

Hai-wen Luo

List of Publications by Year in descending order

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72
papers

3,165
citations

218381

26
h-index

155451

55
g-index

74
all docs

74
docs citations

74
times ranked

1691
citing authors

#	ARTICLE	IF	CITATIONS
1	High dislocation density-induced large ductility in deformed and partitioned steels. <i>Science</i> , 2017, 357, 1029-1032.	6.0	729
2	Experimental and numerical analysis on formation of stable austenite during the intercritical annealing of 5Mn steel. <i>Acta Materialia</i> , 2011, 59, 4002-4014.	3.8	348
3	Recent progress in medium-Mn steels made with new designing strategies, a review. <i>Journal of Materials Science and Technology</i> , 2017, 33, 1457-1464.	5.6	192
4	Influence of refined hierarchical martensitic microstructures on yield strength and impact toughness of ultra-high strength stainless steel. <i>Journal of Materials Science and Technology</i> , 2020, 51, 130-136.	5.6	141
5	Effect of intercritical annealing on the $\frac{1}{4}$ ders strains of medium Mn transformation-induced plasticity steels. <i>Materials and Design</i> , 2015, 83, 42-48.	3.3	132
6	Experimental investigation on a novel medium Mn steel combining transformation-induced plasticity and twinning-induced plasticity effects. <i>International Journal of Plasticity</i> , 2016, 78, 173-186.	4.1	125
7	Nanoindentation investigation on the mechanical stability of individual austenite grains in a medium-Mn transformation-induced plasticity steel. <i>Scripta Materialia</i> , 2013, 69, 215-218.	2.6	119
8	Super-high-strength and formable medium Mn steel manufactured by warm rolling process. <i>Acta Materialia</i> , 2019, 174, 131-141.	3.8	103
9	On the characteristics of Portevin-Le Chatelier bands in cold-rolled 7Mn steel showing transformation-induced plasticity. <i>International Journal of Plasticity</i> , 2018, 103, 188-202.	4.1	88
10	A strong and ductile 7Mn steel manufactured by warm rolling and exhibiting both transformation and twinning induced plasticity. <i>Journal of Alloys and Compounds</i> , 2017, 725, 684-693.	2.8	77
11	Effects of intercritical annealing process on microstructures and tensile properties of cold-rolled 7Mn steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 685, 115-122.	2.6	76
12	A novel two-step intercritical annealing process to improve mechanical properties of medium Mn steel. <i>Acta Materialia</i> , 2019, 176, 250-263.	3.8	73
13	New ultrahigh-strength Mn-alloyed TRIP steels with improved formability manufactured by intercritical annealing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 626, 207-212.	2.6	58
14	A Novel Observation on Cementite Formed During Intercritical Annealing of Medium Mn Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 3119-3124.	1.1	47
15	Microstructural Evolution and Kinetics for Post-dynamic Transformation in a Plain Low Carbon Steel. <i>ISIJ International</i> , 2008, 48, 994-1000.	0.6	46
16	A novel medium-Mn steel with superior mechanical properties and marginal oxidization after press hardening. <i>Acta Materialia</i> , 2021, 205, 116567.	3.8	45
17	Experimental and numerical analysis of influence of carbide on austenitisation kinetics in 5Mn TRIP steel. <i>Materials Science and Technology</i> , 2014, 30, 1367-1377.	0.8	37
18	The relationship between 100Cr6 steelmaking, inclusion microstructure and rolling contact fatigue performance. <i>International Journal of Fatigue</i> , 2019, 129, 104899.	2.8	37

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19	Determination of the intrinsic $\hat{\Gamma}_\pm/\hat{\Gamma}^3$ interface mobility during massive transformations in interstitial free Fe-X alloys. <i>Acta Materialia</i> , 2017, 133, 258-268.	3.8	35
20	Hot deformation characterization of ultrahigh strength stainless steel through processing maps generated using different instability criteria. <i>Materials Characterization</i> , 2017, 131, 480-491.	1.9	35
21	The Influence of Ti on the Hot Ductility of Nb-bearing Steels in Simulated Continuous Casting Process.. <i>ISIJ International</i> , 2002, 42, 273-282.	0.6	33
22	Comments on "Austenite stability of ultrafine-grained transformation-induced plasticity steel with Mn partitioning" by S. Lee, S.J. Lee and B.C. De Cooman, <i>Scripta Materialia</i> 65 (2011) 225-228. <i>Scripta Materialia</i> , 2012, 66, 829-831.	2.6	32
23	On the mechanism of Mn partitioning during intercritical annealing in medium Mn steels. <i>Acta Materialia</i> , 2022, 225, 117601.	3.8	32
24	A metallurgical interpretation of the static recrystallization kinetics of an intercritically deformed C-Mn steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 1889-1898.	1.1	31
25	Medium-Mn steels for hot forming application in the automotive industry. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2021, 28, 741-753.	2.4	29
26	A strong and ductile medium Mn steel manufactured via ultrafast heating process. <i>Journal of Materials Science and Technology</i> , 2022, 97, 54-68.	5.6	29
27	A novel observation of strain-induced ferrite-to-austenite retransformation after intercritical deformation of C-Mn steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 2789-2797.	1.1	28
28	Effect of Intercritical Deformation on Bainite Formation in Al-containing TRIP Steel. <i>ISIJ International</i> , 2003, 43, 1219-1227.	0.6	26
29	Recovery Processes in the Ferrite Phase in C-Mn Steel. <i>ISIJ International</i> , 2004, 44, 1188-1194.	0.6	26
30	A Novel Shim-Assisted Resistance Spot Welding Process to Improve Weldability of Medium-Mn Transformation-Induced Plasticity Steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 1-9.	1.0	23
31	Behavior of Slag Foaming Caused by Blowing Gas in Molten Slags.. <i>ISIJ International</i> , 2000, 40, 954-957.	0.6	21
32	Effect of Inhomogeneous Deformation on the Recrystallization Kinetics of Deformed Metals. <i>ISIJ International</i> , 2004, 44, 1931-1936.	0.6	21
33	Influence of Nb and V on Microstructure and Mechanical Properties of Hot-Rolled Medium Mn Steels. <i>Steel Research International</i> , 2018, 89, 1700389.	1.0	18
34	Microstructures and Mechanical Properties of 7Mn Steel Manufactured by Different Rolling Processes. <i>Metals</i> , 2017, 7, 464.	1.0	17
35	Effect of warm rolling process on microstructures and tensile properties of 10%Mn steel. <i>Journal of Materials Science and Technology</i> , 2020, 47, 131-141.	5.6	16
36	Yielding behavior of triplex medium Mn steel alternated with cooling strategies altering martensite/ferrite interfacial feature. <i>Journal of Materials Science and Technology</i> , 2022, 126, 60-70.	5.6	16

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37	Effect of welding speed on microstructure and mechanical behavior of laser welded Al-Si coated 22MnB5 steel. <i>Optics and Laser Technology</i> , 2022, 154, 108344.	2.2	15
38	Effects of laser beam oscillation welding parameters on Al-Si coated 22MnB5 weld joint properties. <i>Optics and Laser Technology</i> , 2022, 149, 107898.	2.2	14
39	Effect of boron on hot ductility of low carbon low alloyed steel. <i>Materials Science and Technology</i> , 2001, 17, 843-846.	0.8	13
40	Solidified microstructures and elastic modulus of hypo-eutectic and hyper-eutectic TiB ₂ -reinforced high-modulus steel. <i>Acta Materialia</i> , 2019, 176, 84-95.	3.8	13
41	Improved mechanical properties of V-microalloyed dual phase steel by enhancing martensite deformability. <i>Journal of Materials Science and Technology</i> , 2021, 75, 139-153.	5.6	13
42	A novel cold-rolled medium Mn steel with an ultra-high product of tensile strength and elongation. <i>Materials Letters</i> , 2020, 258, 126804.	1.3	12
43	Interaction between inclusion particles on the stainless-steel melt surface. <i>Scandinavian Journal of Metallurgy</i> , 2001, 30, 212-219.	0.3	11
44	Progress on statistical models of evaluating inclusions in clean steels. <i>Journal of Iron and Steel Research International</i> , 2022, 29, 1153-1163.	1.4	11
45	Effect of concurrent recovery on Avrami exponent of the softening kinetics after hot deformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 532, 44-49.	2.6	10
46	Mn Diffusion at Early Stage of Intercritical Annealing of 5Mn Steel. <i>Journal of Iron and Steel Research International</i> , 2015, 22, 1015-1019.	1.4	9
47	Complicated Interaction of Dynamic Recrystallization and Precipitation During Hot Deformation of Ultrahigh-Strength Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 6248-6258.	1.1	9
48	Recrystallisation-assisted creep of an austenitic Fe-Ni alloy under low stresses after hot deformation. <i>Acta Materialia</i> , 2018, 153, 23-34.	3.8	8
49	Effect of flash processing on recrystallization behavior and mechanical performance of cold-rolled IF steel. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2020, 27, 1234-1243.	2.4	8
50	Influence of lamellar and equiaxed microstructural morphologies on yielding behaviour of a medium Mn steel. <i>Materialia</i> , 2021, 20, 101252.	1.3	8
51	Modeling decarburization kinetics of grain-oriented silicon steel. <i>Science Bulletin</i> , 2014, 59, 1778-1783.	1.7	7
52	In-situ measurement and numerical simulation of nitriding kinetics of grain-oriented silicon steel. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 10901-10910.	3.8	7
53	A Dual-Phase Press-Hardening Steel with Improved Mechanical Properties and Superior Oxidation Resistance. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2022, 53, 1934-1944.	1.1	6
54	Influence of excess titanium on hot ductility of C-Mn-Cr-Al steel. <i>Materials Science and Technology</i> , 2001, 17, 1589-1595.	0.8	5

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55	Multiphase-field simulation of austenite reversion in medium-Mn steels. International Journal of Minerals, Metallurgy and Materials, 2021, 28, 847-853.	2.4	5
56	Influence of Cu alloying on hot ductility of C-Mn-Al and Ti-Nb microalloyed steels. Revista De Metalurgia, 2005, 41, 407-411.	0.1	5
57	Characteristics of the Static Recrystallization Kinetics of an Intercritically Deformed C-Mn Steel. Materials Science Forum, 2004, 467-470, 293-298.	0.3	4
58	Constitutive Analysis of Stress-Strain Curves of a High-Nitrogen Austenitic Stainless Steel. Journal of Iron and Steel Research International, 2007, 14, 335-338.	1.4	4
59	Thermodynamic and kinetic analysis of dynamic strain-induced transformation during hot deformation in plain carbon steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 8259-8262.	2.6	4
60	An Analytical Approach to Model Heterogeneous Recrystallization Kinetics Taking into Account the Natural Spatial Inhomogeneity of Deformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 231-238.	1.1	4
61	A thermodynamic model on predicting density of medium-Mn steels with experimental verification. Journal of Iron and Steel Research International, 2017, 24, 1078-1084.	1.4	4
62	Mechanism and Application of Reverse Austenitic Transformation in Medium Mn Steels: A Systematic Review. Steel Research International, 2022, 93, .	1.0	4
63	Effect of molybdenum and temperature reduction on hot ductility of O ₂ -Mn steels. Ironmaking and Steelmaking, 2001, 28, 439-443.	1.1	3
64	Constitutive Analysis in Hot Working of a Nb Heavily Alloyed Stainless Steel. Journal of Iron and Steel Research International, 2007, 14, 179-182.	1.4	2
65	Grain Growth in Nb-Alloyed Stainless Steel of AISI 347 during Heating. Materials Science Forum, 2013, 753, 345-348.	0.3	2
66	Modelling Recovery and Recrystallisation Kinetics after Intercritical Deformation in 0.19 wt% C 1.5 wt% Mn Steel. Materials Science Forum, 2004, 467-470, 329-334.	0.3	1
67	Prominent work hardening and ultrahigh yield strength both realized in 3Mn steel multiply alloyed with Cu/Ni/Al/V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 849, 143473.	2.6	1
68	Effect of Strain Rate on the Subsequent Softening and Precipitation Kinetics in a Nb-Microalloyed Steel. Steel Research International, 2005, 76, 650-655.	1.0	0
69	Characteristics of Dynamic Recrystallization during Hot Deformation for High Nitrogen Stainless Steels. Materials Science Forum, 0, 715-716, 115-121.	0.3	0
70	Effect of Heating Process on Retained Austenite of Mn-TRIP Steel. Materials Science Forum, 2013, 762, 104-109.	0.3	0
71	Why Does Nitriding of Grain-Oriented Silicon Steel Become Slower at Higher Temperature?. Steel Research International, 2021, 92, 2000545.	1.0	0
72	Theory for Heterogeneous Recrystallization Kinetics in Metals. , 2022, , 561-567.		0