Masao Iwamatsu

List of Publications by Year
in descending order

42 papers	506 citations	759233 12 h-index	713466 21 g-index
44 all docs	44 docs citations	44 times ranked	438 citing authors

#	Article	IF	Citations
1	Capillary Condensation and Adhesion of Two Wetter Surfaces. Journal of Colloid and Interface Science, 1996, 182, 400-406.	9.4	114
2	Contact angle hysteresis of cylindrical drops on chemically heterogeneous striped surfaces. Journal of Colloid and Interface Science, 2006, 297, 772-777.	9.4	39
3	Line-Tension Effects on Heterogeneous Nucleation on a Spherical Substrate and in a Spherical Cavity. Langmuir, 2015, 31, 3861-3868.	3.5	36
4	Free-energy landscape of nucleation with an intermediate metastable phase studied using capillarity approximation. Journal of Chemical Physics, 2011, 134, 164508.	3.0	20
5	Line-tension-induced scenario of heterogeneous nucleation on a spherical substrate and in a spherical cavity. Journal of Chemical Physics, 2015, 143, 014701.	3.0	20
6	Heterogeneous critical nucleation on a completely wettable substrate. Journal of Chemical Physics, 2011, 134, 234709.	3.0	19
7	Direct numerical simulation of homogeneous nucleation and growth in a phase-field model using cell dynamics method. Journal of Chemical Physics, 2008, 128, 084504.	3.0	18
8	Minimum free-energy path of homogenous nucleation from the phase-field equation. Journal of Chemical Physics, 2009, 130, 244507.	3.0	18
9	The validity of Cassie's law: A simple exercise using a simplified model. Journal of Colloid and Interface Science, 2006, 294, 176-181.	9.4	16
10	Classical coarsening theory in heteroepitaxial systems. Journal of Applied Physics, 1999, 86, 5541-5548.	2.5	13
11	Scenarios of heterogeneous nucleation and growth studied by cell dynamics simulation. Journal of Chemical Physics, 2007, 126, 134703.	3.0	13
12	A generalized Youngâ€™s equation to bridge a gap between the experimentally measured and the theoretically calculated line tensions. Journal of Adhesion Science and Technology, 2018, 32, 2305-2319.	2.6	12
13	Scaling properties of critical bubble of homogeneous nucleation in stretched fluid of square-gradient density-functional model with triple-parabolic free energy. Journal of Chemical Physics, 2008, 129, 104508.	3.0	11
14	Cell Dynamics Simulation of Kolmogorovâ€“Johnsonâ€“Mehlâ€“Avrami Kinetics of Phase Transformation. Japanese Journal of Applied Physics, 2005, 44, 6688-6694.	1.5	10
15	Critical cavity in the stretched fluid studied using square-gradient density-functional model with triple-parabolic free energy. Journal of Chemical Physics, 2009, 130, 164512.	3.0	10
16	Steady-state nucleation rate and flux of composite nucleus at saddle point. Journal of Chemical Physics, 2012, 136, 204702.	3.0	10
17	Free-Energy Barrier of Filling a Spherical Cavity in the Presence of Line Tension: Implication to the Energy Barrier between the Cassie and Wenzel States on a Superhydrophobic Surface with Spherical Cavities. Langmuir, 2016, 32, 9475-9483.	3.5	10
18	Line tension and morphology of a sessile droplet on a spherical substrate. Physical Review E, 2016, 93, 052804.	2.1	10

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19	GLOBAL CONFORMATION OPTIMIZATION OF MIXED CLUSTERS USING A GENETIC ALGORITHM. International Journal of Modern Physics C, 2002, 13, 279-295.	1.7	9
20	Nucleation and growth by diffusion under Ostwald-Freundlich boundary condition. Journal of Chemical Physics, 2014, 140, 064702.	3.0	8
21	Size-dependent contact angle and the wetting and drying transition of a droplet adsorbed onto a spherical substrate: Line-tension effect. Physical Review E, 2016, 94, 042803.	2.1	8
22	Jones Zone of Group V Semimetals As and Sb. Journal of the Physical Society of Japan, 1980, 48, 479-489.	1.6	7
23	A note on the nucleation with multiple steps: Parallel and series nucleation. Journal of Chemical Physics, 2012, 136, 044701.	3.0	7
24	Line tension and morphology of a droplet and a bubble attached to the inner wall of a spherical cavity. Journal of Chemical Physics, 2016, 144, 144704.	3.0	7
25	A Simple Model of Wetting, Prewetting, and Layering Transitions of Structured Liquids. Journal of Colloid and Interface Science, 1998, 199, 177-186.	9.4	6
26	Nucleation pathway of core-shell composite nucleus in size and composition space and in component space. Physical Review E, 2012, 86, 041604.	2.1	6
27	Spreading law on a completely wettable spherical substrate: The energy balance approach. Physical Review E, 2017, 95, 052802.	2.1	6
28	Free-energy landscapes of intrusion and extrusion of liquid in truncated and inverted truncated conical pores: Implications for the Cassie-Baxter to Wenzel transition. Physical Review E, 2020, 102, 052801.	2.1	6
29	Nucleation and growth of a core-shell composite nucleus by diffusion. Physical Review E, 2017, 95, 042803.	2.1	5
30	Four stages of droplet spreading on a spherical substrate and in a spherical cavity: Surface tension versus line tension and viscous dissipation versus frictional dissipation. Physical Review E, 2018, 98, .	2.1	4
31	Cell Dynamics Simulation of Droplet and Bridge Formation within Striped Nanocapillaries. Langmuir, 2007, 23, 11051-11057.	3.5	3
32	Cell dynamics modeling of phase transformation and metastable phase formation. Journal of Alloys and Compounds, 2010, 504, S538-S542.	5.5	3
33	Spreading law of non-Newtonian power-law liquids on a spherical substrate by an energy-balance approach. Physical Review E, 2017, 96, 012803.	2.1	3
34	Thermodynamics and hydrodynamics of spontaneous and forced imbibition in conical capillaries: A theoretical study of conical liquid diode. Physics of Fluids, 2022, 34, .	4.0	3
35	Stability of critical bubble in stretched fluid of square-gradient density-functional model with triple-parabolic free energy. Journal of Chemical Physics, 2010, 133, 044706.	3.0	2
36	Topography- and topology-driven spreading of non-Newtonian power-law liquids on a flat and a spherical substrate. Physical Review E, 2017, 96, 042803.	2.1	2

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37	Effect of line tension on axisymmetric nanoscale capillary bridges at the liquid-vapor equilibrium. Physical Review E, 2019, 100, 042802.	2.1	2
38	Structural optimization of model colloidal clusters at the airâ€“water interface using genetic algorithms. Journal of Colloid and Interface Science, 2003, 260, 305-311.	9.4	1
39	Dynamics of condensation of wetting layer in time-dependent Ginzburgâ€“Landau model. Journal of Colloid and Interface Science, 2007, 316, 1012-1016.	9.4	1
40	The characterization of wettability of substrates by liquid nanodrops. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 420, 109-114.	4.7	1
41	Nonclassical Surface Nucleation of 6CB at the Airâ€“Liquid Interface of a 6CB Oil-in-Water Nanoemulsion. Langmuir, 2021, 37, 9588-9596.	3.5	1
42	Characterizing the nucleation flux of linked-flux model for core-shell composite nucleus. , 2013, , .		0