

# Vladimir S Ajaev

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2520185/publications.pdf>

Version: 2024-02-01

58  
papers

1,409  
citations

331670

21  
h-index

330143

37  
g-index

59  
all docs

59  
docs citations

59  
times ranked

796  
citing authors

#	ARTICLE	IF	CITATIONS
1	MODELING SHAPES AND DYNAMICS OF CONFINED BUBBLES. Annual Review of Fluid Mechanics, 2006, 38, 277-307.	25.0	168
2	Spreading of thin volatile liquid droplets on uniformly heated surfaces. Journal of Fluid Mechanics, 2005, 528, 279-296.	3.4	158
3	Steady Vapor Bubbles in Rectangular Microchannels. Journal of Colloid and Interface Science, 2001, 240, 259-271.	9.4	123
4	Static and dynamic contact angles of evaporating liquids on heated surfaces. Journal of Colloid and Interface Science, 2010, 342, 550-558.	9.4	71
5	Dynamics of volatile liquid droplets on heated surfaces: theory versus experiment. Journal of Fluid Mechanics, 2008, 610, 343-362.	3.4	70
6	Heat and mass transfer near contact lines on heated surfaces. International Journal of Heat and Mass Transfer, 2017, 108, 918-932.	4.8	56
7	Pressure drop and void fraction during flow boiling in rectangular minichannels in weightlessness. Applied Thermal Engineering, 2013, 51, 1317-1327.	6.0	49
8	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
9	Thermocapillary flow and rupture in films of molten metal on a substrate. Physics of Fluids, 2003, 15, 3144.	4.0	46
10	Levitation and Self-Organization of Liquid Microdroplets over Dry Heated Substrates. Physical Review Letters, 2017, 119, 094503.	7.8	45
11	Dynamic Response of Geometrically Constrained Vapor Bubbles. Journal of Colloid and Interface Science, 2002, 254, 346-354.	9.4	40
12	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
13	Levitation and Self-Organization of Droplets. Annual Review of Fluid Mechanics, 2021, 53, 203-225.	25.0	39
14	Three-Dimensional Steady Vapor Bubbles in Rectangular Microchannels. Journal of Colloid and Interface Science, 2001, 244, 180-189.	9.4	37
15	Interfacial Fluid Mechanics. , 2012, , .		34
16	Steady flow and evaporation of a volatile liquid in a wedge. Physics of Fluids, 2006, 18, 092102.	4.0	32
17	The effect of tri-junction conditions in droplet solidification. Journal of Crystal Growth, 2004, 264, 452-462.	1.5	27
18	Evolution of dry patches in evaporating liquid films. Physical Review E, 2005, 72, 031605.	2.1	25

#	ARTICLE	IF	CITATIONS
19	The effect of evaporation on fingering instabilities. <i>Physics of Fluids</i> , 2009, 21, .	4.0	25
20	Rupture of thin liquid films on structured surfaces. <i>Physical Review E</i> , 2011, 84, 041606.	2.1	24
21	INSTABILITY AND RUPTURE OF THIN LIQUID FILMS ON SOLID SUBSTRATES. <i>Interfacial Phenomena and Heat Transfer</i> , 2013, 1, 81-92.	0.8	24
22	Viscous flow of a volatile liquid on an inclined heated surface. <i>Journal of Colloid and Interface Science</i> , 2004, 280, 165-173.	9.4	22
23	INVESTIGATION OF MOIST AIR FLOW NEAR CONTACT LINE USING MICRODROPLETS AS TRACERS. <i>Interfacial Phenomena and Heat Transfer</i> , 2016, 4, 207-216.	0.8	20
24	Boundary-integral simulations of containerless solidification. <i>Journal of Computational Physics</i> , 2003, 187, 492-503.	3.8	18
25	EXPERIMENTAL AND THEORETICAL STUDIES OF ORDERED ARRAYS OF MICRODROPLETS LEVITATING OVER LIQUID AND SOLID SURFACES. <i>Interfacial Phenomena and Heat Transfer</i> , 2018, 6, 219-230.	0.8	15
26	Application of Floquet theory to the stability of liquid films on structured surfaces. <i>Physics of Fluids</i> , 2013, 25, .	4.0	14
27	Levitation conditions for condensing droplets over heated liquid surfaces. <i>Soft Matter</i> , 2021, 17, 4623-4631.	2.7	14
28	The wimple: A rippled deformation of a wetting film during its drainage. <i>Physics of Fluids</i> , 2007, 19, 061702.	4.0	11
29	Fingering instability of partially wetting evaporating liquids. <i>Journal of Engineering Mathematics</i> , 2012, 73, 31-38.	1.2	11
30	HEAT TRANSFER, PHASE CHANGE, AND THERMOCAPILLARY FLOW IN FILMS OF MOLTEN METAL ON A SUBSTRATE. <i>Numerical Heat Transfer; Part A: Applications</i> , 2006, 50, 301-313.	2.1	10
31	Stability of a Liquid Film on a Surface with Periodic Array of Gas-filled Grooves. <i>Microgravity Science and Technology</i> , 2012, 24, 33-37.	1.4	10
32	Effect of nanoscale bubbles on viscous flow and rupture in thin liquid films. <i>Physics of Fluids</i> , 2006, 18, 068101.	4.0	9
33	Evaporation, viscous flow, and electrostatic interaction of charged interfaces in the apparent contact line region. <i>Physics of Fluids</i> , 2015, 27, .	4.0	9
34	Levitation of evaporating microscale droplets over solid surfaces. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	9
35	Mathematical Modeling of Constrained Vapor Bubbles. , 2003, , 589.		8
36	Ripples in a wetting film formed by a moving meniscus. <i>Physical Review E</i> , 2008, 78, 031602.	2.1	7

#	ARTICLE	IF	CITATIONS
37	Effect of charge regulation on the stability of electrolyte films. <i>Physical Review E</i> , 2014, 89, 032401.	2.1	6
38	Evaporation and interface dynamics in microregion on heated substrate of non-uniform wettability. <i>International Journal of Heat and Mass Transfer</i> , 2019, 142, 118355.	4.8	6
39	Mathematical modeling of moving contact lines in heat transfer applications. <i>Microgravity Science and Technology</i> , 2007, 19, 23-26.	1.4	4
40	Significance of electrically induced shear stress in drainage of thin aqueous films. <i>Physical Review E</i> , 2015, 91, 052403.	2.1	4
41	Three-dimensional effects in directional solidification in Hele-Shaw cells. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 1999, 455, 3589-3616.	2.1	3
42	Evaporation of Ultra-thin Liquid Films into Air. <i>Microgravity Science and Technology</i> , 2010, 22, 441-446.	1.4	3
43	Self-Similar Response of Electrode Polarization for Binary Electrolytes in Parallel Plate Capacitor Systems. <i>Analytical Chemistry</i> , 2019, 91, 11231-11239.	6.5	3
44	Stability and nonlinear evolution of electrolyte films on substrates with spatially periodic charge density. <i>Physical Review E</i> , 2018, 98, .	2.1	2
45	Modeling of Moving Liquid-Vapor Interfaces in the Constrained Vapor Bubble System. <i>Microgravity Science and Technology</i> , 2019, 31, 685-692.	1.4	2
46	Interaction of advancing contact lines with defects on heated substrates. <i>Physical Review E</i> , 2020, 101, 022801.	2.1	2
47	Development of hydrodynamic instability in film condensation on a cylindrical tube in weightlessness. <i>Fluid Dynamics</i> , 1995, 30, 894-898.	0.9	1
48	Evaporation and Viscous Flow in Triangular Grooves in Micro Heat Pipes. , 2005, , 733.		1
49	Models of Drainage and Rupture of Thin Electrolyte Films on Flat and Structured Solid Substrates. <i>Procedia IUTAM</i> , 2015, 15, 132-138.	1.2	1
50	Evaporation and fluid flow near the boundary of a stationary dry patch. <i>Physical Review E</i> , 2022, 105, .	2.1	1
51	The effect of electrical double layers on evaporation of sessile droplets. <i>Journal of Engineering Mathematics</i> , 2022, 134, .	1.2	1
52	Contact line motion on heated patterned surfaces. <i>Numerical Heat Transfer; Part A: Applications</i> , 2022, 82, 802-811.	2.1	1
53	Three-dimensional effects in directional solidification in Hele-Shaw cells: Nonlinear evolution and pattern selection. <i>Physical Review E</i> , 2000, 61, 1275-1284.	2.1	0
54	A thin-film model for flow of molten metal on a substrate during pulsed laser micromachining. , 2002, , .		0

#	ARTICLE	IF	CITATIONS
55	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
56	Electrostatic effects in the apparent contact line region under a vapor bubble. MATEC Web of Conferences, 2016, 84, 00016.	0.2	0
57	Simulations of Rupture in Thin Films of Evaporating Liquids. , 2005, , .		0
58	Laser-Induced Melting and Phase Explosion in Liquid Metal Films. , 2008, , .		0