

Leo Pentti Karjalainen

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91 papers	1,528 citations	23 h-index	35 g-index
94 ext. papers	1,709 ext. citations	2.3 avg, IF	4.79 L-index

#	Paper	IF	Citations
91	Fatigue behavior of high-Mn TWIP steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 517, 68-77	5.3	112
90	Softening and Flow Stress Behaviour of Nb Microalloyed Steels during Hot Rolling Simulation.. <i>ISIJ International</i> , 1995 , 35, 1523-1531	1.7	68
89	High-cycle Fatigue behavior of ultrafine-grained austenitic stainless and TWIP steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 5715-5722	5.3	67
88	Crystallographic Analysis of Martensite in 0.2C-2.0Mn-1.5Si-0.6Cr Steel using EBSD. <i>Journal of Materials Science and Technology</i> , 2011 , 27, 920-930	9.1	65
87	Electrochemical corrosion behaviour of a novel submicron-grained austenitic stainless steel in an acidic NaCl solution. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 431, 211-217	5.3	64
86	Characteristics of Static and Metadynamic Recrystallization and Strain Accumulation in Hot-deformed Austenite as Revealed by the Stress Relaxation Method.. <i>ISIJ International</i> , 1996 , 36, 729-736	1.7	64
85	Effect of Austenite Pancaking on the Microstructure, Texture, and Bendability of an Ultrahigh-Strength Strip Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 1273-1283	2.3	50
84	On Various Aspects of Decomposition of Austenite in a High-Silicon Steel During Quenching and Partitioning. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 1247-1257	2.3	49
83	Hall-Petch Relationship of a TWIP Steel. <i>Key Engineering Materials</i> , 2007 , 423, 147-152	0.4	48
82	Fatigue Behavior of Four High-Mn Twinning Induced Plasticity Effect Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2010 , 41, 1102-1108	2.3	44
81	Effect of grain size on fatigue behavior of Type 301LN stainless steel. <i>International Journal of Fatigue</i> , 2014 , 65, 93-98	5	42
80	Processing and Properties of Reversion-Treated Austenitic Stainless Steels. <i>Metals</i> , 2020 , 10, 281	2.3	37
79	High Temperature Flow Stress and Recrystallization Behavior of High-Mn TWIP Steels. <i>ISIJ International</i> , 2007 , 47, 907-912	1.7	36
78	Deformation Mechanisms in High-Al Bearing High-Mn TWIP Steels in Hot Compression and in Tension at Low Temperatures. <i>Materials Science Forum</i> , 2007 , 550, 217-222	0.4	36
77	Optimizing continuous annealing of interstitial-free steels for improving deep drawability. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2001 , 32, 1989-1995	2.3	35
76	Phase transition revealed by Raman spectroscopy in screen-printed lead zirconate titanate thick films. <i>Journal of Applied Physics</i> , 1994 , 76, 4294-4300	2.5	35
75	Crystallographic Analysis of Isothermally Transformed Bainite in 0.2C-2.0Mn-1.5Si-0.6Cr Steel Using EBSD. <i>Journal of Materials Science and Technology</i> , 2013 , 29, 359-366	9.1	32

74	Austenite stability in reversion-treated structures of a 301LN steel under tensile loading. <i>Materials Characterization</i> , 2017 , 127, 12-26	3.9	30
73	Some aspects of the cyclic behavior of twinning-induced plasticity steels. <i>Scripta Materialia</i> , 2012 , 66, 1034-1039	5.6	30
72	Fatigue behavior of ultrafine-grained and coarse-grained CrNi austenitic stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 3890-3896	5.3	30
71	Influence of subsurface microstructure on the bendability of ultrahigh-strength strip steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 654, 151-160	5.3	25
70	High temperature deformation behavior of two as-cast high-manganese TWIP steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 582, 15-21	5.3	24
69	Kinetics of Recrystallization and Grain Growth of Cold Rolled TWIP Steel. <i>Advanced Materials Research</i> , 2010 , 89-91, 153-158	0.5	24
68	Modeling of the high temperature flow behavior of stabilized 12% Cr ferritic stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 607, 44-52	5.3	23
67	Processing of Submicron Grained Microstructures and Enhanced Mechanical Properties by Cold-Rolling and Reversion Annealing of Metastable Austenitic Stainless Steels. <i>Materials Science Forum</i> , 2007 , 539-543, 4875-4880	0.4	22
66	Raman spectra in laser ablated lead zirconate titanate thin films near the morphotropic phase boundary. <i>Journal of Applied Physics</i> , 1995 , 77, 2691-2696	2.5	20
65	Effect of Silicon and Aluminium on Austenite Static Recrystallization Kinetics in High-strength TRIP-aided Steels. <i>ISIJ International</i> , 2012 , 52, 471-476	1.7	18
64	Reversed Microstructures and Tensile Properties after Various Cold Rolling Reductions in AISI 301LN Steel. <i>Metals</i> , 2018 , 8, 109	2.3	17
63	Effect of silicon on the hot deformation behavior of microalloyed TWIP-type stainless steels. <i>Materials and Design</i> , 2018 , 154, 117-129	8.1	17
62	Physically based modeling and characterization of hot deformation behavior of twinning-induced plasticity steels bearing vanadium and niobium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 703, 85-96	5.3	16
61	Recrystallization Kinetics of Microalloyed Steels Determined by Two Mechanical Testing Techniques. <i>Materials Science Forum</i> , 1998 , 284-286, 119-126	0.4	16
60	Stability of grain-refined reversed structures in a 301LN austenitic stainless steel under cyclic loading. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 703, 280-292	5.3	15
59	Effect of Nb Microalloying on Reversion and Grain Growth in a High-Mn 204Cu Austenitic Stainless Steel. <i>ISIJ International</i> , 2015 , 55, 2217-2224	1.7	15
58	Evaluation of the Behaviour and Properties of a High-Si Steel Processed Using Direct Quenching and Partitioning. <i>Materials Science Forum</i> , 2012 , 706-709, 2824-2829	0.4	14
57	Direct-Quenched Structural Steels 2016 , 1109-1125		14

56	Influence of Critical Carbide Dissolution Temperature during Intercritical Annealing on Hardenability of Austenite and Mechanical Properties of DP-980 Steels. <i>ISIJ International</i> , 2011 , 51, 969-974	1.7	13
55	Fatigue Properties of Steels with Ultrasonic Attrition Treated Surface Layers. <i>Materials Science Forum</i> , 2008 , 604-605, 239-248	0.4	13
54	High-Temperature Flow Stress and Recrystallization Characteristics of Al-Bearing Microalloyed TWIP Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 5329-5342	2.3	12
53	Effects of Carbon Content and Cooling Path on the Microstructure and Properties of TRIP-aided Ultra-High Strength Steels. <i>ISIJ International</i> , 2013 , 53, 337-346	1.7	12
52	Validation of the New Regression Model for the Static Recrystallisation of Hot-Deformed Austenite in Special Steels. <i>Materials Science Forum</i> , 2004 , 467-470, 335-340	0.4	12
51	Improving the yield strength of an antibacterial 304Cu austenitic stainless steel by the reversion treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 793, 139885	5.3	11
50	Effects of Cyclic Pre-straining on Mechanical Properties of an Austenitic Microalloyed High-Mn Twinning-induced Plasticity Steel. <i>Procedia Engineering</i> , 2014 , 74, 47-52		10
49	Designing a Novel DQ&P Process through Physical Simulation Studies. <i>Materials Science Forum</i> , 2013 , 762, 83-88	0.4	10
48	Precipitation of Si and its Influence on Mechanical Properties of Type 441 Stainless Steel. <i>Advanced Materials Research</i> , 2011 , 409, 690-695	0.5	10
47	LCF Behaviour of Ultrafine Grained 301LN Stainless Steel. <i>Procedia Engineering</i> , 2014 , 74, 147-150		9
46	Microstructural and Texture Development during Multi-Pass Hot Deformation of a Stabilized High-Chromium Ferritic Stainless Steel. <i>ISIJ International</i> , 2014 , 54, 1406-1415	1.7	9
45	Reobservations of ferrite recrystallization in a cold-rolled ordered Fe ₈₀ Co ₁₀ V alloy using the EBSD method. <i>Materials Characterization</i> , 2019 , 158, 109962	3.9	8
44	A Rationale for SRX Regression Model of Hot-Deformed Austenite Using an Orthogonal Taguchi L8 Matrix Steels. <i>Materials Science Forum</i> , 2012 , 715-716, 751-757	0.4	8
43	On the activation of alternated stacking fault pair twinning mechanism in a very large-grained Fe ₉₉ Mn _{0.4} Al steel. <i>Scripta Materialia</i> , 2020 , 178, 301-306	5.6	8
42	Correlation of Microstructure and Texture in a Two-Phase High-Mn Twinning-Induced Plasticity Steel During Cold Rolling. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017 , 48, 4842-4856	2.3	7
41	Innovation and Processing of Novel Tough Ductile Ultra-High Strength Steels through TMR-DQP Processing Route. <i>Materials Science Forum</i> , 2014 , 783-786, 1009-1014	0.4	7
40	Static recrystallization characteristics and kinetics of high-silicon steels for direct quenching and partitioning. <i>International Journal of Materials Research</i> , 2019 , 110, 183-193	0.5	6
39	Demonstrating the Effect of Precipitation on the Mechanical Stability of Fine-Grained Austenite in Reversion-Treated 301LN Stainless Steel. <i>Metals</i> , 2017 , 7, 344	2.3	6

38	Static Strain Ageing in Some Austenitic Stainless Steels. <i>Materials Science Forum</i> , 2010 , 638-642, 3278-3283	0.3	6
37	Regression and Solute Drag Models for the Activation Energy of Static Recrystallisation in Hot-Worked Steels. <i>Materials Science Forum</i> , 2003 , 426-432, 1181-1188	0.4	6
36	Mechanical properties of ferritic stainless steel welds in using type 409 and 430 filler metals. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2013 , 57, 335	1.9	5
35	Hardness Profiles of Quenched Steel Heat Affected Zones. <i>Materials Science Forum</i> , 2013 , 762, 722-727	0.4	5
34	Effect of Hot Deformation Temperature on the Restoration Mechanisms and Texture in a High-Cr Ferritic Stainless Steel. <i>Materials Science Forum</i> , 2013 , 762, 705-710	0.4	5
33	Modelling the Deformation and Annealing Processes: Physical and Regression Approaches. <i>Materials Science Forum</i> , 2007 , 550, 583-588	0.4	5
32	Compositional and structural behaviour of screen-printed pzt thick films during rapid sintering. <i>Ferroelectrics</i> , 1994 , 154, 277-282	0.6	5
31	Hot Forming of Ultra-Fine-Grained Multiphase Steel Products Using Press Hardening Combined with Quenching and Partitioning Process. <i>Metals</i> , 2019 , 9, 357	2.3	4
30	Physical Simulation for Evaluating Heat-Affected Zone Toughness of High and Ultra-High Strength Steels. <i>Materials Science Forum</i> , 2013 , 762, 711-716	0.4	4
29	Cellular Mechanisms of Enhanced Osteoblasts Functions via Phase-Reversion Induced Nano/Submicron-Grained Structure in a Low-Ni Austenitic Stainless Steel. <i>Advanced Engineering Materials</i> , 2011 , 13, B483-B492	3.5	4
28	Passive Laser Assisted Bending of Ultra-High Strength Steels. <i>Advanced Materials Research</i> , 2011 , 418-420, 1542-1547	0.5	4
27	Evaluation of PZT thin films on Ag coated Si substrates. <i>Journal of Electronic Materials</i> , 1994 , 23, 1279-1284	0.4	4
26	Propiedades mecánicas a tracción y mecanismos de endurecimiento de un acero TWIP a altas velocidades de deformación: relación de Hall-Petch. <i>Revista De Metalurgia</i> , 2014 , 50, e031	0.4	4
25	Properties of Induction Reversion-Refined Microstructures of AISI 301LN under Monotonic, Cyclic and Rolling Deformation. <i>Materials Science Forum</i> , 2018 , 941, 601-607	0.4	4
24	Studies on Martensite Transformation in a Metastable Austenitic Cr-Mn Stainless Steel. <i>Materials Science Forum</i> , 2013 , 762, 424-430	0.4	3
23	Effect of Niobium on Static Recrystallization Characteristics of TWIP Steels. <i>Materials Science Forum</i> , 2013 , 753, 195-200	0.4	3
22	Study on Cyclic Strain Localization and Fatigue Fracture Mechanism in High Manganese Twinning-Induced Plasticity Steels. <i>Materials Science Forum</i> , 2013 , 762, 411-417	0.4	3
21	Grain size effects on flow stress in hot compression test. <i>Steel Research = Archiv Für Das Eisenhüttenwesen</i> , 1997 , 68, 115-118		3

20	Effect of anodic passivation on the corrosion behaviour of Fe-Mn-Al steels in 3.5%NaCl 2006 , 77-82		3
19	Reobservations on ordering, precipitation and polymorphic phase transformation phenomena during annealing of a severely cold rolled magnetic Fe-Co-10V alloy. <i>Materialia</i> , 2020 , 12, 100765	3.2	2
18	Comparison of the formability of austenitic reversion-treated and temper-rolled 17Cr-7Ni steels 2019 ,		2
17	The Effect of Niobium Carbides and Laves Phase on the Yielding Behaviour of a Stabilized Ferritic Stainless Steel. <i>Materials Science Forum</i> , 2014 , 783-786, 807-812	0.4	2
16	Enhancing Mechanical Properties and Formability of AISI 301LN Stainless Steel Sheet by Local Laser Heat Treatment. <i>Key Engineering Materials</i> , 2013 , 554-557, 885-892	0.4	2
15	Hot-rolling simulation and modelling using Gleeble 1500. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1992 , 63, 297-303		2
14	Processing of Submicron Grained Microstructures and Enhanced Mechanical Properties by Cold-Rolling and Reversion Annealing of Metastable Austenitic Stainless Steels. <i>Materials Science Forum</i> , 4875-4880	0.4	2
13	Tensile Properties and Deformation of AISI 316L Additively Manufactured with Various Energy Densities. <i>Materials</i> , 2021 , 14,	3.5	2
12	Enhancement of grain structure and mechanical properties of a high-Mn twinning-induced plasticity steel bearing AlSi by fast-heating annealing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 795, 139949	5.3	2
11	The role of grain size in static and cyclic deformation behaviour of a laser reversion annealed metastable austenitic steel. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021 , 44, 43-62 ³		2
10	Cyclic deformation behaviour and stability of grain-refined 301LN austenitic stainless structure. <i>MATEC Web of Conferences</i> , 2018 , 165, 06005	0.3	2
9	The Effect of Stabilizers on the Grain Growth and Impact Toughness of 21%Cr Ferritic Stainless Steels High-Temperature Heat-Affected Zones. <i>Materials Science Forum</i> , 2013 , 762, 562-569	0.4	1
8	Flow Stress Behaviour and Static Recrystallization Characteristics of Hot Deformed Austenite in Microalloyed Medium-Carbon Bainitic Steels. <i>Metals</i> , 2021 , 11, 138	2.3	1
7	Influence of Micro-texture Distribution and Straining Direction on the Ridging of Ferritic Stainless Steels. <i>ISIJ International</i> , 2021 , 61, 975-984	1.7	0
6	High-Speed Erichsen Testing of Grain-Refined 301LN Austenitic Stainless Steel Processed by Double-Reversion Annealing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1	2.3	0
5	Formation of nanostructured surface layer, the white layer, through solid particles impingement during slurry erosion in a martensitic medium-carbon steel. <i>Wear</i> , 2022 , 496-497, 204301	3.5	0
4	Simulation of Line Annealing of Type 430 Ferritic Stainless Steel. <i>Materials Science Forum</i> , 2012 , 715-716, 437-446	0.4	
3	Effect of Annealing Conditions on the Texture and Normal Anisotropy of Al-Killed Steels in Simulated Batch Annealing. <i>Steel Research International</i> , 2004 , 75, 182-189	1.6	

- 2 On the Hot Deformation and Static Recrystallization Characteristics of Al-Bearing Microalloyed Twip Steels131-136
- 1 On the Hot Deformation and Static Recrystallization Characteristics of Al-Bearing Microalloyed TWIP Steels **2016**, 131-136