

Irina G Nizovtseva

List of Publications by Year in descending order

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44
papers

496
citations

840776

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docs citations

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times ranked

89
citing authors

#	ARTICLE	IF	CITATIONS
1	Approximate analytical solution of the integro-differential model of bulk crystallization in a metastable liquid with mass supply (heat dissipation) and crystal withdrawal mechanism. <i>Mathematical Methods in the Applied Sciences</i> , 2022, 45, 8170-8178.	2.3	4
2	Simulation of two-phase air-liquid flows in a closed bioreactor loop: Numerical modeling, experiments, and verification. <i>Mathematical Methods in the Applied Sciences</i> , 2022, 45, 8216-8229.	2.3	5
3	A review of continuous modeling of periodic pattern formation with modified phase-field crystal models. <i>European Physical Journal: Special Topics</i> , 2022, 231, 1135-1145.	2.6	8
4	Editorial for the MMAS special issue "Integro-differential models of natural and anthropogenic processes and phenomena". <i>Mathematical Methods in the Applied Sciences</i> , 2022, 45, 7939-7939.	2.3	0
5	Evolution of a Polydisperse Ensemble of Spherical Particles in a Metastable Medium with Allowance for Heat and Mass Exchange with the Environment. <i>Crystals</i> , 2022, 12, 949.	2.2	17
6	Mathematical modeling of binary compounds with the presence of a phase transition layer. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 12260-12270.	2.3	6
7	Editorial for special issue "Nonlinear dynamics of phase transitions". <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 12039-12039.	2.3	0
8	The effect of density changes on crystallization with a mushy layer. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20190248.	3.4	43
9	Phase field analysis of the growth of fast and slow crystallites. <i>European Physical Journal: Special Topics</i> , 2020, 229, 433-437.	2.6	5
10	Binary melt with quasi-stationary solidification modeling: Mushy layer approach. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	2
11	Phase field model derivation for rapid crystal growth in polycrystalline alloys. <i>European Physical Journal: Special Topics</i> , 2020, 229, 453-458.	2.6	5
12	On the theory of non-stationary directional solidification with a phase transition layer. <i>European Physical Journal: Special Topics</i> , 2020, 229, 405-416.	2.6	4
13	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. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 304003.	1.8	8
14	Modeling of a mushy zone during quasi-stationary solidification of TiAl alloy. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	1
15	On the theory of crystal growth in metastable systems with biomedical applications: protein and insulin crystallization. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20180214.	3.4	65
16	On the theory of nucleation and nonstationary evolution of a polydisperse ensemble of crystals. <i>International Journal of Heat and Mass Transfer</i> , 2019, 128, 46-53.	4.8	52
17	MODELING OF PASSENGERS' CHOICE USING INTELLIGENT AGENTS WITH REINFORCEMENT LEARNING IN SHARED INTERESTS SYSTEMS; A BASIC APPROACH. <i>Transport Problems</i> , 2019, 14, 43-53.	0.6	0
18	Travelling-wave amplitudes as solutions of the phase-field crystal equation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20170202.	3.4	22

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19	Kinetic transition in the order-disorder transformation at a solid/liquid interface. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170207.	3.4	12
20	Kinetics of the Formation of a Disordered Crystal Structure during High-Speed Solidification. Journal of Experimental and Theoretical Physics, 2018, 127, 107-114.	0.9	4
21	Traveling wave solutions for the hyperbolic Cahn-Allen equation. Chaos, Solitons and Fractals, 2017, 94, 75-79.	5.1	4
22	Solidification of ternary systems with a nonlinear phase diagram. Russian Metallurgy (Metally), 2017, 2017, 127-135.	0.5	10
23	General set of traveling-wave solutions for amplitude equations in the phase field crystal model. IOP Conference Series: Materials Science and Engineering, 2017, 192, 012004.	0.6	0
24	Disorder trapping by rapidly moving phase interface in an undercooled liquid. EPJ Web of Conferences, 2017, 151, 05001.	0.3	1
25	The hyperbolic Allen-Cahn equation: exact solutions. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 435201.	2.1	13
26	Traveling waves in a profile of phase field: exact analytical solutions of a hyperbolic Allen-Cahn equation. Vestnik Udmurtskogo Universiteta: Matematika, Mekhanika, Komp'yuternye Nauki, 2016, 26, 245-257.	0.2	1
27	The stefan problem on evaporation of a volatile component in the gas-melt-solid system. AIP Conference Proceedings, 2015, , .	0.4	0
28	The role of crystallite withdrawal rate and external sources on nucleation and growth of crystals. AIP Conference Proceedings, 2015, , .	0.4	0
29	Nonlinear analysis of the stability of solidification with a mushy zone. Russian Metallurgy (Metally), 2014, 2014, 606-617.	0.5	4
30	To the theory of underwater ice evolution, or nonlinear dynamics of "false bottoms". International Journal of Heat and Mass Transfer, 2008, 51, 5204-5208.	4.8	55
31	Nonlinear dynamics of the false bottom during seawater freezing. Doklady Earth Sciences, 2008, 419, 359-362.	0.7	22
32	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
33	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
34	The generalized stability indicator of fragment of the network. II Critical performance event. Applied Mathematical Sciences, 0, 7, 5627-5632.	0.1	11
35	The generalized stability indicator of fragment of the network. I. Modeling of the corporate network fragments. Applied Mathematical Sciences, 0, 7, 5621-5625.	0.1	11
36	Nonlinear model of the mushy layer in the time-dependent crystallization. II Calculations. Advanced Studies in Theoretical Physics, 0, 7, 1017-1022.	0.2	0

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37	Nonlinear model of the mushy layer in the time-dependent crystallization of sea water in ice cracks. <i>Advanced Studies in Theoretical Physics</i> , 0, 7, 1011-1016.	0.2	1
38	Index of the economic interaction effectiveness between the natural monopoly and regions. I. Math model. <i>Applied Mathematical Sciences</i> , 0, 7, 6181-6185.	0.1	7
39	Automated methodology combining assessments and developing solutions about interaction. <i>Applied Mathematical Sciences</i> , 0, 8, 3035-3041.	0.1	0
40	Generalization index of the economic interaction effectiveness between the natural monopoly and regions in case of multiple simultaneous projects. <i>Applied Mathematical Sciences</i> , 0, 8, 1223-1230.	0.1	2
41	An exact analytical solution of the Fokker-Planck type equation in the presence of arbitrary growth rates of nuclei. <i>Advanced Studies in Theoretical Physics</i> , 0, 9, 753-756.	0.2	0
42	Morphological stability analysis of the self-similar solidification front in the case of thermodiffusion. Part II. The stability criterion. <i>Advanced Studies in Theoretical Physics</i> , 0, 9, 745-752.	0.2	0
43	Models of transport processes and structural transitions on the basis of equilibrium multi-component zone. <i>Advanced Studies in Theoretical Physics</i> , 0, 9, 559-564.	0.2	0
44	Morphological stability analysis of the self-similar solidification front in the case of thermodiffusion. Part I. The self-similar solutions. <i>Advanced Studies in Theoretical Physics</i> , 0, 9, 737-743.	0.2	0