Seok-Jae Lee

List of Publications by Year
in descending order

90 papers	3,338 citations	172457 29 h-index	149698 56 g-index
91 all docs	91 docs citations	91 times ranked	1916 citing authors

#	Article	IF	Citations
1	Austenite stability of ultrafine-grained transformation-induced plasticity steel with Mn partitioning. Scripta Materialia, 2011, 65, 225-228.	5.2	321
2	On the origin of dynamic strain aging in twinning-induced plasticity steels. Acta Materialia, 2011, 59, 6809-6819.	7.9	292
3	Localized Deformation in Multiphase, Ultra-Fine-Grained 6 Pct Mn Transformation-Induced Plasticity Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3638-3651.	2.2	180
4	Effect of Al on the stacking fault energy of Feâ€"18Mnâ€"0.6C twinning-induced plasticity. Scripta Materialia, 2011, 65, 363-366.	5.2	175
5	Mn partitioning during the intercritical annealing of ultrafine-grained 6% Mn transformation-induced plasticity steel. Scripta Materialia, 2011, 64, 649-652.	5.2	174
6	Prediction of austenite grain growth during austenitization of low alloy steels. Materials & Design, 2008, 29, 1840-1844.	5.1	150
7	Reverse transformation mechanism of martensite to austenite in a metastable austenitic alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 515, 32-37.	5.6	107
8	Effect of austenite grain size on the transformation kinetics of upper and lower bainite in a low-alloy steel. Scripta Materialia, 2008, 59, 87-90.	5.2	103
9	Liquid-Metal-Induced Embrittlement of Zn-Coated Hot Stamping Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 5122-5127.	2.2	99
10	Microstructural and Dilatational Changes during Tempering and Tempering Kinetics in Martensitic Medium-Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 551-559.	2.2	89
11	Prediction of Martensite Start Temperature in Alloy Steels with Different Grain Sizes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3423-3427.	2.2	89
12	Work hardening behavior of ultrafine-grained Mn transformation-induced plasticity steel. Acta Materialia, 2011, 59, 7546-7553.	7.9	82
13	Finite element simulation of quench distortion in a low-alloy steel incorporating transformation kinetics. Acta Materialia, 2008, 56, 1482-1490.	7.9	81
14	Conversional model of transformation strain to phase fraction in low alloy steels. Acta Materialia, 2007, 55, 875-882.	7.9	76
15	Hydrogen Embrittlement of Hardened Low-carbon Sheet Steel. ISIJ International, 2010, 50, 294-301.	1.4	72
16	An Empirical Model for Carbon Diffusion in Austenite Incorporating Alloying Element Effects. ISIJ International, 2011, 51, 1903-1911.	1.4	67
17	Effect of micro-alloying elements on the stretch-flangeability of dual phase steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 536, 231-238.	5.6	67
18	Enhanced properties of nanostructured ZrO2â€"graphene composites rapidly sintered via high-frequency induction heating. Ceramics International, 2015, 41, 835-842.	4.8	64

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19	A Kinetics Model for Martensite Transformation in Plain Carbon and Low-Alloyed Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 422-427.	2.2	61
20	Quantitative analyses of ferrite lattice parameter and solute Nb content in low carbon microalloyed steels. Scripta Materialia, 2005, 52, 973-976.	5.2	60
21	Effect of nitrogen on the critical strain for dynamic strain aging in high-manganese twinning-induced plasticity steel. Scripta Materialia, 2011, 65, 528-531.	5.2	58
22	Effect of Cu addition on the mechanical behavior of austenitic twinning-induced plasticity steel. Scripta Materialia, 2011, 65, 1073-1076.	5.2	52
23	Martensite transformation of sub-micron retained austenite in ultra-fine grained manganese transformation-induced plasticity steel. International Journal of Materials Research, 2013, 104, 423-429.	0.3	51
24	Kinetics modeling of austenite decomposition for an end-quenched 1045 steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 3186-3194.	5.6	43
25	Prediction of Bainite Start Temperature in Alloy Steels with Different Grain Sizes. ISIJ International, 2014, 54, 997-999.	1.4	41
26	Microstructure of Low C Steel Isothermally Transformed in the M S to M f Temperature Range. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4967-4983.	2.2	40
27	Dissolution and Precipitation Kinetics of Nb(C,N) in Austenite of a Low-Carbon Nb-Microalloyed Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 560-568.	2.2	39
28	Carbon diffusivity in multi-component austenite. Scripta Materialia, 2011, 64, 805-808.	5.2	35
29	Effect of Ni addition on the mechanical behavior of quenching and partitioning (Q&P) steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 698, 183-190.	5.6	35
30	Recovering the ductility of medium-Mn steel by restoring the original microstructure. Scripta Materialia, 2021, 190, 16-21.	5.2	31
31	Microstructure and mechanical properties of spheroidized D6AC steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 585, 94-99.	5.6	29
32	Influence of Al on internal friction spectrum of Feâ€“18Mnâ€“0.6C twinning-induced plasticity steel. Scripta Materialia, 2012, 66, 729-732.	5.2	25
33	Effects of Sn content and hot deformation on microstructure and mechanical properties of binary high Sn content Cuâ€“Sn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 796, 140054.	5.6	25
34	Effects of Applied Stresses on Martensite Transformation in AISI4340 Steel. Journal of Iron and Steel Research International, 2007, 14, 63-67.	2.8	22
35	Comparison of two finite element simulation codes used to model the carburizing of steel. Computational Materials Science, 2013, 68, 47-54.	3.0	22
36	An On-Heating Dilation Conversional Model for Austenite Formation in Hypoeutectoid Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 2224-2235.	2.2	21

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37	Latent heat of martensitic transformation in a medium-carbon low-alloy steel. Scripta Materialia, 2009, 60, 1016-1019.	5.2	20
38	Effect of Ti Additions on Microâ€Alloyed Nb TRIP Steel. Steel Research International, 2011, 82, 857-865.	1.8	20
39	A Conversional Model for Austenite Formation in Hypereutectoid Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 3027-3031.	2.2	19
40	Prediction of Tempered Martensite Hardness Incorporating the Composition-Dependent Tempering Parameter in Low Alloy Steels. Materials Transactions, 2014, 55, 1069-1072.	1.2	18
41	Combined data-driven model for the prediction of thermal properties of Ni-based amorphous alloys. Journal of Materials Research and Technology, 2022, 16, 129-138.	5.8	17
42	Application of the Quenching and Partitioning (Q&P) Process to D6AC Steel. ISIJ International, 2016, 56, 2057-2061.	1.4	16
43	Reply to comments on â€œAustenite stability of ultrafine-grained transformation-induced plasticity steel with Mn partitioningâ€• Scripta Materialia, 2012, 66, 832-833.	5.2	14
44	Inverse Design of Fe-Based Bulk Metallic Glasses Using Machine Learning. Metals, 2021, 11, 729.	2.3	14
45	A Quantitative Investigation of Cementite Dissolution Kinetics for Continuous Heating of Hypereutectoid Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3917-3923.	2.2	13
46	Microstructural and Mechanical Characteristics of Novel 6% Cr Cold-Work Tool Steel. Metals, 2017, 7, 12.	2.3	13
47	Application of Machine Learning Algorithms and SHAP for Prediction and Feature Analysis of Tempered Martensite Hardness in Low-Alloy Steels. Metals, 2021, 11, 1159.	2.3	13
48	Thermodynamic Formula for the Acm Temperature of Low Alloy Steels. ISIJ International, 2007, 47, 769-771.	1.4	11
49	Predictive Model for Austenite Grain Growth during Reheating of Alloy Steels. ISIJ International, 2013, 53, 1902-1904.	1.4	11
50	Mechanical Properties of H-charged Fe^|^ndash;18Mn^|^ndash;1.5Al^|^ndash;0.6C TWIP Steel. ISIJ International, 2012, 52, 1670-1677.	1.4	10
51	Effect of Heating Rate on Microstructure and Mechanical Properties in Al 7055. Metals and Materials International, 2021, 27, 449-455.	3.4	10
52	Austenite stability and mechanical properties of nanocrystalline Feâ€"Mn alloy fabricated by spark plasma sintering with variable Mn content. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 725, 382-388.	5.6	8
53	Prediction of Martensite Volume Fraction in Feâ€"Crâ€"Ni Alloys. ISIJ International, 2011, 51, 169-171.	1.4	8
54	Improvement of Mechanical Properties of Spheroidized 1045 Steel by Induction Heat Treatment. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 1761-1769.	2.2	7

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55	Finite Element Simulation and Optimization of Gas-Quenching Process for Tool Steels. Journal of Materials Engineering and Performance, 2018, 27, 4355-4363.	2.5	7
56	Effect of relative density on microstructure and mechanical properties of Fe-12Mn-0.2C alloy fabricated by powder metallurgy. Powder Technology, 2016, 298, 106-111.	4.2	6
57	Rapid consolidation of nanostuctured WC-FeAl 3 by pulsed current activated heating and its mechanical properties. International Journal of Refractory Metals and Hard Materials, 2017, 65, 69-75.	3.8	6
58	Model of Precipitation Hardening of Al â€" Mg â€" Si Alloys Under Aging. Metal Science and Heat Treatment, 2019, 61, 455-460.	0.6	6
59	Experimental Investigation on Tensile Properties and Yield Strength Modeling of T5 Heat-Treated Counter Pressure Cast A356 Aluminum Alloys. Metals, 2021, 11, 1192.	2.3	6
60	Probability-Dependent Precipitation Strengthening Effect of Anisotropic Precipitate in Al-Mg-Si Alloy Produced by T6 Heat Treatment. Journal of Korean Institute of Metals and Materials, 2021, 59, 515-523.	1.0	6
61	Conversion Model for the Martensitic Transformation of Banded Austenite in a Ferrite Matrix. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4921-4925.	2.2	5
62	Improvement of Anisotropic Mechanical Behavior by Sulfide Control in Quenched and Tempered 4340 Steel. Journal of Materials Engineering and Performance, 2015, 24, 2658-2664.	2.5	5
63	Microstructure and Mechanical Properties of Highly Alloyed FeCrMoVC Steel Fabricated by Spark Plasma Sintering. Metals and Materials International, 2018, 24, 597-603.	3.4	5
64	New Equation for Prediction of Martensite Start Temperature in High Carbon Ferrous Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 450-454.	2.2	5
65	Prediction of Tempcore Rebar Strength Using a Thermomechanical Simulator with a Designed Hollow Specimen. Steel Research International, 2020, 91, 1900520.	1.8	5
66	Improved Thermodynamic Formula for Austenite/(Austenite+Cementite) Phase Boundary in Low Alloy Steels. ISIJ International, 2014, 54, 1453-1455.	1.4	5
67	Fabrication of long tubular parts made of tungsten-heavy alloys by inductive bonding of multiple tubes. International Journal of Refractory Metals and Hard Materials, 2019, 85, 105058.	3.8	4
68	Constitutive Model of Triple-Step-Aged Alâ€"Mgâ€"Si Alloy Incorporating Precipitation Kinetics. Metals and Materials International, 2021, 27, 4577-4585.	3.4	4
69	Simultaneous Synthesis and Sintering of a Nanocrystalline AlCr2-Al2O3 Composite by Rapid Heating and Its Mechanical Properties. Journal of Korean Institute of Metals and Materials, 2016, 54, 409-414.	1.0	4
70	Effect of Milling Time and Addition of PCA on Austenite Stability of Fe-7%Mn Alloy. Journal of Korean Powder Metallurgy Institute, 2018, 25, 126-131.	0.3	4
71	Fabrication of Fe-Cr-Mo powder metallurgy steel via a mechanical-alloying process. Metals and Materials International, 2015, 21, 1031-1037.	3.4	3
72	Effect of annealing condition on the crystallinity of VO2 (Î²) thin-films fabricated by a solution-based process. Japanese Journal of Applied Physics, 2019, 58, 105501.	1.5	3

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73	A study on the change of VO2 thin-film coating behavior according to the droplet size using ultrasonic spray. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	3
74	Design of low-Ni martensitic steels with novel cryogenic impact toughness exceeding 190ÂJ. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 142959.	5.6	3
75	Grain Size Dependence of Austenite Decomposition in Air-Cooled 16MnCr5 Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2455-2460.	2.2	2
76	Effect of Cu Addition on Soft Magnetic Properties of Fe–Zr–Si Amorphous Alloy. Materials Transactions, 2014, 55, 1517-1519.	1.2	2
77	Correlation Between Crystal Structure Change and Transformation Strain for Multiphase Transformations. Jom, 2016, 68, 198-202.	1.9	2
78	Computational approach to increasing the packing fraction of amorphous powders. Powder Metallurgy, 2021, 64, 185-191.	1.7	2
79	Mechanical properties and microstructural characteristics of non-equiatomic high entropy alloy FeMnCoCrC prepared by powder metallurgy. Powder Metallurgy, 2021, 64, 180-184.	1.7	2
80	A Study on the Coating Characteristics of VO₂ Nanoparticle Thin Film with Various Conditions of Ultrasonic Spray Coater. Journal of Nanoscience and Nanotechnology, 2021, 21, 3010-3015.	0.9	2
81	Effects of Copper on the Hardenability of a Medium-Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3572-3576.	2.2	1
82	Density Dependency of Tempered Martensite Hardness in Sintered Carbon Steel. Materials Transactions, 2015, 56, 1174-1178.	1.2	1
83	Effects of Milling Time and Process Control Agent on the Austenite Stability of Nanocrystalline Feâ€“10%Mn Alloy Obtained via Spark Plasma Sintering. Materials Transactions, 2018, 59, 1206-1209.	1.2	1
84	Manufacturing Optimization of VO2 Nanoink for Thermochromic Smart Window Based on Solution Process. Nanoscience and Nanotechnology Letters, 2018, 10, 1267-1272.	0.4	1
85	Austenite Stability of Nanocrystalline FeMnNiC Alloy. Journal of Korean Powder Metallurgy Institute, 2019, 26, 389-394.	0.3	1
86	Prediction of nitrogen diffusivity in Î±-ferrite based on thermodynamics. Journal of Iron and Steel Research International, 2015, 22, 743-745.	2.8	0
87	Aging parameter for evaluating age hardening in Al alloys. Materials Research Express, 2017, 4, 076509.	1.6	0
88	A microstructure-based constitutive model for high-alloyed FeCrMoVC. Materials Research Express, 2017, 4, 116504.	1.6	0
89	Effects of Ti and Nb on the Grain Refinement and Mechanical Properties of AISI 4145 Steel. Transactions of the Indian Institute of Metals, 2018, 71, 3037-3043.	1.5	0
90	Plastic Deformation Behavior of Sintered Fe-Based Alloys for Light-Weight Automotive Components. Applied Science and Convergence Technology, 2014, 23, 151-159.	0.9	0