Dong-Woo Suh

List of Publications by Year
in descending order

112 papers	4,391 citations	117453 34 h-index	118652 62 g-index
113 all docs	113 docs citations	113 times ranked	2496 citing authors

#	Article	IF	Citations
1	Hydrogen Trapping Characteristics and Mechanical Degradation in a Duplex Stainless Steel. Metals and Materials International, 2023, 29, 126-134.	1.8	10
2	Microstructure and tensile properties of chemically heterogeneous steel consisting of martensite and austenite. Acta Materialia, 2022, 223, 117506.	3.8	24
3	Prediction of Retained Austenite Fraction in Quenching-and-Partitioning (Q&P) Steels Using the Gibbs Energy Balance Approach. Metals and Materials International, 2022, 28, 2059-2067.	1.8	3
4	Hydrogen Behavior in Ti-Added Reduced Activation Ferritic-Martensitic Steels. Metals and Materials International, 2021, 27, 425-435.	1.8	13
5	Ti-bearing lightweight steel with large high temperature ductility via thermally stable multi-phase microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 808, 140954.	2.6	7
6	Influence of Microstructure Constituents on the Hydrogenâ€Induced Mechanical Degradation in Ultraâ€High Strength Sheet Steels. Metals and Materials International, 2021, 27, 3959-3967.	1.8	13
7	Hardness and Transverse Rupture Strength of TiC-Reinforced SKD11 Steel Matrix Composite. Metals and Materials International, 2020, 26, 302-309.	1.8	4
8	Role of grain size on deformation microstructures and stretch-flangeability of TWIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 773, 138861.	2.6	15
9	Isothermal transformation of austenite to ferrite and precipitation behavior in 9Cr-1.5Mo-1.25Co-0.1C-VNb heat-resistant steel. Materials Characterization, 2020, 170, 110677.	1.9	8
10	A new class of lightweight, stainless steels with ultra-high strength and large ductility. Scientific Reports, 2020, 10, 12140.	1.6	46
11	Quenching and partitioning (Q&P) processed medium Mn steel starting from heterogeneous microstructure. Materialia, 2020, 12, 100757.	1.3	11
12	Influence of initial microstructures on intercritical annealing behaviour in a medium Mn steel. Materials Science and Technology, 2019, 35, 2092-2100.	0.8	13
13	Influence of Initial Pearlite Morphology on the Microstructure Evolution During Heat Treatment of 1.0Câ€“1.5Cr Steel. Metals and Materials International, 2019, 25, 9-17.	1.8	9
14	Partially-recrystallized ferrite grains and multiple plasticity enhancing mechanisms in a medium Mn steel. Materials Characterization, 2019, 155, 109812.	1.9	9
15	Screw dislocation driven martensitic nucleation: A step toward consilience of deformation scenario in fcc materials. Acta Materialia, 2019, 174, 342-350.	3.8	20
16	Austenite morphology and resistance to hydrogen embrittlement in medium Mn transformation-induced plasticity steel. Scripta Materialia, 2019, 169, 52-56.	2.6	35
17	Design of Online Spheroidization Process for 1.0C-1.5Cr Bearing Steel and Microstructure Analysis. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1782-1794.	1.1	8
18	Effects of Molybdenum Addition on Hydrogen Desorption of TiC Precipitation-Hardened Steel. Metals and Materials International, 2018, 24, 532-536.	1.8	17

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19	Tempering Behavior of TiC-Reinforced SKD11 Steel Matrix Composite. Metals and Materials International, 2018, 24, 644-651.	1.8	10
20	Microstructure and Mechanical Properties of Austempered Medium-Carbon Spring Steel. Metals and Materials International, 2018, 24, 693-701.	1.8	10
21	Tensile test criterion of transformation-induced elasticity and plasticity alloys for load-displacement measurement. Journal of Alloys and Compounds, 2017, 711, 305-311.	2.8	0
22	Hydrogen Permeation in Cold-RolledÂHigh-Mn Twinning-Induced Plasticity Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5211-5216.	1.1	3
23	Influence of Heating Rate on Annealing and Reverse Transformation Behavior of TRIP Steels Having Martensite as Starting Microstructure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5217-5222.	1.1	5
24	Medium Mn transformation-induced plasticity steels: Recent progress and challenges. Scripta Materialia, 2017, 126, 63-67.	2.6	257
25	Atomistic investigations of Î²-carbide precipitation in austenitic Fe-Mn-Al-C lightweight steels and the effect of Mo addition. Scripta Materialia, 2017, 127, 97-101.	2.6	80
26	Numerical modelling of moving interfaces under local equilibrium conditions. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2017, 59, 164-170.	0.7	2
27	Influence of the Initial Microstructure on the Heat Treatment Response and Tensile Properties of TRIP-Assisted Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5259-5265.	1.1	8
28	Heat treatment response of TiC-reinforced steel matrix composite. Metals and Materials International, 2016, 22, 935-941.	1.8	10
29	Influence of the Initial Microstructure on the Reverse Transformation Kinetics and Microstructural Evolution in Transformation-Induced Plasticityâ€“Assisted Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5352-5361.	1.1	14
30	Non-isothermal kinetics model to predict accurate phase transformation and hardness of 22MnB5 boron steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 67-73.	2.6	40
31	Observation of Micro-scale Surface Morphology with Microtexture Development During Plane Strain Tensile Deformation in AZ31 Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 12-17.	1.1	1
32	Cracks in Martensite Plates as Hydrogen Traps in a Bearing Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 665-673.	1.1	14
33	Precipitation sequence and its effect on age hardening of alumina-forming austenitic stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 645, 72-81.	2.6	38
34	Variant selection during mechanically induced martensitic transformation of metastable austenite by nanoindentation. Scripta Materialia, 2015, 104, 13-16.	2.6	32
35	Is low phosphorus content in steel a product requirement?. Ironmaking and Steelmaking, 2015, 42, 259-267.	1.1	19
36	Underlying structure of bulky oxide nodule on alumina-forming austenitic stainless steel. Scripta Materialia, 2015, 102, 63-66.	2.6	7

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37	Ausforming of medium carbon steel. Materials Science and Technology, 2015, 31, 436-442.	0.8	17
38	Pearlite growth rate in Feâ€“C and Feâ€“Mnâ€“C steels. Materials Science and Technology, 2015, 31, 487-493.	0.8	26
39	Transformation plasticity in boron-bearing low carbon steel. Metals and Materials International, 2015, 21, 799-804.	1.8	4
40	Stress development and shape change during press-hardening process using phase-transformation-based finite element analysis. International Journal of Plasticity, 2015, 73, 142-170.	4.1	19
41	Stability of stainless-steel nanoparticle and water mixtures. Powder Technology, 2015, 272, 34-44.	2.1	41
42	Dissolution Behaviour of NbC during Slab Reheating. ISIJ International, 2014, 54, 1677-1681.	0.6	21
43	Effect of Second Phase on the Deformation and Fracture Behavior of Multiphase Low-Density Steels. Jom, 2014, 66, 1837-1844.	0.9	14
44	Fabrication of an ultrafine-grained structure by a compositional pinning technique. Acta Materialia, 2014, 77, 236-247.	3.8	26
45	Segregation of phosphorus to ferrite grain boundaries during transformation in an Feâ€“P alloy. International Journal of Materials Research, 2014, 105, 1166-1172.	0.1	8
46	Hydrogen and aluminium in high-manganese twinning-induced plasticity steel. Scripta Materialia, 2014, 80, 9-12.	2.6	38
47	Interaction of aluminium with hydrogen in twinning-induced plasticity steel. Scripta Materialia, 2014, 87, 9-12.	2.6	33
48	Effect of copper addition on the characteristics of high-carbon and high-chromium steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 614, 36-44.	2.6	17
49	Effect of constituent phase on mechanical properties of 9Crâ€“1WVTa reduced activation ferriticâ€“martensitic steels. Journal of Nuclear Materials, 2014, 455, 421-425.	1.3	16
50	Critical Assessment 2: Hydrogen induced fracture in austenitic, high-manganese TWIP steel. Materials Science and Technology, 2014, 30, 1131-1134.	0.8	12
51	Austenite in Transformation-Induced Plasticity Steel Subjected to Multiple Isothermal Heat Treatments. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4201-4209.	1.1	22
52	Toughness anisotropy in X70 and X80 linepipe steels. Materials Science and Technology, 2014, 30, 439-446.	0.8	12
53	Thermo-mechanical-metallurgical modeling for hot-press forming in consideration of the prior austenite deformation effect. International Journal of Plasticity, 2014, 58, 154-183.	4.1	54
54	Feâ€“Alâ€“Mnâ€“C lightweight structural alloys: a review on the microstructures and mechanical properties. Science and Technology of Advanced Materials, 2013, 14, 014205.	2.8	342

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55	Kinetic transition during the growth of proeutectoid ferrite in Fe-C-Mn-Si quaternary steel. Metals and Materials International, 2013, 19, 153-158.	1.8	8
56	Theory for hydrogen desorption in ferritic steel. Computational Materials Science, 2013, 79, 36-44.	1.4	76
57	Effects of Mn, Si and Cr addition on the dissolution and coarsening of pearlitic cementite during intercritical austenitization in Fe-1mass%C alloy. Materials Characterization, 2013, 81, 56-67.	1.9	62
58	Effect of nickel content on the neutron irradiation embrittlement of Ni-Mo-Cr steels. Metals and Materials International, 2013, 19, 1203-1208.	1.8	3
59	Method for measuring nanoscale local strain in a dual phase steel using digital image correlation with nanodot patterns. Scripta Materialia, 2013, 68, 245-248.	2.6	61
60	Effect of hydrogen on the surface energy of ferrite and austenite. Corrosion Science, 2013, 77, 379-384.	3.0	46
61	Estimation of phase fraction in dual phase steel using microscopic characterizations and dilatometric analysis. Materials Characterization, 2013, 84, 205-215.	1.9	30
62	Austenite stability and heterogeneous deformation in fine-grained transformation-induced plasticity-assisted steel. Scripta Materialia, 2013, 68, 933-936.	2.6	91
63	Solubility of carbon in tetragonal ferrite in equilibrium with austenite. Scripta Materialia, 2013, 68, 195-198.	2.6	81
64	Modelling coarsening behaviour of TiC precipitates in high strength, low alloy steels. Materials Science and Technology, 2013, 29, 1074-1079.	0.8	22
65	Interphase precipitation in Tiâ€“Nb and Tiâ€“Nbâ€“Mo bearing steel. Materials Science and Technology, 2013, 29, 309-313.	0.8	81
66	Effect of aluminium on hydrogen-induced fracture behaviour in austenitic Feâ€“Mnâ€“C steel. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120458.	1.0	66
67	Mechanical Anisotropy in Steels for Pipelines. ISIJ International, 2013, 53, 1305-1314.	0.6	66
68	Influence of Mo and Cr Contents on Hardenability of Low-Carbon Boron Steels. Korean Journal of Materials Research, 2013, 23, 555~561-555~561.	0.1	2
69	Oxidation of silicon containing steel. Ironmaking and Steelmaking, 2012, 39, 599-604.	1.1	21
70	Retention of Î´-ferrite in aluminium-alloyed TRIP-assisted steels. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 2904-2914.	1.0	16
71	Spot weldability of TRIP assisted steels with high carbon and aluminium contents. Science and Technology of Welding and Joining, 2012, 17, 92-98.	1.5	33
72	Electrochemical hydrogen permeation measurement through TRIP steel under loading condition of phase transition. Electrochemistry Communications, 2012, 24, 112-115.	2.3	24

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73	Critical assessment: Martensite-start temperature for the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si20.gif" display="inline" overflow="scroll"><mml:mi>Î³</mml:mi><mml:mo>â†’</mml:mo><mml:mi>Îµ</mml:mi></mml:math> transformation. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2012, 36, 16-22.	0.7	55
74	Experiments to separate the effect of texture on anisotropy of pipeline steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 556, 601-606.	2.6	60
75	More Complete Theory for the Calculation of the Martensiteâ€“Start Temperature in Steels. ISIJ International, 2012, 52, 164-166.	0.6	22
76	Influence of Silicon in Low Density Fe-C-Mn-Al Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1731-1735.	1.1	53
77	Stability of (Ti, M)C (M = Nb, V, Mo and W) carbide in steels using first-principles calculations. Acta Materialia, 2012, 60, 208-217.	3.8	301
78	Effect of deformation on hydrogen trapping and effusion in TRIP-assisted steel. Acta Materialia, 2012, 60, 4085-4092.	3.8	126
79	Analysis of Transformation Plasticity in Steel Using a Finite Element Method Coupled with a Phase Field Model. PLoS ONE, 2012, 7, e35987.	1.1	18
80	Austenitizing temperature and hardenability of low-carbon boron steels. Scripta Materialia, 2011, 64, 1118-1120.	2.6	86
81	Dilatometric analysis of cementite dissolution in hypereutectoid steels containing Cr. Scripta Materialia, 2011, 65, 245-248.	2.6	49
82	Finite-element analysis of dimensional non-isotropy during phase transformation in microstructurally banded steel. Scripta Materialia, 2011, 65, 569-572.	2.6	6
83	A Finite Element Modeling for Dilatometric Nonisotropy in Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2094-2106.	1.1	9
84	Influence of Al on the Microstructural Evolution and Mechanical Behavior of Low-Carbon, Manganese Transformation-Induced-Plasticity Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 397-408.	1.1	235
85	Influence of Al on Microstructure and Mechanical Behavior of Cr-Containing Transformation-Induced Plasticity Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 3276-3281.	1.1	11
86	Dual orientation and variant selection during diffusional transformation of austenite to allotriomorphic ferrite. Journal of Materials Science, 2010, 45, 4126-4132.	1.7	16
87	Strain partitioning and mechanical stability of retained austenite. Scripta Materialia, 2010, 63, 297-299.	2.6	180
88	Microstructure and Mechanical Behaviors of 0.1C-13Mn Metastable Austenitic Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 264-268.	1.1	20
89	Effects of annealing conditions on microstructure and mechanical properties of low carbon, manganese transformation-induced plasticity steel. Metals and Materials International, 2009, 15, 909-916.	1.8	71
90	Influence of Cr and Ni on Microstructural Evolution during Heat Treatment of Low-Carbon Transformation Induced Plasticity Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2015-2019.	1.1	11

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91	A microstructure-based analysis for transformation induced plasticity and mechanically induced martensitic transformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 485, 224-233.	2.6	39
92	Dilatometric Analysis of Austenite Formation during Intercritical Annealing. Metals and Materials International, 2008, 14, 275-282.	1.8	23
93	Diffusion-controlled recrystallization and grain growth-induced plasticity of steel under externally applied stress. Philosophical Magazine, 2008, 88, 1811-1824.	0.7	17
94	Effect of molybdenum and chromium on hardenability of low-carbon boron-added steels. Metals and Materials International, 2008, 14, 667-672.	1.8	10
95	Plastic Strain due to Isothermal Transformation from Austenite to Ferrite in IF and Low Carbon Steels. Materials Transactions, 2007, 48, 882-885.	0.4	5
96	Dilatometric analysis of austenite decomposition considering the effect of non-isotropic volume change. Acta Materialia, 2007, 55, 2659-2669.	3.8	57
97	Influence of partial replacement of Si by Al on the change of phase fraction during heat treatment of TRIP steels. Scripta Materialia, 2007, 57, 1097-1100.	2.6	86
98	Effects of phosphorous addition on mechanical properties and retained austenite stability of 0.15Câ˜'1.5Mnâ˜'1.5Al TRIP-aided cold rolled steels. Metals and Materials International, 2007, 13, 13-19.	1.8	40
99	Dilatometric Analysis of Phase Fraction during Austenite Decomposition into Banded Microstructure in Low-Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2963-2973.	1.1	20
100	Calculation of Transformation Plasticity during Coherent Transformation of Steel. ISIJ International, 2006, 46, 341-343.	0.6	6
101	Variant Selection in Mechanically-induced Martensitic Transformation of Metastable Austenitic Steel. ISIJ International, 2005, 45, 1217-1219.	0.6	34
102	Limit of ferrite grain refinement by severe plastic deformation of austenite. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1057-1059.	1.1	4
103	Effect of initial grain size of austenite on hot-deformed structure of Ni-30Fe alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 3399-3408.	1.1	12
104	Microstructural evolution of Alâ€"Znâ€"Mgâ€"Cuâ€"(Sc) alloy during hot extrusion and heat treatments. Journal of Materials Processing Technology, 2004, 155-156, 1330-1336.	3.1	48
105	Effects of pre-treatment conditions on warm hydroformability of 7075 aluminum tubes. Journal of Materials Processing Technology, 2004, 155-156, 1337-1343.	3.1	31
106	A model for transformation plasticity during bainite transformation of steel under external stress. Acta Materialia, 2003, 51, 4907-4917.	3.8	65
107	Orientation Distribution of Proeutectoid Ferrite Nucleated at Prior Austenite Grain Boundaries in Vanadium-added Steel.. ISIJ International, 2002, 42, 1321-1323.	0.6	19
108	Dynamic Restoration Process of Ni-30Fe Alloy during Hot Deformation.. ISIJ International, 2002, 42, 432-439.	0.6	21

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109	Evaluation of Dislocation Density from the Flow Curves of Hot Deformed Austenite.. ISIJ International, 2002, 42, 564-566.	0.6	12
110	Serration of Grain Boundary in Ni-300Fe Alloy through High Temperature Deformation.. ISIJ International, 2002, 42, 1026-1032.	0.6	12
111	Evaluation of the deviation angle of ferrite from the Kudjumovâ€“Sachs relationship in a low carbon steel by EBSD. Scripta Materialia, 2002, 46, 375-378.	2.6	31
112	FEM Modeling of Flow Curves for Ferrite/Pearlite Two-Phase Steels.. ISIJ International, 2001, 41, 782-787.	0.6	19