

Peter Galenko

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papers

3,229
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33
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204
ext. papers

3,958
ext. citations

2.6
avg, IF

6.04
L-index

#	Paper	IF	Citations
177	Local nonequilibrium effect on rapid dendritic growth in a binary alloy melt. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997 , 235, 271-280	2.3	138
176	Diffuse-interface model for rapid phase transformations in nonequilibrium systems. <i>Physical Review E</i> , 2005 , 71, 046125	2.4	127
175	Model for free dendritic alloy growth under interfacial and bulk phase nonequilibrium conditions. <i>Journal of Crystal Growth</i> , 1999 , 197, 992-1002	1.6	112
174	Local nonequilibrium effect on undercooling in rapid solidification of alloys. <i>Physical Review E</i> , 1997 , 55, 343-352	2.4	103
173	Solute trapping and diffusionless solidification in a binary system. <i>Physical Review E</i> , 2007 , 76, 031606	2.4	87
172	Extended thermodynamical analysis of a motion of the solid-liquid interface in a rapidly solidifying alloy. <i>Physical Review B</i> , 2002 , 65,	3.3	73
171	Phase-field-crystal and Swift-Hohenberg equations with fast dynamics. <i>Physical Review E</i> , 2009 , 79, 051110	1.0	69
170	Dendrite growth under forced convection: analysis methods and experimental tests. <i>Physics-Uspexhi</i> , 2014 , 57, 771-786	2.8	65
169	Phase-field model with relaxation of the diffusion flux in nonequilibrium solidification of a binary system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2001 , 287, 190-197	2.3	61
168	Selection criterion of stable dendritic growth at arbitrary Péclet numbers with convection. <i>Physical Review E</i> , 2013 , 87, 062403	2.4	57
167	Solute trapping in rapid solidification of a binary dilute system: a phase-field study. <i>Physical Review E</i> , 2011 , 84, 041143	2.4	56
166	Crystal growth of pure substances: Phase-field simulations in comparison with analytical and experimental results. <i>Journal of Computational Physics</i> , 2005 , 207, 221-239	4.1	56
165	Linear morphological stability analysis of the solid-liquid interface in rapid solidification of a binary system. <i>Physical Review E</i> , 2004 , 69, 051608	2.4	53
164	Dendritic growth velocities in an undercooled melt of pure nickel under static magnetic fields: A test of theory with convection. <i>Acta Materialia</i> , 2016 , 103, 184-191	8.4	52
163	Dendrite growth velocity in levitated undercooled nickel melts. <i>Journal of Crystal Growth</i> , 2006 , 297, 211-222	1.6	51
162	Diffuse-interface modeling of solute trapping in rapid solidification: Predictions of the hyperbolic phase-field model and parabolic model with finite interface dissipation. <i>Acta Materialia</i> , 2013 , 61, 4155-4168	8.4	50
161	Change of the kinetics of solidification and microstructure formation induced by convection in the NiAl system. <i>Applied Physics Letters</i> , 2007 , 91, 041913	3.4	50

160	Unconditionally stable method and numerical solution of the hyperbolic phase-field crystal equation. <i>Physical Review E</i> , 2013 , 88, 013310	2.4	45
159	Diffusionless crystal growth in rapidly solidifying eutectic systems. <i>Physical Review Letters</i> , 2006 , 96, 150602	7.4	44
158	Thermo-solutal and kinetic regimes of an anisotropic dendrite growing under forced convective flow. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 19149-61	3.6	43
157	Rapid solidification: in situ diagnostics and theoretical modelling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 449-451, 34-41	5.3	43
156	Selected mode for rapidly growing needle-like dendrite controlled by heat and mass transport. <i>Acta Materialia</i> , 2017 , 137, 64-70	8.4	42
155	Dendritic solidification in undercooled Ni ₄₇ Zr ₅₃ Al melts: Experiments and modeling. <i>Acta Materialia</i> , 2009 , 57, 6166-6175	8.4	41
154	Evidence of the transition from ordered to disordered growth during rapid solidification of an intermetallic phase. <i>Europhysics Letters</i> , 2009 , 87, 40007	1.6	40
153	Nonequilibrium solidification in undercooled Ti ₄₅ Al ₅₅ melts. <i>Journal of Applied Physics</i> , 2008 , 103, 073509	5.5	39
152	Non-equilibrium effects in spinodal decomposition of a binary system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008 , 372, 985-989	2.3	38
151	Kinetics of dendritic growth under the influence of convective flow in solidification of undercooled droplets. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 375-377, 488-492	5.3	38
150	From atomistic interfaces to dendritic patterns. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	37
149	Thermo-solutal and kinetic modes of stable dendritic growth with different symmetries of crystalline anisotropy in the presence of convection. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	37
148	Rapid solidification as non-ergodic phenomenon. <i>Physics Reports</i> , 2019 , 818, 1-70	27.7	36
147	Modelling of dendritic solidification in undercooled dilute Ni ₄₇ Zr melts. <i>Acta Materialia</i> , 2007 , 55, 6834-6844	8.4	35
146	Analysis of the dispersion relation in spinodal decomposition of a binary system. <i>Philosophical Magazine Letters</i> , 2007 , 87, 821-827	1	35
145	Kinetic contribution to the fast spinodal decomposition controlled by diffusion. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009 , 388, 3113-3123	3.3	34
144	Selection of the dynamically stable regime of rapid solidification front motion in an isothermal binary alloy. <i>Journal of Crystal Growth</i> , 2000 , 216, 512-526	1.6	33
143	The boundary integral theory for slow and rapid curved solid/liquid interfaces propagating into binary systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	32

142	The effect of fluid flow on the solidification of Ni ₂ B from the undercooled melt. <i>Journal of Applied Physics</i> , 2014 , 115, 053511	2.5	32
141	Selection criterion for the growing dendritic tip in a non-isothermal binary system under forced convective flow. <i>Journal of Crystal Growth</i> , 2010 , 312, 2122-2127	1.6	31
140	Phase-field modeling of solute trapping: comparative analysis of parabolic and hyperbolic models. <i>International Journal of Materials Research</i> , 2010 , 101, 473-479	0.5	30
139	Selection criterion of a stable dendrite growth in rapid solidification. <i>International Journal of Heat and Mass Transfer</i> , 2016 , 101, 789-799	4.9	29
138	Marginal stability analysis of the phase field crystal model in one spatial dimension. <i>Physical Review B</i> , 2011 , 83,	3.3	29
137	Stochastic generalization for a hyperbolic model of spinodal decomposition. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010 , 389, 3443-3455	3.3	29
136	Evolution of the structure factor in a hyperbolic model of spinodal decomposition. <i>European Physical Journal: Special Topics</i> , 2009 , 177, 165-175	2.3	28
135	Steady-state shapes of growing crystals in the field of local nonequilibrium diffusion. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000 , 272, 207-217	2.3	28
134	Dendritic growth with the six-fold symmetry: Theoretical predictions and experimental verification. <i>Journal of Physics and Chemistry of Solids</i> , 2017 , 108, 98-103	3.9	27
133	Effect of convective flow on stable dendritic growth in rapid solidification of a binary alloy. <i>Journal of Crystal Growth</i> , 2017 , 457, 349-355	1.6	27
132	Traveling wave profiles for a crystalline front invading liquid states: Analytical and numerical solutions. <i>Physica D: Nonlinear Phenomena</i> , 2015 , 308, 1-10	3.3	26
131	Three dimensional structures predicted by the modified phase field crystal equation. <i>Computational Materials Science</i> , 2016 , 111, 310-312	3.2	26
130	Unconditionally gradient-stable computational schemes in problems of fast phase transitions. <i>Physical Review E</i> , 2011 , 83, 026705	2.4	26
129	Solidification behaviour of undercooled Co-Ni alloys showing a metastable miscibility gap. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 375-377, 520-523	5.3	24
128	Modeling of convection, temperature distribution and dendritic growth in glass-fluxed nickel melts. <i>Journal of Crystal Growth</i> , 2017 , 471, 66-72	1.6	23
127	The shape of dendritic tips. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190243	3	23
126	Gibbs-Thomson condition for the rapidly moving interface in a binary system. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016 , 447, 161-171	3.3	23
125	Rapid advancing of the solid-liquid interface in undercooled alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 375-377, 493-497	5.3	23

124	Local-nonequilibrium phase transition model with relaxation of the diffusion flux. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994 , 190, 292-294	2.3	23
123	Dendritic growth in AlBi alloys during brazing. Part 1: Experimental evidence and kinetics. <i>International Journal of Heat and Mass Transfer</i> , 2005 , 48, 2372-2384	4.9	22
122	Dendritic solidification and fragmentation in undercooled NiZr alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 449-451, 649-653	5.3	21
121	Surface Tension and Viscosity of Cu50Zr50 Measured by the Oscillating Drop Technique on Board the International Space Station. <i>Microgravity Science and Technology</i> , 2019 , 31, 177-184	1.6	20
120	Coarse graining for the phase-field model of fast phase transitions. <i>Physical Review E</i> , 2013 , 88, 042151	2.4	20
119	Effect of convective transport on dendritic crystal growth from pure and alloy melts. <i>Applied Physics Letters</i> , 2017 , 111, 031602	3.4	20
118	Local non-equilibrium effect on the growth kinetics of crystals. <i>Acta Materialia</i> , 2019 , 168, 203-209	8.4	18
117	Phase-field modeling of an abrupt disappearance of solute drag in rapid solidification. <i>Acta Materialia</i> , 2015 , 90, 282-291	8.4	18
116	Selection criterion for the growing dendritic tip at the inner core boundary. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013 , 46, 195101	2	18
115	Spinodally decomposed patterns in rapidly quenched CoCu melts. <i>Acta Materialia</i> , 2013 , 61, 1078-1092	8.4	18
114	Faceting of a rough solid-liquid interface of a metal induced by forced convection. <i>Philosophical Magazine Letters</i> , 2013 , 93, 608-617	1	18
113	Fluctuations and stochastic noise in systems with hyperbolic mass transport. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 366, 149-158	3.3	18
112	Hyperbolic self-consistent problem of heat transfer in rapid solidification of supercooled liquid. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000 , 278, 129-138	2.3	18
111	Diffusionless (chemically partitionless) crystallization and subsequent decomposition of supersaturated solid solutions in Sn-Bi eutectic alloy. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019 , 377, 20180204	3	17
110	Thermodynamics of rapid solidification and crystal growth kinetics in glass-forming alloys. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019 , 377, 20180205	3	17
109	Travelling-wave amplitudes as solutions of the phase-field crystal equation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	17
108	Selected mode of dendritic growth with n-fold symmetry in the presence of a forced flow. <i>Europhysics Letters</i> , 2017 , 119, 16001	1.6	17
107	Dendritic growth in AlBi alloys during brazing. Part 2: Computational modeling. <i>International Journal of Heat and Mass Transfer</i> , 2005 , 48, 2385-2396	4.9	16

106	Boundary integral approach for propagating interfaces in a binary non-isothermal mixture. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2017 , 469, 420-428	3.3	15
105	Modeling of a transition to diffusionless dendritic growth in rapid solidification of a binary alloy. <i>Computational Materials Science</i> , 2009 , 45, 972-980	3.2	15
104	Analysis of interface kinetics: solutions of the Gibbs-Thomson-type equation and of the kinetic rate theory. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 192, 012014	0.4	13
103	Structure and mechanical properties of structural steel in laser resolidification processing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 375-377, 502-506	5.3	13
102	Synthesis of composite coatings using rapid laser sintering of metallic powder mixtures. <i>Physics of Metals and Metallography</i> , 2013 , 114, 799-820	1.2	12
101	A review on the theory of stable dendritic growth. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200325	3	12
100	Selection Criterion of Stable Mode of Dendritic Growth with n-Fold Symmetry at Arbitrary Péclet Numbers with a Forced Convection. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2019 , 203-215	0.3	11
99	Containerless Undercooled Melts: Ordering, Nucleation, and Dendrite Growth. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 4921-4936	2.3	11
98	A grand potential approach to phase-field modeling of rapid solidification. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2014 , 39,	3.8	11
97	Bifurcations in a sidebranch surface of a free-growing dendrite. <i>Physical Review E</i> , 1997 , 55, 611-619	2.4	11
96	Non-Equilibrium and Near-Equilibrium Solidification of Undercooled Melts of Ni- and Al-based Alloys. <i>Advanced Engineering Materials</i> , 2008 , 10, 444-452	3.5	10
95	Modelling of crystal pattern formation in isothermal undercooled alloys. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2000 , 8, 81-94	2	10
94	Atomic density functional and diagram of structures in the phase field crystal model. <i>Journal of Experimental and Theoretical Physics</i> , 2016 , 122, 298-309	1	9
93	The hyperbolic Allen-Cahn equation: exact solutions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016 , 49, 435201	2	9
92	Growth of different faces in a body centered cubic lattice: A case of the phase-field-crystal modeling. <i>Journal of Crystal Growth</i> , 2020 , 539, 125608	1.6	9
91	Theoretical modeling of crystalline symmetry order with dendritic morphology. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 275-286	2.3	8
90	Thermo-solutal growth of an anisotropic dendrite with six-fold symmetry. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 105702	1.8	8
89	Solute redistribution around crystal shapes growing under hyperbolic mass transport. <i>International Journal of Heat and Mass Transfer</i> , 2015 , 89, 1054-1060	4.9	8

88	Fast crystallization of structural steel during laser processing of the surface. <i>Technical Physics</i> , 2002 , 47, 561-568	0.5	8
87	Physics of Dendrites 1995 ,		8
86	Phase-Field Crystals 2018 ,		8
85	The role of intense convective flow on dendrites evolving with n-fold symmetry. <i>Journal of Crystal Growth</i> , 2020 , 535, 125540	1.6	7
84	Modeling of dendrite growth from undercooled nickel melt: sharp interface model versus enthalpy method. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 194002	1.8	7
83	Experimental test for the hyperbolic model of spinodal decomposition in the binary system. <i>JETP Letters</i> , 2007 , 86, 458-461	1.2	7
82	Non-axisymmetric growth of dendrite with arbitrary symmetry in two and three dimensions: sharp interface model vs phase-field model. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 2899-2909	2.3	7
81	A Stable Dendritic Growth with Forced Convection: A Test of Theory Using Enthalpy-Based Modeling Methods. <i>Jom</i> , 2020 , 72, 3123-3131	2.1	7
80	Solidification of Undercooled Melts of Al-Based Alloys on Earth and in Space. <i>Jom</i> , 2017 , 69, 1303-1310	2.1	6
79	Coarse-graining for fast dynamics of order parameters in the phase-field model. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	6
78	Interaction of solid ceramic particles with a dendritic solidification front. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 375-377, 524-527	5.3	6
77	Resistivity Saturation in Metallic Liquids Above a Dynamical Crossover Temperature Observed in Measurements Aboard the International Space Station. <i>Physical Review Letters</i> , 2019 , 123, 226601	7.4	6
76	Kinetic transition in the order-disorder transformation at a solid/liquid interface. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	5
75	Influence of tiny amounts of impurity on dendritic growth in undercooled melts. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 192, 012030	0.4	5
74	Model for isothermal pattern formation of growing crystals in undercooled binary alloys. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2000 , 8, 67-79	2	5
73	Traveling waves of the solidification and melting of cubic crystal lattices. <i>Physical Review E</i> , 2020 , 102, 062802	2.4	5
72	Bell-shaped dendrite velocity-undercooling relationship with an abrupt drop of solidification kinetics in glass forming Cu-Zr(-Ni) melts. <i>Journal of Crystal Growth</i> , 2020 , 532, 125411	1.6	5
71	The shape of dendritic tips: a test of theory with computations and experiments. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200326	3	5

70	Thin interface limit of the double-sided phase-field model with convection. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190540	3	5
69	Boundary Integral Equation Study of the Growth of a Dendritic Elliptic Paraboloid Crystal. <i>Russian Metallurgy (Metally)</i> , 2018 , 2018, 737-741	0.5	5
68	Fast traveling waves in the phase-field theory: effective mobility approach versus kinetic energy approach. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 204003	1.8	4
67	Kinetics of the Formation of a Disordered Crystal Structure during High-Speed Solidification. <i>Journal of Experimental and Theoretical Physics</i> , 2018 , 127, 107-114	1	4
66	Simulation of crystalline pattern formation by the MPFC method. <i>MATEC Web of Conferences</i> , 2017 , 129, 02035	0.3	4
65	Solidification kinetics of a Cu-Zr alloy: ground-based and microgravity experiments. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 192, 012028	0.4	4
64	Phase-Field Modeling of Dendritic Solidification in Undercooled Droplets Processed by Electromagnetic Levitation. <i>Materials Science Forum</i> , 2006 , 508, 431-436	0.4	4
63	Dynamic instability of the steady state of a planar front during non-equilibrium solidification of binary alloys. <i>Journal of Crystal Growth</i> , 2019 , 506, 55-60	1.6	4
62	Influence of computational domain size on the pattern formation of the phase field crystals. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 192, 012008	0.4	3
61	A shape of dendritic tips at high Péclet numbers. <i>Journal of Crystal Growth</i> , 2019 , 515, 44-47	1.6	3
60	Diffuse interface models of solidification with convection: The choice of a finite interface thickness. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 447-452	2.3	3
59	Kinetics of rapid crystal growth: phase field theory versus atomistic simulations. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019 , 529, 012035	0.4	3
58	Method of evaluation for the non-stationary period of primary dendritic crystallization. <i>Journal of Physics and Chemistry of Solids</i> , 2019 , 134, 176-181	3.9	3
57	The diagram of phase-field crystal structures: an influence of model parameters in a two-mode approximation. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 192, 012019	0.4	3
56	Influence of initial seed distribution on the pattern formation of the phase field crystals 2017 ,		3
55	Gradient stability of numerical algorithms in local nonequilibrium problems of critical dynamics. <i>Computational Mathematics and Mathematical Physics</i> , 2011 , 51, 1074-1090	0.9	3
54	Phase-Field Modeling of Dendritic Solidification: Verification for the Model Predictions with Latest Experimental Data 2005 , 52-60		3
53	Structure diagram and dynamics of formation of hexagonal boron nitride in phase-field crystal model.. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380, 20200318	3	3

52	Selection constants in the theory of stable dendritic growth. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 2891-2897	2.3	3
51	Rapid eutectic growth: from rod growth to diffusionless solidification.. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380, 20200305	3	3
50	Dendrite growth in undercooled Al-rich Al-Ni melts measured on Earth and in Space. <i>Physical Review Materials</i> , 2019 , 3,	3.2	3
49	Thermo-solutal growth of a dendritic crystal in the form of an elliptical paraboloid with forced convection. <i>Journal of Crystal Growth</i> , 2020 , 531, 125319	1.6	3
48	Phase-field simulation of non-isothermal phase separation in rapidly quenched Co-Cu melts. <i>Computational Materials Science</i> , 2019 , 158, 289-295	3.2	3
47	The hodograph equation for slow and fast anisotropic interface propagation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200324	3	3
46	Demonstration of the effect of stirring on nucleation from experiments on the International Space Station using the ISS-EML facility. <i>Npj Microgravity</i> , 2021 , 7, 31	5.3	3
45	Dendrite Growth and Grain Refinement in Undercooled Melts353-372		3
44	Forced Flow Effect on Dendritic Growth Kinetics in a Binary Nonisothermal System349-362		3
43	Traveling wave solutions for the hyperbolic CahnAllen equation. <i>Chaos, Solitons and Fractals</i> , 2017 , 94, 75-79	9.3	2
42	On the mesoscopic description of locally nonequilibrium solidification of pure substances. <i>JETP Letters</i> , 2015 , 101, 136-140	1.2	2
41	Model experiment on a glass-forming Pd-Ni-Cu-P alloy. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 157-165	2.3	2
40	Boundary interface conditions and solute trapping near the transition to diffusionless solidification. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 287-294	2.3	2
39	Crystal structures predicted by the PFC method with atomic density fluctuations. <i>Materials Today: Proceedings</i> , 2019 , 11, 118-123	1.4	2
38	Boundary integral approach for elliptical dendritic paraboloid as a form of growing crystals. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 192, 012025	0.4	2
37	FRACTALS, MORPHOLOGICAL SPECTRUM AND COMPLEXITY OF INTERFACIAL PATTERNS IN NON-EQUILIBRIUM SOLIDIFICATION 2006 ,		2
36	Deterministic and Stochastic Dynamics in Spinodal Decomposition of a Binary System. <i>Progress in Physics of Metals</i> , 2009 , 10, 27-102	1.6	2
35	The effectiveness of parallelizing an algorithm of the PFC equation solution using PetIGA library. <i>Vestnik Udmurtskogo Universiteta: Matematika, Mekhanika, Kompjuternye Nauki</i> , 2016 , 26, 445-450	0.4	2

34	Effects of local nonequilibrium in rapid eutectic solidification Part 1: Statement of the problem and general solution. <i>Mathematical Methods in the Applied Sciences</i> , 2020 , 44, 12211	2.3	2
33	Convective and conductive selection criteria of a stable dendritic growth and their stitching. <i>Mathematical Methods in the Applied Sciences</i> , 2020 , 44, 12139	2.3	2
32	About one unified description of the first- and second-order phase transitions in the phase-field crystal model. <i>Mathematical Methods in the Applied Sciences</i> , 2020 , 44, 12129	2.3	2
31	Kinetics of solid-liquid interface motion in molecular dynamics and phase-field models: crystallization of chromium and silicon. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200320	3	2
30	High-rate solidification and melting of concentrated solutions and the Hillert parallel construction. <i>Russian Metallurgy (Metally)</i> , 2016 , 2016, 785-792	0.5	2
29	The Effect of Nonisothermality on the Early Stages of Spinodal Decomposition. <i>Journal of Experimental and Theoretical Physics</i> , 2019 , 129, 86-96	1	1
28	Kinetics of dendrite growth and dendritic fragmentation in the undercooled Co _{81.2} Cu _{18.8} alloy melt. <i>Metallurgical Research and Technology</i> , 2014 , 111, 295-303	0.9	1
27	Diffusionless crystal growth in a eutectic system during rapid solidification. <i>Journal of Experimental and Theoretical Physics</i> , 2006 , 103, 150-158	1	1
26	Quasistationary Forms of Crystal Growth in Locally Nonequilibrium Diffusion of Impurity. <i>Journal of Engineering Physics and Thermophysics</i> , 2000 , 73, 1236-1246	0.6	1
25	Amorphization and nanocrystal formation in a Pd-Ni-Cu-P alloy after cooling under different conditions. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380, 20200321	3	1
24	Thermodynamic description of metastable fcc/liquid phase equilibria and solidification kinetics in Al-Cu alloys. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380, 20200327	3	1
23	Analytical solutions to the boundary integral equation: A case of angled dendrites and paraboloids. <i>Mathematical Methods in the Applied Sciences</i> , 2020 , 44, 12058	2.3	1
22	Correlated noise effect on the structure formation in the phase-field crystal model. <i>Mathematical Methods in the Applied Sciences</i> , 2020 , 44, 12185	2.3	1
21	Dendritic growth of ice crystals: a test of theory with experiments. <i>Journal of Physics Condensed Matter</i> , 2021 , 33,	1.8	1
20	Boundary conditions and heat resistance at the moving solid-liquid interface. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018 , 489, 149-162	3.3	1
19	Dendrite tips as elliptical paraboloids. <i>Journal of Physics Condensed Matter</i> , 2021 , 33,	1.8	1
18	Effects of local nonequilibrium in rapid eutectic solidification Part 2: Analysis of effects and comparison to experiment. <i>Mathematical Methods in the Applied Sciences</i> , 2021 , 44, 12271	2.3	1
17	Morphological stability diagram for slowly and rapidly solidifying binary systems. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 353-364	2.3	0

16	Hodograph-equation for rapid solidification of Si-0.1 at.% As alloy melt. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 439-445	2.3	0
15	Effect of tiny amount of impurity and convective transport on dendrite growth kinetics. <i>European Physical Journal: Special Topics</i> , 2020 , 229, 239-251	2.3	0
14	Study on Anomalous Rapid Solidification of Al-35 at%Ni in Microgravity. <i>Jom</i> , 1	2.1	0
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