Demircan Canadinc

List of Publications by Year
in descending order

92 papers	2,744 citations	147566 31 h-index	205818 48 g-index
93 all docs	93 docs citations	93 times ranked	1901 citing authors

#	Article	IF	Citations
1	Strain hardening behavior of aluminum alloyed Hadfield steel single crystals. Acta Materialia, 2005, 53, 1831-1842.	3.8	122
2	The role of monotonic pre-deformation on the fatigue performance of a high-manganese austenitic TWIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 499, 518-524.	2.6	115
3	On the negative strain rate sensitivity of Hadfield steel. Scripta Materialia, 2008, 59, 1103-1106.	2.6	113
4	Microstructural, mechanical and electrochemical characterization of TiZrTaHfNb and Ti1.5ZrTa0.5Hf0.5Nb0.5 refractory high-entropy alloys for biomedical applications. Intermetallics, 2019, 113, 106572.	1.8	111
5	On deformation behavior of Fe-Mn based structural alloys. Materials Science and Engineering Reports, 2017, 122, 1-28.	14.8	102
6	Detwinning in NiTi alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 5-13.	1.1	95
7	Microstructure and tribological properties of TiTaHfNbZr high entropy alloy coatings deposited on Ti 6Al 4V substrates. Intermetallics, 2019, 105, 99-106.	1.8	84
8	On the mechanical response and microstructure evolution of NiCoCr single crystalline medium entropy alloys. Materials Research Letters, 2018, 6, 442-449.	4.1	78
9	Accelerated oxidation in ductile refractory high-entropy alloys. Intermetallics, 2018, 97, 58-66.	1.8	73
10	Anomalous work hardening behavior of Fe40Mn40Cr10Co10 high entropy alloy single crystals deformed by twinning and slip. Acta Materialia, 2019, 181, 555-569.	3.8	72
11	Shape memory behavior of FeNiCoTi single and polycrystals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 3661-3672.	1.1	70
12	Estimation of fracture toughness of liver tissue: Experiments and validation. Medical Engineering and Physics, 2012, 34, 882-891.	0.8	68
13	Ultra-high temperature multi-component shape memory alloys. Scripta Materialia, 2019, 158, 83-87.	2.6	68
14	On the fatigue behavior of ultrafine-grained interstitial-free steel. International Journal of Materials Research, 2006, 97, 1328-1336.	0.1	55
15	On the fatigue crack growthâ€“microstructure relationship in ultrafine-grained interstitial-free steel. Journal of Materials Science, 2010, 45, 4813-4821.	1.7	54
16	Microstructureâ€“mechanical property relationships in ultrafine-grained NbZr. Acta Materialia, 2007, 55, 6596-6605.	3.8	52
17	On the Microstructural Stability of Ultrafine-Grained Interstitial-Free Steel under Cyclic Loading. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1946-1955.	1.1	49
18	Effects of upper cycle temperature on the actuation fatigue response of NiTiHf high temperature shape memory alloys. Acta Materialia, 2017, 138, 185-197.	3.8	48

#	Article	IF	Citations
19	Monitoring the fatigue-induced damage evolution in ultrafine-grained interstitial-free steel utilizing digital image correlation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 225-234.	2.6	47
20	The role of heat treatment on the cyclic stressâ€“strain response of ultrafine-grained interstitial-free steel. International Journal of Fatigue, 2008, 30, 426-436.	2.8	46
21	Role of microstructure on the actuation fatigue performance of Ni-Rich NiTiHf high temperature shape memory alloys. Acta Materialia, 2019, 175, 107-120.	3.8	44
22	Evaluation of passive oxide layer formationâ€“biocompatibility relationship in NiTi shape memory alloys: Geometry and body location dependency. Materials Science and Engineering C, 2014, 36, 118-129.	3.8	42
23	Orientation evolution in Hadfield steel single crystals under combined slip and twinning. International Journal of Solids and Structures, 2007, 44, 34-50.	1.3	41
24	Role of applied stress level on the actuation fatigue behavior of NiTiHf high temperature shape memory alloys. Acta Materialia, 2018, 153, 156-168.	3.8	41
25	The role of dense dislocation walls on the deformation response of aluminum alloyed hadfield steel polycrystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 454-455, 662-666.	2.6	40
26	Corrosion behavior of novel Titanium-based high entropy alloys designed for medical implants. Materials Chemistry and Physics, 2020, 254, 123377.	2.0	35
27	Analysis of surface crack growth under rolling contact fatigue. International Journal of Fatigue, 2008, 30, 1678-1689.	2.8	34
28	The role of nitrogen on the deformation response of hadfield steel single crystals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 1821-1831.	1.1	33
29	Role of Austenitization and Pre-Deformation on the Kinetics of the Isothermal Bainitic Transformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1355-1366.	1.1	33
30	Experimental and Numerical Investigation of the Role of Grain Boundary Misorientation Angle on the Dislocationâ€“Grain Boundary Interactions. Advanced Engineering Materials, 2011, 13, 281-287.	1.6	33
31	On the deformation response and cyclic stability of Ni50Ti35Hf15 high temperature shape memory alloy wires. Scripta Materialia, 2017, 135, 92-96.	2.6	33
32	Mechanical Properties of TiTaHfNbZr High-Entropy Alloy Coatings Deposited on NiTi Shape Memory Alloy Substrates. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1992-1997.	1.1	32
33	The role of grain size and distribution on the cyclic stability of titanium. Scripta Materialia, 2009, 60, 344-347.	2.6	29
34	On the micro-deformation mechanisms active in high-manganese austenitic steels under impact loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 632, 29-34.	2.6	28
35	Twinning activities in high-Mn austenitic steels under high-velocity compressive loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 648, 104-112.	2.6	28
36	Evaluation of the biocompatibility of NiTi dental wires: A comparison of laboratory experiments and clinical conditions. Materials Science and Engineering C, 2014, 40, 142-147.	3.8	27

#	Article	IF	Citations
37	Stressâ€“strainâ€“temperature behaviour of [001] single crystals of Co49Ni21Ga30ferromagnetic shape memory alloy under compression. Philosophical Magazine, 2007, 87, 2313-2322.	0.7	25
38	In-situ characterization of transformation plasticity during an isothermal austenite-to-bainite phase transformation. Materials Characterization, 2012, 65, 100-108.	1.9	25
39	Assessment of Ni ion release from TiTaHfNbZr high entropy alloy coated NiTi shape memory substrates in artificial saliva and gastric fluid. Materials Chemistry and Physics, 2019, 236, 121802.	2.0	24
40	Improvement of the fatigue performance of an ultrafine-grained Nbâ€“Zr alloy by nano-sized precipitates formed by internal oxidation. Scripta Materialia, 2008, 58, 571-574.	2.6	23
41	An exploration of plastic deformation dependence of cell viability and adhesion in metallic implant materials. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 60, 177-186.	1.5	23
42	Three-dimensional modeling of the grain boundary misorientation angle distribution based on two-dimensional experimental texture measurements. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 5604-5612.	2.6	21
43	On the role of slipâ€“twin interactions on the impact behavior of high-manganese austenitic steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 593, 120-126.	2.6	21
44	The Influence of Zirconium on the Low-Cycle Fatigue Response of Ultrafine-Grained Copper. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1916-1925.	1.1	20
45	Fracture behavior of novel biomedical Ti-based high entropy alloys under impact loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 803, 140456.	2.6	20
46	On the cyclic deformation response of ultrafine-grained Alâ€“Mg alloys at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 496, 114-120.	2.6	19
47	Assessment of biocompatibility of novel TiTaHf-based high entropy alloys for utility in orthopedic implants. Materials Chemistry and Physics, 2021, 266, 124573.	2.0	19
48	High-concentration carbon assists plasticity-driven hydrogen embrittlement in a Fe-high Mn steel with a relatively high stacking fault energy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 717, 78-84.	2.6	18
49	On the incorporation of length scales associated with pearlitic and bainitic microstructures into a visco-plastic self-consistent model. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 485, 258-271.	2.6	17
50	Anisotropy of ultrafine-grained alloys under impact loading: The case of biomedical niobiumâ€“zirconium. Scripta Materialia, 2012, 66, 435-438.	2.6	17
51	Incorporation of Dynamic Strain Aging Into a Viscoplastic Self-Consistent Model for Predicting the Negative Strain Rate Sensitivity of Hadfield Steel. Journal of Engineering Materials and Technology, Transactions of the ASME, 2016, 138, .	0.8	17
52	Cyclic stability of ultrafine-grained interstitial-free steel at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 503, 160-162.	2.6	16
53	Modeling the role of external stresses on the austenite-to-bainite phase transformation in 51CrV4 steel. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 045007.	0.8	16
54	Pre-deformationâ€“transformation plasticity relationship during martensitic transformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 625-633.	2.6	15

#	Article	IF	Citations
55	Investigation of rolling contact crack initiation in bainitic and pearlitic rail steels. Fatigue and Fracture of Engineering Materials and Structures, 2012, 35, 985-997.	1.7	15
56	Design of a NiTiHf shape memory alloy with an austenite finish temperature beyond 400 Â°C utilizing artificial intelligence. Journal of Alloys and Compounds, 2022, 904, 164135.	2.8	15
57	Early detection of crack initiation sites in TiAl alloys during low-cycle fatigue at high temperatures utilizing digital image correlation. International Journal of Materials Research, 2009, 100, 603-608.	0.1	14
58	Fatigue Damage Evolution in Ultrafineâ€Grained Interstitialâ€Free Steel. Advanced Engineering Materials, 2011, 13, 275-280.	1.6	14
59	A comprehensive evaluation of parameters governing the cyclic stability of ultrafine-grained FCC alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 6345-6355.	2.6	14
60	Effects of microstructural mechanisms on the localized oxidation behavior of NiTi shape memory alloys in simulated body fluid. Journal of Materials Science, 2018, 53, 948-958.	1.7	14
61	Prediction of the NiTi shape memory alloy composition with the best corrosion resistance for dental applications utilizing artificial intelligence. Materials Chemistry and Physics, 2021, 258, 123974.	2.0	13
62	On the cyclic stability of nanocrystalline copper obtained by powder consolidation at room temperature. Scripta Materialia, 2008, 58, 307-310.	2.6	12
63	In situ characterization of backstress effects on the austenite-to-bainite phase transformation. Scripta Materialia, 2012, 67, 368-371.	2.6	12
64	Lowering Strain Rate Simultaneously Enhances Carbon- and Hydrogen-Induced Mechanical Degradation in an Fe-33Mn-1.1C Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1137-1141.	1.1	12
65	A Comparative Analysis of Austenite-to-Martensite and Austenite-to-Bainite Phase Transformation Kinetics in Steels. Materials Research Letters, 2013, 1, 141-147.	4.1	11
66	A New Venue Toward Predicting the Role of Hydrogen Embrittlement on Metallic Materials. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5409-5422.	1.1	11
67	On the role of the cooling rate and crystallographic orientation on the shape memory properties of CoNiAl single crystals under compression. Smart Materials and Structures, 2007, 16, 1006-1015.	1.8	10
68	Martensite variant localization effects on fatigue crack growth - The CuZnAl example. Scripta Materialia, 2019, 171, 112-117.	2.6	10
69	Deshielding effects on fatigue crack growth in shape memory alloys- A study on CuZnAl single-crystalline materials. Acta Materialia, 2019, 176, 155-166.	3.8	10
70	On the Cyclic Stability and Fatigue Performance of Ultrafine-Grained Interstitial-Free Steel under Mean Stress. Key Engineering Materials, 2008, 378-379, 39-52.	0.4	9
71	Evolution of transformation plasticity in austenite-to-bainite phase transformation: A multi parameter problem. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 541, 73-80.	2.6	9
72	Multi-Scale Modeling of the Impact Response of a Strain-Rate Sensitive High-Manganese Austenitic Steel. Frontiers in Materials, 2014, 1, .	1.2	9

#	Article	IF	Citations
73	Microstructure-based modeling of the impact response of a biomedical niobiumâ€“zirconium alloy. Journal of Materials Research, 2014, 29, 1123-1134.	1.2	9
74	Machine learning-assisted design of biomedical high entropy alloys with low elastic modulus for orthopedic implants. Journal of Materials Science, 2022, 57, 11151-11169.	1.7	8
75	A Microstructure-Sensitive Model for Simulating the Impact Response of a High-Manganese Austenitic Steel. Journal of Engineering Materials and Technology, Transactions of the ASME, 2016, 138, .	0.8	7
76	Nanotwin Formation in High-Manganese Austenitic Steels Under Explosive Shock Loading. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1026-1030.	1.1	7
77	A Critical Approach to the Biocompatibility Testing of Niti Orthodontic Archwires. International Journal of Metallurgy and Metal Physics, 2016, 1, 1-7.	0.3	7
78	Modeling the role of hydrogen interstitial concentration on internal stress fields in iron matrix. Journal of Materials Science, 2010, 45, 1683-1687.	1.7	6
79	Incorporating the grain boundary misorientation effects on slip activity into crystal plasticity. Mechanics of Advanced Materials and Structures, 2016, 23, 865-872.	1.5	6
80	Investigation of the Dissolutionâ€“Reformation Cycle of the Passive Oxide Layer on NiTi Orthodontic Archwires. Shape Memory and Superelasticity, 2017, 3, 264-273.	1.1	6
81	Enhancing biocompatibility of NiTi shape memory alloys by simple NH3 treatments. Applied Surface Science, 2020, 525, 146547.	3.1	6
82	On the coupled temperatureâ€“strain rate sensitivity of ultrafine-grained interstitial-free steel. Scripta Materialia, 2010, 63, 544-547.	2.6	5
83	Evolution of transformation plasticity during bainitic transformation. International Journal of Materials Research, 2011, 102, 1152-1163.	0.1	5
84	Crack growth behavior of low-alloy bainitic 51CrV4 steel. Procedia Engineering, 2010, 2, 1373-1382.	1.2	4
85	Computation of parent austenite grain orientation from product grain orientations upon displacive phase transformations. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 085009.	0.8	4
86	On the Utility of Crystal Plasticity Modeling to Uncover the Individual Roles of Microdeformation Mechanisms on the Work Hardening Response of Fe-23Mn-0.5C TWIP Steel in the Presence of Hydrogen. Journal of Engineering Materials and Technology, Transactions of the ASME, 2018, 140, .	0.8	4
87	Experimental and Numerical Evaluation of Thickness Reduction in Steel Plate Heat Exchangers. Journal of Engineering Materials and Technology, Transactions of the ASME, 2015, 137, .	0.8	3
88	Micro-Scale Cyclic Bending Response of NiTi Shape Memory Alloy. Materials Transactions, 2016, 57, 472-475.	0.4	2
89	Twinning activity in high-manganese austenitic steels under high velocity loading. Materials Science and Technology, 2016, 32, 463-465.	0.8	2
90	A Novel Approach for Monitoring Plastic Flow Localization during In-Situ Sem Testing of Small-Scale Samples. Experimental Techniques, 2018, 42, 177-189.	0.9	2

#	Article	IF	Citations
91	The Influence of Plastic Deformation Mechanisms on the Adhesion Behavior and Collagen Formation in Osteoblast Cells. Minerals, Metals and Materials Series, 2018, , 295-301.	0.3	2
92	Termination of negative strain-rate sensitivity by nanotwin formation in TWIP steel micropillars. Philosophical Magazine Letters, 2020, 100, 507-512.	0.5	0