Peter Galenko

List of Publications by Year in descending order

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193	4,524	81743	143772
papers	citations	39 h-index	57 g-index

204	204	204	947
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Diffuse-interface model for rapid phase transformations in nonequilibrium systems. Physical Review E, 2005, 71, 046125.	0.8	160
2	Local nonequilibrium effect on rapid dendritic growth in a binary alloy melt. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 235, 271-280.	0.9	156
3	Local nonequilibrium effect on undercooling in rapid solidification of alloys. Physical Review E, 1997, 55, 343-352.	0.8	126
4	Model for free dendritic alloy growth under interfacial and bulk phase nonequilibrium conditions. Journal of Crystal Growth, 1999, 197, 992-1002.	0.7	122
5	Solute trapping and diffusionless solidification in a binary system. Physical Review E, 2007, 76, 031606.	0.8	105
6	Dendrite growth under forced convection: analysis methods and experimental tests. Physics-Uspekhi, 2014, 57, 771-786.	0.8	96
7	Extended thermodynamical analysis of a motion of the solid-liquid interface in a rapidly solidifying alloy. Physical Review B, 2002, 65, .	1.1	85
8	Rapid solidification as non-ergodic phenomenon. Physics Reports, 2019, 818, 1-70.	10.3	83
9	Phase-field-crystal and Swift-Hohenberg equations with fast dynamics. Physical Review E, 2009, 79, 051110.	0.8	81
10	Dendritic growth velocities in an undercooled melt of pure nickel under static magnetic fields: A test of theory with convection. Acta Materialia, 2016, 103, 184-191.	3.8	78
11	Phase-field model with relaxation of the diffusion flux in nonequilibrium solidification of a binary system. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 287, 190-197.	0.9	73
12	Solute trapping in rapid solidification of a binary dilute system: A phase-field study. Physical Review E, 2011, 84, 041143.	0.8	73
13	Selection criterion of stable dendritic growth at arbitrary PÃ©clet numbers with convection. Physical Review E, 2013, 87, 062403.	0.8	73
14	Selected mode for rapidly growing needle-like dendrite controlled by heat and mass transport. Acta Materialia, 2017, 137, 64-70.	3.8	70
15	Crystal growth of pure substances: Phase-field simulations in comparison with analytical and experimental results. Journal of Computational Physics, 2005, 207, 221-239.	1.9	68
16	Linear morphological stability analysis of the solid-liquid interface in rapid solidification of a binary system. Physical Review E, 2004, 69, 051608.	0.8	66
17	The boundary integral theory for slow and rapid curved solid/liquid interfaces propagating into binary systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170218.	1.6	65
18	Dendrite growth velocity in levitated undercooled nickel melts. Journal of Crystal Growth, 2006, 297, 211-222.	0.7	64

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19	Diffuse-interface modeling of solute trapping in rapid solidification: Predictions of the hyperbolic phase-field model and parabolic model with finite interface dissipation. Acta Materialia, 2013, 61, 4155-4168.	3.8	64
20	Thermo-solutal and kinetic regimes of an anisotropic dendrite growing under forced convective flow. Physical Chemistry Chemical Physics, 2015, 17, 19149-19161.	1.3	64
21	From atomistic interfaces to dendritic patterns. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170210.	1.6	64
22	Thermo-solutal and kinetic modes of stable dendritic growth with different symmetries of crystalline anisotropy in the presence of convection. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170215.	1.6	60
23	Unconditionally stable method and numerical solution of the hyperbolic phase-field crystal equation. Physical Review E, 2013, 88, 013310.	0.8	56
24	Change of the kinetics of solidification and microstructure formation induced by convection in the Niâ€“Al system. Applied Physics Letters, 2007, 91, .	1.5	54
25	The shape of dendritic tips. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190243.	1.6	53
26	Selection criterion for the growing dendritic tip in a non-isothermal binary system under forced convective flow. Journal of Crystal Growth, 2010, 312, 2122-2127.	0.7	52
27	Dendritic growth with the six-fold symmetry: Theoretical predictions and experimental verification. Journal of Physics and Chemistry of Solids, 2017, 108, 98-103.	1.9	52
28	Effect of convective flow on stable dendritic growth in rapid solidification of a binary alloy. Journal of Crystal Growth, 2017, 457, 349-355.	0.7	52
29	Nonequilibrium solidification in undercooled Ti45Al55 melts. Journal of Applied Physics, 2008, 103, .	1.1	51
30	Kinetics of dendritic growth under the influence of convective flow in solidification of undercooled droplets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 488-492.	2.6	50
31	Rapid solidification: in situ diagnostics and theoretical modelling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 34-41.	2.6	50
32	Diffusionless Crystal Growth in Rapidly Solidifying Eutectic Systems. Physical Review Letters, 2006, 96, 150602.	2.9	49
33	Evidence of the transition from ordered to disordered growth during rapid solidification of an intermetallic phase. Europhysics Letters, 2009, 87, 40007.	0.7	49
34	Dendritic solidification in undercooled Niâ€“Zrâ€“Al melts: Experiments and modeling. Acta Materialia, 2009, 57, 6166-6175.	3.8	48
35	A review on the theory of stable dendritic growth. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200325.	1.6	48
36	Non-equilibrium effects in spinodal decomposition of a binary system. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 985-989.	0.9	46

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37	Kinetic contribution to the fast spinodal decomposition controlled by diffusion. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 3113-3123.	1.2	44
38	Modelling of dendritic solidification in undercooled dilute Niâ€“Zr melts. Acta Materialia, 2007, 55, 6834-6842.	3.8	42
39	Modeling of convection, temperature distribution and dendritic growth in glass-fluxed nickel melts. Journal of Crystal Growth, 2017, 471, 66-72.	0.7	42
40	Analysis of the dispersion relation in spinodal decomposition of a binary system. Philosophical Magazine Letters, 2007, 87, 821-827.	0.5	41
41	Selection of the dynamically stable regime of rapid solidification front motion in an isothermal binary alloy. Journal of Crystal Growth, 2000, 216, 512-526.	0.7	40
42	Selection criterion of a stable dendrite growth in rapid solidification. International Journal of Heat and Mass Transfer, 2016, 101, 789-799.	2.5	39
43	The effect of fluid flow on the solidification of Ni2B from the undercooled melt. Journal of Applied Physics, 2014, 115, 053511.	1.1	38
44	Phase-field modeling of solute trapping: comparative analysis of parabolic and hyperbolic models. International Journal of Materials Research, 2010, 101, 473-479.	0.1	37
45	Marginal stability analysis of the phase field crystal model in one spatial dimension. Physical Review B, 2011, 83, .	1.1	37
46	Three dimensional structures predicted by the modified phase field crystal equation. Computational Materials Science, 2016, 111, 310-312.	1.4	37
47	Unconditionally gradient-stable computational schemes in problems of fast phase transitions. Physical Review E, 2011, 83, 026705.	0.8	36
48	Surface Tension and Viscosity of Cu50Zr50 Measured by the Oscillating Drop Technique on Board the International Space Station. Microgravity Science and Technology, 2019, 31, 177-184.	0.7	35
49	Steady-state shapes of growing crystals in the field of local nonequilibrium diffusion. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 272, 207-217.	0.9	33
50	Stochastic generalization for a hyperbolic model of spinodal decomposition. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3443-3455.	1.2	33
51	Traveling wave profiles for a crystalline front invading liquid states: Analytical and numerical solutions. Physica D: Nonlinear Phenomena, 2015, 308, 1-10.	1.3	33
52	Boundary integral approach for propagating interfaces in a binary non-isothermal mixture. Physica A: Statistical Mechanics and Its Applications, 2017, 469, 420-428.	1.2	33
53	Evolution of the structure factor in a hyperbolic model of spinodal decomposition. European Physical Journal: Special Topics, 2009, 177, 165-175.	1.2	32
54	Diffusionless (chemically partitionless) crystallization and subsequent decomposition of supersaturated solid solutions in Snâ€“Bi eutectic alloy. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180204.	1.6	32

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55	Thermodynamics of rapid solidification and crystal growth kinetics in glass-forming alloys. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180205.	1.6	32
56	Local non-equilibrium effect on the growth kinetics of crystals. Acta Materialia, 2019, 168, 203-209.	3.8	31
57	Local-nonequilibrium phase transition model with relaxation of the diffusion flux. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 190, 292-294.	0.9	30
58	Gibbsâ€“Thomson condition for the rapidly moving interface in a binary system. Physica A: Statistical Mechanics and Its Applications, 2016, 447, 161-171.	1.2	30
59	Selected mode of dendritic growth with n-fold symmetry in the presence of a forced flow. Europhysics Letters, 2017, 119, 16001.	0.7	28
60	Dendritic solidification and fragmentation in undercooled Niâ€“Zr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 649-653.	2.6	27
61	Spinodally decomposed patterns in rapidly quenched Coâ€“Cu melts. Acta Materialia, 2013, 61, 1078-1092.	3.8	27
62	Rapid advancing of the solidâ€“liquid interface in undercooled alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 493-497.	2.6	26
63	Phase-field modeling of an abrupt disappearance of solute drag in rapid solidification. Acta Materialia, 2015, 90, 282-291.	3.8	26
64	Effect of convective transport on dendritic crystal growth from pure and alloy melts. Applied Physics Letters, 2017, 111, .	1.5	26
65	Solidification behaviour of undercooled Coâ€“Cu alloys showing a metastable miscibility gap. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 520-523.	2.6	25
66	Dendritic growth in Alâ€“Si alloys during brazing. Part 1: Experimental evidence and kinetics. International Journal of Heat and Mass Transfer, 2005, 48, 2372-2384.	2.5	25
67	Coarse graining for the phase-field model of fast phase transitions. Physical Review E, 2013, 88, 042151.	0.8	24
68	Selection criterion for the growing dendritic tip at the inner core boundary. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 195101.	0.7	22
69	Faceting of a rough solidâ€“liquid interface of a metal induced by forced convection. Philosophical Magazine Letters, 2013, 93, 608-617.	0.5	22
70	Travelling-wave amplitudes as solutions of the phase-field crystal equation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170202.	1.6	22
71	The shape of dendritic tips: a test of theory with computations and experiments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200326.	1.6	22
72	Selection Criterion of Stable Mode of Dendritic Growth with n-Fold Symmetry at Arbitrary PÃ©clet Numbers with a Forced Convection. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2019, , 203-215.	0.1	21

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73	Fluctuations and stochastic noise in systems with hyperbolic mass transport. Physica A: Statistical Mechanics and Its Applications, 2006, 366, 149-158.	1.2	20
74	A grand potential approach to phase-field modeling of rapid solidification. Journal of Non-Equilibrium Thermodynamics, 2014, 39, 93-111.	2.4	20
75	Containerless Undercooled Melts: Ordering, Nucleation, and Dendrite Growth. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4921-4936.	1.1	20
76	Hyperbolic self-consistent problem of heat transfer in rapid solidification of supercooled liquid. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 278, 129-138.	0.9	19
77	Dendritic growth in Alâ€“Si alloys during brazing. Part 2: Computational modeling. International Journal of Heat and Mass Transfer, 2005, 48, 2385-2396.	2.5	19
78	Traveling waves of the solidification and melting of cubic crystal lattices. Physical Review E, 2020, 102, 062802.	0.8	19
79	Modeling of a transition to diffusionless dendritic growth in rapid solidification of a binary alloy. Computational Materials Science, 2009, 45, 972-980.	1.4	18
80	Atomic density functional and diagram of structures in the phase field crystal model. Journal of Experimental and Theoretical Physics, 2016, 122, 298-309.	0.2	18
81	Analysis of interface kinetics: solutions of the Gibbs-Thomson-type equation and of the kinetic rate theory. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012014.	0.3	17
82	Structure and mechanical properties of structural steel in laser resolidification processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 502-506.	2.6	16
83	Bell-shaped â€œdendrite velocity-undercoolingâ€•relationship with an abrupt drop of solidification kinetics in glass forming Cu-Zr(-Ni) melts. Journal of Crystal Growth, 2020, 532, 125411.	0.7	16
84	A Stable Dendritic Growth with Forced Convection: A Test of Theory Using Enthalpy-Based Modeling Methods. Jom, 2020, 72, 3123-3131.	0.9	16
85	Growth of different faces in a body centered cubic lattice: A case of the phase-field-crystal modeling. Journal of Crystal Growth, 2020, 539, 125608.	0.7	16
86	Thermo-solutal growth of an anisotropic dendrite with six-fold symmetry. Journal of Physics Condensed Matter, 2018, 30, 105702.	0.7	15
87	Theoretical modeling of crystalline symmetry order with dendritic morphology. European Physical Journal: Special Topics, 2020, 229, 275-286.	1.2	15
88	The role of intense convective flow on dendrites evolving with n-fold symmetry. Journal of Crystal Growth, 2020, 535, 125540.	0.7	14
89	Synthesis of composite coatings using rapid laser sintering of metallic powder mixtures. Physics of Metals and Metallography, 2013, 114, 799-820.	0.3	13
90	The hyperbolic Allenâ€“Cahn equation: exact solutions. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 435201.	0.7	13

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91	Modeling of dendrite growth from undercooled nickel melt: sharp interface model versus enthalpy method. Journal of Physics Condensed Matter, 2020, 32, 194002.	0.7	13
92	Study on Anomalous Rapid Solidification of Al-35Âat%Ni in Microgravity. Jom, 2022, 74, 2420-2427.	0.9	13
93	Bifurcations in a sidebranch surface of a free-growing dendrite. Physical Review E, 1997, 55, 611-619.	0.8	12
94	Modelling of crystal pattern formation in isothermal undercooled alloys. Modelling and Simulation in Materials Science and Engineering, 2000, 8, 81-94.	0.8	12
95	Kinetic transition in the orderâ€“disorder transformation at a solid/liquid interface. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170207.	1.6	12
96	Resistivity Saturation in Metallic Liquids Above a Dynamical Crossover Temperature Observed in Measurements Aboard the International Space Station. Physical Review Letters, 2019, 123, 226601.	2.9	12
97	Non-axisymmetric growth of dendrite with arbitrary symmetry in two and three dimensions: sharp interface model vs phase-field model. European Physical Journal: Special Topics, 2020, 229, 2899-2909.	1.2	12
98	Fast crystallization of structural steel during laser processing of the surface. Technical Physics, 2002, 47, 561-568.	0.2	11
99	Nonâ€Equilibrium and Nearâ€Equilibrium Solidification of Undercooled Melts of Niâ€•and Alâ€based Alloys. Advanced Engineering Materials, 2008, 10, 444-452.	1.6	11
100	Solute redistribution around crystal shapes growing under hyperbolic mass transport. International Journal of Heat and Mass Transfer, 2015, 89, 1054-1060.	2.5	11
101	Solidification of Undercooled Melts of Al-Based Alloys on Earth and in Space. Jom, 2017, 69, 1303-1310.	0.9	11
102	Demonstration of the effect of stirring on nucleation from experiments on the International Space Station using the ISS-EML facility. Npj Microgravity, 2021, 7, 31.	1.9	11
103	Method of evaluation for the non-stationary period of primary dendritic crystallization. Journal of Physics and Chemistry of Solids, 2019, 134, 176-181.	1.9	10
104	Correlated noise effect on the structure formation in the phaseâ€field crystal model. Mathematical Methods in the Applied Sciences, 2021, 44, 12185-12193.	1.2	10
105	Kinetics of solidâ€“liquid interface motion in molecular dynamics and phase-field models: crystallization of chromium and silicon. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200320.	1.6	10
106	Model for isothermal pattern formation of growing crystals in undercooled binary alloys. Modelling and Simulation in Materials Science and Engineering, 2000, 8, 67-79.	0.8	9
107	Coarse-graining for fast dynamics of order parameters in the phase-field model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170203.	1.6	9
108	Thin interface limit of the double-sided phase-field model with convection. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190540.	1.6	9

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109	Dendrite tips as elliptical paraboloids. Journal of Physics Condensed Matter, 2021, 33, 443002.	0.7	9
110	Experimental test for the hyperbolic model of spinodal decomposition in the binary system. JETP Letters, 2007, 86, 458-461.	0.4	8
111	Solidification kinetics of a Cu-Zr alloy: ground-based and microgravity experiments. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012028.	0.3	8
112	Simulation of crystalline pattern formation by the MPFC method. MATEC Web of Conferences, 2017, 129, 02035.	0.1	7
113	Diffuse interface models of solidification with convection: The choice of a finite interface thickness. European Physical Journal: Special Topics, 2020, 229, 447-452.	1.2	7
114	Fast traveling waves in the phase-field theory: effective mobility approach versus kinetic energy approach. Journal of Physics Condensed Matter, 2020, 32, 204003.	0.7	7
115	Amorphization and nanocrystal formation in a Pdâ€“Niâ€“Cuâ€“P alloy after cooling under different conditions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20200321.	1.6	7
116	Interaction of solid ceramic particles with a dendritic solidification front. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 524-527.	2.6	6
117	Influence of tiny amounts of impurity on dendritic growth in undercooled melts. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012030.	0.3	6
118	Convective and conductive selection criteria of a stable dendritic growth and their stitching. Mathematical Methods in the Applied Sciences, 2021, 44, 12139-12151.	1.2	6
119	Dendrite growth in undercooled Al-rich Al-Ni melts measured on Earth and in Space. Physical Review Materials, 2019, 3, .	0.9	6
120	Structure diagram and dynamics of formation of hexagonal boron nitride in phase-field crystal model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20200318.	1.6	6
121	Influence of computational domain size on the pattern formation of the phase field crystals. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012008.	0.3	5
122	Boundary Integral Equation Study of the Growth of a Dendritic Elliptic Paraboloid Crystal. Russian Metallurgy (Metally), 2018, 2018, 737-741.	0.1	5
123	Kinetics of rapid crystal growth: phase field theory versus atomistic simulations. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012035.	0.3	5
124	Dynamic instability of the steady state of a planar front during non-equilibrium solidification of binary alloys. Journal of Crystal Growth, 2019, 506, 55-60.	0.7	5
125	Effects of local nonequilibrium in rapid eutectic solidificationâ€”Part 1: Statement of the problem and general solution. Mathematical Methods in the Applied Sciences, 2021, 44, 12211-12220.	1.2	5
126	The hodograph equation for slow and fast anisotropic interface propagation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200324.	1.6	5

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127	Selection constants in the theory of stable dendritic growth. European Physical Journal: Special Topics, 2020, 229, 2891-2897.	1.2	5
128	A Stable Mode of Dendritic Growth in Cases of Conductive and Convective Heat and Mass Transfer. Crystals, 2022, 12, 965.	1.0	5
129	Phase-Field Modeling of Dendritic Solidification: Verification for the Model Predictions with Latest Experimental Data. , 2005, , 52-60.		4
130	Phase-Field Modeling of Dendritic Solidification in Undercooled Droplets Processed by Electromagnetic Levitation. Materials Science Forum, 2006, 508, 431-436.	0.3	4
131	Gradient stability of numerical algorithms in local nonequilibrium problems of critical dynamics. Computational Mathematics and Mathematical Physics, 2011, 51, 1074-1090.	0.2	4
132	High-rate solidification and melting of concentrated solutions and the Hillert parallel construction. Russian Metallurgy (Metally), 2016, 2016, 785-792.	0.1	4
133	Traveling wave solutions for the hyperbolic Cahnâ€“Allen equation. Chaos, Solitons and Fractals, 2017, 94, 75-79.	2.5	4
134	Influence of initial seed distribution on the pattern formation of the phase field crystals. AIP Conference Proceedings, 2017, , .	0.3	4
135	Kinetics of the Formation of a Disordered Crystal Structure during High-Speed Solidification. Journal of Experimental and Theoretical Physics, 2018, 127, 107-114.	0.2	4
136	A shape of dendritic tips at high PÃ©clet numbers. Journal of Crystal Growth, 2019, 515, 44-47.	0.7	4
137	Thermo-solutal growth of a dendritic crystal in the form of an elliptical paraboloid with forced convection. Journal of Crystal Growth, 2020, 531, 125319.	0.7	4
138	About one unified description of the firstâ€•and secondâ€•order phase transitions in the phaseâ€field crystal model. Mathematical Methods in the Applied Sciences, 2020, 44, 12129.	1.2	4
139	Dendritic growth of ice crystals: a test of theory with experiments. Journal of Physics Condensed Matter, 2021, 33, 365402.	0.7	4
140	Rapid eutectic growth: from rod growth to diffusionless solidification. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20200305.	1.6	4
141	Diffusionless crystal growth in a eutectic system during rapid solidification. Journal of Experimental and Theoretical Physics, 2006, 103, 150-158.	0.2	3
142	On the mesoscopic description of locally nonequilibrium solidification of pure substances. JETP Letters, 2015, 101, 136-140.	0.4	3
143	The diagram of phase-field crystal structures: an influence of model parameters in a two-mode approximation. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012019.	0.3	3
144	Phase-field simulation of non-isothermal phase separation in rapidly quenched Co-Cu melts. Computational Materials Science, 2019, 158, 289-295.	1.4	3

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145	Model experiment on a glass-forming Pd-Ni-Cu-P alloy. European Physical Journal: Special Topics, 2020, 229, 157-165.	1.2	3
146	Boundary interface conditions and solute trapping near the transition to diffusionless solidification. European Physical Journal: Special Topics, 2020, 229, 287-294.	1.2	3
147	Effects of local nonequilibrium in rapid eutectic solidificationâ€”Part 2: Analysis of effects and comparison to experiment. Mathematical Methods in the Applied Sciences, 2021, 44, 12271.	1.2	3
148	Deterministic and Stochastic Dynamics in Spinodal Decomposition of a Binary System. Progress in Physics of Metals, 2009, 10, 27-102.	0.5	3
149	The effectiveness of parallelizing an algorithm of the PFC equation solution using PetIGA library. Vestnik Udmurtskogo Universiteta: Matematika, Mekhanika, Komp'yuternye Nauki, 2016, 26, 445-450.	0.0	3
150	Thermodynamic description of metastable fcc/liquid phase equilibria and solidification kinetics in Al-Cu alloys. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20200327.	1.6	3
151	Kinetics of dendrite growth and dendritic fragmentation in the undercooled Co_{81.2}Cu_{18.8}alloyâ€™s melt. Metallurgical Research and Technology, 2014, 111, 295-303.	0.4	2
152	Dendritic growth in an inclined viscous flow. Part 1. Hydrodynamic solutions. AIP Conference Proceedings, 2017, , .	0.3	2
153	Dendritic growth in an inclined viscous flow. Part 2. Numerical examples. AIP Conference Proceedings, 2017, , .	0.3	2
154	Boundary integral approach for elliptical dendritic paraboloid as a form of growing crystals. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012025.	0.3	2
155	Crystal structures predicted by the PFC method with atomic density fluctuations. Materials Today: Proceedings, 2019, 11, 118-123.	0.9	2
156	The Effect of Nonisothermality on the Early Stages of Spinodal Decomposition. Journal of Experimental and Theoretical Physics, 2019, 129, 86-96.	0.2	2
157	Analytical solutions to the boundary integral equation: A case of angled dendrites and paraboloids. Mathematical Methods in the Applied Sciences, 2020, 44, 12058.	1.2	2
158	Hodograph-equation for rapid solidification of Si-0.1 at.% As alloy melt. European Physical Journal: Special Topics, 2020, 229, 439-445.	1.2	2
159	Modeling and simulation of heat/mass transport, nucleation and growth kinetics in phase transformations. European Physical Journal: Special Topics, 2020, 229, 141-143.	1.2	2
160	Effect of tiny amount of impurity and convective transport on dendrite growth kinetics. European Physical Journal: Special Topics, 2020, 229, 239-251.	1.2	2
161	FRACTALS, MORPHOLOGICAL SPECTRUM AND COMPLEXITY OF INTERFACIAL PATTERNS IN NON-EQUILIBRIUM SOLIDIFICATION. , 2006, , .		2
162	Rod eutectic growth in bulk undercooled melts. Mathematical Methods in the Applied Sciences, 0, , .	1.2	2

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163	Mathematical modeling of dendrite growth in an Alâ€“Ge alloy with convective flow. Mathematical Methods in the Applied Sciences, 2022, 45, 8069-8081.	1.2	2
164	Quasistationary Forms of Crystal Growth in Locally Nonequilibrium Diffusion of Impurity. Journal of Engineering Physics and Thermophysics, 2000, 73, 1236-1246.	0.2	1
165	Application of the model of locally nonequilibrium solidification to the process of structure formation in alloys rapidly quenched by spinning. Crystallography Reports, 2001, 46, 310-311.	0.1	1
166	Disorder trapping by rapidly moving phase interface in an undercooled liquid. EPJ Web of Conferences, 2017, 151, 05001.	0.1	1
167	Boundary conditions and heat resistance at the moving solidâ€“liquid interface. Physica A: Statistical Mechanics and Its Applications, 2018, 489, 149-162.	1.2	1
168	Morphological stability diagram for slowly and rapidly solidifying binary systems. European Physical Journal: Special Topics, 2020, 229, 353-364.	1.2	1
169	Dendritic crystallization from the undercooled melts: effect of tiny amount of impurity. European Physical Journal: Special Topics, 2020, 229, 2885-2890.	1.2	1
170	Analytical solution of the problem on inclined viscous flow around a parabolic dendrite within the framework of Oseen's approximation. Vestnik Udmurtskogo Universiteta: Matematika, Mekhanika, Komp'yuternye Nauki, 2016, 26, 379-387.	0.0	1
171	Traveling waves in a profile of phase field: exact analytical solutions of a hyperbolic Allenâ€“Cahn equation. Vestnik Udmurtskogo Universiteta: Matematika, Mekhanika, Komp'yuternye Nauki, 2016, 26, 245-257.	0.0	1
172	Structural and phase inhomogeneity of cast corrosion-resistant steels of the austenitic class. Metal Science and Heat Treatment, 1992, 34, 395-401.	0.2	0
173	A Transition to Diffusionless Growth of Crystal Microstructure in Rapid Solidification. Materials Science Forum, 2006, 508, 19-24.	0.3	0
174	Supersymmetry model of a binary mixture with noise of the diffusion flux. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 365, 358-363.	0.9	0
175	A relaxation time of secondary dendritic branches to their steady-state growth. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012002.	0.3	0
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177	On the theory of dendritic growth under convective heat and mass transfer in a binary alloy. AIP Conference Proceedings, 2018, , .	0.3	0
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