HÃ¥kan Hallberg

List of Publications by Year
in descending order

39 papers	1,023 citations	361045 20 h-index	433756 31 g-index
39 all docs	39 docs citations	39 times ranked	827 citing authors

#	Article	IF	Citations
1	Approaches to Modeling of Recrystallization. Metals, 2011, 1, 16-48.	1.0	137
2	Simulation of discontinuous dynamic recrystallization in pure Cu using a probabilistic cellular automaton. Computational Materials Science, 2010, 49, 25-34.	1.4	117
3	A constitutive model for the formation of martensite in austenitic steels under large strain plasticity. International Journal of Plasticity, 2007, 23, 1213-1239.	4.1	100
4	Modeling of continuous dynamic recrystallization in commercial-purity aluminum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1126-1134.	2.6	85
5	A modified level set approach to 2D modeling of dynamic recrystallization. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 085012.	0.8	57
6	Crystal plasticity modeling of microstructure influence on fatigue crack initiation in extruded Al6082-T6 with surface irregularities. International Journal of Fatigue, 2018, 111, 16-32.	2.8	43
7	Influence of anisotropic grain boundary properties on the evolution of grain boundary character distribution during grain growthâ€"a 2D level set study. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 085005.	0.8	36
8	Microstructure evolution during dynamic discontinuous recrystallization in particle-containing Cu. Computational Materials Science, 2014, 84, 327-338.	1.4	33
9	Coupled diffusion-deformation multiphase field model for elastoplastic materials applied to the growth of Cu6Sn5. Acta Materialia, 2016, 108, 98-109.	3.8	30
10	Influence of process parameters on grain refinement in AA1050 aluminum during cold rolling. International Journal of Mechanical Sciences, 2013, 66, 260-272.	3.6	27
11	A combined crystal plasticity and graph-based vertex model of dynamic recrystallization at large deformations. Modelling and Simulation in Materials Science and Engineering, 2015, 23, 045011.	0.8	26
12	Modeling of grain growth under fully anisotropic grain boundary energy. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 045002.	0.8	26
13	Prediction of the residual state in 304 austenitic steel after laser shock peening â€" Effects of plastic deformation and martensitic phase transformation. International Journal of Mechanical Sciences, 2016, 111-112, 24-34.	3.6	24
14	Recrystallization and texture evolution during hot rolling of copper, studied by a multiscale model combining crystal plasticity and vertex models. Modelling and Simulation in Materials Science and Engineering, 2016, 24, 075004.	0.8	24
15	Investigation of microstructure evolution during self-annealing in thin Cu films by combining mesoscale level set and ab initio modeling. Journal of the Mechanics and Physics of Solids, 2016, 90, 160-178.	2.3	24
16	Transient nucleation in selective laser melting of Zr-based bulk metallic glass. Materials and Design, 2020, 195, 108958.	3.3	24
17	Accelerating crystal plasticity simulations using GPU multiprocessors. International Journal for Numerical Methods in Engineering, 2014, 100, 111-135.	1.5	22
18	Thermo-mechanically coupled model of diffusionless phase transformation in austenitic steel. International Journal of Solids and Structures, 2010, 47, 1580-1591.	1.3	21

#	Article	IF	Citations
19	Crack tip transformation zones in austenitic stainless steel. Engineering Fracture Mechanics, 2012, 79, 266-280.	2.0	21
20	Evidence of 3D strain gradients associated with tin whisker growth. Scripta Materialia, 2018, 144, 1-4.	2.6	21
21	Microstructure evolution influenced by dislocation density gradients modeled in a reactionâ€"diffusion system. Computational Materials Science, 2013, 67, 373-383.	1.4	17
22	Differences in phase transformation in laser peened and shot peened 304 austenitic steel. International Journal of Mechanical Sciences, 2020, 176, 105535.	3.6	14
23	Stability of grain boundary texture during isothermal grain growth in UO2 considering anisotropic grain boundary properties. Journal of Nuclear Materials, 2015, 465, 664-673.	1.3	11
24	An extended vertex and crystal plasticity framework for efficient multiscale modeling of polycrystalline materials. International Journal of Solids and Structures, 2017, 125, 150-160.	1.3	11
25	Investigation of faceted void morphologies in UO 2 by phase field modelling. Journal of Nuclear Materials, 2015, 467, 113-120.	1.3	9
26	Evaluation of grain boundary energy, structure and stiffness from phase field crystal simulations. Modelling and Simulation in Materials Science and Engineering, 2022, 30, 014002.	0.8	9
27	Model Describing Material-Dependent Deformation Behavior in High-Velocity Metal Forming Processes. Journal of Engineering Mechanics - ASCE, 2009, 135, 345-357.	1.6	8
28	Grain boundary and particle interaction: Enveloping and pass-through mechanisms studied by 3D phase field crystal simulations. Materials and Design, 2022, 220, 110845.	3.3	8
29	A constitutive model for the flow stress behavior and microstructure evolution in aluminum alloys under hot working conditions â€" with application to AA6099. Applied Mathematical Modelling, 2020, 81, 253-262.	2.2	7
30	Modeling of nucleation and growth in glass-forming alloys using a combination of classical and phase-field theory. Computational Materials Science, 2019, 165, 167-179.	1.4	6
31	Modelling of the Mechanical Response in 304 Austenitic Steel during Laser Shock Peening and Conventional Shot Peening. Procedia Manufacturing, 2020, 47, 450-457.	1.9	6
32	Microstructure and Property Modifications of Cold Rolled IF Steel by Local Laser Annealing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 4786-4802.	1.1	5
33	Diagonally implicit Rungeâ€"Kutta (DIRK) integration applied to finite strain crystal plasticity modeling. Computational Mechanics, 2018, 62, 1429-1441.	2.2	4
34	Peel testing of a packaging material laminate studied by in-situ X-ray tomography and cohesive zone modeling. International Journal of Adhesion and Adhesives, 2019, 95, 102428.	1.4	4
35	Cohesive zone modeling of crack propagation influenced by martensitic phase transformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 564-573.	2.6	3
36	Grain boundary stiffness based on phase field crystal simulations. Materials Letters, 2022, 318, 132178.	1.3	3

#	Article	IF	Citations
37	Modeling of Crack Behavior in Austenitic Steel Influenced by Martensitic Phase Transformation. Key Engineering Materials, 0, 452-453, 637-640.	0.4	0
38	A Note on the Kelvin Effect in 100Cr6 Steel with Application to Identification of the Elastoplastic Limit. ISRN Thermodynamics, 2012, 2012, 1-4.	0.6	0
39	Phase field modelling allotropic transformation of solid solution. Computers, Materials and Continua, 2020, 62, 1289-1302.	1.5	0