Vadim S Nikolayev

List of Publications by Year
in descending order

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79 papers	2,070 citations	236612 25 h-index	253896 43 g-index
79 all docs	79 docs citations	79 times ranked	1167 citing authors

#	Article	IF	Citations
1	Water recovery from dew. Journal of Hydrology, 1996, 182, 19-35.	2.3	125
2	Coalescence of sessile drops. Journal of Fluid Mechanics, 2002, 453, 427-438.	1.4	124
3	Using radiative cooling to condense atmospheric vapor: a study to improve water yield. Journal of Hydrology, 2003, 276, 1-11.	2.3	118
4	Measurement and modelling of dew in island, coastal and alpine areas. Atmospheric Research, 2005, 73, 1-22.	1.8	98
5	Contact Line Dynamics in Drop Coalescence and Spreading. Langmuir, 2004, 20, 1213-1221.	1.6	97
6	Experimental Evidence of the Vapor Recoil Mechanism in the Boiling Crisis. Physical Review Letters, 2006, 97, 184503.	2.9	93
7	Thermally induced two-phase oscillating flow inside a capillary tube. International Journal of Heat and Mass Transfer, 2010, 53, 3905-3913.	2.5	85
8	Boiling crisis and non-equilibrium drying transition. Europhysics Letters, 1999, 47, 345-351.	0.7	79
9	New Hydrodynamic Mechanism for Drop Coarsening. Physical Review Letters, 1996, 76, 3144-3147.	2.9	74
10	Physical principles and state-of-the-art of modeling of the pulsating heat pipe: A review. Applied Thermal Engineering, 2021, 195, 117111.	3.0	66
11	A Dynamic Film Model of the Pulsating Heat Pipe. Journal of Heat Transfer, 2011, 133, .	1.2	60
12	Collecting dew as a water source on small islands: the dew equipment for water project in BisË˜evo (Croatia). Energy, 2007, 32, 1032-1037.	4.5	53
13	Dynamics of the triple contact line on a nonisothermal heater at partial wetting. Physics of Fluids, 2010, 22, .	1.6	47
14	Comparison of various radiation-cooled dew condensers using computational fluid dynamics. Desalination, 2009, 249, 707-712.	4.0	41
15	Coherent light transmission by a dew pattern. Optics Communications, 1998, 150, 263-269.	1.0	36
16	Growth of a dry spot under a vapor bubble at high heat flux and high pressure. International Journal of Heat and Mass Transfer, 2001, 44, 3499-3511.	2.5	33
17	Gas spreading on a heated wall wetted by liquid. Physical Review E, 2001, 64, 051602.	0.8	31
18	Dynamics of Drop Coalescence on a Surface: The Role of Initial Conditions and Surface Properties. International Journal of Thermophysics, 2005, 26, 1743-1757.	1.0	31

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19	Dips and Rims in Dried Colloidal Films. Physical Review Letters, 2010, 105, 266103.	2.9	31
20	Contact line singularity at partial wetting during evaporation driven by substrate heating. Europhysics Letters, 2012, 100, 14003.	0.7	30
21	Effect of tube heat conduction on the pulsating heat pipe start-up. Applied Thermal Engineering, 2017, 117, 24-29.	3.0	29
22	Relaxation of nonspherical sessile drops towards equilibrium. Physical Review E, 2002, 65, 046135.	0.8	28
23	In situ investigation of liquid films in pulsating heat pipe. Applied Thermal Engineering, 2017, 126, 1023-1028.	3.0	28
24	Effect of tube heat conduction on the single branch pulsating heat pipe start-up. International Journal of Heat and Mass Transfer, 2016, 95, 477-487.	2.5	26
25	Pulsating Heat Pipes: Experimental Analysis, Design and Applications. , 2018, , 1-62.		26
26	Possibility of long-distance heat transport in weightlessness using supercritical fluids. Physical Review E, 2010, 82, 061126.	0.8	25
27	Using magnetic levitation to produce cryogenic targets for inertial fusion energy: experiment and theory. Cryogenics, 2002, 42, 253-261.	0.9	24
28	Magnetic Gravity Compensation. Microgravity Science and Technology, 2011, 23, 113-122.	0.7	24
29	Can hydrodynamic contact line paradox be solved by evaporationâ€“condensation?. Journal of Colloid and Interface Science, 2015, 460, 329-338.	5.0	24
30	Wetting film dynamics during evaporation under weightlessness in a near-critical fluid. Physical Review E, 2005, 72, 031602.	0.8	22
31	Development and test of a cryogenic pulsating heat pipe and a pre-cooling system. AIP Conference Proceedings, 2012, , .	0.3	22
32	Apparent-contact-angle model at partial wetting and evaporation: Impact of surface forces. Physical Review E, 2013, 87, 012404.	0.8	22
33	Moving contact line of a volatile fluid. Physical Review E, 2013, 88, 060404.	0.8	21
34	Oscillatory instability of the gasâ€“liquid meniscus in a capillary under the imposed temperature difference. International Journal of Heat and Mass Transfer, 2013, 64, 313-321.	2.5	20
35	Evaporation-driven dewetting of a liquid film. Physical Review Fluids, 2016, 1, .	1.0	20
36	Liquid-vapor phase separation in a thermocapillary force field. Europhysics Letters, 2002, 59, 245-251.	0.7	17

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37	Coalescence limited by hydrodynamics. Physics of Fluids, 1997, 9, 3227-3234.	1.6	16
38	Comment on â€œThe moisture from the air as water resource in arid region: Hopes, doubt and factsâ€•by Kogan and Trahtman. Journal of Arid Environments, 2006, 67, 343-352.	1.2	16
39	Dynamics and depinning of the triple contact line in the presence of periodic surface defects. Journal of Physics Condensed Matter, 2005, 17, 2111-2119.	0.7	15
40	Magnetic Compensation of Gravity: Experiments with Oxygen. Microgravity Science and Technology, 2009, 21, 129-133.	0.7	15
41	Pulsating Heat Pipe Simulations: Impact of PHP Orientation. Microgravity Science and Technology, 2019, 31, 241-248.	0.7	15
42	EVALUATION OF THE VAPOR THERMODYNAMIC STATE IN PHP. Heat Pipe Science and Technology an International Journal, 2014, 5, 369-376.	0.2	15
43	Fast heat transfer calculations in supercritical fluids versus hydrodynamic approach. Physical Review E, 2003, 67, 061202.	0.8	14
44	Equation of motion of the triple contact line along an inhomogeneous surface. Europhysics Letters, 2003, 64, 763-768.	0.7	14
45	Experimental analysis and transient numerical simulation of a large diameter pulsating heat pipe in microgravity conditions. International Journal of Heat and Mass Transfer, 2022, 187, 122532.	2.5	14
46	The effect of vibrations on heterogeneous fluids: Some studies in weightlessness. Acta Astronautica, 2007, 61, 1002-1009.	1.7	13
47	Study of fluid behaviour under gravity compensated by a magnetic field. Microgravity Science and Technology, 2006, 18, 196-199.	0.7	12
48	Pulsating Heat Pipes: Basics of Functioning and Modeling. , 2018, , 63-139.		12
49	Impact of the apparent contact angle on the bubble departure at boiling. International Journal of Heat and Mass Transfer, 2012, 55, 7352-7354.	2.5	11
50	Quasistatic relaxation of arbitrarily shaped sessile drops. Physical Review E, 2005, 72, 011606.	0.8	10
51	TRIGGERING THE BOILING CRISIS: A STUDY OF THE DRY SPOT SPREADING MECHANISM. Interfacial Phenomena and Heat Transfer, 2014, 2, 363-383.	0.3	10
52	Transparent heater for study of the boiling crisis near the vaporâ€“liquid critical point. Acta Astronautica, 2010, 66, 760-768.	1.7	9
53	Criticality in the slowed-down boiling crisis at zero gravity. Physical Review E, 2015, 91, 053007.	0.8	9
54	Liquid film dynamics with immobile contact line during meniscus oscillation. Journal of Fluid Mechanics, 2021, 923, .	1.4	9

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55	Gas â€œWetsâ€• a Solid Wall in Orbit. International Journal of Thermophysics, 2002, 23, 89-101.	1.0	8
56	Modeling of the moving deformed triple contact line: Influence of the fluid inertia. Journal of Colloid and Interface Science, 2006, 302, 605-612.	5.0	8
57	Comment on â€œFlow and heat transfer of liquid plug and neighboring vapor slugs in a pulsating heat pipeâ€•by Yuan, Qu, & Ma. International Journal of Heat and Mass Transfer, 2011, 54, 2226-2227.	2.5	8
58	Piston effect in a supercritical fluid sample cell : A phenomenological approach of the mechanisms. European Physical Journal Special Topics, 2001, 11, Pr6-23-Pr6-34.	0.2	8
59	Bubble spreading during the boiling crisis: modelling and experimenting in microgravity. Microgravity Science and Technology, 2006, 18, 34-37.	0.7	7
60	Role of Vapor Mass Transfer in Flow Coating of Colloidal Dispersions in the Evaporative Regime. Langmuir, 2017, 33, 14078-14086.	1.6	7
61	Dynamic modeling of contact-line deformation: Comparison with experiment. Physical Review E, 2008, 78, 021605.	0.8	6
62	Contact angle hysteresis and pinning at periodic defects in statics. Physical Review E, 2014, 90, 012406.	0.8	6
63	Boiling Crisis Dynamics: Low Gravity Experiments at High Pressure. Microgravity Science and Technology, 2015, 27, 253-260.	0.7	6
64	Reprint of: Effect of tube heat conduction on the pulsating heat pipe start-up. Applied Thermal Engineering, 2017, 126, 1077-1082.	3.0	6
65	Evaporation condensation-induced bubble motion after temperature gradient set-up. Comptes Rendus - Mecanique, 2017, 345, 35-46.	2.1	5
66	Twin spacing and the structural phase transitions inRBa2Cu3O7â^'Î´high-Tcsuperconductors. Physical Review B, 1994, 50, 4163-4167.	1.1	4
67	Vapour spreading and the boiling crisis. Journal of Physics Condensed Matter, 2003, 15, S435-S442.	0.7	4
68	3D reconstruction of dynamic liquid film shape by optical grid deflection method. European Physical Journal E, 2018, 41, 5.	0.7	4
69	Evaporation Effect on the Contact Angle and Contact Line Dynamics. , 2022, , 133-187.		4
70	On the theory of formation of a twin (Ferroelastic) structure in high-temperature superconductors with oxygen nonstoichiometry. Solid State Communications, 1990, 75, 503-506.	0.9	3
71	Twin spacing versus size of a monocrystal for the nonstoichiometric 1:2:3 superconductors. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 180, 157-163.	0.9	3
72	Computational Fluid Dynamic (CFD) Applied to Radiative Cooled Dew Condensers. , 2006, , .		3

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73	Boiling phenomena in near-critical SF6 observed in weightlessness. Acta Astronautica, 2014, 100, 22-29.	1.7	3
74	OSCILLATING MENISCI AND LIQUID FILMS AT EVAPORATION/CONDENSATION. Heat Pipe Science and Technology an International Journal, 2014, 5, 59-67.	0.2	3
75	Near-critical fluid boiling: Overheating and wetting films. European Physical Journal E, 2008, 26, 345-353.	0.7	2
76	Quench cooling under reduced gravity. Physical Review E, 2013, 88, 013004.	0.8	1
77	Thin wedge evaporation/condensation controlled by the vapor dynamics in the atmosphere. European Physical Journal E, 2018, 41, 147.	0.7	1
78	Crise d'Ã©bullition : inhibition du dÃ©tachement de la bulle de vapeur par la force de recul. Mecanique Et Industries, 2004, 5, 553-558.	0.2	1
79	Dynamic modelling of the deformed contact line under partial wetting conditions: Quasi-static approach. European Physical Journal: Special Topics, 2009, 166, 181-184.	1.2	0