Martin Franz-Xaver Wagner

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Thermal stability of SPD-processed aluminum alloys - Internal friction as an indication for recovery, recrystallization and abnormal grain growth. Journal of Materials Research and Technology, 2022, 17, 1752-1759.	2.6	6
2	Effect of Equal-Channel Angular Pressing and Targeted Heat Treatment on Aluminum AA7075 Sheet Metal. Minerals, Metals and Materials Series, 2022, , 25-36.	0.3	2
3	On radial microstructural variations, local texture and mechanical gradients after cold extrusion of commercially pure aluminum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, , 143496.	2.6	1
4	Thermomechanical Analysis and Experimental Validation of ECAP for Aluminum Sheet Metal. Minerals, Metals and Materials Series, 2021, , 1775-1790.	0.3	4
5	Effect of sample geometry on the macroscopic shear deformation of the titanium alloy Ti-10V-2Fe-3Al subjected to quasi-static and dynamic compression-shear loading. IOP Conference Series: Materials Science and Engineering, 2021, 1147, 012014.	0.3	0
6	Facing the Issues of Sheet Metal Equalâ€Channel Angular Pressing: A Modified Approach Using Stacks to Produce Ultrafineâ€Grained High Ductility AA5083 Sheets. Advanced Engineering Materials, 2021, 23, 2100244.	1.6	2
7	Processing Q&P steels by hot-metal gas forming: Influence of local cooling rates on the properties and microstructure of a 3rd generation AHSS. Journal of Materials Processing Technology, 2021, 293, 117070.	3.1	17
8	Flexible manufacturing chain with integrated incremental bending and Q-P heat treatment for on-demand production of AHSS safety parts. Journal of Materials Processing Technology, 2020, 275, 116312.	3.1	16
9	Interface Formation during Collision Welding of Aluminum. Metals, 2020, 10, 1202.	1.0	13
10	Particle Ejection by Jetting and Related Effects in Impact Welding Processes. Metals, 2020, 10, 1108.	1.0	14
11	Adiabatic blanking of advanced high-strength steels. CIRP Annals - Manufacturing Technology, 2020, 69, 269-272.	1.7	17
12	Evolution of Grain Refinement in AA5083 Sheet Metal Processed by ECAP. Minerals, Metals and Materials Series, 2020, , 362-369.	0.3	8
13	Plastic flow during equal-channel angular pressing with arbitrary tool angles. International Journal of Plasticity, 2020, 134, 102755.	4.1	13
14	Formation of bulk-laminated materials by localized deformation during ECAP of an AA6060 aluminum alloy. MATEC Web of Conferences, 2020, 326, 08001.	0.1	1
15	Strain partitioning by recurrent shear localization during equal-channel angular pressing of an AA6060 aluminum alloy. Acta Materialia, 2019, 176, 306-317.	3.8	35
16	Manufacturing of 42SiCr-Pipes for Quenching and Partitioning by Longitudinal HFI-Welding. Metals, 2019, 9, 716.	1.0	3
17	Prediction of NiTi B19′ Martensite Twin Activation Below a Spherical Indenter Tip. Shape Memory and Superelasticity, 2019, 5, 313-326.	1.1	1
18	Influence of Austenite Grain Size on Mechanical Properties after Quench and Partitioning Treatment of a 42SiCr Steel. Metals, 2019, 9, 577.	1.0	6

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19	Microstructural Investigations of Low Temperature Joining of Q&P Steels Using Ag Nanoparticles in Combination with Sn and SnAg as Activating Material. Applied Sciences (Switzerland), 2019, 9, 539.	1.3	2
20	Mechanisms of fatigue crack propagation in a Q&P-processed steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 18-28.	2.6	15
21	Finite element simulations on the relation of microstructural characteristics and the formation of different types of adiabatic shear bands in a β-titanium alloy. IOP Conference Series: Materials Science and Engineering, 2019, 480, 012022.	0.3	6
22	Strain-rate sensitive ductility in a low-alloy carbon steel after quenching and partitioning treatment. Scientific Reports, 2019, 9, 17023.	1.6	9
23	Hydrogen embrittlement of a quenching and partitioning steel during corrosion and zinc electroplating. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 247-254.	2.6	15
24	Microstructural evolution during uniaxial tension-compression in-plane deformation of an IF steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 652-660.	2.6	8
25	HAZ characterization of welded 42SiCr steel treated by quenching and partitioning. Journal of Materials Processing Technology, 2019, 268, 37-46.	3.1	8
26	Technical-economic evaluation of severe plastic deformation processing technologies—methodology and use case of lever-arm-shaped aircraft lightweight components. International Journal of Advanced Manufacturing Technology, 2018, 94, 3619-3632.	1.5	3
27	On the identification of an effective cross section for a cruciform specimen. Strain, 2018, 54, e12257.	1.4	8
28	Effect of Creep and Aging on the Precipitation Kinetics of an Al–Cu Alloy after One Pass of ECAP. Advanced Engineering Materials, 2018, 20, 1700307.	1.6	11
29	Dynamic behavior of geometrically complex hybrid composite samples in a Split-Hopkinson Pressure Bar system. IOP Conference Series: Materials Science and Engineering, 2018, 373, 012025.	0.3	3
30	Virtual Extensometer Analysis of Martensite Band Nucleation, Growth, and Strain Softening in Pseudoelastic NiTi Subjected to Different Load Cases. Materials, 2018, 11, 1458.	1.3	5
31	Finite Element Simulation of the Presta Joining Process for Assembled Camshafts: Application to Aluminum Shafts. Metals, 2018, 8, 128.	1.0	6
32	On the PLC Effect in a Particle Reinforced AA2017 Alloy. Metals, 2018, 8, 88.	1.0	28
33	Corrosion characteristics of a quenching and partitioning steel determined by electrochemical impedance spectroscopy. IOP Conference Series: Materials Science and Engineering, 2018, 373, 012003.	0.3	8
34	Influence of Extrusion Temperature on the Aging Behavior and Mechanical Properties of an AA6060 Aluminum Alloy. Metals, 2018, 8, 51.	1.0	19
35	Strain Localization during Equal-Channel Angular Pressing Analyzed by Finite Element Simulations. Metals, 2018, 8, 55.	1.0	13
36	On the Effect of Natural Aging Prior to Low Temperature ECAP of a High-Strength Aluminum Alloy. Metals, 2018, 8, 63.	1.0	12

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37	Microstructural Evolution during Severe Plastic Deformation by Gradation Extrusion. Metals, 2018, 8, 96.	1.0	16
38	Light-Weight Aluminum-Based Alloys—From Fundamental Science to Engineering Applications. Metals, 2018, 8, 260.	1.0	8
39	Growth, microstructure and thermal transformation behaviour of epitaxial Ni-Ti films. Acta Materialia, 2017, 132, 255-263.	3.8	18
40	Influence of ECAP temperature on the formability of a particle reinforced 2017 aluminum alloy. IOP Conference Series: Materials Science and Engineering, 2017, 181, 012039.	0.3	4
41	Thin NiTi Films Deposited on Graphene Substrates. Shape Memory and Superelasticity, 2017, 3, 1-8.	1.1	2
42	Elastic deformation of twinned microstructures. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170330.	1.0	8
43	Microstructure and mechanical properties of an AA6060 aluminum alloy after cold and warm extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 717-724.	2.6	16
44	The Interface of an Intrinsic Hybrid Composite – Development, Production and Characterisation. Procedia CIRP, 2017, 66, 289-293.	1.0	10
45	Indentation Response and Structureâ€Property Correlation in a Bimodal Ti–6Al–4V Alloy. Advanced Engineering Materials, 2017, 19, 1700298.	1.6	10
46	Analysis of the complex stress state during early loading in cylindrical compression-shear specimens. IOP Conference Series: Materials Science and Engineering, 2017, 181, 012025.	0.3	3
47	An experimental study on optimum lubrication for large-scale severe plastic deformation of aluminum-based alloys. Journal of Materials Processing Technology, 2017, 239, 222-229.	3.1	31
48	A numerical and experimental study of temperature effects on deformation behavior of carbon steels at high strain rates. IOP Conference Series: Materials Science and Engineering, 2017, 181, 012022.	0.3	6
49	Microstructural evolution during tension-compression in-plane deformation of a pure aluminum sheet. IOP Conference Series: Materials Science and Engineering, 2017, 181, 012024.	0.3	1
50	High temperature and dynamic testing of AHSS for an analytical description of the adiabatic cutting process. IOP Conference Series: Materials Science and Engineering, 2017, 181, 012026.	0.3	7
51	On the development of an intrinsic hybrid composite. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012017.	0.3	6
52	Experimental evaluation of Bauschinger effects during tension-compression in-plane deformation of sheet materials. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012018.	0.3	7
53	Acellularization-Induced Changes in Tensile Properties Are Organ Specific - An In-Vitro Mechanical and Structural Analysis of Porcine Soft Tissues. PLoS ONE, 2016, 11, e0151223.	1.1	32
54	Reducing the nucleation barrier in magnetocaloric Heusler alloys by nanoindentation. APL Materials, 2016, 4, .	2.2	29

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55	On the effect of incremental forming on alpha phase precipitation and mechanical behavior of beta-Ti-10V-2Fe-3Al. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012026.	0.3	2
56	Influence of thermally activated processes on the deformation behavior during low temperature ECAP. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012030.	0.3	7
57	Microstructural characterisation of interfaces in magnetic pulse welded aluminum/aluminum joints. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012016.	0.3	5
58	Obtaining a TRIP microstructure by thermomechanical treatment without isothermal holding. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012024.	0.3	1
59	Challenges During Microstructural Analysis and Mechanical Testing of Small-Scale Pseudoelastic NiTi Structures. Shape Memory and Superelasticity, 2016, 2, 171-179.	1.1	5
60	Scaling up Segal's principle of Equal-Channel Angular Pressing. Materials and Design, 2016, 97, 502-511.	3.3	58
61	Piezoresistive characterization of multi-walled carbon nanotube-epoxy based flexible strain sensitive films by impedanceAspectroscopy. Composites Science and Technology, 2016, 122, 18-26.	3.8	114
62	Effect of Input Structure of Blank on Development of Final Structure when Processing at Temperatures between Solidus and Liquidus. Procedia Engineering, 2015, 100, 722-729.	1.2	2
63	Quantification of material slippage in the iliotibial tract when applying the partial plastination clamping technique. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 49, 112-117.	1.5	15
64	Strain rate effects on the localization of the stress-induced martensitic transformation in pseudoelastic NiTi under uniaxial tension, compression and compression–shear. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 643, 194-202.	2.6	51
65	In-plane biaxial compression and tension testing of thin sheet materials. International Journal of Solids and Structures, 2015, 66, 111-120.	1.3	18
66	Investigation of the stress-induced martensitic transformation in pseudoelastic NiTi under uniaxial tension, compression and compression–shear. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 621, 76-81.	2.6	60
67	Influence of metastable retained austenite on macro and micromechanical properties of steel processed by the Q&P process. Journal of Alloys and Compounds, 2014, 615, S163-S168.	2.8	50
68	A Novel Method to Investigate the Principles of Impact Welding: Development and Enhancement of a Test Rig, Experimental and Numerical Results. Advanced Materials Research, 2014, 966-967, 500-509.	0.3	4
69	Influence of precipitates on low-cycle fatigue and crack growth behavior in an ultrafine-grained aluminum alloy. Acta Materialia, 2014, 80, 250-263.	3.8	57
70	Development of a novel test rig to investigate the fundamentals of impact welding. Journal of Materials Processing Technology, 2014, 214, 2009-2017.	3.1	20
71	An experimental and numerical investigation of different shear test configurations for sheet metal characterization. International Journal of Solids and Structures, 2014, 51, 1066-1074.	1.3	92
72	Modification of metastable microstructure of CPM15V steel by heat exposure after treatment in semi-solid state. Journal of Alloys and Compounds, 2014, 586, S159-S164.	2.8	9

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73	Effects of particle reinforcement and ECAP on the precipitation kinetics of an Al-Cu alloy. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012080.	0.3	12
74	Do Cells Contribute to Tendon and Ligament Biomechanics?. PLoS ONE, 2014, 9, e105037.	1.1	35
75	On the crystallographic anisotropy of nanoindentation in pseudoelastic NiTi. Acta Materialia, 2013, 61, 602-616.	3.8	66
76	Finite Element Simulation of Localized Phase Transformations in Pseudoelastic NiTi Shape Memory Alloys Subjected to Multi-Axial Stress States. , 2013, , 525-530.		1
77	High-strength aluminum-based light-weight materials for safety components – recent progress by microstructural refinement and particle reinforcement. International Journal of Materials Research, 2012, 103, 3-11.	0.1	17
78	Cryogenic forming of AA7075 by Equalâ€Channel Angular Pressing. Materialwissenschaft Und Werkstofftechnik, 2012, 43, 561-566.	0.5	33
79	Fatigue crack propagation in an ECAPâ€processed aluminium alloy – influence of shear plane orientation. Materialwissenschaft Und Werkstofftechnik, 2012, 43, 609-616.	0.5	8
80	The role of backpressure during large scale Equalâ€Channel Angular Pressing. Materialwissenschaft Und Werkstofftechnik, 2012, 43, 668-672.	0.5	22
81	Effect of SiCâ€Reinforcement and Equalâ€Channel Angular Pressing on Microstructure and Mechanical Properties of AA2017. Advanced Engineering Materials, 2012, 14, 388-393.	1.6	12
82	Microstructure and Mechanical Behavior of a Mini-Thixoformed Tool Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3034-3038.	1.1	15
83	Microstructure, crystallographic texture and mechanical properties of the magnesium alloy AZ31B after different routes of thermo-mechanical processing. International Journal of Plasticity, 2012, 35, 155-166.	4.1	87
84	Optimisation of thermo mechanical treatments using cryogenic rolling and aging of the high strength aluminium alloy AlZn5.5MgCu (AA7075). Optimierung der thermomechanischen Behandlung am Beispiel der hochfesten Aluminiumlegierung AlZn5,5MgCu mittels Tieftemperaturwalzen. Materialwissenschaft Und Werkstofftechnik, 2011, 42, 573-579.	0.5	4
85	Influence of strain gradients on the grain refinement during industrial scale ECAP. Materialwissenschaft Und Werkstofftechnik, 2011, 42, 680-685.	0.5	16
86	Microstructural and mechanical challenges in biomedical NiTi. Journal of Physics: Conference Series, 2010, 240, 012004.	0.3	2
87	Phase volume fractions and strain measurements in an ultrafine-grained NiTi shape-memory alloy during tensile loading. Acta Materialia, 2010, 58, 2344-2354.	3.8	145
88	Effect of Ni4Ti3 precipitation on martensitic transformation in Ti–Ni. Acta Materialia, 2010, 58, 6685-6694.	3.8	140
89	Macroscopic versus local strain rates during tensile testing of pseudoelastic NiTi. Scripta Materialia, 2010, 63, 863-866.	2.6	16
90	Localization Events and Microstructural Evolution in Ultraâ€Fine Grained NiTi Shape Memory Alloys during Thermoâ€Mechanical Loading. Advanced Engineering Materials, 2010, 12, 453-459.	1.6	8

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91	Nanoindentation of a Pseudoelastic NiTiFe Shape Memory Alloy. Advanced Engineering Materials, 2010, 12, 13-19.	1.6	34
92	Microstructural Characterization of Lamellar Features in TiAl by FIB Imaging. Advanced Engineering Materials, 2010, 12, 447-452.	1.6	0
93	Untersuchungen zum Einfluss von ECAP und Tieftemperaturwalzen auf die mechanischen Eigenschaften der Aluminiumlegierung 7075. Materialwissenschaft Und Werkstofftechnik, 2010, 41, 697-703.	0.5	9
94	Einfluss von ECAP und WĤmebehandlung auf Mikrostruktur und mechanische Eigenschaften einer SiC-verstĤkten AlCu-Legierung. Materialwissenschaft Und Werkstofftechnik, 2010, 41, 704-710.	0.5	9
95	Thermomechanische Optimierung mittels ECAP und WĀ ¤ mebehandlung an einer Aluminiumlegierung der Automobil- und Luftfahrtindustrie. Materialwissenschaft Und Werkstofftechnik, 2010, 41, 756-764.	0.5	3
96	Experimentelle Untersuchung und numerische Simulation des inkrementellen Umformverhaltens von Stahl 42CrMo4. Materialwissenschaft Und Werkstofftechnik, 2010, 41, 765-775.	0.5	21
97	Scaling up the equal hannel angular pressing process – a study on a 6000 aluminium alloy. Materialwissenschaft Und Werkstofftechnik, 2010, 41, 814-821.	0.5	16
98	A finite element study on localized deformation and functional fatigue in pseudoelastic NiTi strips. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1172-1178.	2.6	14
99	Influence of Ni on martensitic phase transformations in NiTi shape memory alloys. Acta Materialia, 2010, 58, 3444-3458.	3.8	696
100	Effect of low-temperature precipitation on the transformation characteristics of Ni-rich NiTi shape memory alloys during thermal cycling. Intermetallics, 2010, 18, 1172-1179.	1.8	76
101	Near-Threshold Fatigue Crack Propagation in an ECAP-Processed Ultrafine-Grained Aluminium Alloy. Materials Science Forum, 2010, 667-669, 873-878.	0.3	11
102	Nanoindentation of pseudoelastic NiTi shape memory alloys: Thermomechanical and microstructural aspects. International Journal of Materials Research, 2009, 100, 936-942.	0.1	22
103	Elastic anisotropy of Ni4Ti3 from first principles. Scripta Materialia, 2009, 60, 207-210.	2.6	61
104	Microstructural anisotropy, uniaxial and biaxial creep behavior of Ti–45Al–5Nb–0.2B–0.2C. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 510-511, 368-372.	2.6	10
105	Grain-boundary sliding in a TiAl alloy with fine-grained duplex microstructure during 750°C creep. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 510-511, 359-363.	2.6	14
106	Transformation-induced plasticity during pseudoelastic deformation in Ni–Ti microcrystals. Acta Materialia, 2009, 57, 3549-3561.	3.8	248
107	Microstructural evolution during multiaxial deformation of pseudoelastic NiTi studied by first-principles-based micromechanical modeling. Acta Materialia, 2009, 57, 3856-3867.	3.8	28

108 TEM investigation of the microstructural evolution during nanoindentation of NiTi. , 2009, , .

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109	Strain mapping at propagating interfaces in pseudoelastic NiTi. , 2009, , .		9
110	Lattice stability, elastic constants and macroscopic moduli of NiTi martensites from first principles. Acta Materialia, 2008, 56, 6232-6245.	3.8	200
111	Hard X-ray studies of stress-induced phase transformations of superelastic NiTi shape memory alloys under uniaxial load. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 481-482, 414-419.	2.6	42
112	Powder metallurgical processing of NiTi shape memory alloys with elevated transformation temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 491, 270-278.	2.6	90
113	Healing of fatigue damage in NiTi shape memory alloys. Journal Physics D: Applied Physics, 2008, 41, 185408.	1.3	64
114	A transmission electron microscopy procedure for in-situ straining of miniature pseudoelastic NiTi specimens. International Journal of Materials Research, 2008, 99, 1150-1156.	0.1	8
115	Quantitative Charakterisierung der Gefüge-Anisotropie einer stranggepressten TiAl-Legierung. Praktische Metallographie/Practical Metallography, 2008, 45, 210-224.	0.1	5
116	Stress and strain states in a pseudoelastic wire subjected to bending rotation. Mechanics of Materials, 2006, 38, 1012-1025.	1.7	28
117	New aspects of bending rotation fatigue in ultra-fine-grained pseudo-elastic NiTi wires. International Journal of Materials Research, 2006, 97, 1687-1696.	0.1	20
118	The Potential of Powder Metallurgy for the Fabrication of Biomaterials on the Basis of Nickel-Titanium: A Case Study with a Staple Showing Shape Memory Behaviour. Advanced Engineering Materials, 2005, 7, 613-619.	1.6	66
119	Structural and functional fatigue of NiTi shape memory alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 378, 24-33.	2.6	648
120	Design of a Medical Non-Linear Drilling Device: The Influence of Twist and Wear on the Fatigue Behaviour of NiTi Wires Subjected to Bending Rotation. Materialwissenschaft Und Werkstofftechnik, 2004, 35, 320-325.	0.5	22
121	In-situ diffraction investigation of superelastic NiTi shape memory alloys under mechanical stress with neutrons and with synchrotron radiation. Materialwissenschaft Und Werkstofftechnik, 2004, 35, 280-283.	0.5	23
122	Structural fatigue of pseudoelastic NiTi shape memory wires. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 378, 105-109.	2.6	123
123	The influence of temperature on lattice parameters of coexisting phases in NiTi shape memory alloys—a neutron diffraction study. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 378, 161-164.	2.6	40
124	Investigation of the phase evolution in a super-elastic NiTi shape memory alloy (50.7at.%Ni) under extensional load with synchrotron radiation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 378, 81-85.	2.6	61
125	Crack initiation and propagation in 50.9 at. pct Ni-Ti pseudoelastic shape-memory wires in bending-rotation fatigue. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2847-2860.	1.1	117
126	Microstructural Features and Mechanical Properties after Industrial Scale ECAP of an Al 6060 Alloy. Materials Science Forum, 0, 667-669, 1153-1158.	0.3	25

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127	Mini-Thixoforming of a Steel Produced by Powder Metallurgy. Solid State Phenomena, 0, 192-193, 500-505.	0.3	7
128	Thermomechanical Constraints on Pseudoelasticity During Nanoindentation of Binary and Ternary NiTi(Fe) Alloys. , 0, , 639-644.		0
129	Development of Unconventional Processing of Steels in Semi-Solid State. Solid State Phenomena, 0, 256, 251-256.	0.3	0
130	Numerical and Experimental Study on ECAP-Processing Parameters for Efficient Grain Refinement of AA5083 Sheet Metal. Key Engineering Materials, 0, 794, 315-323.	0.4	6
131	Monitoring Localized Deformation of Pseudoelastic NiTi Subjected to Uniaxial Loading. , 0, , 537-542.		1