Vladimir S Ajaev

List of Publications by Year
in descending order

58	1,409	331670	330143
papers	citations	21 h-index	37 g-index

59	59	59	796
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Evaporation and fluid flow near the boundary of a stationary dry patch. Physical Review E, 2022, 105, .	2.1	1
2	The effect of electrical double layers on evaporation of sessile droplets. Journal of Engineering Mathematics, 2022, 134, .	1.2	1
3	Contact line motion on heated patterned surfaces. Numerical Heat Transfer; Part A: Applications, 2022, 82, 802-811.	2.1	1
4	Levitation conditions for condensing droplets over heated liquid surfaces. Soft Matter, 2021, 17, 4623-4631.	2.7	14
5	Levitation of evaporating microscale droplets over solid surfaces. Physical Review Fluids, 2021, 6, .	2.5	9
6	Levitation and Self-Organization of Droplets. Annual Review of Fluid Mechanics, 2021, 53, 203-225.	25.0	39
7	Interaction of advancing contact lines with defects on heated substrates. Physical Review E, 2020, 101, 022801.	2.1	2
8	Self-Similar Response of Electrode Polarization for Binary Electrolytes in Parallel Plate Capacitor Systems. Analytical Chemistry, 2019, 91, 11231-11239.	6.5	3
9	Evaporation and interface dynamics in microregion on heated substrate of non-uniform wettability. International Journal of Heat and Mass Transfer, 2019, 142, 118355.	4.8	6
10	Modeling of Moving Liquid-Vapor Interfaces in the Constrained Vapor Bubble System. Microgravity Science and Technology, 2019, 31, 685-692.	1.4	2
11	EXPERIMENTAL AND THEORETICAL STUDIES OF ORDERED ARRAYS OF MICRODROPLETS LEVITATING OVER LIQUID AND SOLID SURFACES. Interfacial Phenomena and Heat Transfer, 2018, 6, 219-230.	0.8	15
12	Stability and nonlinear evolution of electrolyte films on substrates with spatially periodic charge density. Physical Review E, 2018, 98, .	2.1	2
13	Heat and mass transfer near contact lines on heated surfaces. International Journal of Heat and Mass Transfer, 2017, 108, 918-932.	4.8	56
14	Interaction of Levitating Microdroplets with Moist Air Flow in the Contact Line Region. Nanoscale and Microscale Thermophysical Engineering, 2017, 21, 60-69.	2.6	48
15	Levitation and Self-Organization of Liquid Microdroplets over Dry Heated Substrates. Physical Review Letters, 2017, 119, 094503.	7.8	45
16	Electrostatic effects in the apparent contact line region under a vapor bubble. MATEC Web of Conferences, 2016, 84, 00016.	0.2	0
17	INVESTIGATION OF MOIST AIR FLOW NEAR CONTACT LINE USING MICRODROPLETS AS TRACERS. Interfacial Phenomena and Heat Transfer, 2016, 4, 207-216.	0.8	20
18	Stability and break-up of thin liquid films on patterned and structured surfaces. Advances in Colloid and Interface Science, 2016, 228, 92-104.	14.7	39

#	ARTICLE	IF	CITATIONS
19	Significance of electrically induced shear stress in drainage of thin aqueous films. Physical Review E, 2015, 91, 052403.	2.1	4
20	Models of Drainage and Rupture of Thin Electrolyte Films on Flat and Structured Solid Substrates. Procedia IUTAM, 2015, 15, 132-138.	1.2	1
21	Evaporation, viscous flow, and electrostatic interaction of charged interfaces in the apparent contact line region. Physics of Fluids, 2015, 27, .	4.0	9
22	APPLICATION OF THE NONLINEAR POISSON-BOLTZMANN MODEL TO THE STABILITY OF AN ELECTROLYTE FILM. Interfacial Phenomena and Heat Transfer, 2014, 2, 75-84.	0.8	0
23	Effect of charge regulation on the stability of electrolyte films. Physical Review E, 2014, 89, 032401.	2.1	6
24	Pressure drop and void fraction during flow boiling in rectangular minichannels in weightlessness. Applied Thermal Engineering, 2013, 51, 1317-1327.	6.0	49
25	Application of Floquet theory to the stability of liquid films on structured surfaces. Physics of Fluids, 2013, 25, .	4.0	14
26	INSTABILITY AND RUPTURE OF THIN LIQUID FILMS ON SOLID SUBSTRATES. Interfacial Phenomena and Heat Transfer, 2013, 1, 81-92.	0.8	24
27	Interfacial Fluid Mechanics. , 2012, , .		34
28	Fingering instability of partially wetting evaporating liquids. Journal of Engineering Mathematics, 2012, 73, 31-38.	1.2	11
29	Stability of a Liquid Film on a Surface with Periodic Array of Gas-filled Grooves. Microgravity Science and Technology, 2012, 24, 33-37.	1.4	10
30	Rupture of thin liquid films on structured surfaces. Physical Review E, 2011, 84, 041606.	2.1	24
31	Evaporation of Ultra-thin Liquid Films into Air. Microgravity Science and Technology, 2010, 22, 441-446.	1.4	3
32	Static and dynamic contact angles of evaporating liquids on heated surfaces. Journal of Colloid and Interface Science, 2010, 342, 550-558.	9.4	71
33	The effect of evaporation on fingering instabilities. Physics of Fluids, 2009, 21, .	4.0	25
34	Ripples in a wetting film formed by a moving meniscus. Physical Review E, 2008, 78, 031602.	2.1	7
35	Dynamics of volatile liquid droplets on heated surfaces: theory versus experiment. Journal of Fluid Mechanics, 2008, 610, 343-362.	3.4	70
36	Laser-Induced Melting and Phase Explosion in Liquid Metal Films. , 2008, , .		0

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37	The wimple: A rippled deformation of a wetting film during its drainage. Physics of Fluids, 2007, 19, 061702.	4.0	11
38	Mathematical modeling of moving contact lines in heat transfer applications. Microgravity Science and Technology, 2007, 19, 23-26.	1.4	4
39	HEAT TRANSFER, PHASE CHANGE, AND THERMOCAPILLARY FLOW IN FILMS OF MOLTEN METAL ON A SUBSTRATE. Numerical Heat Transfer; Part A: Applications, 2006, 50, 301-313.	2.1	10
40	MODELING SHAPES AND DYNAMICS OF CONFINED BUBBLES. Annual Review of Fluid Mechanics, 2006, 38, 277-307.	25.0	168
41	Effect of nanoscale bubbles on viscous flow and rupture in thin liquid films. Physics of Fluids, 2006, 18, 068101.	4.0	9
42	Steady flow and evaporation of a volatile liquid in a wedge. Physics of Fluids, 2006, 18, 092102.	4.0	32
43	Evaporation and Viscous Flow in Triangular Grooves in Micro Heat Pipes. , 2005, , 733.		1
44	Evolution of dry patches in evaporating liquid films. Physical Review E, 2005, 72, 031605.	2.1	25
45	Spreading of thin volatile liquid droplets on uniformly heated surfaces. Journal of Fluid Mechanics, 2005, 528, 279-296.	3.4	158
46	Simulations of Rupture in Thin Films of Evaporating Liquids. , 2005, , .		0
47	Viscous flow of a volatile liquid on an inclined heated surface. Journal of Colloid and Interface Science, 2004, 280, 165-173.	9.4	22
48	The effect of tri-junction conditions in droplet solidification. Journal of Crystal Growth, 2004, 264, 452-462.	1.5	27
49	Boundary-integral simulations of containerless solidification. Journal of Computational Physics, 2003, 187, 492-503.	3.8	18
50	Thermocapillary flow and rupture in films of molten metal on a substrate. Physics of Fluids, 2003, 15, 3144.	4.0	46
51	Mathematical Modeling of Constrained Vapor Bubbles. , 2003, , 589.		8
52	A thin-film model for flow of molten metal on a substrate during pulsed laser micromachining. , 2002, , .		0
53	Dynamic Response of Geometrically Constrained Vapor Bubbles. Journal of Colloid and Interface Science, 2002, 254, 346-354.	9.4	40
54	Steady Vapor Bubbles in Rectangular Microchannels. Journal of Colloid and Interface Science, 2001, 240, 259-271.	9.4	123

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55	Three-Dimensional Steady Vapor Bubbles in Rectangular Microchannels. Journal of Colloid and Interface Science, 2001, 244, 180-189.	9.4	37
56	Three-dimensional effects in directional solidification in Hele-Shaw cells: Nonlinear evolution and pattern selection. Physical Review E, 2000, 61, 1275-1284.	2.1	0
57	Threeâ€“dimensional effects in directional solidification in Heleâ€”Shaw cells. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 1999, 455, 3589-3616.	2.1	3
58	Development of hydrodynamic instability in film condensation on a cylindrical tube in weightlessness. Fluid Dynamics, 1995, 30, 894-898.	0.9	1