

Makoto Watanabe

List of Publications by Year in descending order

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120
papers

2,443
citations

236612

25
h-index

243296

44
g-index

121
all docs

121
docs citations

121
times ranked

1705
citing authors

#	ARTICLE	IF	CITATIONS
1	Detecting the defects of warm-sprayed Ti-6Al-4V coating using Eddy current testing method. NDT and E International, 2022, 125, 102565.	1.7	9
2	Novel Pb-Free Superconducting Joint Between NbTi and Nb ₃ Sn Wires Using High-Temperature-Tolerable Superconducting Nb ³ Hf Intermedia. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.1	2
3	Effect of plastic strain on the solidification cracking of Hastelloy-X in the selective laser melting process. Additive Manufacturing, 2021, 37, 101742.	1.7	12
4	Ferroelastic and plastic behaviors in pseudo-single crystal micropillars of nontransformable tetragonal zirconia. Acta Materialia, 2021, 203, 116471.	3.8	9
5	β -Texture Evolution of a Near- β Titanium Alloy During Cooling After Forging in the β Single-Phase and (α + β) Dual-Phase Regions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 303-315.	1.1	11
6	Machine learning for pattern and waveform recognitions in terahertz image data. Scientific Reports, 2021, 11, 1251.	1.6	9
7	Efficient terahertz wave generation of diabol-shaped Fe/Pt spintronic antennas driven by a 780nm pump beam. Applied Physics Express, 2021, 14, 042008.	1.1	10
8	Detection and location of microdefects during selective laser melting by wireless acoustic emission measurement. Additive Manufacturing, 2021, 40, 101915.	1.7	18
9	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, 626.	1.0	10
10	Process Selection for the Fabrication of Cavitation Erosion-Resistant Bronze Coatings by Thermal and Kinetic Spraying in Maritime Applications. Journal of Thermal Spray Technology, 2021, 30, 1310-1328.	1.6	10
11	Process Parameter Optimization Framework for the Selective Laser Melting of Hastelloy X Alloy Considering Defects and Solidification Crack Occurrence. Crystals, 2021, 11, 578.	1.0	12
12	Novel Calibration Strategy for Validation of Finite Element Thermal Analysis of Selective Laser Melting Process Using Bayesian Optimization. Materials, 2021, 14, 4948.	1.3	7
13	Deformation-Induced Grain-Interior α Precipitation and β Texture Evolution during the β -Processed Forging of a Near- β Titanium Alloy. Metals, 2021, 11, 1405.	1.0	1
14	Experimental Identification of Stress-Strain Relation for Pure Ni at Extremely High Strain Rates and Its Constitutive Modeling. The Proceedings of the Materials and Mechanics Conference, 2021, 2021, OS0203.	0.0	0
15	Materials Integration for S elective Laser Melting Process. Journal of Smart Processing, 2021, 10, 99-107.	0.0	0
16	Effects of Gun Scanning Pattern on the Structure, Mechanical Properties and Corrosion Resistance of Plasma-Sprayed YSZ Coatings. Journal of Thermal Spray Technology, 2020, 29, 60-73.	1.6	1
17	Effect of α precipitation on β texture evolution during β -processed forging in a near- β titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 771, 138640.	2.6	23
18	β -Texture Evolution During α Precipitation in the Two-Step Forging Process of a Near- β Titanium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5912-5922.	1.1	8

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19	Imperforate tracheary elements and vessels alleviate xylem tension under severe dehydration: insights from water release curves for excised twigs of three tree species. <i>American Journal of Botany</i> , 2020, 107, 1122-1135.	0.8	10
20	Low-Temperature Properties of the Magnetic Sensor with Amorphous Wire. <i>Sensors</i> , 2020, 20, 6986.	2.1	2
21	Characterization of Osteoarthritis in a Medial Meniscectomy-Induced Animal Model Using Contrast-Enhanced X-ray Microtomography. <i>Biomedicines</i> , 2020, 8, 56.	1.4	3
22	Materials informatics approach to understand aluminum alloys. <i>Science and Technology of Advanced Materials</i> , 2020, 21, 540-551.	2.8	18
23	Terahertz Magneto-Optic Sensor/Imager. <i>Scientific Reports</i> , 2020, 10, 1158.	1.6	23
24	Tensile properties prediction by multiple linear regression analysis for selective laser melted and post heat-treated Ti-6Al-4V with microstructural quantification. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 787, 139549.	2.6	36
25	Fabrication of porous structural Metallic devices by Laser Additive Manufacturing. <i>The Proceedings of Mechanical Engineering Congress Japan</i> , 2020, 2020, S04104.	0.0	0
26	Development of the Materials Integration System for Materials Design and Manufacturing. <i>Materials Transactions</i> , 2020, 61, 2067-2071.	0.4	17
27	Efficient Terahertz Wave Generation of Fe/Pt Diabolo-shaped Spintronic Antennas Fabricated on MgO Substrate. , 2020, , .		0
28	Prediction of Creep Rupture Time Using Constitutive Laws and Damage Rules in 9Cr-1Mo-V-Nb Steel Welds. <i>Materials Transactions</i> , 2019, 60, 213-221.	0.4	14
29	Automatic steel labeling on certain microstructural constituents with image processing and machine learning tools. <i>Science and Technology of Advanced Materials</i> , 2019, 20, 532-542.	2.8	27
30	Image Segmentation and Analysis for Microstructure and Property Evaluations on Ti-6Al-4V Fabricated by Selective Laser Melting. <i>Materials Transactions</i> , 2019, 60, 561-568.	0.4	15
31	Effects of amorphous phase on hot corrosion behavior of plasma-sprayed LaMgAl11O19 coating. <i>Surface and Coatings Technology</i> , 2019, 363, 95-105.	2.2	15
32	Evaluation of 3D-Printed titanium alloy using eddy current testing with high-sensitivity magnetic sensor. <i>NDT and E International</i> , 2019, 102, 90-95.	1.7	15
33	Materials Integration System for Materials Design and Manufacturing. <i>Materia Japan</i> , 2019, 58, 511-514.	0.1	3
34	Mid-IR laser ultrasonic testing for fiber reinforced plastics. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	1
35	Pattern recognition with machine learning on optical microscopy images of typical metallurgical microstructures. <i>Scientific Reports</i> , 2018, 8, 2078.	1.6	107
36	Mid-infrared pulsed laser ultrasonic testing for carbon fiber reinforced plastics. <i>Ultrasonics</i> , 2018, 84, 310-318.	2.1	16

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37	On-Chip Terahertz Near-Field Generation/Detection Scheme. , 2018, , .		0
38	A Study of NiCo _{0.6} Fe _{0.2} Cr _x SiAlTi _y High-Entropy Alloys for Applications as a High-Temperature Protective Coating and a Bond Coat in Thermal Barrier Coating Systems. Journal of the Electrochemical Society, 2018, 165, C524-C531.	1.3	23
39	Fabrication of Pours Metals of High of Refractory Metal. The Proceedings of the Materials and Processing Conference, 2018, 2018.26, 206.	0.0	0
40	External magnetic field distribution mapping using terahertz emission from indium antimonide. Japanese Journal of Applied Physics, 2017, 56, 028001.	0.8	2
41	Effects of Spray Parameters and Post-spray Heat Treatment on Microstructure and Mechanical Properties of Warm-Sprayed Ti-6Al-4V Coatings. Journal of Thermal Spray Technology, 2017, 26, 627-647.	1.6	12
42	Optimization of mid-IR generation from a periodically poled MgO doped stoichiometric lithium tantalate optical parametric oscillator with intracavity difference frequency mixing. Japanese Journal of Applied Physics, 2017, 56, 072701.	0.8	8
43	Polarization-variable emitter for terahertz time-domain spectroscopy. Optics Express, 2016, 24, 27160.	1.7	4
44	Columnar and DVC-structured thermal barrier coatings deposited by suspension plasma spray: high-temperature stability and their corrosion resistance to the molten salt. Ceramics International, 2016, 42, 16822-16832.	2.3	20
45	Effects of Processing Parameters on the Deposition of Yttria Partially Stabilized Zirconia Coating During Suspension Plasma Spray. Journal of the American Ceramic Society, 2016, 99, 3546-3555.	1.9	22
46	Highly Segmented Thermal Barrier Coatings Deposited by Suspension Plasma Spray: Effects of Spray Process on Microstructure. Journal of Thermal Spray Technology, 2016, 25, 1638-1649.	1.6	13
47	Microstructure and mechanical properties of Ti-6Al-4V alloy prepared by selective laser melting. The Proceedings of the Materials and Processing Conference, 2016, 2016.24, 302.	0.0	0
48	Effects of Spray Parameters and Heat Treatment on the Microstructure and Mechanical Properties of Titanium Coatings Formed by Warm Spraying. Journal of Thermal Spray Technology, 2015, 24, 1459-1479.	1.6	12
49	Mid IR pulsed light source for laser ultrasonic testing of carbon-fiber-reinforced plastic. Journal of Optics (United Kingdom), 2015, 17, 094011.	1.0	15
50	A polarization-sensitive 4-contact detector for terahertz time-domain spectroscopy. Optics Express, 2014, 22, 10332.	1.7	16
51	Conductive Transparent TiN _x /TiO ₂ Hybrid Films Deposited on Plastics in Air Using Atmospheric Plasma Processing. Advanced Functional Materials, 2014, 24, 3075-3081.	7.8	19
52	Warm Spray Forming of Ti-6Al-4V. Journal of Thermal Spray Technology, 2014, 23, 197-212.	1.6	42
53	Atmospheric plasma deposition of transparent semiconducting ZnO films on plastics in ambient air. Organic Electronics, 2014, 15, 775-784.	1.4	10
54	Effects of residual stress on the mechanical properties of plasma-sprayed thermal barrier coatings. Engineering Fracture Mechanics, 2013, 110, 314-327.	2.0	41

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55	Effect of nitrogen flow rate on microstructures and mechanical properties of metallic coatings by warm spray deposition. <i>Surface and Coatings Technology</i> , 2013, 232, 587-599.	2.2	15
56	Effects of processing conditions on the mechanical properties and deformation behaviors of plasma-sprayed thermal barrier coatings: Evaluation of residual stresses and mechanical properties of thermal barrier coatings on the basis of in situ curvature measurement under a wide range of spray parameters. <i>Acta Materialia</i> , 2013, 61, 1037-1047.	3.8	56
57	Terahertz Transmission for Arrays of Apertures with Siemens-Star Geometry. <i>Applied Physics Express</i> , 2013, 6, 032201.	1.1	1
58	3-dimensional Observation of Stress Corrosion Cracking by X-ray Computed Tomography. <i>Zairyo To Kankyo/ Corrosion Engineering</i> , 2013, 62, 111-113.	0.0	3
59	Observation of High Resolution Microstructures in Advanced Thermal Sprayed Coatings and Single Deposited Splats Using Ion Beam Milling. <i>Journal of the Vacuum Society of Japan</i> , 2013, 56, 291-297.	0.3	0
60	Single sub-wavelength aperture with greatly enhanced transmission. <i>New Journal of Physics</i> , 2012, 14, 053001.	1.2	12
61	Detection of AE Events due to Cracks in TBC during Spraying Process. <i>Materials Transactions</i> , 2012, 53, 671-675.	0.4	8
62	Aperture array Fabry-Pérot interference filter. <i>Optics Communications</i> , 2012, 285, 4861-4865.	1.0	4
63	Comparison of Oxidation and Microstructure of Warm-Sprayed and Cold-Sprayed Titanium Coatings. <i>Journal of Thermal Spray Technology</i> , 2012, 21, 550-560.	1.6	28
64	WC-Co/Al Multilayer Coatings by Warm Spray Deposition. <i>Journal of Thermal Spray Technology</i> , 2012, 21, 597-608.	1.6	4
65	Evaluation of cracking due to dynamic temperature fluctuation during plasma spraying process by laser AE method. <i>Strength, Fracture and Complexity</i> , 2011, 7, 177-183.	0.2	2
66	Observation of High Resolution Microstructures in Thermal Sprayed Coatings and Single Deposited Splats Using Ion Beam Milling. <i>Materials Transactions</i> , 2011, 52, 439-446.	0.4	14
67	Multilayered WC-Co/Cu coatings by warm spray deposition. <i>Surface and Coatings Technology</i> , 2011, 205, 5358-5368.	2.2	14
68	Terahertz dielectric properties of plasma-sprayed thermal-barrier coatings. <i>Surface and Coatings Technology</i> , 2011, 205, 4620-4626.	2.2	28
69	Effects of Particle Strength of Feedstock Powders on Properties of Warm-Sprayed WC-Co Coatings. <i>Journal of Thermal Spray Technology</i> , 2011, 20, 1098-1109.	1.6	23
70	Current Status and Future Prospects of Warm Spray Technology. <i>Journal of Thermal Spray Technology</i> , 2011, 20, 653-676.	1.6	82
71	Characterization of the Internal Friction Properties of 2.25Cr-1Mo Steel. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2010, 74, 227-230.	0.2	0
72	Crack Monitoring during Plasma Spraying of Ceramic Coatings by Non-Contact Acoustic Emission Method. <i>Materials Transactions</i> , 2010, 51, 1272-1276.	0.4	10

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73	Multi-scale Phenomena and Structures Observed in Fabrication of Thermal Barrier Coatings by Using Plasma Spraying. Journal of Solid Mechanics and Materials Engineering, 2010, 4, 88-93.	0.5	0
74	Effect of Powder Characteristics on Properties of Warm-Sprayed WC-Co Coatings. Journal of Thermal Spray Technology, 2010, 19, 81-88.	1.6	57
75	Microstructural Development and Deposition Behavior of Titanium Powder Particles in Warm Spraying Process: From Single Splat to Coating. Journal of Thermal Spray Technology, 2010, 19, 1244-1254.	1.6	24
76	Thermal diffusivity measurement of 2.25Cr-1Mo steel with internal friction. Materials Letters, 2010, 64, 1247-1250.	1.3	0
77	Effect of cold working deformation on the internal friction of 2.25Cr-1Mo steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6741-6744.	2.6	5
78	Bonding mechanisms of thermally softened metallic powder particles and substrates impacted at high velocity. Surface and Coatings Technology, 2010, 204, 2175-2180.	2.2	78
79	Highly efficient aperture array terahertz band-pass filters. , 2010, , .		0
80	Highly-efficient aperture array terahertz band-pass filtering. Optics Express, 2010, 18, 25250.	1.7	13
81	Structure and Properties of Thermal Sprayed Cermet (WC-Co) Coatings. Journal of High Temperature Society, 2010, 36, 254-263.	0.1	3
82	413 Non-contact Damage Monitoring of Ceramic Coatings during Spraying Process by Laser AE Method. The Proceedings of the Materials and Processing Conference, 2010, 2010.18, _413-1_-_413-3_.	0.0	0
83	Electromagnetic properties of plasma sprayed thermal barrier coatings in terahertz range. , 2009, , .		0
84	In situ monitoring of cracking behaviors of plasma-sprayed coatings by the laser acoustic emission technique. Journal of Materials Research, 2009, 24, 3182-3189.	1.2	12
85	Thermal softening effect on the deposition efficiency and microstructure of warm sprayed metallic powder. Scripta Materialia, 2009, 60, 710-713.	2.6	40
86	Effects of Temperature of In-flight Particles on Bonding and Microstructure in Warm-Sprayed Titanium Deposits. Journal of Thermal Spray Technology, 2009, 18, 392-400.	1.6	30
87	Jetting-Out Phenomenon Associated with Bonding of Warm-Sprayed Titanium Particles onto Steel Substrate. Journal of Thermal Spray Technology, 2009, 18, 490-499.	1.6	27
88	Impact bonding and rebounding between kinetically sprayed titanium particle and steel substrate revealed by high-resolution electron microscopy. Journal Physics D: Applied Physics, 2009, 42, 065304.	1.3	53
89	Characterization of the Internal Friction Properties of 2.25Cr-1Mo Steel. Materials Transactions, 2009, 50, 2143-2146.	0.4	3
90	Development of WC-Co Coatings Deposited by Warm Spray Process. Journal of Thermal Spray Technology, 2008, 17, 750-756.	1.6	45

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91	Modified tensile adhesion test for evaluation of interfacial toughness of HVOF sprayed coatings. Surface and Coatings Technology, 2008, 202, 1746-1752.	2.2	35
92	Warm Spraying: An improved spray process to deposit novel coatings. Surface and Coatings Technology, 2008, 202, 4369-4373.	2.2	60
93	Evaluation of HVOF-sprayed WC-Co coatings for wood machining. Surface and Coatings Technology, 2008, 202, 5127-5135.	2.2	22
94	Grain refinement in a single titanium powder particle impacted at high velocity. Scripta Materialia, 2008, 59, 768-771.	2.6	136
95	Warm spraying—a novel coating process based on high-velocity impact of solid particles. Science and Technology of Advanced Materials, 2008, 9, 033002.	2.8	131
96	IN SITU MONITORING OF PLASMA SPRAYING PROCESS BY LASER ACOUSTIC EMISSION METHOD. Modern Physics Letters B, 2008, 22, 977-982.	1.0	2
97	Development of WC-Co Coatings by Warm Spray Deposition for Resource Savings of Tungsten. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2007, 71, 853-859.	0.2	14
98	Effects of carbide size and Co content on the microstructure and mechanical properties of HVOF-sprayed WC-Co coatings. Surface and Coatings Technology, 2007, 202, 509-521.	2.2	197
99	Evaluation of Strain Field Around Impacted Particles by Applying Electron Moiré Method. Journal of Thermal Spray Technology, 2007, 16, 940-946.	1.6	8
100	Comparison of Microstructure and Oxidation Behavior of CoNiCrAlY Bond Coatings Prepared by Different Thermal Spray Processes. Materials Transactions, 2006, 47, 1638-1642.	0.4	50
101	Simulation of Solid Particle Impact Behavior for Spray Processes. Materials Transactions, 2006, 47, 1697-1702.	0.4	71
102	Effect of WC size on interface fracture toughness of WC-Co HVOF sprayed coatings. Surface and Coatings Technology, 2006, 201, 619-627.	2.2	70
103	Oxidation Property of CoNiCrAlY Coatings Prepared by Various Thermal Spraying Techniques. Materials Science Forum, 2006, 522-523, 339-344.	0.3	4
104	3412 Evaluation of Interfacial Fracture Toughness and Residual Stresses in Stainless Steel Coatings prepared by HVOF spraying. The Proceedings of the JSME Annual Meeting, 2006, 2006.1, 535-536.	0.0	0
105	Shear band formation in columnar thermal barrier oxides. Acta Materialia, 2005, 53, 3765-3773.	3.8	14
106	The influence of test method on failure mechanisms and durability of a thermal barrier system. Acta Materialia, 2004, 52, 1123-1131.	3.8	24
107	A probe for the high temperature deformation of thermal barrier oxides. Acta Materialia, 2004, 52, 1479-1487.	3.8	52
108	Title is missing!. Journal of Materials Science Letters, 2003, 22, 1091-1093.	0.5	5

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109	Fracture behavior of ceramic coatings during thermal cycling evaluated by acoustic emission method using laser interferometers. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 359, 368-374.	2.6	29
110	Evaluation of in situ fracture toughness of ceramic coatings at elevated temperature by AE inverse analysis. <i>Science and Technology of Advanced Materials</i> , 2003, 4, 205-212.	2.8	14
111	Measurement of the residual stress in a Pt-Aluminide bond coat. <i>Scripta Materialia</i> , 2002, 46, 67-70.	2.6	39
112	Residual Stress Measurement in a Pt-Aluminide Bond Coat. <i>Materials Research Society Symposia Proceedings</i> , 2001, 695, 1.	0.1	0
113	Crack Propagation Behavior of Ti/Ti-Al Layered Materials. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2000, 64, 1076-1081.	0.2	8
114	Evaluation of fracture behavior in a plasma-sprayed ceramics coating by acoustic emission using laser interferometer. , 1999, , .		0
115	Simulation of crack propagation in Alumina particle-dispersed SiC composites. <i>Journal of the European Ceramic Society</i> , 1999, 19, 329-334.	2.8	15
116	Simulation of Crack Propagation with Microcracking in Al ₂ O ₃ /Particle-Dispersed SiC Composites. <i>Key Engineering Materials</i> , 1998, 145-149, 925-930.	0.4	1
117	Simulation of fracture behavior in particle-dispersed ceramic composites. <i>Engineering Fracture Mechanics</i> , 1998, 59, 289-303.	2.0	14
118	Simulation of Crack Path in SiC Particle-Dispersed Al ₂ O ₃ Composites.. <i>Nihon Kikai Gakkai Ronbunshu, A Hen/Transactions of the Japan Society of Mechanical Engineers, Part A</i> , 1997, 63, 46-52.	0.2	0
119	Simulation of Crack Propagation Process in Particle-Dispersed Composites. <i>Materials Transactions, JIM</i> , 1996, 37, 404-408.	0.9	1
120	Novel Coatings of Cemented Carbides by an Improved HVOF Spraying Process. , 0, , 159-166.		0