Dmitri Alexandrov

List of Publications by Year
in descending order

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277 papers	4,788 citations	53789 45 h-index	161844 54 g-index
280 all docs	280 docs citations	280 times ranked	481 citing authors

#	Article	IF	Citations
1	Dendrite growth under forced convection: analysis methods and experimental tests. Physics-Uspekhi, 2014, 57, 771-786.	2.2	96
2	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.	7.9	78
3	Selection criterion of stable dendritic growth at arbitrary PÃ©clet numbers with convection. Physical Review E, 2013, 87, 062403.	2.1	73
4	Selected mode for rapidly growing needle-like dendrite controlled by heat and mass transport. Acta Materialia, 2017, 137, 64-70.	7.9	70
5	Dynamics of particulate assemblages in metastable liquids: a test of theory with nucleation and growth kinetics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190245.	3.4	68
6	Transient nucleation kinetics of crystal growth at the intermediate stage of bulk phase transitions. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 455101.	2.1	67
7	On the theory of transient nucleation at the intermediate stage of phase transitions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 1501-1504.	2.1	66
8	A complete analytical solution of the Fokkerâ€“Planck and balance equations for nucleation and growth of crystals. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170327.	3.4	66
9	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.	3.4	65
10	On the theory of crystal growth in metastable systems with biomedical applications: protein and insulin crystallization. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180214.	3.4	65
11	Thermo-solutal and kinetic regimes of an anisotropic dendrite growing under forced convective flow. Physical Chemistry Chemical Physics, 2015, 17, 19149-19161.	2.8	64
12	From atomistic interfaces to dendritic patterns. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170210.	3.4	64
13	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.	3.4	60
14	Analytical solutions of mushy layer equations describing directional solidification in the presence of nucleation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170217.	3.4	60
15	Phase transformations in metastable liquids combined with polymerization. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180215.	3.4	60
16	Nucleation and growth of crystals at the intermediate stage of phase transformations in binary melts. Philosophical Magazine Letters, 2014, 94, 786-793.	1.2	59
17	Directional solidification of binary melts with a non-equilibrium mushy layer. International Journal of Heat and Mass Transfer, 2006, 49, 4903-4909.	4.8	58
18	Nonlinear dynamics of directional solidification with a mushy layer. Analytic solutions of the problem. International Journal of Heat and Mass Transfer, 2007, 50, 3616-3623.	4.8	57

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19	Flow-induced morphological instability and solidification with the slurry and mushy layers in the presence of convection. International Journal of Heat and Mass Transfer, 2012, 55, 3196-3204.	4.8	57
20	Nucleation kinetics and crystal growth with fluctuating rates at the intermediate stage of phase transitions. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 015003.	2.0	57
21	Dynamic stability analysis of the solidification of binary melts in the presence of a mushy region: changeover of instability. Journal of Crystal Growth, 2000, 210, 797-810.	1.5	56
22	Convective instability of directional crystallization in a forced flow: The role of brine channels in a mushy layer on nonlinear dynamics of binary systems. International Journal of Heat and Mass Transfer, 2011, 54, 1144-1149.	4.8	56
23	Nucleation and crystal growth in binary systems. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 125102.	2.1	56
24	Self-similar solidification: morphological stability of the regime. International Journal of Heat and Mass Transfer, 2004, 47, 1383-1389.	4.8	55
25	To the theory of underwater ice evolution, or nonlinear dynamics of â€œfalse bottomsâ€• International Journal of Heat and Mass Transfer, 2008, 51, 5204-5208.	4.8	55
26	On the theory of Ostwald ripening in the presence of different mass transfer mechanisms. Journal of Physics and Chemistry of Solids, 2016, 91, 48-54.	4.0	55
27	Solidification of leads: approximate solutions of non-linear problem. Annals of Glaciology, 2006, 44, 118-122.	1.4	54
28	Nucleation and particle growth with fluctuating rates at the intermediate stage of phase transitions in metastable systems. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20130647.	2.1	54
29	Effects of nonlinear growth rates of spherical crystals and their withdrawal rate from a crystallizer on the particle-size distribution function. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180210.	3.4	54
30	Directional solidification with a two-phase zone: thermodiffusion and temperature-dependent diffusivity. Computational Materials Science, 2006, 37, 1-6.	3.0	53
31	Unidirectional solidification with a mushy layer. The influence of weak convection. Acta Materialia, 2006, 54, 2401-2406.	7.9	53
32	Self-similar solidification of an alloy from a cooled boundary. International Journal of Heat and Mass Transfer, 2006, 49, 763-769.	4.8	53
33	Solidification of a ternary melt from a cooled boundary, or nonlinear dynamics of mushy layers. International Journal of Heat and Mass Transfer, 2009, 52, 4807-4811.	4.8	53
34	The Stefan problem of solidification of ternary systems in the presence of moving phase transition regions. Journal of Experimental and Theoretical Physics, 2009, 108, 821-829.	0.9	53
35	The shape of dendritic tips. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190243.	3.4	53
36	Analytical description of seawater crystallization in ice fissures and their influence on heat exchange between the ocean and the atmosphere. Doklady Earth Sciences, 2006, 411, 1407-1411.	0.7	52

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37	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.	1.5	52
38	Coupled convective and morphological instability of the inner core boundary of the Earth. Physics of the Earth and Planetary Interiors, 2011, 189, 134-141.	1.9	52
39	Dendritic growth with the six-fold symmetry: Theoretical predictions and experimental verification. Journal of Physics and Chemistry of Solids, 2017, 108, 98-103.	4.0	52
40	Effect of convective flow on stable dendritic growth in rapid solidification of a binary alloy. Journal of Crystal Growth, 2017, 457, 349-355.	1.5	52
41	Nonlinear dynamics of mushy layers induced by external stochastic fluctuations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170216.	3.4	52
42	On the theory of nucleation and nonstationary evolution of a polydisperse ensemble of crystals. International Journal of Heat and Mass Transfer, 2019, 128, 46-53.	4.8	52
43	Nonlinear dynamics for the solidification of binary melt with a nonequilibrium two-phase zone. Doklady Physics, 2006, 51, 291-295.	0.7	51
44	Solidification with a quasiequilibrium mushy region: exact analytical solution of nonlinear model. Journal of Crystal Growth, 2001, 222, 816-821.	1.5	50
45	Mushy Layer Formation during Solidification Î¿f Binary Alloys from a Cooled Wall: the Role of Boundary Conditions. Acta Physica Polonica A, 2009, 115, 791-794.	0.5	50
46	Solidification with a quasiequilibrium two-phase zone. Acta Materialia, 2001, 49, 759-764.	7.9	49
47	One-dimensional solidification of an alloy with a mushy zone: thermodiffusion and temperature-dependent diffusivity. Journal of Fluid Mechanics, 2005, 527, 57-66.	3.4	49
48	Nucleation and crystal growth kinetics during solidification: The role of crystallite withdrawal rate and external heat and mass sources. Chemical Engineering Science, 2014, 117, 156-160.	3.8	49
49	A review on the theory of stable dendritic growth. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200325.	3.4	48
50	On the theory of Ostwald ripening: formation of the universal distribution. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 035103.	2.1	47
51	On the theory of the unsteady-state growth of spherical crystals in metastable liquids. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180209.	3.4	47
52	Heterogeneous materials: metastable and non-ergodic internal structures. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180353.	3.4	44
53	The effect of density changes on crystallization with a mushy layer. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190248.	3.4	43
54	Modeling of convection, temperature distribution and dendritic growth in glass-fluxed nickel melts. Journal of Crystal Growth, 2017, 471, 66-72.	1.5	42

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55	Nonlinear dynamics of polydisperse assemblages of particles evolving in metastable media. European Physical Journal: Special Topics, 2020, 229, 383-404.	2.6	41
56	Selection criterion of a stable dendrite growth in rapid solidification. International Journal of Heat and Mass Transfer, 2016, 101, 789-799.	4.8	39
57	Nonlinear climate dynamics: From deterministic behaviour to stochastic excitability and chaos. Physics Reports, 2021, 902, 1-60.	25.6	39
58	Nucleation and evolution of spherical crystals with allowance for their unsteady-state growth rates. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 075102.	2.1	38
59	Three dimensional structures predicted by the modified phase field crystal equation. Computational Materials Science, 2016, 111, 310-312.	3.0	37
60	From nucleation and coarsening to coalescence in metastable liquids. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190247.	3.4	37
61	Patterns in soft and biological matters. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200002.	3.4	37
62	Unidirectional solidification of binary melts from a cooled boundary: analytical solutions of a nonlinear diffusion-limited problem. Journal of Physics Condensed Matter, 2008, 20, 114105.	1.8	34
63	Boundary integral approach for propagating interfaces in a binary non-isothermal mixture. Physica A: Statistical Mechanics and Its Applications, 2017, 469, 420-428.	2.6	33
64	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.	3.4	32
65	Kinetics of particle coarsening with allowance for Ostwald ripening and coagulation. Journal of Physics Condensed Matter, 2016, 28, 035102.	1.8	29
66	Sea Ice Dynamics Induced by External Stochastic Fluctuations. Pure and Applied Geophysics, 2013, 170, 2273-2282.	1.9	28
67	Selected mode of dendritic growth with n-fold symmetry in the presence of a forced flow. Europhysics Letters, 2017, 119, 16001.	2.0	28
68	Effect of convective transport on dendritic crystal growth from pure and alloy melts. Applied Physics Letters, 2017, 111, .	3.3	26
69	Time-dependent crystallization in magma chambers and lava lakes cooled from above: The role of convection and kinetics on nonlinear dynamics of binary systems. International Journal of Heat and Mass Transfer, 2012, 55, 1189-1196.	4.8	25
70	Ostwald ripening in the presence of simultaneous occurrence of various mass transfer mechanisms: an extension of the Lifshitzâ€“Slyozov theory. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200308.	3.4	24
71	Nucleation and growth dynamics of ellipsoidal crystals in metastable liquids. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200306.	3.4	24
72	Nonlinear dynamics of the false bottom during seawater freezing. Doklady Earth Sciences, 2008, 419, 359-362.	0.7	22

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73	Selection criterion for the growing dendritic tip at the inner core boundary. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 195101.	2.1	22
74	On the theory of evolution of particulate systems. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012001.	0.6	22
75	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.	3.4	22
76	Relaxation dynamics of the phase transformation process at its ripening stage. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 245101.	2.1	21
77	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.	0.2	21
78	The Gibbs-Thomson effect in the evolution of particulate assemblages in a metastable liquid. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126259.	2.1	20
79	An analytical solution to the nonlinear evolutionary equations for nucleation and growth of particles. Philosophical Magazine Letters, 2018, 98, 199-208.	1.2	19
80	On the theory of phase transformation process in a binary supercooled melt. European Physical Journal: Special Topics, 2020, 229, 375-382.	2.6	19
81	The influence of Brownian coagulation on the particle-size distribution function in supercooled melts and supersaturated solutions. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 015101.	2.1	18
82	Stochastically driven transitions between climate attractors. Tellus, Series A: Dynamic Meteorology and Oceanography, 2014, 66, 23454.	1.7	17
83	Mathematical Simulation of the Crystal Nucleation and Growth at the Intermediate Stage of a Phase Transition. Russian Metallurgy (Metally), 2018, 2018, 707-715.	0.5	17
84	On the Theory of the Nonstationary Spherical Crystal Growth in Supercooled Melts and Supersaturated Solutions. Russian Metallurgy (Metally), 2019, 2019, 787-794.	0.5	17
85	Evolution of a Polydisperse Ensemble of Spherical Particles in a Metastable Medium with Allowance for Heat and Mass Exchange with the Environment. Crystals, 2022, 12, 949.	2.2	17
86	Mathematical modelling of nucleation and growth of crystals with buoyancy effects. Philosophical Magazine Letters, 2016, 96, 132-141.	1.2	16
87	Kinetics of diffusive decomposition in the case of several mass transfer mechanisms. Journal of Crystal Growth, 2017, 457, 11-18.	1.5	16
88	A Stable Dendritic Growth with Forced Convection: A Test of Theory Using Enthalpy-Based Modeling Methods. Jom, 2020, 72, 3123-3131.	1.9	16
89	Thermo-solutal growth of an anisotropic dendrite with six-fold symmetry. Journal of Physics Condensed Matter, 2018, 30, 105702.	1.8	15
90	Theoretical modeling of crystalline symmetry order with dendritic morphology. European Physical Journal: Special Topics, 2020, 229, 275-286.	2.6	15

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91	Solidification from a Cooled Boundary with a Mushy Layer Under Conditions of Nonturbulent and Turbulent Heat and Mass Transfer in the Ocean. International Journal of Fluid Mechanics Research, 2010, 37, 1-14.	0.4	15
92	Effects of external heat/mass sources and withdrawal rates of crystals from a metastable liquid on the evolution of particulate assemblages. European Physical Journal: Special Topics, 2019, 228, 25-34.	2.6	14
93	How the intermediate stage of a phase transition process transforms to the concluding stage of Ostwald ripening. Journal of Crystal Growth, 2020, 532, 125456.	1.5	14
94	Dissolution of polydisperse ensembles of crystals in channels with a forced flow. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190246.	3.4	14
95	The role of intense convective flow on dendrites evolving with n-fold symmetry. Journal of Crystal Growth, 2020, 535, 125540.	1.5	14
96	Towards the theory of phase transformations in metastable liquids. Analytical solutions and stability analysis. European Physical Journal: Special Topics, 2020, 229, 365-373.	2.6	14
97	The influence of non-stationarity and interphase curvature on the growth dynamics of spherical crystals in a metastable liquid. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200307.	3.4	14
98	Dynamical law of the phase interface motion in the presence of crystals nucleation. Scientific Reports, 2022, 12, .	3.3	14
99	Behavior of the Ant Colony Algorithm for the Set Covering Problem. , 2000, , 255-260.		13
100	The hyperbolic Allenâ€“Cahn equation: exact solutions. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 435201.	2.1	13
101	Anomalous stochastic dynamics induced by the slipâ€“stick friction and leading to phantom attractors. Physica D: Nonlinear Phenomena, 2019, 399, 153-158.	2.8	13
102	Mathematical modeling of crystallization process from a supercooled binary melt. Mathematical Methods in the Applied Sciences, 2021, 44, 12244-12251.	2.3	13
103	Modeling of dendrite growth from undercooled nickel melt: sharp interface model versus enthalpy method. Journal of Physics Condensed Matter, 2020, 32, 194002.	1.8	13
104	Study on Anomalous Rapid Solidification of Al-35Âat%Ni in Microgravity. Jom, 2022, 74, 2420-2427.	1.9	13
105	The steady-state solidification scenario of ternary systems: Exact analytical solution of nonlinear model. International Journal of Heat and Mass Transfer, 2012, 55, 3755-3762.	4.8	12
106	Selection of stable growth conditions for the parabolic dendrite tip in crystallization of multicomponent melts. Technical Physics, 2013, 58, 309-315.	0.7	12
107	Analysis of stochastic model for nonlinear volcanic dynamics. Nonlinear Processes in Geophysics, 2015, 22, 197-204.	1.3	12
108	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.	2.6	12

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109	How the shift in the phase transition temperature influences the evolution of crystals during the intermediate stage of phase transformations. European Physical Journal: Special Topics, 2020, 229, 2923-2935.	2.6	12
110	Regular and chaotic regimes in Saltzman model of glacial climate dynamics under the influence of additive and parametric noise. European Physical Journal B, 2014, 87, 1.	1.5	11
111	Solute redistribution around crystal shapes growing under hyperbolic mass transport. International Journal of Heat and Mass Transfer, 2015, 89, 1054-1060.	4.8	11
112	On the theory of bulk crystallization in the moving phase transition layer. Journal of Crystal Growth, 2020, 532, 125420.	1.5	11
113	Microstructure and morphology of Si crystals grown in pure Si and Alâ€“Si melts. Journal of Physics Condensed Matter, 2022, 34, 094002.	1.8	11
114	Modelling of hemodynamics in bifurcation lesions of coronary arteries before and after myocardial revascularization. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20200303.	3.4	11
115	Growth of spherical and ellipsoidal crystals in a metastable liquid. European Physical Journal: Special Topics, 2022, 231, 1089-1100.	2.6	11
116	On the theory of solidification with a two-phase concentration supercooling zone. Russian Metallurgy (Metally), 2010, 2010, 745-750.	0.5	10
117	Excitability, mixed-mode oscillations and transition to chaos in a stochastic ice ages model. Physica D: Nonlinear Phenomena, 2017, 343, 28-37.	2.8	10
118	Solidification of ternary systems with a nonlinear phase diagram. Russian Metallurgy (Metally), 2017, 2017, 127-135.	0.5	10
119	Method of evaluation for the non-stationary period of primary dendritic crystallization. Journal of Physics and Chemistry of Solids, 2019, 134, 176-181.	4.0	10
120	Anomalous climate dynamics induced by multiplicative and additive noises. Physical Review E, 2020, 102, 012217.	2.1	10
121	Kinetics of the intermediate stage of phase transition with elliptical crystals. European Physical Journal: Special Topics, 2020, 229, 2937-2949.	2.6	10
122	Self-Similar Solidification of Binary Alloys. Acta Physica Polonica A, 2009, 115, 795-799.	0.5	10
123	Emergence of a Mushy Region in Processes of Binary Melt Solidification. International Journal of Fluid Mechanics Research, 1999, 26, 248-264.	0.4	10
124	The boundary integral equation for curved solid/liquid interfaces propagating into a binary liquid with convection. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 055701.	2.1	10
125	Nonlinear dynamics of directional solidification of ternary solutions with mushy layers. Heat and Mass Transfer, 2009, 45, 1467-1472.	2.1	9
126	The large-time behaviour of coarsening of a particulate assemblage due to Ostwald ripening and coagulation. Philosophical Magazine Letters, 2016, 96, 355-360.	1.2	9

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127	Noise-induced transitions and shifts in a climateâ€“vegetation feedback model. Royal Society Open Science, 2018, 5, 171531.	2.4	9
128	In-silico study of hemodynamic effects in a coronary artery with stenosis. European Physical Journal: Special Topics, 2020, 229, 3009-3020.	2.6	9
129	Mathematical modeling of the growth of ellipsoidal crystals in metastable melts and solutions. Mathematical Methods in the Applied Sciences, 2021, 44, 12252-12259.	2.3	9
130	Dendrite tips as elliptical paraboloids. Journal of Physics Condensed Matter, 2021, 33, 443002.	1.8	9
131	Dynamic stability of a solidification process of a binary melt in the presence of a broad quasiequilibrium mushy region. Scripta Materialia, 1996, 35, 787-790.	5.2	8
132	The Stefan problem for unsteady-state evaporation of a volatile component in the solidâ€“liquidâ€“gas systems: Exact analytical solution. International Journal of Heat and Mass Transfer, 2010, 53, 2790-2794.	4.8	8
133	Analysis of noise-induced eruptions in a geyser model. European Physical Journal B, 2016, 89, 1.	1.5	8
134	Transport phenomena in complex systems (part 1). Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200301.	3.4	8
135	Analytical solution of a binary melt solidification model in the presence of a quasi-equilibrium mushy region for the case of the non-linear phase diagram. Journal of Physics Condensed Matter, 2020, 32, 304003.	1.8	8
136	Anomalous Stochastic Transport of Particles with Self-Reinforcement and Mittagâ€“Leffler Distributed Rest Times. Fractal and Fractional, 2021, 5, 221.	3.3	8
137	Dynamics of intracellular clusters of nanoparticles. Cancer Nanotechnology, 2022, 13, .	3.7	8
138	Numerical Modeling of One-Dimensional Binary Solidification with a Mushy Layer Evolution. Numerical Mathematics, 2012, 5, 157-185.	1.3	7
139	Dynamics of the phase transition boundary in the presence of nucleation and growth of crystals. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 345101.	2.1	7
140	The steady-state solutions of coagulation equations. International Journal of Heat and Mass Transfer, 2018, 121, 884-886.	4.8	7
141	Analytical Solution for a Problem of Directional Solidification in a Ternary System. Acta Physica Polonica A, 2009, 115, 786-790.	0.5	7
142	Solidification with a Quasiequilibrium Mushy Zone: Exact Analytical Solution. International Journal of Fluid Mechanics Research, 2000, 27, 213-222.	0.4	7
143	Interdendritic spacing in growth processes with a mushy layer. AIP Conference Proceedings, 2015, , .	0.4	6
144	Noise-induced variability of volcanic extrusions. Europhysics Letters, 2016, 116, 40006.	2.0	6

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145	Influence of tiny amounts of impurity on dendritic growth in undercooled melts. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012030.	0.6	6
146	Convective and conductive selection criteria of a stable dendritic growth and their stitching. Mathematical Methods in the Applied Sciences, 2021, 44, 12139-12151.	2.3	6
147	Evaporation kinetics of a polydisperse ensemble of drops. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200309.	3.4	6
148	A complete analytical solution of unsteady coagulation equations and transition between the intermediate and concluding stages of a phase transformation. European Physical Journal: Special Topics, 2022, 231, 1115-1121.	2.6	6
149	Nucleation and Growth of an Ensemble of Crystals during the Intermediate Stage of a Phase Transition in Metastable Liquids. Crystals, 2022, 12, 895.	2.2	6
150	The effect of concentrational supercooling on the morphological stability of self-similar solidification with a planar front. Doklady Physics, 2001, 46, 453-458.	0.7	5
151	On the theory of the formation of the two-phase concentration-supercooling region. Doklady Physics, 2003, 48, 481-486.	0.7	5
152	A Nonlinear Instability Analysis of Crystallization Processes with a Two-Phase Zone. Journal of Metastable and Nanocrystalline Materials, 2004, 20-21, 468-475.	0.1	5
153	Nonlinear dynamics of solidification in three-component systems. Doklady Physics, 2008, 53, 471-475.	0.7	5
154	How a small noise generates large-amplitude oscillations of volcanic plug and provides high seismicity. European Physical Journal B, 2015, 88, 1.	1.5	5
155	Stochastic variability and noise-induced generation of chaos in a climate feedback system including the carbon dioxide dynamics. Europhysics Letters, 2016, 115, 40009.	2.0	5
156	Influence of computational domain size on the pattern formation of the phase field crystals. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012008.	0.6	5
157	Boundary Integral Equation Study of the Growth of a Dendritic Elliptic Paraboloid Crystal. Russian Metallurgy (Metally), 2018, 2018, 737-741.	0.5	5
158	Noise-induced chaos in non-linear dynamics of El NiÃ±os. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 2922-2926.	2.1	5
159	Phase field analysis of the growth of fast and slow crystallites. European Physical Journal: Special Topics, 2020, 229, 433-437.	2.6	5
160	Transient dynamics of solute bands in dilute binary alloys. European Physical Journal: Special Topics, 2020, 229, 253-263.	2.6	5
161	Analysis of Stochastic Generation and Shifts of Phantom Attractors in a Climateâ€“Vegetation Dynamical Model. Mathematics, 2021, 9, 1329.	2.2	5
162	Selection constants in the theory of stable dendritic growth. European Physical Journal: Special Topics, 2020, 229, 2891-2897.	2.6	5

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163	The bulk crystal growth in binary supercooled melts with allowance for heat removal. European Physical Journal: Special Topics, 2022, 231, 1101-1106.	2.6	5
164	Solidification of ternary melts with a two-phase layer. Journal of Physics Condensed Matter, 2022, 34, 383002.	1.8	5
165	A Stable Mode of Dendritic Growth in Cases of Conductive and Convective Heat and Mass Transfer. Crystals, 2022, 12, 965.	2.2	5
166	Scaling properties of a two-phase zone in directed crystallization. Doklady Physics, 2002, 47, 499-503.	0.7	4
167	Nonlinear analysis of the stability of solidification with a mushy zone. Russian Metallurgy (Metally), 2014, 2014, 606-617.	0.5	4
168	Traveling wave solutions for the hyperbolic Cahnâ€“Allen equation. Chaos, Solitons and Fractals, 2017, 94, 75-79.	5.1	4
169	On the Theory of Fragmentation Process with Initial Particle Volume. Communications in Theoretical Physics, 2017, 68, 269.	2.5	4
170	Influence of initial seed distribution on the pattern formation of the phase field crystals. AIP Conference Proceedings, 2017, , .	0.4	4
171	A shape of dendritic tips at high PÃ©clet numbers. Journal of Crystal Growth, 2019, 515, 44-47.	1.5	4
172	Rapid quenching effect on the microstructure of Al-Si eutectic Zn-doped alloy. Journal of Crystal Growth, 2020, 531, 125333.	1.5	4
173	Thermo-solutal growth of a dendritic crystal in the form of an elliptical paraboloid with forced convection. Journal of Crystal Growth, 2020, 531, 125319.	1.5	4
174	Formation of the microstructure of rapidly solidified hypoeutectic Al-Si alloy. European Physical Journal: Special Topics, 2020, 229, 417-425.	2.6	4
175	Dendritic growth of ice crystals: a test of theory with experiments. Journal of Physics Condensed Matter, 2021, 33, 365402.	1.8	4
176	Incipience of a Mushy Zone in Binary Melt Solidification Processes: General Theory. International Journal of Fluid Mechanics Research, 2000, 27, 223-238.	0.4	4
177	Stochastic Model of Virusâ€“Endosome Fusion and Endosomal Escape of pH-Responsive Nanoparticles. Mathematics, 2022, 10, 375.	2.2	4
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