M Ramulu

List of Publications by Year
in descending order

146 papers	6,485 citations	66234 42 h-index	74018 75 g-index
147 all docs	147 docs citations	147 times ranked	3565 citing authors

#	Article	IF	Citations
1	Fatigue performance evaluation of selective laser melted Tiâ€“6Alâ€“4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 598, 327-337.	2.6	647
2	Electron Beam Additive Manufacturing of Titanium Components: Properties and Performance. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	1.3	321
3	A study on the drilling of composite and titanium stacks. Composite Structures, 2001, 54, 67-77.	3.1	286
4	Orthogonal cutting mechanisms of graphite/epoxy composite. Part I: unidirectional laminate. International Journal of Machine Tools and Manufacture, 1995, 35, 1623-1638.	6.2	278
5	Mechanics of crack curving and branching ? a dynamic fracture analysis. International Journal of Fracture, 1985, 27, 187-201.	1.1	179
6	Drilling process optimization for graphite/bismaleimideâ€“titanium alloy stacks. Composite Structures, 2004, 63, 101-114.	3.1	171
7	Friction stir welding of titanium alloys: A review. Materials and Design, 2018, 141, 230-255.	3.3	170
8	Orthogonal cutting of fiber-reinforced composites: A finite element analysis. International Journal of Mechanical Sciences, 1997, 39, 597-613.	3.6	147
9	State of the Art of Research and Development in Abrasive Waterjet Machining. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 1997, 119, 776-785.	1.3	136
10	Orthogonal cutting mechanisms of graphite/epoxy composite. Part II: multi-directional laminate. International Journal of Machine Tools and Manufacture, 1995, 35, 1639-1648.	6.2	135
11	Drilling of (Al2O3)p/6061 metal matrix composites. Journal of Materials Processing Technology, 2002, 124, 244-254.	3.1	124
12	Effect of build direction on the fracture toughness and fatigue crack growth in selective laser melted Tiâ€6Alâ€4â€‰V. Fatigue and Fracture of Engineering Materials and Structures, 2015, 38, 1228-1236.	1.7	108
13	The influence of abrasive waterjet cutting conditions on the surface quality of graphite/epoxy laminates. International Journal of Machine Tools and Manufacture, 1994, 34, 295-313.	6.2	106
14	Material removal in abrasive waterjet machining of metals Surface integrity and texture. Wear, 1997, 210, 50-58.	1.5	105
15	Water jet and abrasive water jet cutting of unidirectional graphite/epoxy composite. Composites, 1993, 24, 299-308.	0.9	99
16	Chip formation in orthogonal trimming of graphite/epoxy composite. Composites Part A: Applied Science and Manufacturing, 1996, 27, 121-133.	3.8	98
17	Waterjet and abrasive waterjet surface treatment of titanium: a comparison of surface texture and residual stress. Wear, 2001, 249, 943-950.	1.5	98
18	An Examination of the Effects from Surface Texture on the Strength of Fiber Reinforced Plastics. Journal of Composite Materials, 1999, 33, 102-123.	1.2	97

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19	Effect of fibre direction on surface roughness measurements of machined graphite/epoxy composite. Composites Manufacturing, 1993, 4, 39-51.	0.4	94
20	EDM machinability of SiCw/Alcomposites. Journal of Materials Science, 1989, 24, 1103-1108.	1.7	87
21	A Study of Kerf Characteristics in Abrasive Waterjet Machining of Graphite/Epoxy Composite. Journal of Engineering Materials and Technology, Transactions of the ASME, 1996, 118, 256-265.	0.8	85
22	Machinability of High Temperature Composites by Abrasive Waterjet. Journal of Engineering Materials and Technology, Transactions of the ASME, 1990, 112, 381-386.	0.8	83
23	Electrical Discharge Machining of Functionally Graded 15â€“35 Vol% SiCp/Al Composites. Materials and Manufacturing Processes, 2006, 21, 479-487.	2.7	79
24	EDM surface effects on the fatigue strength of a 15 vol% SiCp/Al metal matrix composite material. Composite Structures, 2001, 54, 79-86.	3.1	78
25	Dynamic crack curvingâ€”A photoelastic evaluation. Experimental Mechanics, 1983, 23, 1-9.	1.1	75
26	Experimental and numerical analysis of transverse stitched T-joints in bending. Composite Structures, 2000, 50, 17-27.	3.1	68
27	Investigation of microstructure, surface and subsurface characteristics in titanium alloy friction stir welds of varied thicknesses. Science and Technology of Welding and Joining, 2009, 14, 476-483.	1.5	68
28	Machining and surface integrity of fibre-reinforced plastic composites. Sadhana - Academy Proceedings in Engineering Sciences, 1997, 22, 449-472.	0.8	62
29	Investigation of mechanical behavior of transverse stitched T-joints with PR520 resin in flexure and tension. Composite Structures, 2001, 52, 307-314.	3.1	59
30	Finite Element Modeling of Edge Trimming Fiber Reinforced Plastics. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2002, 124, 32-41.	1.3	58
31	Influence of Consolidation Process on the Drilling Performance and Machinability of PIXA-M and PEEK Thermoplastic Composites. Journal of Thermoplastic Composite Materials, 2005, 18, 195-217.	2.6	58
32	Study on the Drilling of Titanium/Graphite Hybrid Composites. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 390-396.	0.8	56
33	Effect of process conditions on superplastic forming behaviour in Tiâ€“6Alâ€“4V friction stir welds. Science and Technology of Welding and Joining, 2009, 14, 669-680.	1.5	56
34	Peak temperatures during friction stir welding of Tiâ€“6Alâ€“4V. Science and Technology of Welding and Joining, 2010, 15, 468-472.	1.5	56
35	Surface quality and kerf width prediction in abrasive water jet machining of metal-composite stacks. Composites Part B: Engineering, 2019, 175, 107134.	5.9	55
36	EDM Sinker Cutting of a Ceramic Particulate Composite, SiC-TiB₂. Advanced Ceramic Materials, 1988, 3, 324-327.	2.3	51

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37	Investigation of stresses in he orthogonal cutting of fiber-reinforced plastics. Experimental Mechanics, 1996, 36, 33-41.	1.1	49
38	Electron beam additive manufacturing of Ti6Al4V: Evolution of powder morphology and part microstructure with powder reuse. Materialia, 2020, 9, 100631.	1.3	49
39	Identification of Process Parameters for Friction Stir Welding Tiâ€“6Alâ€“4V. Journal of Engineering Materials and Technology, Transactions of the ASME, 2010, 132, .	0.8	48
40	Influence of Grain Size and Microstructure on Oxidation Rates in Titanium Alloy Ti-6Al-4V Under Superplastic Forming Conditions. Journal of Materials Engineering and Performance, 2004, 13, 727-734.	1.2	47
41	Characterization of Superplastically Formed Friction Stir Weld in Titanium 6AL-4V: Preliminary Results. Journal of Materials Engineering and Performance, 2008, 17, 187-192.	1.2	47
42	Material flow during friction stir welding of Ti-6Al-4V. Journal of Materials Processing Technology, 2015, 218, 107-115.	3.1	46
43	Hydro-abrasive erosion characteristics of 30vol.%SiCp/6061-T6 Al composite at shallow impact angles. Wear, 1993, 166, 55-63.	1.5	43
44	Low-Velocity Impact Response Characterization of a Hybrid Titanium Composite Laminate. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 220-226.	0.8	43
45	Modified Exit-ply Delamination Model for Drilling FRPs. Journal of Composite Materials, 2009, 43, 483-500.	1.2	42
46	Tensile properties of friction stir welded and friction stir welded-superplastically formed Tiâ€“6Alâ€“4V butt joints. Materials & Design, 2010, 31, 3056-3061.	5.1	41
47	Waterjet Machining and Peening of Metals. Journal of Pressure Vessel Technology, Transactions of the ASME, 2000, 122, 90-95.	0.4	40
48	Fatigue performance of Friction Stir Welded Tiâ€“6Alâ€“4V subjected to various post weld heat treatment temperatures. International Journal of Fatigue, 2015, 75, 19-27.	2.8	40
49	Mechanics of crack curving and branching â€” a dynamic fracture analysis. , 1985, , 61-75.		38
50	Further studies on dynamic crack branching. Experimental Mechanics, 1983, 23, 431-437.	1.1	37
51	Drilling of Graphite/Bismaleimide Composite Material. Journal of Materials Engineering and Performance, 1999, 8, 330-338.	1.2	37
52	Fatigue Performance of High-Pressure Waterjet-Peened Aluminum Alloy. Journal of Pressure Vessel Technology, Transactions of the ASME, 2002, 124, 118-123.	0.4	37
53	Material removal in abrasive waterjet machining of metals A residual stress analysis. Wear, 1997, 211, 302-310.	1.5	36
54	Dynamic crack curving and branching under biaxial loading. Experimental Mechanics, 1987, 27, 146-153.	1.1	34

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55	Machinability of titanium alloy (Tiâ€™6Alâ€™4V) by abrasive waterjets. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2003, 217, 1709-1721.	1.5	34
56	Superplastic forming of friction stir welds in Titanium alloy 6Alâ€4V: preliminary results. Materialwissenschaft Und Werkstofftechnik, 2008, 39, 353-357.	0.5	34
57	Effects on the Surface Texture, Superplastic Forming, and Fatigue Performance of Titanium 6AL-4V Friction Stir Welds. Journal of Materials Engineering and Performance, 2010, 19, 503-509.	1.2	34
58	Waterjet Peening and Surface Preparation at 600MPa: A Preliminary Experimental Study. Journal of Fluids Engineering, Transactions of the ASME, 2007, 129, 485-490.	0.8	33
59	Machining of Graphite/Epoxy Composite Materials With Polycrystalline Diamond (PCD) Tools. Journal of Engineering Materials and Technology, Transactions of the ASME, 1991, 113, 430-436.	0.8	32
60	Frequency analysis and characterization in orthogonal cutting of glass fiber reinforced composites. Composites Part A: Applied Science and Manufacturing, 2003, 34, 949-962.	3.8	31
61	Net shape manufacturing and the performance of polymer composites under dynamic loads. Experimental Mechanics, 1997, 37, 379-385.	1.1	29
62	Surface Residual Stresses in Ti-6Al-4V Friction Stir Welds: Pre- and Post-Thermal Stress Relief. Journal of Materials Engineering and Performance, 2015, 24, 3263-3270.	1.2	29
63	Fracture toughness and fatigue crack growth in Tiâ€6Alâ€4V friction stir welds. Fatigue and Fracture of Engineering Materials and Structures, 2015, 38, 970-982.	1.7	29
64	Surface quality monitoring in abrasive water jet machining of Ti6Al4Vâ€“CFRP stacks through wavelet packet analysis of acoustic emission signals. International Journal of Advanced Manufacturing Technology, 2019, 104, 4091-4104.	1.5	29
65	Waterjet and Water-Air Jet Surface Processing of a Titanium Alloy: A Parametric Evaluation. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	1.3	28
66	Mathematical Modeling of Ultra-High-Pressure Waterjet Peening. Journal of Engineering Materials and Technology, Transactions of the ASME, 2005, 127, 186-191.	0.8	27
67	Effect of waterjet formation on surface preparation and profiling of aluminum alloy. Wear, 2008, 265, 176-185.	1.5	27
68	Drilling of Hybrid Titanium Composite Laminate (HTCL) with Electrical Discharge Machining. Materials, 2016, 9, 746.	1.3	27
69	Abrasive Water Jet Machining Mechanisms in Continuous-Fiber Ceramic Composites. Journal of Composites Technology and Research, 2001, 23, 82.	0.4	27
70	Dynamic stress-intensity factors for unsymmetric dynamic isochromatics. Experimental Mechanics, 1981, 21, 41-48.	1.1	26
71	A study of the surface texture of composite drilled holes. Journal of Materials Processing Technology, 1993, 37, 373-389.	3.1	26
72	Friction Stir-Welded Titanium Alloy Ti-6Al-4V: Microstructure, Mechanical and Fracture Properties. Jom, 2015, 67, 1054-1063.	0.9	26

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73	Comparative study of fatigue and fracture in friction stir and electron beam welds of 24â€‰mm thick titanium alloy Tiâ€6Alâ€4â€‰V. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 1226-1240.	1.7	25
74	Mechanical anisotropy and its evolution with powder reuse in Electron Beam Melting AM of Ti6Al4V. Materials and Design, 2021, 200, 109450.	3.3	25
75	Powder reuse and its contribution to porosity in additive manufacturing of Ti6Al4V. Materialia, 2021, 15, 100992.	1.3	24
76	EDM Surface Characterization of a Ceramic Composite TiB2/SiC. Journal of Engineering Materials and Technology, Transactions of the ASME, 1991, 113, 437-442.	0.8	22
77	Experimental Investigation of Abrasive Waterjet Machining of Titanium Graphite Laminates. International Journal of Automation Technology, 2016, 10, 392-400.	0.5	22
78	Parametric analyses of stitched composite T-joints by the finite element method. Materials & Design, 2002, 23, 751-758.	5.1	21
79	Influence of processing methods on the tensile and flexure properties of high temperature composites. Composites Science and Technology, 2004, 64, 1763-1772.	3.8	21
80	Study of machining induced surface defects and its effect on fatigue performance of AZ91/15%SiCp metal matrix composite. Journal of Magnesium and Alloys, 2020, 8, 387-395.	5.5	20
81	Dynamic Crack Curving and Branching in Line-Pipe. Journal of Pressure Vessel Technology, Transactions of the ASME, 1982, 104, 317-322.	0.4	19
82	Edge Trimming of Graphite/Epoxy with Diamond Abrasive Cutters. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 1999, 121, 647-655.	1.3	19
83	Residual Stress Induced by Waterjet Peening: A Finite Element Analysis. Journal of Pressure Vessel Technology, Transactions of the ASME, 2004, 126, 333-340.	0.4	19
84	Ultrasonic machining effects on the surface finish and strength of silicon carbide ceramics. International Journal of Manufacturing Technology and Management, 2005, 7, 107.	0.1	19
85	Elasticâ€“plastic stress/strain response of friction stir-welded titanium butt joints using moirÃ© interferometry. Optics and Lasers in Engineering, 2010, 48, 385-392.	2.0	19
86	Fatigue performance of Friction Stir Welded titanium structural joints. International Journal of Fatigue, 2015, 70, 171-177.	2.8	19
87	Cascadating fracture in a laminated tempered safety glass panel. International Journal of Fracture, 1991, 48, 49-69.	1.1	18
88	Strain energy density fracture criterion in elastodynamic mixed mode crack propagation. Engineering Fracture Mechanics, 1983, 18, 1087-1098.	2.0	16
89	Experimental study of composite T-joints under tensile and shear loading. Advanced Composite Materials, 2006, 15, 193-210.	1.0	16
90	Usage of PCD tool in drilling of titanium/graphite hybrid composite laminate. International Journal of Machining and Machinability of Materials, 2013, 13, 276.	0.1	15

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91	Analytical formulation of subsurface stresses during orthogonal cutting of FRPs. Composites Part A: Applied Science and Manufacturing, 2010, 41, 1164-1173.	3.8	14
92	Study of surface topography in Abrasive Water Jet machining of carbon foam and morphological characterization using Discrete Wavelet Transform. Journal of Materials Processing Technology, 2019, 273, 116249.	3.1	14
93	Microstructure and Mechanical Properties of Friction Stir Welded Dissimilar Titanium Alloys: TIMET-54M and ATI-425. Metals, 2016, 6, 252.	1.0	13
94	A Fractographic Analysis of Additively Manufactured Ti6Al4V by Electron Beam Melting: Effects of Powder Reuse. Journal of Failure Analysis and Prevention, 2020, 20, 794-803.	0.5	13
95	Powder Reuse in Electron Beam Melting Additive Manufacturing of Ti6Al4V: Particle Microstructure, Oxygen Content and Mechanical Properties. Additive Manufacturing, 2020, 35, 101216.	1.7	13
96	Dynamic photoelastic investigation on the mechanics of waterjet and abrasive waterjet machining. Optics and Lasers in Engineering, 1993, 19, 43-65.	2.0	12
97	Investigation of displacement fields in an abrasive waterjet drilling process: Part 2. Numerical analysis. Experimental Mechanics, 2001, 41, 388-402.	1.1	11
98	Analysis of the waterjet contact/impact on target material. Optics and Lasers in Engineering, 2000, 33, 121-139.	2.0	10
99	Investigation of displacement fields in an abrasive waterjet drilling process: Part 1. Experimental measurements. Experimental Mechanics, 2001, 41, 375-387.	1.1	10
100	Simulation of Tensile Behavior in Friction Stir Welded and Superplastically Formed-Titanium 6Al-4V alloy. Journal of Materials Engineering and Performance, 2010, 19, 510-514.	1.2	10
101	Spark-Erosion Process Effects on the Properties and Performance of a Tib2 Particulate-Reinforced/SiC Matrix Ceramic Composite. Ceramic Engineering and Science Proceedings, 0, , 227-238.	0.1	10
102	Dynamic Crack Branchingâ€"A Photoelastic Evaluation. , 1984, , 130-148.		10
103	Influence of fibre on the cutting stress state in machining idealized glass fibre composite. Journal of Strain Analysis for Engineering Design, 1997, 32, 19-27.	1.0	9
104	Processing and fiber content effects on the machinability of compression moulded random direction short GFRP composites. International Journal of Automotive Technology, 2010, 11, 849-855.	0.7	9
105	Effect of Shot Peening on Fatigue Crack Growth in 7075-T7351. Journal of ASTM International, 2005, 2, 12569.	0.2	9
106	Edge Finishing and Delamination Effects Induced During Abrasive Waterjet Machining on the Compression Strength of a Graphite/Epoxy Composite. , 2005, , 173.		8
107	Damage progression analyses of transverse stitched T-joints under flexure and tensile loading. Advanced Composite Materials, 2006, 15, 243-261.	1.0	8
108	Thinning Behavior Simulations in Superplastic Forming of Friction Stir Processed Titanium 6Al-4V. Journal of Materials Engineering and Performance, 2010, 19, 481-487.	1.2	8

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109	Strain energy density criteria for dynamic fracture and dynamic crack branching. Theoretical and Applied Fracture Mechanics, 1986, 5, 117-123.	2.1	7
110	SIMULATION OF ROUTER ACTION ON A LATHE TO TEST THE CUTTING TOOL PERFORMANCE IN EDGE-TRIMMING OF GRAPHITE/EPOXY COMPOSITE. Experimental Techniques, 1994, 18, 23-28.	0.9	7
111	Cutting Edge Wear of Tungsten Carbide Tool in Continuous and Interrupted Cutting of a Polymer Composite. Materials and Manufacturing Processes, 1995, 10, 493-508.	2.7	7
112	Frequency Analysis and Process Monitoring in Drilling of Composite Materials. Advanced Composites Letters, 2004, 13, 096369350401300.	1.3	7
113	Tool Wear Monitoring Using Microphone Signals and Recurrence Quantification Analysis when Drilling Composites. Advanced Materials Research, 2013, 711, 239-244.	0.3	7
114	Study of Microstructural Characteristics and Mechanical Properties of Friction Stir Welded Three Titanium Alloys. Materials Today: Proceedings, 2018, 5, 1082-1092.	0.9	7
115	Fatigue of shot peened 7075-T7351 SENB specimen - A 3-D analysis. Fatigue and Fracture of Engineering Materials and Structures, 2006, 29, 416-424.	1.7	6
116	Surface tracking of diffusion bonding void closure and its application to titanium alloys. International Journal of Material Forming, 2020, 13, 517-531.	0.9	6
117	Numerical and experimental study of mixed mode fatigue crack propagation. , 1994, , 1073-1123.		5
118	An experimental analysis of a Nd:YAG laser cutting process for machining silicon nitride. International Journal of Production Research, 1996, 34, 1417-1428.	4.9	5
119	Analysis of dynamic mixed-mode isochromatics. Experimental Mechanics, 1985, 25, 344-353.	1.1	4
120	Small surface and corner crack propagation in aluminum and steel alloys. Experimental Mechanics, 1988, 28, 214-220.	1.1	4
121	Peening with High Pressure Waterjets. , 1999, , .		4
122	Transverse Stitched T-Joints in Bending with PR520 Resin: Initial Results. Journal of Reinforced Plastics and Composites, 2001, 20, 65-75.	1.6	4
123	Experimental modelling and analysis of drilling (Al<SUB align=right>2O<SUB align=right>3)p/6061 metal matrix composites using PCD tool. International Journal of Materials and Product Technology, 2008, 32, 20.	0.1	4
124	Dynamic Crack Curving and Crack Branching. , 1983, , 241-250.		4
125	Transverse Stitched T-Joints in Bending with PR520 Resin: Initial Results. Journal of Reinforced Plastics and Composites, 2001, 20, 65-75.	1.6	4
126	Small fatigue crack growth from a keyhole notch. Scripta Metallurgica, 1987, 21, 187-190.	1.2	3

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127	Study on the Drilling of Titanium/Graphite Hybrid Composites. , 2005, , 99.		3
128	A study of the residual stress induced by shot peening for an isotropic material based on Pragerâ€™s yield criterion for combined stresses. Meccanica, 2015, 50, 1593-1604.	1.2	3
129	CRITERIA FOR DYNAMIC CRACK CURVING AND BRANCHING. , 1984, , 3099-3107.		3
130	Contributions of intra-build design parameters to mechanical properties in electron beam additive manufacturing of Ti6Al4V. Materials Today Communications, 2022, 30, 103190.	0.9	3
131	Low-Velocity Impact Response Characterization of a Hybrid Titanium Composite Laminate. , 2005, , .		2
132	Modeling of Diffusion Bonding Time in Dissimilar Titanium Alloys: Preliminary Results. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	1.3	2
133	A Notched Specimen for a Short Fatigue Crack. Experimental Techniques, 1987, 11, 32-34.	0.9	1
134	Fatigue crack growth from an artificial flaw. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1989, 119, 73-80.	2.6	1
135	Simulation of Tensile Behavior in Friction Stir Welded and Superplastically Formed Titanium 6 Al-4V Alloy. , 2007, , .		1
136	Edge Finishing Effects on the Impact Behavior of Chopped GFRP Composites. Experimental Mechanics, 2010, 50, 321-331.	1.1	1
137	Effect of Surface Play on the Quality of the Hole when Drilling Multi-Directional CFRP Composites. Applied Mechanics and Materials, 0, 330, 117-122.	0.2	1
138	Experimental and Numerical Analysis of Mechanical Behavior in Friction Stir Welded Different Titanium Alloys. , 2014, , .		1
139	Characterization of Surfaces Generated in Milling and Abrasive Water Jet of CFRP Using Wavelet Packet Transform. IOP Conference Series: Materials Science and Engineering, 2020, 842, 012001.	0.3	1
140	An Experimental Characterization of the Failure Mechanisms Activated in GFRP Composites. , 2007, , 489.		0
141	Failure Analysis of a Fibrous Composite Half-Space Subjected to Uniform Surface Line Load. , 2007, , 77.		0
142	Hole Surface Quality and Damage When Drilling Unidirectional CFRP Composites. , 2012, , .		0
143	Multi-Sensor Detection and Estimation of Gaps When Drilling CFRP Composite Stacks. , 2014, , .		0
144	Effect of Heat Treatment on Friction Stir Welded Dissimilar Titanium Alloys. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 45-53.	0.3	0

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145	Dataset for interpreting the Circos figures used in the review of friction stir welding of titanium alloys. Data in Brief, 2019, 22, 164-168.	0.5	0
146	Waterjet Peening At 600MPa: A First Investigation. , 2005, , .		0