

Janin Eiken

List of Publications by Year in descending order

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39
papers

1,777
citations

393982

19
h-index

329751

37
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39
all docs

39
docs citations

39
times ranked

833
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiphase-field approach for multicomponent alloys with extrapolation scheme for numerical application. <i>Physical Review E</i> , 2006, 73, 066122.	0.8	411
2	The multiphase-field model with an integrated concept for modelling solute diffusion. <i>Physica D: Nonlinear Phenomena</i> , 1998, 115, 73-86.	1.3	367
3	Phase field simulation of equiaxed solidification in technical alloys. <i>Acta Materialia</i> , 2006, 54, 2697-2704.	3.8	206
4	CALPHAD and Phase-Field Modeling: A Successful Liaison. <i>Journal of Phase Equilibria and Diffusion</i> , 2007, 28, 101-106.	0.5	87
5	Impact of P and Sr on solidification sequence and morphology of hypoeutectic Al-Si alloys: Combined thermodynamic computation and phase-field simulation. <i>Acta Materialia</i> , 2015, 98, 152-163.	3.8	77
6	Multi-ternary extrapolation scheme for efficient coupling of thermodynamic data to a multi-phase-field model. <i>Computational Materials Science</i> , 2015, 108, 283-292.	1.4	65
7	Phase-field simulation of microstructure formation in technical castings – A self-consistent homoenthalpic approach to the micro-macro problem. <i>Journal of Computational Physics</i> , 2009, 228, 6784-6795.	1.9	61
8	Controlling Microstructure in Magnesium Alloys: A Combined Thermodynamic, Experimental and Simulation Approach. <i>Advanced Engineering Materials</i> , 2006, 8, 241-247.	1.6	43
9	Upgrading CALPHAD to microstructure simulation: the phase-field method. <i>International Journal of Materials Research</i> , 2009, 100, 128-134.	0.1	43
10	Phase-Field Simulation of Solidification and Solid-State Transformations in Multicomponent Steels. <i>Steel Research International</i> , 2008, 79, 608-616.	1.0	40
11	Phase field modelling of microstructural evolution during the quenching and partitioning treatment in low-alloy steels. <i>Computational Materials Science</i> , 2016, 112, 245-256.	1.4	38
12	Dendritic growth texture evolution in Mg-based alloys investigated by phase-field simulation. <i>International Journal of Cast Metals Research</i> , 2009, 22, 86-89.	0.5	35
13	Phase-field simulation of microstructure formation in technical magnesium alloys. <i>International Journal of Materials Research</i> , 2010, 101, 503-509.	0.1	27
14	Numerical solution of the phase-field equation with minimized discretization error. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012, 33, 012105.	0.3	27
15	Phase-field based simulation of microstructure evolution in technical alloy grades. <i>International Journal of Advances in Engineering Sciences and Applied Mathematics</i> , 2010, 2, 126-139.	0.7	25
16	Interplay between β (Ti) nucleation and growth during peritectic solidification investigated by phase-field simulations. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 464104.	0.7	24
17	Quantitative comparison of the phase-transformation kinetics in a sharp-interface and a phase-field model. <i>Computational Materials Science</i> , 2011, 50, 1846-1853.	1.4	22
18	Calphad coupled phase-field model with mechano-chemical contributions and its application to rafting of β in CMSX-4. <i>Computational Materials Science</i> , 2020, 184, 109909.	1.4	21

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19	Towards a metadata scheme for the description of materials – the description of microstructures. Science and Technology of Advanced Materials, 2016, 17, 410-430.	2.8	19
20	Phase boundary anisotropy and its effects on the maze-to-lamellar transition in a directionally solidified Al Al ₂ Cu eutectic. Acta Materialia, 2019, 170, 268-277.	3.8	17
21	Columnar dendritic solidification of TiAl under diffusive and hypergravity conditions investigated by phase-field simulations. Computational Materials Science, 2020, 172, 109358.	1.4	17
22	Simulation of microstructure formation in technical aluminum alloys using the multiphase-field method. Transactions of the Indian Institute of Metals, 2009, 62, 299-304.	0.7	16
23	Simulations of the initial transient during directional solidification of multicomponent alloys using the phase field method. Modelling and Simulation in Materials Science and Engineering, 2000, 8, 871-879.	0.8	13
24	3D phase-field computations of microsegregation in nodular cast iron compared to experimental data and Calphad-based Scheil-prediction. Materialia, 2020, 9, 100538.	1.3	11
25	Numerical Determination of Heat Distribution and Castability Simulations of as Cast Mg-Al Alloys. Advanced Engineering Materials, 2009, 11, 162-168.	1.6	8
26	Eutectic morphology evolution and Sr-modification in Al-Si based alloys studied by 3D phase-field simulation coupled to Calphad data. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012084.	0.3	8
27	Phase-Field Simulations of Dendritic Orientation Selection in Mg-Alloys with Hexagonal Anisotropy. Materials Science Forum, 2010, 649, 199-204.	0.3	7
28	Phase field models for heterogeneous nucleation: Application to inoculation in alpha-solidifying Ti-Al-B alloys. European Physical Journal: Special Topics, 2014, 223, 545-558.	1.2	7
29	Discussion of the Accuracy of the Multi-Phase-Field Approach to Simulate Grain Growth with Anisotropic Grain Boundary Properties. ISIJ International, 2020, 60, 1832-1834.	0.6	6
30	Methods of segregation analysis applied to simulated multicomponent multiphase microstructures. International Journal of Materials Research, 2014, 105, 130-138.	0.1	5
31	Multiscale solidification simulation of Sr-modified Al-Si-Mg alloy in die casting. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012034.	0.3	5
32	The Finite Phase-Field Method - A Numerical Diffuse Interface Approach for Microstructure Simulation with Minimized Discretization Error. Materials Research Society Symposia Proceedings, 2011, 1369, 1.	0.1	4
33	A Multi-phase-field Approach for Solidification with Non-negligible Volumetric Expansion – Application to Graphite Growth in Nodular Cast Iron. Transactions of the Indian Institute of Metals, 2018, 71, 2725-2729.	0.7	4
34	Multi-scale simulation of hybrid light metal structures produced by high pressure die casting. IOP Conference Series: Materials Science and Engineering, 0, 861, 012035.	0.3	4
35	Cloud-Based ICME Software Training. Education Sciences, 2021, 11, 5.	1.4	3
36	Calphad-based phase-field study of the interplay between spheroidal graphite growth and chemical segregation in ductile cast iron. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012055.	0.3	2

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37	Resampling technique applied to statistics of microsegregation characterization. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012062.	0.3	1
38	Micro-macro Coupled Solidification Simulations of a Sr-Modified Al-Si-Mg Alloy in Permanent Mould Casting. Lecture Notes in Mechanical Engineering, 2021, , 202-211.	0.3	1
39	Is There a Difference Between Dendrites of a Binary or a Ternary Alloy? Some Answers by Phase-Field Simulations. , 2002, , .		0