

Gregory N Haidemenopoulos

List of Publications by Year in descending order

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92
papers

1,758
citations

279798

23
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315739

38
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95
all docs

95
docs citations

95
times ranked

1263
citing authors

#	ARTICLE	IF	CITATIONS
1	High entropy oxides-exploring a paradigm of promising catalysts: A review. <i>Materials and Design</i> , 2021, 202, 109534.	7.0	140
2	Corrosion-induced hydrogen embrittlement in aluminum alloy 2024. <i>Corrosion Science</i> , 2006, 48, 1209-1224.	6.6	119
3	Kinetics of Solute Partitioning During Intercritical Annealing of a Medium-Mn Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 4841-4846.	2.2	73
4	Constitutive modeling and finite element methods for TRIP steels. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 5094-5114.	6.6	68
5	Corrosion of exposed rebars, associated mechanical degradation and correlation with accelerated corrosion tests. <i>Construction and Building Materials</i> , 2011, 25, 3367-3374.	7.2	66
6	Modelling of austenite stability in low-alloy triple-phase steels. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1996, 67, 513-519.	0.3	61
7	Modelling of microsegregation and homogenization of 6061 extrudable Al-alloy. <i>Journal of Materials Processing Technology</i> , 2007, 194, 63-73.	6.3	58
8	Kinetics of strain-induced transformation of dispersed austenite in low-alloy TRIP steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 615, 416-423.	5.6	55
9	Tensile and fatigue behaviour of wrought magnesium alloys AZ31 and AZ61. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2008, 31, 812-821.	3.4	54
10	Effect of prior deformation and heat treatment on the corrosion-induced hydrogen trapping in aluminium alloy 2024. <i>Corrosion Science</i> , 2014, 80, 139-142.	6.6	45
11	Thermodynamics-based alloy design criteria for austenite stabilization and transformation toughening in the Fe–Ni–Co system. <i>Journal of Alloys and Compounds</i> , 1995, 220, 142-147.	5.5	42
12	Surface hardening of low-alloy 15CrNi6 steel by CO2 laser beam. <i>Surface and Coatings Technology</i> , 1999, 115, 249-255.	4.8	41
13	Laser-beam carburizing of low-alloy steels. <i>Surface and Coatings Technology</i> , 2001, 139, 183-191.	4.8	41
14	Interplay between deformation behavior and mechanical properties of intercritically annealed and tempered medium-manganese transformation-induced plasticity steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 654, 359-367.	5.6	41
15	Experimental determination of the stability of retained austenite in low alloy TRIP steels. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1999, 70, 466-471.	0.3	40
16	Characterization of trapped hydrogen in exfoliation corroded aluminium alloy 2024. <i>Scripta Materialia</i> , 1999, 41, 1327-1332.	5.2	39
17	On the effect of austenite stability on high cycle fatigue of TRIP 700 steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 573, 7-11.	5.6	38
18	Transformation microyielding of retained austenite. <i>Acta Metallurgica</i> , 1989, 37, 1677-1682.	2.1	35

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19	Evidence on the corrosion-induced hydrogen embrittlement of the 2024 aluminium alloy. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2005, 28, 565-574.	3.4	32
20	Simulation of the transformation of iron intermetallics during homogenization of 6xxx series extrudable aluminum alloys. <i>Journal of Materials Processing Technology</i> , 2012, 212, 2255-2260.	6.3	31
21	Pyrolytic laser-based chemical vapour deposition of TiC coatings. <i>Thin Solid Films</i> , 1995, 271, 96-100.	1.8	28
22	Fatigue and fracture behavior of pearlitic Grade 900A steel used in railway applications. <i>Theoretical and Applied Fracture Mechanics</i> , 2016, 83, 51-59.	4.7	28
23	On the thermodynamic stability of retained austenite in 4340 steel. <i>Journal of Alloys and Compounds</i> , 1997, 247, 128-133.	5.5	26
24	The effect of stress triaxiality on the phase transformation in transformation induced plasticity steels: Experimental investigation and modelling the transformation kinetics. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 800, 140321.	5.6	25
25	Effects of temper condition and corrosion on the fatigue performance of a laser-welded Al-Cu-Mg-Ag (2139) alloy. <i>Materials & Design</i> , 2010, 31, 42-49.	5.1	22
26	Hydrogen Absorption into Aluminum Alloy 2024-T3 During Exfoliation and Alternate Immersion Testing. <i>Corrosion</i> , 1998, 54, 73-78.	1.1	21
27	Coupled thermodynamic/kinetic analysis of diffusional transformations during laser hardening and laser welding. <i>Journal of Alloys and Compounds</i> , 2001, 320, 302-307.	5.5	20
28	Growth of TiB ₂ and TiC coatings using pulsed laser deposition. <i>Thin Solid Films</i> , 1997, 303, 39-46.	1.8	19
29	Composition and processing design of medium-Mn steels based on CALPHAD, SFE modeling, and genetic optimization. <i>Acta Materialia</i> , 2020, 193, 291-310.	7.9	19
30	Low-alloy TRIP steels: a correlation between mechanical properties and the retained austenite stability. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 2002, 73, 249-252.	0.3	18
31	Retained austenite and mechanical properties in bainite transformed low alloy steels. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1995, 66, 433-438.	0.3	17
32	Protective role of local Al cladding against corrosion damage and hydrogen embrittlement of 2024 aluminum alloy specimens. <i>Theoretical and Applied Fracture Mechanics</i> , 2005, 44, 70-81.	4.7	17
33	Investigation of rolling contact fatigue cracks in a grade 900A rail steel of a metro track. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2006, 29, 887-900.	3.4	17
34	Evaluation of creep damage of INCOLOY 800HT pigtailed in a refinery steam reformer unit. <i>Engineering Failure Analysis</i> , 2014, 45, 456-469.	4.0	17
35	Rolling contact fatigue cracking in rails subjected to in-service loading. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2016, 39, 1161-1172.	3.4	15
36	Mechanical behavior of 2024 Al alloy specimen subjected to paint stripping by laser radiation and plasma etching. <i>Theoretical and Applied Fracture Mechanics</i> , 1996, 25, 139-146.	4.7	14

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37	Finite Element Modelling of TRIP Steels. Steel Research International, 2004, 75, 730-736.	1.8	14
38	Transformation plasticity of retained austenite in stage-I tempered martensitic steels. Scripta Metallurgica, 1989, 23, 207-212.	1.2	13
39	Simulation of intercritical annealing in low-alloy TRIP steels. Steel Research = Archiv FÄr Das EisenhÄttenwesen, 2000, 71, 351-356.	0.3	13
40	Modeling of Microsegregation and Homogenization of 6xxx Al-Alloys Including Precipitation and Strengthening During Homogenization Cooling. Materials, 2019, 12, 1421.	2.9	13
41	Mechanical performance of laser spot-welded joints in Al-Al/Cu solar thermal absorbers. Materials and Design, 2018, 155, 148-160.	7.0	12
42	A treatment of paraequilibrium thermodynamics in AF1410 steel using the thermocalc software and database. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 1988, 12, 219-224.	1.6	11
43	Thermal and microstructural characterization of a novel ductile cast iron modified by aluminum addition. International Journal of Minerals, Metallurgy and Materials, 2020, 27, 190-199.	4.9	11
44	Effect of precipitate coherency on the corrosion-induced hydrogen trapping in 2024 aluminum alloy. International Journal of Hydrogen Energy, 2021, 46, 34487-34497.	7.1	11
45	Effect of novel paint removal processes on the fatigue behavior of aluminum alloy 2024. Surface and Coatings Technology, 1998, 106, 198-204.	4.8	10
46	Aluminum and Aluminum Alloys. , 0, , 321-463.		10
47	Stability and Constitutive Modelling in Multiphase TRIP Steels. Steel Research International, 2006, 77, 720-726.	1.8	10
48	Constitutive and transformation kinetics modeling of μ -Martensite and mechanical twinning in steels containing austenite. Acta Materialia, 2023, 228, 117757.	7.9	10
49	Alloy Design Based on Computational Thermodynamics and Multi-objective Optimization: The Case of Medium-Mn Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2584-2602.	2.2	9
50	On the nanocrystalline structure of TiC and TiB ₂ produced by laser ablation. Scripta Materialia, 1997, 8, 55-59.	0.5	8
51	Austenite Evolution and Solute Partitioning during Thermal Cycling in the Intercritical Range of a Medium-Mn Steel. Steel Research International, 2016, 87, 1686-1693.	1.8	8
52	Multi-phase field modeling in TRIP steels: Distributed vs. average stability and strain-induced transformation of retained austenite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 833, 142341.	5.6	8
53	Nanocrystalline growth and diagnostics of TiC and TiB ₂ hard coatings by pulsed laser deposition. Applied Physics A: Materials Science and Processing, 1999, 69, S427-S431.	2.3	7
54	A Semi-Empirical Model for the evolution of Retained Austenite via Bainitic Transformation in Multiphase TRIP Steels. Steel Research International, 2008, 79, 875-884.	1.8	7

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55	Microstructural and Mechanical Characterization of Solidified Austenitic Stainless Steels. Archives of Foundry Engineering, 2017, 17, 163-167.	0.4	7
56	Grain Size Evolution during Multipass Hot-Rolling of C-Mn Steels: Comparison of Phase Field and Extended JMAK Modeling. Steel Research International, 2018, 89, 1800223.	1.8	7
57	Aging Phenomena during In-Service Creep Exposure of Heat-Resistant Steels. Metals, 2019, 9, 800.	2.3	7
58	Aspects of ductility, toughness and formability of steel sheet in relation to transformation plasticity. Journal of Materials Processing Technology, 1992, 30, 211-230.	6.3	6
59	Austenite stabilization from direct cementite conversion in low-alloy steels. Steel Research = Archiv für Das Eisenhüttenwesen, 1996, 67, 93-99.	0.3	6
60	Laser-beam surface transformation hardening of hypoeutectoid Ck-60 steel. Steel Research = Archiv für Das Eisenhüttenwesen, 1997, 68, 119-124.	0.3	6
61	Diagnostics of the ions produced by laser ablation of TiC and TiB ₂ . Applied Surface Science, 1998, 126, 92-98.	6.1	6
62	Modelling of Transformations in TRIP Steels. Steel Research International, 2004, 75, 737-743.	1.8	6
63	Thermodynamics-Based Computational Design of Al-Mg-Sc-Zr Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 888-899.	2.2	6
64	Carburization of high-temperature steels: A simulation-based ranking of carburization resistance. Engineering Failure Analysis, 2015, 51, 29-36.	4.0	6
65	Effect of retained austenite stability on cyclic deformation behavior of low-alloy transformation-induced plasticity steels. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 1085-1099.	3.4	6
66	Simulation and analysis of the solidification characteristics of a Si-Mo ductile iron. Journal of Mining and Metallurgy, Section B: Metallurgy, 2021, 57, 53-62.	0.8	6
67	Influence of plastic prestraining on the fatigue crack propagation rate of S355MC and S460MC structural steels. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 1391-1405.	3.4	5
68	Stress-corrosion cracking of a monel 400 tube. Journal of Failure Analysis and Prevention, 2004, 4, 44-50.	0.9	4
69	The influence of salt fog exposure on the fatigue performance of Alclad 6xxx aluminum alloys laser beam welded joints. Journal of Materials Science, 2010, 45, 4390-4400.	3.7	4
70	Case-Study Inverse Thermal Analyses of Al2139 Laser Welds. Journal of Materials Engineering and Performance, 2012, 21, 777-785.	2.5	4
71	Probing the Evolution of Retained Austenite in TRIP Steel During Strain-Induced Transformation: A Multitechnique Investigation. Jom, 2018, 70, 924-928.	1.9	4
72	Investigation of Stress-Oriented Hydrogen-Induced Cracking (SOHIC) in an Amine Absorber Column of an Oil Refinery. Metals, 2018, 8, 663.	2.3	4

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73	Matrix design of a novel ductile cast iron modified by W and Al: A comparison between thermodynamic modeling and experimental data. <i>Metallurgical and Materials Engineering</i> , 2020, 26, 15-29.	0.5	4
74	On the optimization of precipitated austenite for transformation toughening of steels. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 1989, 13, 215-223.	1.6	3
75	Phase fraction mapping in the as-cast microstructure of extrudable 6xxx aluminum alloys. <i>International Journal of Materials Research</i> , 2014, 105, 1202-1209.	0.3	3
76	Metallographic Index-Based Quantification of the Homogenization State in Extrudable Aluminum Alloys. <i>Metals</i> , 2016, 6, 121.	2.3	3
77	Microstructural and Thermomechanical Simulation of the Additive Manufacturing Process in 316L Austenitic Stainless Steel. <i>Materials Proceedings</i> , 2021, 3, .	0.2	3
78	<title>Surface treatment of metals with excimer and CO2 lasers</title>. , 1993, , .		2
79	Case-Study Inverse Thermal Analyses of Al2198 Laser Welds. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 471-480.	2.5	2
80	A Numerical Method for Inverse Thermal Analysis of Steady-State Energy Deposition in Plate Structures. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 180-190.	2.5	2
81	Visualization of the Rolling Contact Fatigue Cracks in Rail Tracks with a Magneto-optical Sensor. <i>Journal of Nondestructive Evaluation</i> , 2019, 38, 1.	2.4	2
82	Hot Oxidation Resistance of a Novel Cast Iron Modified by Nb and Al Addition for Exhaust Manifold Applications. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2022, 53, 1991-2003.	2.2	2
83	Excimer Laser Used as a Materials Characterization Tool: Sulphide Inclusion Printing in Steel. <i>Laser Chemistry</i> , 1993, 13, 121-128.	0.5	1
84	Analysis of Heat Affected Zone in Welded Aluminum Alloys Using Inverse and Direct Modeling. <i>Journal of Materials Engineering and Performance</i> , 2008, 17, 402-410.	2.5	1
85	Inverse Thermal Analysis of Heat-Affected Zone in Al2129 and Al2198 Laser Welds. <i>Journal of Materials Engineering and Performance</i> , 2013, 22, 1582-1592.	2.5	1
86	Human bone ingrowth into a porous tantalum acetabular cup. <i>AIMS Materials Science</i> , 2017, 4, 1220-1230.	1.4	1
87	Creep rupture in HP-Nb refractory steel tubes due to short-term overheating. <i>European Journal of Materials</i> , 2021, 1, 1-22.	2.6	1
88	Exploitation of the TRIP Effect for the Development of Formable, Fracture and Fatigue Resistant Steels for Automotive Applications. , 2009, , 31-40.		0
89	Time resolved and spectral analysis of solar absorber Cu-Al and Al-Al laser weld emission. , 2013, , .		0
90	Corrosion-Induced Hydrogen Embrittlement in AA2024. , 2019, , .		0

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91	Extrudable Al-Si-Mg Alloys: Simulation of Microsegregation and Homogenization. , 2019, , .		0
92	Multiscaling Effects in Trip Steels. , 2006, , 725-726.		0