List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	High dislocation density–induced large ductility in deformed and partitioned steels. Science, 2017, 357, 1029-1032.	6.0	729
2	The effect of morphology on the stability of retained austenite in a quenched and partitioned steel. Scripta Materialia, 2013, 68, 321-324.	2.6	533
3	Lattice Dislocations Enhancing Thermoelectric PbTe in Addition to Band Convergence. Advanced Materials, 2017, 29, 1606768.	11.1	365
4	Making ultrastrong steel tough by grain-boundary delamination. Science, 2020, 368, 1347-1352.	6.0	200
5	Kinematic and thermal characteristics of Lüders and Portevin-Le Châtelier bands in a medium Mn transformation-induced plasticity steel. Acta Materialia, 2017, 124, 17-29.	3.8	169
6	Driving Force and Logic of Development of Advanced High Strength Steels for Automotive Applications. Steel Research International, 2013, 84, 937-947.	1.0	165
7	The respective hardening contributions of dislocations and twins to the flow stress of a twinning-induced plasticity steel. Scripta Materialia, 2016, 112, 28-31.	2.6	161
8	Strain rate sensitivity and evolution of dislocations and twins in a twinning-induced plasticity steel. Acta Materialia, 2015, 88, 170-179.	3.8	145
9	Effect of pre-existed austenite on austenite reversion and mechanical behavior of an Fe-0.2C-8Mn-2Al medium Mn steel. Acta Materialia, 2018, 147, 59-69.	3.8	137
10	Effect of chemical composition on work hardening of Fe—Mn—C TWIP steels. Materials Science and Technology, 2011, 27, 707-709.	0.8	132
11	Effect of intercritical annealing on the Lüders strains of medium Mn transformation-induced plasticity steels. Materials and Design, 2015, 83, 42-48.	3.3	132
12	Experimental investigation on a novel medium Mn steel combining transformation-induced plasticity and twinning-induced plasticity effects. International Journal of Plasticity, 2016, 78, 173-186.	4.1	125
13	Nanoindentation investigation on the mechanical stability of individual austenite grains in a medium-Mn transformation-induced plasticity steel. Scripta Materialia, 2013, 69, 215-218.	2.6	119
14	Evolution of dislocations and twins in a strong and ductile nanotwinned steel. Acta Materialia, 2016, 111, 96-107.	3.8	118
15	Abnormal TRIP effect on the work hardening behavior of a quenching and partitioning steel at high strain rate. Acta Materialia, 2020, 188, 551-559.	3.8	108
16	Super-high-strength and formable medium Mn steel manufactured by warm rolling process. Acta Materialia, 2019, 174, 131-141.	3.8	103
17	Optimum properties of quenching and partitioning steels achieved by balancing fraction and stability of retained austenite. Scripta Materialia, 2018, 150, 1-6.	2.6	101
18	Modelling strength and ductility of ultrafine grained BCC and FCC alloys using irreversible thermodynamics. Materials Science and Technology, 2009, 25, 833-839.	0.8	97

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19	Revisit the role of deformation twins on the work-hardening behaviour of twinning-induced plasticity steels. Scripta Materialia, 2018, 142, 28-31.	2.6	94
20	Interactions between deformation-induced defects and carbides in a vanadium-containing TWIP steel. Scripta Materialia, 2012, 66, 1018-1023.	2.6	89
21	Nanoindentation investigation on the initiation of yield point phenomenon in a medium Mn steel. Scripta Materialia, 2018, 150, 134-138.	2.6	83
22	An approach to define the effective lath size controlling yield strength of bainite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6614-6619.	2.6	80
23	The Role of Transformationâ€Induced Plasticity in the Development of Advanced High Strength Steels. Advanced Engineering Materials, 2018, 20, 1701083.	1.6	77
24	Evolution of dislocation and twin densities in a Mg alloy at quasi-static and high strain rates. Acta Materialia, 2020, 201, 102-113.	3.8	74
25	Evolution of dislocation density in bainitic steel: Modeling and experiments. Acta Materialia, 2018, 149, 46-56.	3.8	70
26	Machine learning recommends affordable new Ti alloy with bone-like modulus. Materials Today, 2020, 34, 41-50.	8.3	67
27	Dislocation emission criterion from a blunt crack tip. Journal of the Mechanics and Physics of Solids, 2004, 52, 1991-2003.	2.3	65
28	On the correlation among dislocation density, lath thickness and yield stress of bainite. Acta Materialia, 2017, 135, 382-389.	3.8	64
29	In-situ evaluation of Lüders band associated with martensitic transformation in a medium Mn transformation-induced plasticity steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 674, 59-63.	2.6	59
30	Optimising the strength-ductility-toughness combination in ultra-high strength quenching and partitioning steels by tailoring martensite matrix and retained austenite. International Journal of Plasticity, 2020, 134, 102851.	4.1	59
31	Microstructural evolution and phase transformation in twinning-induced plasticity steel induced by high-pressure torsion. Acta Materialia, 2016, 109, 300-313.	3.8	58
32	A constitutive model for high strain rate deformation in FCC metals based on irreversible thermodynamics. Mechanics of Materials, 2009, 41, 982-988.	1.7	57
33	Irreversible thermodynamics modelling of plastic deformation of metals. Materials Science and Technology, 2008, 24, 495-500.	0.8	56
34	Increasing yield strength of medium Mn steel by engineering multiple strengthening defects. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 724, 11-16.	2.6	54
35	A Novel Strong and Ductile TWIP/Martensite Steel Composite. Advanced Engineering Materials, 2016, 18, 56-59.	1.6	52
36	The role of interstitial carbon atoms on the strain-hardening rate of twinning-induced plasticity steels. Scripta Materialia, 2020, 178, 264-268.	2.6	51

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37	Ultrafine-grained dual-phase maraging steel with high strength and excellent cryogenic toughness. Acta Materialia, 2021, 211, 116878.	3.8	51
38	Alloy design by dislocation engineering. Journal of Materials Science and Technology, 2018, 34, 417-420.	5.6	49
39	Modelling the effect of carbon on deformation behaviour of twinning induced plasticity steels. Journal of Materials Science, 2011, 46, 7410-7414.	1.7	48
40	Dislocation annihilation in plastic deformation: I. Multiscale irreversible thermodynamics. Acta Materialia, 2012, 60, 2606-2614.	3.8	44
41	Interfacial plasticity of a TiB 2 -reinforced steel matrix composite fabricated by eutectic solidification. Scripta Materialia, 2015, 99, 13-16.	2.6	42
42	Revealing the Intrinsic Nanohardness of Lath Martensite in Low Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 688-694.	1.1	42
43	Deformation twinning in submicron and micron pillars of twinning-induced plasticity steel. Scripta Materialia, 2012, 67, 641-644.	2.6	41
44	Revealing the role of dislocations on the stability of retained austenite in a tempered bainite. Scripta Materialia, 2019, 168, 23-27.	2.6	41
45	Increase of martensite start temperature after small deformation of austenite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 609, 141-146.	2.6	38
46	Mechanism of saturated flow stress during hot tensile deformation of a TA15 Ti alloy. Materials and Design, 2015, 86, 146-151.	3.3	38
47	Modelling the steady state deformation stress under various deformation conditions using a single irreversible thermodynamics based formulation. Acta Materialia, 2009, 57, 3431-3438.	3.8	37
48	Effect of substitution of Si by Al on the microstructure and mechanical properties of bainitic transformation-induced plasticity steels. Journal of Materials Science and Technology, 2017, 33, 1475-1486.	5.6	36
49	Microscopic strain partitioning in Lüders band of an ultrafine-grained medium Mn steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 761, 138050.	2.6	35
50	Strengthening contributions of dislocations and twins in warm-rolled TWIP steels. International Journal of Plasticity, 2022, 150, 103198.	4.1	35
51	On the Mechanical Stability of Austenite Matrix After Martensite Formation in a Medium Mn Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 3346-3353.	1.1	34
52	Size effect on deformation twinning in face-centred cubic single crystals: Experiments and modelling. Acta Materialia, 2017, 129, 1-10.	3.8	34
53	The effect of deformation twins on the quasi-cleavage crack propagation in twinning-induced plasticity steels. Acta Materialia, 2018, 150, 59-68.	3.8	33
54	On the nanoindentation behaviour of complex ferritic phases. Philosophical Magazine Letters, 2014, 94, 439-446.	0.5	31

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55	Strong and ductile Mg alloys developed by dislocation engineering. Journal of Materials Science and Technology, 2019, 35, 394-395.	5.6	30
56	Strong and ductile medium Mn steel without transformation-induced plasticity effect. Materials Research Letters, 2018, 6, 365-371.	4.1	29
57	Supper strong nanostructured TWIP steels for automotive applications. Progress in Natural Science: Materials International, 2014, 24, 50-55.	1.8	28
58	Deformation twinning in small-sized face-centred cubic single crystals: Experiments and modelling. Journal of the Mechanics and Physics of Solids, 2015, 85, 128-142.	2.3	27
59	Room-Temperature Quenching and Partitioning Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3167-3172.	1.1	27
60	Temperature dependence of strengthening mechanisms in a twinning-induced plasticity steel. International Journal of Plasticity, 2019, 116, 192-202.	4.1	27
61	Suppression of dislocations at high strain rate deformation in a twinning-induced plasticity steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 628, 84-88.	2.6	26
62	Benefits of Intercritical Annealing in Quenching and Partitioning Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1460-1464.	1.1	26
63	Improving the bending toughness of Al-Si coated press-hardened steel by tailoring coating thickness. Scripta Materialia, 2021, 192, 19-25.	2.6	26
64	Critical role of Lüders banding in hydrogen embrittlement susceptibility of medium Mn steels. Scripta Materialia, 2021, 190, 32-37.	2.6	24
65	Revolutionizing car body manufacturing using a unified steel metallurgy concept. Science Advances, 2021, 7, eabk0176.	4.7	24
66	On the Mechanisms of Different Work-Hardening Stages in Twinning-Induced Plasticity Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 5080-5090.	1.1	23
67	Effect of carbon on strain-rate and temperature sensitivity of twinning-induced plasticity steels: Modeling and experiments. Acta Materialia, 2019, 165, 278-293.	3.8	23
68	Effect of ausforming temperature and strain on the bainitic transformation kinetics of a low carbon boron steel. Philosophical Magazine, 2015, 95, 1150-1163.	0.7	22
69	Simultaneous Increase of Both Strength and Ductility of Medium Mn Transformation-Induced Plasticity Steel by Vanadium Alloying. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1433-1438.	1.1	22
70	Revealing hydrogen-induced delayed fracture in ferrite-containing quenching and partitioning steels. Materialia, 2018, 4, 260-267.	1.3	22
71	Resetting the Austenite Stability in a Medium Mn Steel via Dislocation Engineering. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2971-2977.	1.1	22
72	Extraordinary Lüders-strain-rate in medium Mn steels. Materialia, 2019, 6, 100288.	1.3	21

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73	High-strength medium Mn quenching and partitioning steel with low yield ratio. Materials Science and Technology, 2019, 35, 2109-2114.	0.8	21
74	Enhancing yield stress and uniform elongation in an ultrathin packaging steel via controlling dislocation density. International Journal of Plasticity, 2022, 155, 103334.	4.1	21
75	Modelling steady state deformation of fcc metals by non-equilibrium thermodynamics. Materials Science and Technology, 2007, 23, 1105-1108.	0.8	20
76	Influence of co-existing medium Mn and dual phase steel microstructures on ductility and Lüders band formation. Acta Materialia, 2021, 221, 117418.	3.8	20
77	Temperature dependence of Lüders strain and its correlation with martensitic transformation in a medium Mn transformation-induced plasticity steel. Journal of Iron and Steel Research International, 2017, 24, 1073-1077.	1.4	19
78	Microstructural evolution of a nanotwinned steel under extremely high-strain-rate deformation. Acta Materialia, 2018, 149, 407-415.	3.8	19
79	Extra work hardening in room-temperature quenching and partitioning medium Mn steel enabled by intercritical annealing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 797, 140106.	2.6	19
80	Critical Assessment 15: Science of deformation and failure mechanisms in twinning induced plasticity steels. Materials Science and Technology, 2015, 31, 1265-1270.	0.8	18
81	Improving Tensile Properties of Room-Temperature Quenching and Partitioning Steel by Dislocation Engineering. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4021-4026.	1.1	18
82	Revealing the fatigue crack initiation mechanism of a TiB2-reinforced steel matrix composite. International Journal of Fatigue, 2020, 130, 105276.	2.8	18
83	A novel eutectic Fe-15Âwt.% Ti alloy with an ultrafine lamellar structure for high temperature applications. Intermetallics, 2013, 35, 41-44.	1.8	17
84	Predicting the stress–strain behaviour of carbon steels under hot working conditions: An irreversible thermodynamics model. Scripta Materialia, 2009, 61, 648-651.	2.6	16
85	Modelling the strength of ultrafine-grained and nanocrystalline fcc metals. Scripta Materialia, 2009, 61, 1113-1116.	2.6	16
86	Effect of Free Surface on the Stability of Individual Retained Austenite Grains in a Duplex Stainless Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4875-4881.	1.1	16
87	Revealing the interfacial plasticity and shear strength of a TiB2-strengthened high-modulus low-density steel. Journal of the Mechanics and Physics of Solids, 2018, 121, 313-327.	2.3	16
88	Revealing orientation-dependent martensitic transformation in a medium Mn steel by micropillar compression. International Journal of Plasticity, 2019, 123, 165-177.	4.1	16
89	Thermomechanical parametric studies on residual stresses in S355 and S690 welded H-sections. Journal of Constructional Steel Research, 2019, 160, 387-401.	1.7	16
90	Making composite steel higher strength and higher ductility via introducing carbon diffusion strategy. Materials Research Letters, 2021, 9, 391-397.	4.1	16

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91	Anti-pathogen stainless steel combating COVID-19. Chemical Engineering Journal, 2022, 433, 133783.	6.6	16
92	Evolution of dislocations and twins in high cycle fatigue of a twinning-induced plasticity steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 647, 249-255.	2.6	15
93	Growth Mechanism of Primary and Eutectic TiB2 Particles in a Hypereutectic Steel Matrix Composite. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 1981-1989.	1.1	15
94	Effect of boron on bainitic transformation kinetics after ausforming in low carbon steels. Journal of Materials Science and Technology, 2017, 33, 1494-1503.	5.6	15
95	The Role of Retained Austenite Stability on Low-Temperature Mechanical Behaviors of a Quenching and Partitioning Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5650-5655.	1.1	15
96	On the fatigue crack propagation mechanism of a TiB2-reinforced high-modulus steel. Composites Part B: Engineering, 2020, 190, 107960.	5.9	14
97	A dislocation-based flow rule with succinct power-law form suitable for crystal plasticity finite element simulations. International Journal of Plasticity, 2021, 138, 102921.	4.1	14
98	A unified dislocation-based model for ultrafine- and fine-grained face-centered cubic and body-centered cubic metals. Computational Materials Science, 2017, 131, 1-10.	1.4	13
99	Revealing the Fracture Mechanism of Twinningâ€Induced Plasticity Steels. Steel Research International, 2018, 89, 1700433.	1.0	13
100	Influences of particle fraction and characteristics on damage tolerance of TiB2-reinforced steel matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 823, 141736.	2.6	12
101	Abnormal relationship between Ms temperature and prior austenite grain size in Al-alloyed steels. Scripta Materialia, 2017, 134, 11-14.	2.6	11
102	Engineering Heterogeneous Multiphase Microstructure by Austenite Reverted Transformation Coupled with Ferrite Transformation. Jom, 2019, 71, 1322-1328.	0.9	11
103	A novel stainless steel with intensive silver nanoparticles showing superior antibacterial property. Materials Research Letters, 2021, 9, 270-277.	4.1	11
104	Machine learning assisted screening of non-rare-earth elements for Mg alloys with low stacking fault energy. Computational Materials Science, 2021, 196, 110544.	1.4	9
105	Comparing hydrogen embrittlement behaviors of two press hardening steels: 2ÂGPa vs. 1.5ÂGPa grade. Journal of Materials Science and Technology, 2022, 124, 109-115.	5.6	9
106	Edge dislocation dipole emission from a blunt crack tip and its morphological effects. Scripta Materialia, 2006, 54, 649-653.	2.6	8
107	Recrystallisation-assisted creep of an austenitic Fe-Ni alloy under low stresses after hot deformation. Acta Materialia, 2018, 153, 23-34.	3.8	8
108	Effect of Processing Parameters on Mechanical Properties of Deformed and Partitioned (D&P) Medium Mn Steels. Metals, 2021, 11, 356.	1.0	8

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109	Dislocation Source and Pile-up in a Twinning-induced Plasticity Steel at High-Cycle Fatigue. Acta Metallurgica Sinica (English Letters), 2021, 34, 169-173.	1.5	8
110	Understanding hydrogen embrittlement in press-hardened steel by coupling phase field and hydrogen diffusion modeling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 834, 142523.	2.6	8
111	Large strain burst induced by martensitic transformation in austenitic micropillars. Scripta Materialia, 2017, 137, 64-68.	2.6	7
112	Revealing heterogeneous C partitioning in a medium Mn steel by nanoindentation. Materials Science and Technology, 2017, 33, 552-558.	0.8	7
113	The Role of Plastic Strain on the Delayed Fracture Behavior of Twinning-Induced Plasticity Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1437-1447.	1.1	7
114	Carbon-Dislocation Interaction-Induced Abnormal Strain-Rate Sensitivity in Twinning-Induced Plasticity Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2570-2575.	1.1	7
115	Review on Hydrogen Embrittlement of Press-hardened Steels for Automotive Applications. Acta Metallurgica Sinica (English Letters), 2023, 36, 1123-1143.	1.5	7
116	Thermal instability of nanocrystalline Cu enables Cu-Cu direct bonding in interconnects at low temperature. Scripta Materialia, 2022, 220, 114900.	2.6	7
117	Modelling plastic deformation of metals over a wide range of strain rates using irreversible thermodynamics. IOP Conference Series: Materials Science and Engineering, 2009, 3, 012006.	0.3	6
118	Recrystallization induced plasticity in austenite and ferrite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 541, 196-198.	2.6	6
119	Martensitic Transformation in Micron-Sized Fcc Single Crystals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4731-4736.	1.1	6
120	Analytical solution for Coble creep in polycrystalline materials under biaxial loading. Mechanics of Materials, 2015, 91, 290-294.	1.7	6
121	Effects of Crystal Orientation on Deformation Twinning and Dislocation Slip in Single Crystal Micro-pillars of a Twinning-Induced Plasticity Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 5235-5242.	1.1	6
122	Recent developments and perspectives of advanced high-strength medium Mn steel: from material design to failure mechanisms. Materials Futures, 2022, 1, 032001.	3.1	6
123	Processing–Microstructure Relation of Deformed and Partitioned (D&P) Steels. Metals, 2019, 9, 695.	1.0	5
124	In-situ measurement of plastic strain in martensite matrix induced by austenite-to-martensite transformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 811, 141061.	2.6	5
125	Predicting the evolution of dislocation density following hot deformation. Philosophical Magazine Letters, 2011, 91, 387-393.	0.5	4
126	Damage Mechanisms of a TiB2-Reinforced Steel Matrix Composite for Lightweight Automotive Application. Metallurgical and Materials Transactions E, 2016, 3, 203-208.	0.5	3

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127	Improving Hydrogen Embrittlement Resistance of Hot-Stamped 1500 MPa Steel Parts That Have Undergone a Q&P Treatment by the Design of Retained Austenite and Martensite Matrix. Metals, 2020, 10, 1585.	1.0	3
128	TiB2-TiC Reinforced Martensitic Steel Fabricated by Conventional Solidification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2144-2148.	1.1	3
129	Phase transformation and carbon profile at the interface between Al-Si coating and steel substrate in a press-hardened steel. Materialia, 2021, 20, 101268.	1.3	3
130	Orientation-dependent superelasticity and fatigue of CuAlMn alloy under in situ micromechanical tensile characterization. Journal of the Mechanics and Physics of Solids, 2022, 160, 104787.	2.3	3
131	Modelling the strongest grain size in nanocrystalline FCC metals. Materials Letters, 2011, 65, 3128-3130.	1.3	2
132	Effect of Aluminum and Grain Size on the Fracture Behavior of Twinning-Induced Plasticity Steels. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2145-2151.	1.0	2
133	Rationalizing the Grain Size Dependence of Strength and Strain-Rate Sensitivity of Nanocrystalline fcc Metals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1943-1948.	1.1	2
134	Strain rate sensitivity of a 1.5ÂGPa nanotwinned steel. Journal of Iron and Steel Research International, 2021, 28, 1352-1356.	1.4	2
135	Martensite Enables the Formation of Complex Nanotwins in a Medium Mn Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 1960-1966.	1.1	1
136	Interfacial Strength Characterization in a High-Modulus Low-Density Steel-Based Fe-TiB2 Composite. Minerals, Metals and Materials Series, 2017, , 453-460.	0.3	1
137	Revealing the tempering embrittlement in a medium entropy alloy containing carbon atoms. AIP Advances, 2022, 12, 015304.	0.6	1
138	A nanometre-sized porous phase in iron–carbon–boron system. Materials Letters, 2010, 64, 2559-2561.	1.3	0
139	New Constitutive Analysis of Microstructural Evolution: Hot Compression of Gamma Iron. Materials Science Forum, 0, 706-709, 2284-2289.	0.3	0
140	Understanding Ceramic Particle-Stimulated Heterogeneous Recrystallization in a Medium Entropy Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 1156.	1.1	0