jumpei, Hiroki Waizumi, Yutaka Oya, Yue Huang Naoki Kishimoto, Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.cplett.2019.02.013>

Data analysis of multi-dimensional thermophysical properties of liquid substances based on clustering approach of machine learning

Chemical Physics Letters, Volume 728, (2019), pp.109-114, Gota Kikugawa, Yuta Nishimura, Koji Shimoyama, Taku Ohara Tomonaga Okabe, Fumio S. Ohuchi, DOI:<https://doi.org/10.1016/j.cplett.2019.04.075>

Multiscale analysis and experimental validation of crack initiation in quasi-isotropic laminates

International Journal of Solids and Structures Volumes 193–194, (2020), pp.172-191, Yuta Kumagai, Sota Onodera, Marco Salviano Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.ijsolstr.2020.02.010>

論文名・書誌事項・DOI

ステアリング積層法による複合材料積層板中の円孔まわりのひずみ集中軽減効果

日本複合材料学会誌, 2020 年 46 卷 1 号 p. 13-20, 末益 博志, 青木 雄一郎

DOI:<https://doi.org/10.6089/jscm.46.13>

Application of deep learning to inverse design of phase separation structure in polymer alloy

Computational Materials Science Volume 190, (2021), 110278, Kazuya Hiraide, Kenta Hirayama, Katsuhiro Endo, Mayu Muramatsu

DOI:<https://doi.org/10.1016/j.commatsci.2021.110278>

Amine/epoxy stoichiometric ratio dependence of crosslinked structure and ductility in amine-cured epoxy thermosetting resins

Journal of Applied Polymer Science, Volume 138, Issue 23, (2021) 50542, Nobuyuki Odagiri, Keiichi Shirasu, Yoshiaki Kawagoe, Gota Kikugawa, Yutaka Oya, Naoki Kishimoto, Fumio S. Ohuchi, Tomonaga Okabe,

DOI:<https://doi.org/10.1002/app.50542>

Molecular dynamics simulation of cross-linking processes and material properties for epoxy resins using first-principle calculation combined with global reaction route mapping algorithms

Chemical Physics Letters Volume 762, (2021), 138104, Y.Oya, M.Nakazawa, K.Shirasu, Y. Hino, K. Inuyama, G. Kikugawa, J.Li, R. Kuwahara

N.Kishimoto, H.Waizumi, M. Nishikawa, A.Waas, N. Odagiri, A.Koyanagi, M.Salviato, T.Okabe DOI:<https://doi.org/10.1016/j.cplett.2020.138104>

Effect of carbon fibres on the static and fatigue mechanical properties of fibre metal laminates

Fatigue & Fracture of Engineering Materials & Structures, Volume 43, Issue 7, (2020) pp.1461-1472, Kimiyoshi Naito, Keiichi Shirasu, Yoshihisa Tanaka, DOI:<https://doi.org/10.1111/ffe.13211>

Mechanical anisotropy of PAN-based and pitch-based carbon fibers

Mechanical Engineering Journal, (2020) Volume 7 Issue 4 pp.19-00599, Keiichi SHIRASU, Chiemi NAGAI, Kimiyoshi NAITO, DOI:<https://doi.org/10.1299/mej.19-00599>

Microstructure-elastic property relationships in carbon fibers: A nanoindentation study

Composites Part B: Engineering Volume 200, (2020), 108342, Keiichi Shirasu, Kenta Goto, Kimiyoshi Naito

DOI:<https://doi.org/10.1016/j.compositesb.2020.108342>

ミクロスケール解析による薄層CFRP積層板のin-situ損傷・強度特性評価

日本複合材料学会誌, 2020 年 46 卷 5 号 p. 212-222

樋口 誠, 青木 涼馬, 横関 智弘, 岡部 朋永, DOI:<https://doi.org/10.6089/jscm.46.212>

Evaluation of the in-situ damage and strength properties of thin-ply CFRP laminates by micro-scale finite element analysis

Advanced Composite Materials Volume 29, (2020) - Issue 5, Ryo Higuchi, Ryoma Aoki, Tomohiro Yokozeki, Tomonaga Okabe, DOI:<https://doi.org/10.1080/09243046.2020.1740867>

Experimental and numerical study on progressive damage and failure in composite laminates during open-hole compression tests

Composites Part A: Applied Science and Manufacturing Volume 145, (2021), 106300 R. Higuchi, S. Warabi, A. Yoshimura, T. Nagashima, T. Yokozeki, T.Okabe, DOI:<https://doi.org/10.1016/j.compositesa.2021.106300>

A decoupling scheme for two-scale finite thermoviscoelasticity with thermal and cure-induced deformations

Volume 122, Issue 4 28 February (2021) pp. 1133-1166, Risa Saito, Yosuke Yamanaka, Seishiro Matsubara Tomonaga Okabe, Shuji Moriguchi, Kenjiro Terada, DOI:<https://doi.org/10.1002/nme.6575>

Tensile-strength-controlling factors in unidirectional carbon fiber reinforced plastic composites

Composites Part A: Applied Science and Manufacturing Volume 140, January 2021, 106140, Go Yamamoto, Keita

Koizumi, Takahiro Nakamura, Noriyuki Hirano, Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.compositesa.2020.106140>

Fluid-structural design analysis for composite aircraft wings with various fiber properties

Journal of Fluid Science and Technology 2021 Volume 16 Issue 1 Pages JFST0009, Shugo DATE, Yoshiaki ABE, Takeki YAMAMOTO, Tomonaga OKABE, DOI:<https://doi.org/10.1299/jfst.2021jfst0009>

Analytical model for determining effective stiffness and mechanical behavior of polymer matrix composite laminates using continuum damage mechanics

International Journal of Damage Mechanics, Volume 29, Issue 10, Sota Onodera, Tomonaga Okabe, DOI:<https://doi.org/10.1177/1056789520939624>

Experimental and numerical investigations on push-out delamination in drilling of composite laminates

Composites Science and Technology Volume 198, (2020), 108238, R. Higuchi, S. Warabi, W. Ishibashi, T. Okabe

DOI:<https://doi.org/10.1016/j.compscitech.2020.108238>

Numerical Simulation of Wake Deflection Control around NACA0012 Airfoil Using Active

Morphing Flaps Journal of Flow Control, Measurement & Visualization, Vol.8 No.3, (2020), Yoshiaki Abe, Takayuki Konishi, Tomonaga Okabe, DOI:<https://doi.org/10.4236/jfcmv.2020.83007>

論文名・書誌事項・DOI

On the instability of multiple annular delaminations of axisymmetric laminates with arbitrary boundary conditions subjected to transverse load Composite Structures Volume 251, (2020), 112678
Hiroshi Suemasu, DOI:<https://doi.org/10.1016/j.compstruct.2020.112678>

Effect of gap on strengths of automated fiber placement manufactured laminates Composite Structures Volume 263, (2021), 113677, Hiroshi Suemasu, Yuichiro Aoki, Sunao Sugimoto, Toshiya Nakamura
DOI:<https://doi.org/10.1016/j.compstruct.2021.113677>

Micromechanical modeling for the in-plane mechanical behavior of orthogonal three-dimensional woven ceramic matrix composites with transverse and matrix cracking International Journal of Damage Mechanics, Volume 31, Issue 2, Sota Onodera, Junpei Tsuyuki, Tomonaga Okabe DOI:<https://doi.org/10.1177/10567895211026017>

Thermoset resin curing simulation using quantum-chemical reaction path calculation and dissipative particle dynamics Soft Matter, 2021, Volume 17, Issue 28, pp.6707-6717, Yoshiaki Kawagoe, Gota Kikugawa, Keiichi Shirasu, and Tomonaga Okabe
DOI:<https://doi.org/10.1039/D1SM00600B>

Prediction of transverse crack progression based on continuum damage mechanics and its application to composite laminates and filament-wound cylindrical pressure vessels Advanced Composite Materials Volume 31 (2022) Issue 6, pp.600-616, Yoshiko Nagumo, Sota Onodera, Tomonaga Okabe
DOI: <https://doi.org/10.1080/09243046.2022.2048452>

Uncovering the Mechanism of Size Effect on the Thermomechanical Properties of Highly Cross-Linked Epoxy Resins The Journal of Physical Chemistry B (2022), 126, 13, pp.2593–2607, Yinbo Zhao, Gota Kikugawa
Yoshiaki Kawagoe, Keiichi Shirasu, Naoki Kishimoto, Yingxiao Xi, and Tomonaga Okabe, DOI:<https://doi.org/10.1021/acs.jpcb.1c10827>

Density Functional Theory for Polymer Phase Separations Induced by Coupling of Chemical Reaction and Elastic Stress Advanced Theory and Simulations, Volume 5, Issue 1, Yutaka Oya, Gota Kikugawa, Tomonaga Okabe, Toshihiro Kawakatsu, DOI:<https://doi.org/10.1002/adts.202100385>

Relation between the internal molecular structure and thermomechanical properties of multi-component epoxy resin Proceedings of the 2nd Asian Conference on Thermal Science, 20311, Oct, (2021), Yinbo Zhao, Gota Kikugawa, Naoki Kishimoto, Yoshiaki Kawagoe, Keiichi Shirasu, Tomonaga Okabe

Multi-fidelity progressive damage simulation of notched composite laminates with various ply thicknesses International Journal of Solids and Structures Volume 242, (2022), 111518, R. Higuchi, R. Aoki, S. Onodera, X. Lu J. Zhi, K.H. Leong, T. Yokozeki, T. Okabe, DOI:<https://doi.org/10.1016/j.ijsolstr.2022.111518>

Damage-mechanics mesoscale modeling of composite laminates considering diffuse and discrete ply damages: Effects of ply thickness Composite Structures Volume 277, (2021), 114609
R. Aoki, R. Higuchi, T. Yokozeki, K. Aoki, S. Uchiyama, T. Ogasawara, DOI:<https://doi.org/10.1016/j.compstruct.2021.114609>

非線形拡張有限要素法による複合材料の有孔強度評価

日本複合材料学会誌、48(6)、2022、pp.223-235
樋口諒、青木涼馬、横関智弘、長嶋利夫、岡部朋永

Enhancement of tensile strength of tapered laminates by utilizing thin-ply composites Composites Part B: Engineering Volume 248, (2023), 110372, Xiawan Hua, Ryo Higuchi, Tomohiro Yokozeki
DOI:<https://doi.org/10.1016/j.compositesb.2022.110372>

Analytical approach for evaluation of impact damage in nonlinear quasi-isotropic plates of arbitrary boundary conditions Advanced Composite Materials, Hiroshi Suemasu, Makoto Ichiki, Yuichiro Aoki
DOI:<https://doi.org/10.1080/09243046.2022.2087581>

Numerical calculation and finite element analysis for anisotropic elastic properties of carbon fibers: dependence of integration subinterval and mesh size on indentation-derived elastic modulus SN Applied Sciences volume 4, Article number: 291 (2022), Kenta Goto, Kimiyoshi Naito, Keiichi Shirasu Ikumu Watanabe, DOI:<https://doi.org/10.1007/s42452-022-05183-w>

Effect of interaction of gaps on compressive strength of automated-fiber-placement-manufactured laminates Composite Structures Volume 306, (2023), 116607, Hiroshi Suemasu, Yuichiro Aoki
Sunao Sugimoto, Toshiya Nakamura, DOI:<https://doi.org/10.1016/j.compstruct.2022.116607>

量子化学計算と分子反応シミュレーションを組み合わせたマルチスケールモデリングによる熱硬化性フェノール樹脂の評価と解析 日本複合材料学会誌 vol. 48, No. 6, pp. 217-222, 2022 岸本直樹, 和泉廣樹, 坂本純平, 岡部朋永

論文名・書誌事項・DOI

A novel single-stroke path planning algorithm for 3D printers using continuous carbon fiber reinforced thermoplastics

Additive Manufacturing Volume 55, (2022), 102816, Kohei Yamamoto, Jose Victorio Salazar Luces, Keiichi Shirasu, Yamato Hoshikawa Tomonaga Okabe, Yasuhisa Hirata, DOI:<https://doi.org/10.1016/j.addma.2022.102816>

Effects of fiber properties on aerodynamic performance and structural sizing of composite aircraft wings

Aerospace Science and Technology Volume 124, (2022), 107565, Shugo Date, Yoshiaki Abe, Tomonaga Okabe
DOI:<https://doi.org/10.1016/j.ast.2022.107565>

Lap-shear strength and fracture behavior of CFRP/3D-printed titanium alloy adhesive joint prepared by hot-press-aided co-bonding

International Journal of Adhesion and Adhesives Volume 117, Part A (2022) 103169, Keiichi Shirasu, Masayoshi Mizutani, Naoki Takano, Hajime Yoshinaga, Tsuyoshi Oguri, Ken-ichi Ogawa, Tomonaga Okabe Shigeru Obayashi, DOI:<https://doi.org/10.1016/j.ijadhadh.2022.103169>

Multiscale modeling of process-induced residual deformation on carbon-fiber-reinforced plastic laminate from quantum calculation to laminate scale finite-element analysis

Mechanics of Materials Volume 170, (2022), 104332, Yoshiaki Kawagoe, Kenji Kawai, Yuta Kumagai, Keiichi Shirasu, Gota Kikugawa Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.mechmat.2022.104332>

Generalized coordinate smoothed particle hydrodynamics with an overset method in total

Lagrangian formulation International Journal for Numerical Methods in Engineering, Volume 123, Issue 19 (2022) pp.4518-4544, Huachao Deng, Yoshiaki Kawagoe, Yoshiaki Abe, Kenjiro Terada, Tomonaga Okabe, DOI:<https://doi.org/10.1002/nme.7043>

Morphologies of polymer chains adsorbed on inorganic nanoparticles in a polymer composite as revealed by atomic-resolution electron microscopy

Polymer Journal volume 54, pp.1297–1306 (2022), Tomohiro Miyata, Yoshiaki Kawagoe, Tomonaga Okabe, Hiroshi Jinnai
DOI:<https://doi.org/10.1038/s41428-022-00690-4>

Molecular-scale investigation on relationship between thermal conductivity and the structure of crosslinked epoxy resin

International Journal of Heat and Mass Transfer, Volume 198, 1 December 2022, 123429, Yinbo Zhao Gota Kikugawa, Yoshiaki Kawagoe, Keiichi Shirasu, Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.ijheatmasstransfer.2022.123429>

Experimental and numerical study on open-hole tension/compression properties of carbon-fiber-reinforced thermoplastic laminates

Journal of Composite Materials, Volume 56, Issue 14, pp. 2211–2225, Keiichi Shirasu , Junpei Tsuyuki, Tomonaga Okabe
DOI:<https://doi.org/10.1177/00219983221096880>

3D造形した連続繊維熱可塑性CFRPの圧縮特性に関する実験的評価

日本複合材料学会誌, 48, 4 (2022), pp.142-148, 干川大和, 白須圭一, 岡部朋永

Open-hole tensile properties of 3D-printed continuous carbon-fiber-reinforced thermoplastic laminates: Experimental study and multiscale analysis

Journal of Thermoplastic Composite Materials Vol. 0(0) pp.1–26(2022), Yamato Hoshikawa, Keiichi Shirasu, Kohei Yamamoto Yasuhisa Hirata, Ryo Higuchi, Tomonaga Okabe, DOI:<https://doi.org/10.1177/08927057221110791>

<A4>

Bayesian inference of ferrite transformation kinetics from dilatometric measurement

Computational Materials Science Volume 184, November 2020, 109837, Hoheok Kim, Junya Inoue, Tadashi Kasuya, Masato Okada Kenji Nagata, DOI:<https://doi.org/10.1016/j.commatsci.2020.109837>

Development of Data-Driven System in Materials Integration

MATERIALS TRANSACTIONS 2020 Volume 61 Issue 11 pp.2058-2066, Junya Inoue, Masato Okada, Hiromichi Nagao, Hideo Yokota, Yoshitaka Adachi
DOI:<https://doi.org/10.2320/matertrans.MT-MA2020006>

Stochastic characterization and reconstruction of material microstructures for establishment of process-structure-property linkage using the deep generative model

PHYSICAL REVIEW E, Volume 104 Issue 2, 025302, Satoshi Noguchi and Junya Inoue, DOI:<https://doi.org/10.1103/PhysRevE.104.025302>

Unsupervised segmentation of microstructural images of steel using data mining methods

Computational Materials Science Volume 201, (2022), 110855, Hoheok Kim, Yuuki Arisato, Junya Inoue
DOI:<https://doi.org/10.1016/j.commatsci.2021.110855>

An integrated approach for numerically predicting the failure of resistance spot welds

Science and Technology of Welding and Joining Volume 27, 2022 - Issue 4, Hui Wang, Tadashi Kasuya, Takaaki Kondo, Junya Inoue
DOI:<https://doi.org/10.1080/13621718.2022.2045064>

Identification of microstructures critically affecting material properties using machine learning framework based on metallurgists' thinking process

Scientific Reports volume 12, Article number 14238 (2022)
Satoshi Noguchi, Hui Wang, Junya Inoue, DOI:<https://doi.org/10.1038/s41598-022-17614-0>

論文名・書誌事項・DOI

An improved model for estimating the peak load of resistance spot welds in pull-out failure during cross-tension testing Science and Technology of Welding and Joining Volume 28, (2023) - Issue 1, Hui Wang, Tadashi Kasuya, Takaaki Kondo, Junya Inoue, DOI:<https://doi.org/10.1080/13621718.2022.2114179>

Prediction of continuous cooling transformation diagram for weld heat affected zone by machine learning Science and Technology of Advanced Materials: Methods Volume 2, (2022) - Issue, Satoshi Minamoto Susumu Tsukamoto, Tadashi Kasuya, Makoto Watanabe, Masahiko Demura, DOI:<https://doi.org/10.1080/27660400.2022.2123262>

Exploration of Chemical Space Guided by PixelCNN for Fragment-Based De Novo Drug Discovery J. Chem. Inf. Model. 2022, 62, 23, pp.5988–6001, Satoshi Noguchi and Junya Inoue DOI:<https://doi.org/10.1021/acs.jcim.2c01345>

GPU-accelerated artificial neural network potential for molecular dynamics simulation Computer Physics Communications Volume 285, (2023), 108655, Meng Zhang, Koki Hibi, Junya Inoue DOI:<https://doi.org/10.1016/j.cpc.2022.108655>

<A5>

Automatic steel labeling on certain microstructural constituents with image processing and machine learning tools Science and Technology of Advanced Materials, Volume 20, (2019) - Issue 1, Bulgarevich Dmitry Tsukamoto Susumu, KasuyaTadashi, Demura Masahiko, WATANABE Makoto, DOI:<https://doi.org/10.1080/14686996.2019.1610668>

A universal Bayesian inference framework for complicated creep constitutive equations Scientific Reports volume 10, Article number: 10437 (2020) ,Yoh-ichi Mototake, Hitoshi Izuno, Kenji Nagata, Masahiko Demura Masato Okada, DOI:<https://doi.org/10.1038/s41598-020-65945-7>

Data-based selection of creep constitutive models for high-Cr heat-resistant steel Science and Technology of Advanced Materials Volume 21, (2020) - Issue 1, pp.219-228, Hitoshi Izuno, Masahiko Demura Masaaki Tabuchi, Yoh-ichi Mototake, Masato Okada, DOI:<https://doi.org/10.1080/14686996.2020.1738268>

Multipoint indentation for material identification in three-dimensional observation based on serial sectioning Precision Engineering Volume 69, (2021), pp.62-67, Kazuhiro Fujisaki, Norio Yamashita, Hideo Yokota DOI:<https://doi.org/10.1016/j.precisioneng.2021.01.005>

Bridging a mesoscopic inhomogeneity to macroscopic performance of amorphous materials in the framework of the phase field modeling Physica D: Nonlinear Phenomena Volume 409 , (2020), 132470 Edgar Avalos, Shuangquan Xie, Kazuto Akagi, Yasumasa Nishiura, DOI:<https://doi.org/10.1016/j.physd.2020.132470>

Visible fingerprint of X-ray images of epoxy resins using singular value decomposition of deep learning features Computational Materials Science Volume 186, January 2021, 109996, EdgarAvalos, KazutoAkagi, Yasumasa Nishiura, DOI:<https://doi.org/10.1016/j.commatsci.2020.109996>

Structural changes during glass formation extracted by computational homology with machine learning Communications Materials volume 1, Article number: 98 (2020) Akihiko Hirata, Tomohide Wada, Ippei Obayashi Yasuaki Hiraoka, DOI:<https://doi.org/10.1038/s43246-020-00100-3>

Damage Model Determination for Predicting Creep Rupture Time of 2 1/4Cr-1Mo Steel Weld Joints MATERIALS TRANSACTIONS Volume 62 (2021) Issue 7, Hitoshi Izuno, Masahiko Demura, Masayoshi Yamazaki, Masaaki Tabuchi, Daisuke Abe, Keisuke Torigata, DOI:<https://doi.org/10.2320/matertrans.MT-MA2020004>

Descriptor extraction on inherent creep strength of carbon steel by exhaustive search Science and Technology of Advanced Materials: Methods Volume 1, (2021) - Issue 1, Junya Sakurai, Masahiko Demura, Yoh-ichi Mototake, Masato Okada, Masayoshi Yamazaki and Junya Inoue, DOI:<https://doi.org/10.1080/27660400.2021.1951505>

Implementation of Materials Data Integration using Ontology Supplementary Proceedings of the XXIII International Conference on Data Analytics and Management in Data Intensive Domains (DAMDID/RCDL 2021), Moscow, Russia, October 26-29, (2021), pp. 235-239,Toshihiro Ashino, Nobutaka Nishikawa, Takuya Kadohira Masahiko Demura

Efficient 3D observation of steel microstructure using serial sectioning with precision cutting and on-site etching Precision Engineering Volume 75, (2022), pp.37-45, Norio Yamashita, Takashi Matsuno, Daisuke Maeda Mayuko Kikuzuki, Hideo Yokota, DOI:<https://doi.org/10.1016/j.precisioneng.2022.01.004>

<B1>

- Three-dimensional analytical model for effective elastic constants of transversely isotropic plates with multiple cracks: Application to stiffness reduction and steady-state cracking of composite laminates** Engineering Fracture Mechanics, Volume 219, (2019), 106595, Sota Onodera, Tomonaga Okabe
DOI:<https://doi.org/10.1016/j.engfracmech.2019.106595>
- Considering the stress concentration of fiber surfaces in the prediction of the tensile strength of unidirectional carbon fiber-reinforced plastic composites** Composites Part A: Applied Science and Manufacturing, Volume 121, (2019), pp.499-509, Go Yamamoto, Miho Onodera, Keita Koizumi, Jun Watanabe, Haruki Okuda Fumihiko Tanaka, Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.compositesa.2019.04.011>
- Particle simulation of dual-scale flow in resin transfer molding for process analysis** Composites Part A: Applied Science and Manufacturing, Volume 121, (2019), pp.283-288, Shigeki Yashiro, Daichi Nakashima Yutaka Oya, Tomonaga Okabe, Ryosuke Matsuzaki, DOI:<https://doi.org/10.1016/j.compositesa.2019.03.038>
- Numerical study for tensile strength prediction of unidirectional carbon fiber-reinforced composite considering fiber surface stress concentration** Mechanical Engineering Journal, (2019), Volume 6 Issue 3, pp.19-20, Go Yamamoto, Tomonaga Okabe, DOI:<https://doi.org/10.1299/mej.19-00020>
- Introducing self-organized maps (SOM) as a visualization tool for materials research and education** Results in Materials, Volume 4, (2019), 100020, Jimin Qian, Nam Phuong Nguyen, Yutaka Oya, Gota Kikugawa Tomonaga Okabe, Yue Huang, Fumio S. Ohuchi, DOI:<https://doi.org/10.1016/j.rinma.2019.100020>
- Gate optimization for resin transfer molding in dual-scale porous media: Numerical simulation and experiment measurement** Journal of Composite Materials, Volume 54, Issue 16, Yutaka Oya, Tsubasa Matsumiya Akira Ito, Ryosuke Matsuzaki, Tomonaga Okabe, DOI:<https://doi.org/10.1177/0021998319890122>
- Multiscale analysis and experimental validation of crack initiation in quasi-isotropic laminates** International Journal of Solids and Structures, Volumes 193–194, (2020), pp.172-191, Yuta Kumagai, Sota Onodera, Marco Salviato Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.ijsolstr.2020.02.010>
- Amine/epoxy stoichiometric ratio dependence of crosslinked structure and ductility in amine-cured epoxy thermosetting resins** Journal of Applied Polymer Science, Volume 138, Issue 23, (2021) 50542 DOI:<https://doi.org/10.1002/app.50542>
- A decoupling scheme for two-scale finite thermoviscoelasticity with thermal and cure-induced deformations** Volume 122, Issue 4, (2021) pp.1133-1166, Risa Saito, Yosuke Yamanaka, Seishiro Matsubara, Tomonaga Okabe Shuji Moriguchi, Kenjiro Terada, DOI:<https://doi.org/10.1002/nme.6575>
- Molecular dynamics simulation of cross-linking processes and material properties for epoxy resins using first-principle calculation combined with global reaction route mapping algorithms** Chemical Physics Letters Volume 762, (2021), 138104, Y.Oya, M.Nakazawa,K.Shirasu,Y. Hino,K. Inuyama,G. Kikugawa,J.Li, R. Kuwahara N.Kishimoto,H.Waizumi,M. Nishikawa, A.Waas, N. Odagiri, A.Koyanagi, M.Salviato,T.Okabe DOI:<https://doi.org/10.1016/j.cplett.2020.138104>
- Tensile-strength-controlling factors in unidirectional carbon fiber reinforced plastic composites** Composites Part A: Applied Science and Manufacturing, Volume 140, (2021), 106140, Go Yamamoto Keita Koizumi, Takahiro Nakamura Noriyuki Hirano, Tomonaga Okabe, DOI:<https://doi.org/10.1016/j.compositesa.2020.106140>
- Fluid-structural design analysis for composite aircraft wings with various fiber properties** Journal of Fluid Science and Technology, (2021) Volume 16 Issue 1, Pages JFST0009, Shugo DATE, Yoshiaki ABE, Takeki YAMAMOTO, Tomonaga OKABE, DOI:<https://doi.org/10.1299/jfst.2021jfst0009>
- ミクロスケール解析による薄層CFRP積層板のin-situ損傷・強度特性評価** 日本複合材料学会誌, 2020年46巻5号 pp. 212-222 樋口 誠, 青木 涼馬, 横関 智弘, 岡部 朋永, DOI:<https://doi.org/10.6089/jscm.46.212>
- Analytical model for determining effective stiffness and mechanical behavior of polymer matrix composite laminates using continuum damage mechanics** International Journal of Damage Mechanics, Sota Onodera, Tomonaga Okabe, DOI:<https://doi.org/10.1177/105678952093962>
- Experimental and numerical investigations on push-out delamination in drilling of composite laminates** Composites Science and Technology Volume 198, 108238, (2020), R. Higuchi, S. Warabi, W. Ishibashi, T. Okabe DOI:<https://doi.org/10.1016/j.compscitech.2020.108238>
- Evaluation of the in-situ damage and strength properties of thin-ply CFRP laminates by micro-scale finite element analysis** Advanced Composite Materials Volume 29, 2020 - Issue 5, Ryo Higuchi, Ryoma Aoki Tomohiro Yokozeki, Tomonaga Okabe, DOI:<https://doi.org/10.1080/09243046.2020.1740867>

論文名・書誌事項・DOI

<p>Numerical Simulation of Wake Deflection Control around NACA0012 Airfoil Using Active Morphing Flaps Journal of Flow Control, Measurement & Visualization, Vol.8 No.3, (2020), Yoshiaki Abeorcid, Takayuki Konishi Tomonaga Okabe, DOI:https://doi.org/10.4236/jfcmv.2020.83007</p>
<p>Synergistic effect of phase structures and in situ sintering of silver fillers on thermal conductivity of epoxy/polyethersulphone/silver filler composites Polymer, Volume 223, (2021), 123726 Hajime Kishi, Takashi Saruwatari, Takemasa Mototsuka, Sanae Tanaka, Takeshi Kakibe, Satoshi Matsuda DOI:https://doi.org/10.1016/j.polymer.2021.123726</p>
<p>Thermo-mechanical coupled incremental variational formulation for thermosetting resins subjected to curing process International Journal of Solids and Structures, Volume 216, (2021), pp.30-42 Yosuke Yamanaka, Seishiro Matsubara, Risa Saito, Shuji Moriguchi, Kenjiro Terada, DOI:https://doi.org/10.1016/j.ijsolstr.2021.01.014</p>
<p>Decoupled two-scale viscoelastic analysis of FRP in consideration of dependence of resin properties on degree of cure International Journal of Solids and Structures Volume 190, (2020), pp.199-215, Risa Saito Yuya Yamaguchi, Seishiro Matsubara, Shuji Moriguchi, Yasuko Mihara, Takaya Kobayashi, Kenjiro Terada DOI:https://doi.org/10.1016/j.ijsolstr.2019.11.010</p>
<p>Numerical simulation for deformation of laminates combining the novel shell element with the decoupled two-scale viscoelastic analysis of FRP International Journal of Solids and Structures Volumes 234–235, (2022), 111236, Takeki Yamamoto, Tomonaga Okabe, Kenjiro Terada DOI:https://doi.org/10.1016/j.ijsolstr.2021.111236</p>
<p>An Externally-Constrained Ising Clustering Method for Material Informatics Proceedings of 2021 Ninth International Symposium on Computing and Networking Workshops (CANDARW) pp. 201-204, (2021) Kazuhiko Komatsu, Masahito Kumagai, Ji Qi, Masayuki Sato, Hiroaki Kobayashi DOI:https://doi.org/10.1109/CANDARW53999.2021.00040</p>
<p>Optimizations of a Linear Matrix Solver in a Composite Simulation for a Vector Computer Proceedings of the 12th International Symposium on Parallel Architectures, Algorithms and Programming (PAAP) (2021), Zhilin He Kazuhiko Komatsu, Masayuki Sato Hiroaki Kobayashi, DOI:https://doi.org/10.1109/PAAP54281.2021.9720445</p>
<p>Ising-Based Combinatorial Clustering Using the Kernel Method Proceedings of 2021 IEEE 14th International Symposium on Embedded Multicore/Many-core Systems-on-Chip (MCSoC), pp.197-203 (2021), Masahito Kumagai, Kazuhiko Komatsu, Masayuki Sato, Hiroaki Kobayashi, DOI:https://doi.org/10.1109/MCSoC51149.2021.00037</p>
<p>An External Definition of the One-Hot Constraint and Fast QUBO Generation for High-Performance Combinatorial Clustering International Journal of Networking and Computing Volume 11 (2021) Issue 2, pp.463-491, Masahito Kumagai, Kazuhiko Komatsu Fumiyo Takano, Takuya Araki, Masayuki Sato, Hiroaki Kobayashi, DOI:https://doi.org/10.15803/ijnc.11.2_463</p>
<p>A dynamic parameter tuning method for SpMM parallel execution Concurrency and Computation: Practice and Experience, (2021):e6755, Bin Qi, Kazuhiko Komatsu, Masayuki Sato, Hiroaki Kobayashi DOI:https://doi.org/10.1002/cpe.6755</p>
<p>シアネット／ポリエーテルスルホンブレンドの相構造と難燃性 ネットワークポリマー, 43, pp.189-197 (2022), 本塚武雅, 茂村創太, 上杉瑠太, 望月絢由, 柿部剛史, 松田聰, 岸 肇</p>
<p>シアネット硬化工ポキシ樹脂の熱機械特性に関する実験的評価と分子動力学シミュレーション 日本複合材料学会誌, 48, 4, (2022), pp.134-141 川越吉晃, 小森翔平, 菊川豪太, 白須圭一, 岡部朋永</p>
<p>A method of fully implicit coupled analyses for thermoset resin subjected to cure based on variationally consistent formulation for finite thermo-viscoelasticity International Journal of Solids and Structures Volume 268, (2023), 112161, Yosuke Yamanaka, Seishiro Matsubara, Shuji Moriguchi Kenjiro Terada, DOI:https://doi.org/10.1016/j.ijsolstr.2023.112161</p>

<B2>

数値計算モデルの妥当性確認に基づいた変位拡大機構の統計モデルの構築

航空宇宙技術, 2019 年 18 卷 pp.161-169, 伊藤 誠, 小木曾 望
DOI:<https://doi.org/10.2322/astj.JSASS-D-18-00050>

統計的不確定性を考慮したシングルイベント発生率推定法の提案

日本機械学会論文集2019年 85 卷877 号 pp.19-00183, 飯田 輝澄, 小木曾 望
DOI:<https://doi.org/10.1299/transjsme.19-00183>

経験的な制約条件を考慮した非対称積層板の多目的積層構成最適設計

日本機械学会論文集2021年87卷 900 号, pp.21-00081, 橋脇 健太朗, 小木曾 望
DOI:<https://doi.org/10.1299/transjsme.21-00081>

論文名・書誌事項・DOI

逐次端面観察とデジタル画像相関法による積層欠陥を有する自動積層模擬CFRP積層板の損傷進展観察
日本複合材料学会誌, 48, 4, 2022.07, 小野寺壯太, 豊島夏樹, 矢代茂樹

<B3>

Variable thickness design for composite materials using curvilinear fiber paths

Composite Structures Volume 263, (2021), 113723, Yuto Mori, Ryosuke Matsuzaki, Naoya Kumekawa

DOI:<https://doi.org/10.1016/j.compstruct.2021.113723>

Experimental and numerical studies of the open-hole compressive strength of thin-ply CFRP laminates

Composites Part A: Applied Science and Manufacturing

Volume 145, (2021), 106365, Kota Takamoto, Toshio Ogasawara, Hiroki Kodama, Tomoisa Mikami, Sota Oshima, Kazuyuki Aoki Ryo Higuchi, Tomohiro Yokozeki, DOI:<https://doi.org/10.1016/j.compositesa.2021.106365>

Multi-objective optimization of weight and strength of laminated composites using gap-less and overlap-less variable thickness fiber placement

Composite Structures Volume 276, (2021), 114562

Haruya Tanaka, Yuto Mori, Naoya Kumekawa, Ryosuke Matsuzaki, DOI:<https://doi.org/10.1016/j.compstruct.2021.114562>

Effects of ply thickness and 0°-layer ratio on failure mechanism of open-hole and filled-hole tensile tests of thin-ply composite laminates

Composite Structures Volume 280, (2022), 114926, Ryoma Aoki

Ryo Higuchi, Tomohiro Yokozeki, Kazuyuki Aoki, Shigekazu Uchiyama, Toshio Ogasawara

DOI:<https://doi.org/10.1016/j.compstruct.2021.114926>

薄層プリプレグテープのステアリング積層限界に関する実験的評価

宇宙航空研究開発機構研究開発報告 (JAXA-RR) , JAXA-RR-21-004, (2022), 安岡 哲夫 青木 雄一郎, 佐々木 一仕, 豊澤 崇文, 杉本 直

中村 俊哉, DOI:<http://doi.org/10.20637/00048261>

Experimental evaluation of variable thickness 3D printing of continuous carbon fiber-reinforced composites

Composite Structures Volume 288, (2022), 115391, Naoya Kumekawa, Yuto Mori, Haruya Tanaka, Ryosuke Matsuzaki

DOI:<https://doi.org/10.1016/j.compstruct.2022.115391>

Damage-mechanics mesoscale modeling of composite laminates considering diffuse and discrete ply damages: Effects of ply thickness

Composite Structures Volume 277, (2021), 114609, Ryoma Aoki, Ryo Higuchi, Tomohiro Yokozeki, Kazuyuki Aoki, Shigekazu Uchiyama Toshio Ogasawara, DOI:<https://doi.org/10.1016/j.compstruct.2021.114609>

層間強化材を用いた薄層CFRP積層板の損傷進展・強度特性評価

日本複合材料学会誌48巻6号、pp.234-243、2022年

青木涼馬、樋口諒、横関智弘、青木一行、内山重和、小笠原俊夫

Experimental evaluation of filled-hole compressive strengths of thin-ply carbon fiber / epoxy composite laminates

Composites Science and Technology Available online 16 March 2023, 109996, Toshio Ogasawara,

Tomoisa Mikami, Kota Takamoto, Kenji Asakawa, Kazuyuki Aoki, Shigekazu Uchiyama, Sunao Sugimoto, Tomohiro Yokozeki

DOI:<https://doi.org/10.1016/j.compscitech.2023.109996>

<C1>

レーザ積層造形における雰囲気中の酸素がスパッタ発生に与える影響

スマートプロセス学会誌, 2019 年 8 卷 3 号 pp.102-105

天野宏紀、佐々木智章、野村祐司、石本卓也、中野貴由 DOI:<https://doi.org/10.7791/jspmee.8.102>

Crystallographic Orientation Control of 316L Austenitic Stainless Steel via Selective Laser Melting

ISIJ International/Volume 60 (2020) Issue 8, Takuya Ishimoto, Siqi Wu, Yukinobu Ito, Shi-Hai Sun, Hiroki Amano, Takayoshi Nakano

DOI:<https://doi.org/10.2355/isijinternational.ISIJINT-2019-744>

Crystallographic orientation control of pure chromium via laser powder bed fusion and improved high temperature oxidation resistance

Additive Manufacturing Volume 36, December 2020, 101624

Ozkan Gokcekaya, Naohiro Hayashi, Takuya Ishimoto, Kyosuke Ueda, Takayuki Narushima, Takayoshi Nakano

DOI:<https://doi.org/10.1016/j.addma.2020.101624>

Effect of Scan Length on Densification and Crystallographic Texture Formation of Pure Chromium Fabricated by Laser Powder Bed Fusion

Crystals, (2021), Volume 11 Issue 1, Ozkan Gokcekaya

Takuya Ishimoto, Tsubasa Todo, Ryoya Saganuma, Ryo Fukushima, Takayuki Narushima, Takayoshi Nakano

DOI:<https://doi.org/10.3390/crust11010009>

Unique crystallographic texture formation in Inconel 718 by laser powder bed fusion and its effect on mechanical anisotropy

Acta Materialia Volume 212, (2021), 116876, Ozkan Gokcekaya, Takuya Ishimoto, Shinya Hibino, Jumpei Yasutomi, Takayuki

Narushima, Takayoshi Nakano, DOI:<https://doi.org/10.1016/j.actamat.2021.116876>

論文名・書誌事項・DOI

付加製造用電子ビーム照射による 316L ステンレス鋼の溶融・凝固挙動

スマートプロセス学会誌, 2021 年 10 卷 4 号 pp. 208-213 奥川将行, 宮田雄一朗, 王雷, 能勢和史, 小泉雄一郎, 中野貴由

DOI:<https://doi.org/10.7791/jspmee.10.208>

フェーズフィールド法による Ni 基超合金付加製造における凝固偏析予測

スマートプロセス学会誌 2021 年 10 卷 4 号 pp. 214-219

奥川 将行, 齊藤 賢士, 若林 誠, 小泉 雄一郎, DOI:<https://doi.org/10.7791/jspmee.10.214>

レーザ粉末床溶融法における雰囲気ガスがオーステナイト系ステンレス鋼 316L の造形体組織に与える影響

スマートプロセス学会誌 2021 年 10 卷 4 号 pp. 230-234

天野 宏紀, 山口 祐典, 石本 卓也, 中野 貴由, DOI:<https://doi.org/10.7791/jspmee.10.230>

レーザ粉末床溶融結合法により作製した Ti-15Mo-5Zr-3Al 合金試料における 残留応力とスキヤンストラテジーの関係

スマートプロセス学会誌 2021 年 10 卷 4 号 pp. 235-239, 高瀬 文, 石本 卓也, 中野 貴由, DOI:<https://doi.org/10.7791/jspmee.10.235>

レーザ粉末床溶融結合法による導電性材料としての銅合金の造形

スマートプロセス学会誌 2021 年 10 卷 4 号 pp. 265-269 小笠 良輔, Gupta Mridul, 石本 卓也, 松垣 あいら, 久世 哲嗣, 柳谷 彰彦

上田 正人, 池尾 直子, 中野 貴由, DOI:<https://doi.org/10.7791/jspmee.10.265>

Reduction of Spatter Generation Using Atmospheric Gas in Laser Powder Bed Fusion of Ti-6Al-4V

MATERIALS TRANSACTIONS, (2021), Volume 62 Issue 8 pp. 1225-1230

Hiroki Amano, Yusuke Yamaguchi, Takuya Ishimoto, Takayoshi Nakano, DOI:<https://doi.org/10.2320/matertrans.MT-M2021059>

Factor which governs the feature of texture developed during additive manufacturing; clarified from the study on hexagonal C₄₀-NbSi₂ Scripta Materialia Volume 203, (2021), 114111, Koji Hagihara, Takuya Ishimoto, Masahiro Suzuki, Ryosuke Ozasa, Aira Matsugaki, Pan Wang, Takayoshi Nakano, DOI:<https://doi.org/10.1016/j.scriptamat.2021.114111>

Comparison of Phase Characteristics and Residual Stresses in Ti-6Al-4V Alloy Manufactured by Laser Powder Bed Fusion (L-PBF) and Electron Beam Powder Bed Fusion (EB-PBF) Techniques

Crystals, (2021) Volume 11 Issue 7, Aya Takase, Takuya Ishimoto, Naotaka Morita, Naoko Ikeo, Takayoshi Nakano

DOI:<https://doi.org/10.3390/crust11070796>

Control of Crystallographic Texture and Mechanical Properties of Hastelloy-X via Laser Powder Bed Fusion

Crystals, (2021) Volume 11 Issue 9, Shinya Hibino, Tsubasa Todo, Takuya, Ishimoto, Ozkan Gokcekaya, Yuichiro Koizumi Kenichiro Igashira, Takayoshi Nakano, DOI:<https://doi.org/10.3390/crust11091064>

Single crystalline-like crystallographic texture formation of pure tungsten through laser powder bed fusion

Scripta Materialia Volume 206, (2022), 114252, Tsubasa Todo, Takuya Ishimoto, Ozkan Gokcekaya, Jongyeong Oh Takayoshi Nakano, DOI:<https://doi.org/10.1016/j.scriptamat.2021.114252>

Surface residual stress and phase stability in unstable β -type Ti-15Mo-5Zr-3Al alloy manufactured by laser and electron beam powder bed fusion technologies

Additive Manufacturing Volume 47, (2021), 102257, Aya Takase, Takuya Ishimoto, Ryoya Suganuma, Takayoshi Nakano

DOI:<https://doi.org/10.1016/j.addma.2021.102257>

Effect of a helium gas atmosphere on the mechanical properties of Ti-6Al-4V alloy built with laser powder bed fusion: A comparative study with argon gas

Additive Manufacturing Volume 48, Part B, (2021), 102444, Hiroki Amano, Takuya Ishimoto, Ryoya Suganuma, Keisuke Aiba, Shi-Hai Sun, Ryosuke Ozasa Takayoshi Nakano, DOI:<https://doi.org/10.1016/j.addma.2021.102444>

Influence of powder characteristics on densification via crystallographic texture formation: Pure tungsten prepared by laser powder bed fusion

Additive Manufacturing Letters Volume 1, (2021), 100016, Ozkan Gokcekaya, Takuya Ishimoto, Tsubasa Todo, Pan Wang, Nakano Takayoshi

DOI:<https://doi.org/10.1016/j.addlet.2021.100016>

Lattice distortion in selective laser melting (SLM)-manufactured unstable β -type Ti-15Mo-5Zr-3Al alloy analyzed by high-precision X-ray diffractometry

Scripta Materialia Volume 201, (2021), 113953, Aya Takase, Takuya Ishimoto, Ryoya Suganuma, Takayoshi Nakano

DOI:<https://doi.org/10.1016/j.scriptamat.2021.113953>

3D Puzzle in Cube Pattern for Anisotropic/Isotropic Mechanical Control of Structure Fabricated by Metal Additive Manufacturing

Crystals, (2021) Volume 11 Issue 8, 959, Naoko Ikeo, Hidetsugu Fukuda

Aira Matsugaki, Toru Inoue, Ai Serizawa, Tadaaki Matsuzaka, Takuya Ishimoto, Ryosuke Ozasa, Ozkan Gokcekaya, Takayoshi Nakano

DOI:<https://doi.org/10.3390/crust11080959>

Comparison of microstructure, crystallographic texture, and mechanical properties in Ti-15Mo-5Zr-3Al alloys fabricated via electron and laser beam powder bed fusion technologies

Additive Manufacturing Volume 47, (2021), 102329, Shi-Hai Sun, Koji Hagihara, Takuya Ishimoto, Ryoya Suganuma, Yun-Fei Xue

Takayoshi Nakano, DOI:<https://doi.org/10.1016/j.addma.2021.102329>

論文名・書誌事項・DOI

Control of Anisotropic Crystallographic Texture in Powder Bed Fusion Additive Manufacturing of Metals and Ceramics—A Review JOM volume 74, pp.1760–1773 (2022), Koji Hagihara, Takayoshi Nakano
DOI:<https://doi.org/10.1007/s11837-021-04966-7>

Effects of Recrystallization on Tensile Anisotropic Properties for IN738LC Fabricated by Laser Powder Bed Fusion Crystals, Volume 12 Issue 6 (2022), Shinya Hibino, Kazushige Fujimitsu, Makoto Azuma, Takuya Ishimoto Takayoshi Nakano, DOI:<https://doi.org/10.3390/crust12060842>

Effects of Scanning Strategy on the Microstructure and Mechanical Properties of Sc-Zr-Modified Al-Mg Alloy Manufactured by Laser Powder Bed Fusion Crystals, Volume 12 Issue 10(2022) Yusufu Ekubaru, Ozkan Gokcekaya, Takayoshi Nakano, DOI:<https://doi.org/10.3390/crust12101348>

<C2>

Creep Durability of Ni-Base Single Crystal Superalloy Containing Pb Impurity

Metallurgical and Materials Transactions A, Volume 53, Issue 7, pp.2627-2641(2022), Horie Takahide, Kawagishi Kyoko Takata Yuji Yokokawa Tadaharu, Suzuki Shinsuke, Hiroshi Harada
DOI:<https://doi.org/10.1007/s11661-022-06692-4>

Unveiling the Mechanism of Improved Oxidation Resistance for CaO Crucible Melting Using Ni-Al Alloy Metallurgical and Materials Transactions A volume 53, pp.2452–2458 (2022), Chihiro Tabata, Kyoko Kawagishi, Jun Uzuhashi Tadakatsu Ohkubo, Tadaharu Yokokawa, Hiroshi Harada & Shinsuke Suzuki DOI:<https://doi.org/10.1007/s11661-022-06678-2>

Effect of Ca Addition on the Oxidation Resistance of Ni-Al Alloy

Metallurgical and Materials Transactions A (2022), Chihiro Tabata, Kyoko Kawagishi, Tadaharu Yokokawa, Jun Uzuhashi Tadakatsu Ohkubo, Hiroshi Harada, Shinsuke Suzuki, DOI:<https://doi.org/10.1007/s11661-022-06936-3>

<C4>

β -Ti安定化元素を複合添加した四元系TiAl/基合金の実験および計算状態図

日本学術振興会耐熱金属材料第123委員会研究報告, vol. 60, No.1, pp.123-130, 2019, 中島 広豊, Ali Shaaban, 竹山 雅夫

Ti-Al-Cr 3元系における $\beta+a\rightarrow a_2+\gamma\rightarrow\beta+\gamma$ 相変態を利用した組織制御

日本学術振興会耐熱金属材料第123委員会研究報告, vol. 60, No.1, pp.131-140, 2019, 村田 健太, 若林 英輝, Ali Shaaban, 山形 邽介 中島 広豊, 竹山 雅夫

鍛造TiAl/基合金の室温延性に及ぼす組織因子の影響

日本学術振興会耐熱金属材料第123委員会研究報告, vol. 60, No.1, pp.141-149, 2019, 山形 邽介, 岡田陽太郎, 若林英輝, 中島 広豊 竹山 雅夫

TiAl/基合金のクリープに及ぼす粒界 β -Ti相の影響

日本学術振興会耐熱金属材料第123委員会研究報告, vol. 60, No.1, pp.151-161, 2019, 若林 英輝, 竹山 雅夫

Deformation Behavior of Advanced γ -TiAl Based Alloys by In-Situ SEM Observation and Digital Image Correlation Technique

Proceedings of Joint EPRI-123 HiMAT International Conference, pp.1380-1388,(2019)

Yotaro Okada, Ryosuke Yamagata, Hirotoyo Nakashima, Masao Takeyama

Effects of γ -TiAl/ γ Lamellar Interfaces and Grain-Boundary a_2 -Ti₃Al Phase on Creep of TiAl Based Alloy

Proceedings of Joint EPRI-123 HiMAT International Conference, pp.1395-1401,(2019), Hideki Wakabayashi

Ryosuke Yamagata, Hirotoyo Nakashima, Masao Takeyama

Effect of Carbon in Solution on Phase Equilibria among $\beta/a(a_2)/\gamma$ Phases in TiAl Alloys Using Soft X-Ray Emission Spectroscopy

Proceedings of Joint EPRI-123 HiMAT International Conference, pp.1402-1407,(2019)

Yuta Kimoto, Hirotoyo Nakashima, Masao Takeyama

Microstructure Effect on Enhancement of Room-Temperature Ductility in β -Ti Containing γ -TiAl Based Alloys

Proceedings of Joint EPRI-123 HiMAT International Conference, pp.1446-1456,(2019), Ryosuke Yamagata

Yotaro Okada, Hirotoyo Nakashima, Masao Takeyama

Effect of Widmanstatten-Type a_2 -Ti₃Al Plates on Creep in γ -TiAl Based Alloy

Proceedings of Joint EPRI-123 HiMAT International Conference, pp.1429-1435,(2019), Fumiya Ikemura, Hideki Wakabayashi

Ryosuke Yamagata, Hirotoyo Nakashima, Masao Takeyama

論文名・書誌事項・DOI

- Influence of Unique Layered Microstructure on Mechanical Properties of TiAl-Based Alloys Prepared by Electron Beam Melting** Proceedings of Joint EPRI-123 HiMAT International Conference, pp.897-903,(2019)
Ken Cho, Masahiro Sakata, Jong Yeong Oh, Hiroyuki Y. Yasuda, Mitsuhiro Todai, Ayako Ikeda, Masao Takeyama
- β -Ti 相を用いて粒界組織を制御した TiAl 基合金のクリープ特性** 日本学術振興会耐熱金属材料第123委員会研究報告
vol. 61, No.1, pp.117-126,(2020), 池村 郁哉, 若林 英輝, 山形 遼介, 竹山 雅夫
- TiAl基合金の $\beta/a(a2)/\gamma$ 相間の相平衡に及ぼす炭素および酸素の影響** 日本学術振興会耐熱金属材料第123委員会研究報告
vol. 61, No.1, pp.127-136,(2020), 木許 雄太, 中島 広豊, 竹山 雅夫
- 侵入型元素を含むTiAl基三元系合金の計算状態図** 日本学術振興会耐熱金属材料第123委員会研究報告
vol. 61, No.1, pp.137-141, 2020, 中島 広豊, 木許 雄太, 竹山 雅夫
- Effect of interstitial carbon and oxygen in solution on the phase equilibria among $\beta/a2/\gamma$ phases in TiAl alloys** MRS Advances volume 6, pp.195–197 (2021), Hirotoyo Nakashima, Masao Takeyama
DOI:<https://doi.org/10.1557/s43580-021-00050-z>
- Nano-indentation modulus and hardness of β -Ti and γ -TiAl phases in Ti-Al-Cr system**
MRS Advances volume 6, pp.183–186 (2021), Yotaro Okada, Sota Taniguchi, Ryosuke Yamagata, Hirotoyo Nakashima
Masao Takeyama, DOI:<https://doi.org/10.1557/s43580-021-00046-9>
- Effect of microstructure factor on room-temperature fracture toughness of β -Ti containing γ -TiAl-based alloys** MRS Advances volume 6, pp.198–202 (2021), Ryosuke Yamagata, Hirotoyo Nakashima, Masao Takeyama
DOI:<https://doi.org/10.1557/s43580-021-00062-9>
- Improving the Tensile Properties of Additively Manufactured β -Containing TiAl Alloys via Microstructure Control Focusing on Cellular Precipitation Reaction** Crystals, (2021) Volume 11 Issue 7
809, Ken Cho, Hirotaka Odo, Keisuke Okamoto, Hiroyuki Y. Yasuda, Hirotoyo Nakashima, Masao Takeyama, Takayoshi Nakano
DOI:<https://doi.org/10.3390/crust11070809>
- Peculiar microstructural evolution and tensile properties of β -containing γ -TiAl alloys fabricated by electron beam melting**
Additive Manufacturing Volume 46, (2021), 102091, Ken Cho, Hajime Kawabata, Tatsuhiro Hayashi, Hiroyuki Y. Yasuda, Hirotoyo Nakashima, Masao Takeyama, Takayoshi Nakano, DOI:<https://doi.org/10.1016/j.addma.2021.102091>
- 電子ビーム積層造形法による β 相含有 γ -TiAl 合金の健全造形と組織制御** スマートプロセス学会誌/10巻 (2021) 4号
pp.240-245, 趙研, 川端はじめ, 尾堂裕隆, 林竜弘, 安田弘行, 竹山雅夫, 中野貴由, DOI:<https://doi.org/10.7791/jspmee.10.240>
- Quantitative analysis of oxygen in solution in the Ti-Al-O ternary alloys by soft X-ray emission spectroscopy** Journal of Alloys and Compounds Volume 920, (2022), 165822, Hirotoyo Nakashima, Arata Kinouchi
Masao Takeyama, DOI:<https://doi.org/10.1016/j.jallcom.2022.165822>
- Experimental phase diagram study of the TiAl-rich part of the Ti-Al-Ni ternary system**
Calphad, Volume 80, (2023), 102521, Hirotoyo Nakashima, Jianhui Yu, Masao Takeyama
DOI:<https://doi.org/10.1016/j.calphad.2022.102521>
- 金属射出成形法（MIM）を利用するTiAl合金粉末の焼結挙動に及ぼすNi粉添加の影響**
日本熱処理技術協会会誌 热処理 63巻1号(2023年2月号), pp.21-28, (2023), 新藤健太郎、福島明、花田忠之、花見和樹、土井研児、中島広豊
竹山雅夫

論文名・書誌事項・DOI

<C5>

Selective Laser Thermoregulation System for Accelerated Degradation Test of SiC/SiC CMCs

JLMN-Journal of Laser Micro/Nanoengineering Vol. 15, No. 3, 2020, Hayato Koshiji, Tomomasa Ohkubo, Kenji Azato, Yuki Kameda Ei-ichi Matsunaga, Takumi Dobashi, Naohiro Shichijo, Ken Goto, Mitsuhiro Sato, Chikara Fujiwara, Yutaka Kagawa
DOI: <https://doi.org/10.2961/jlmn.2020.03.2003>

Bending fatigue behavior in an advanced SiC/SiC ceramic matrix composite component at elevated temperature in air

Composites Part C: Open Access Volume 5, (2021), 100127, Amit Patel, Eiichi Sato Takeshi Takagi, Naohiro Shichijo, DOI:<https://doi.org/10.1016/j.jcomc.2021.100127>

Effect of oxidation on the bending fatigue behavior of an advanced SiC/SiC CMC component at 1000 °C in air

Journal of the European Ceramic Society Volume 42, Issue 10, (2022), pp.4121-4132, Amit Patel, Eiichi Sato, Takeshi Takagi Naohiro Shichijo, DOI:<https://doi.org/10.1016/j.jeurceramsoc.2022.03.061>

Automated Damage Detection of (C/C)/Si/SiC Composite Using Vibration Modes with Deep Neural Networks

J. Compos. Sci. Volume 5 Issue 11, Chihiro Shibata, Naohiro Shichijo, Johei Matsuoka ,Yuriko Takeshima ,Jenn-Ming Yang Yoshihisa Tanaka, Yutaka Kagawa, DOI:<https://doi.org/10.3390/jcs5110301>