Mikko P Haataja

List of Publications by Year
in descending order

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58 papers	4,895 citations	172457 29 h-index	133252 59 g-index
59 all docs	59 docs citations	59 times ranked	5362 citing authors

#	Article	IF	Citations
1	Modeling Elasticity in Crystal Growth. Physical Review Letters, 2002, 88, 245701.	7.8	766
2	Spatiotemporal Control of Intracellular Phase Transitions Using Light-Activated optoDroplets. Cell, 2017, 168, 159-171.e14.	28.9	659
3	Liquid Nuclear Condensates Mechanically Sense and Restructure the Genome. Cell, 2018, 175, 1481-1491.e13.	28.9	490
4	RNA transcription modulates phase transition-driven nuclear body assembly. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5237-45.	7.1	416
5	Physical principles of intracellular organization via active and passive phase transitions. Reports on Progress in Physics, 2018, 81, 046601.	20.1	319
6	Phase-Field Crystals with Elastic Interactions. Physical Review Letters, 2006, 96, 225504.	7.8	242
7	Ionic Surfactant Aggregates in Saline Solutions: Sodium Dodecyl Sulfate (SDS) in the Presence of Excess Sodium Chloride (NaCl) or Calcium Chloride (CaCl₂). Journal of Physical Chemistry B, 2009, 113, 5863-5870.	2.6	199
8	Structural Properties of Ionic Detergent Aggregates:â€‰ A Large-Scale Molecular Dynamics Study of Sodium Dodecyl Sulfate. Journal of Physical Chemistry B, 2007, 111, 11722-11733.	2.6	178
9	Nucleation landscape of biomolecular condensates. Nature, 2021, 599, 503-506.	27.8	108
10	Nonlinear Geometric Effects in Mechanical Bistable Morphing Structures. Physical Review Letters, 2012, 109, 114302.	7.8	107
11	Formation and regulation of lipid microdomains in cell membranes: Theory, modeling, and speculation. FEBS Letters, 2010, 584, 1678-1684.	2.8	96
12	Phase behavior and morphology of multicomponent liquid mixtures. Soft Matter, 2019, 15, 1297-1311.	2.7	77
13	Transbilayer Colocalization of Lipid Domains Explained via Measurement of Strong Coupling Parameters. Biophysical Journal, 2015, 109, 2317-2327.	0.5	70
14	Crossover Scaling of Wavelength Selection in Directional Solidification of Binary Alloys. Physical Review Letters, 2004, 93, 246101.	7.8	62
15	Micelle Fission through Surface Instability and Formation of an Interdigitating Stalk. Journal of the American Chemical Society, 2008, 130, 17977-17980.	13.7	60
16	Connecting microstructural coarsening processes to electrochemical performance in solid oxide fuel cells: An integrated modeling approach. Journal of Power Sources, 2014, 250, 319-331.	7.8	52
17	Electrostatic Screening and Charge Correlation Effects in Micellization of Ionic Surfactants. Journal of Physical Chemistry B, 2009, 113, 6314-6320.	2.6	50
18	Dislocations and morphological instabilities: Continuum modeling of misfitting heteroepitaxial films. Physical Review B, 2002, 65, .	3.2	48

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19	Biochemistry on a Leash: The Roles of Tether Length and Geometry in Signal Integration Proteins. Biophysical Journal, 2009, 96, 1275-1292.	0.5	47
20	Structure and Dynamics of Surfactant and Hydrocarbon Aggregates on Graphite: A Molecular Dynamics Simulation Study. Journal of Physical Chemistry B, 2008, 112, 2915-2921.	2.6	44
21	Seaweed to Dendrite Transition in Directional Solidification. Physical Review Letters, 2003, 91, 155502.	7.8	43
22	Dynamic Phase Engineering of Bendable Transition Metal Dichalcogenide Monolayers. Nano Letters, 2017, 17, 2473-2481.	9.1	41
23	Domain Formation in the Plasma Membrane: Roles of Nonequilibrium Lipid Transport and Membrane Proteins. Physical Review Letters, 2008, 100, 178102.	7.8	37
24	Stress-driven migration of simple low-angle mixed grain boundaries. Acta Materialia, 2012, 60, 1395-1407.	7.9	33
25	Influence of mobile dislocations on phase separation in binary alloys. Physical Review B, 2004, 69, .	3.2	31
26	Surfactant and Hydrocarbon Aggregates on Defective Graphite Surface: Structure and Dynamics. Journal of Physical Chemistry B, 2008, 112, 12954-12961.	2.6	31
27	Critical dynamics in multicomponent lipid membranes. Physical Review E, 2009, 80, 020902.	2.1	31
28	Lipid Domain Morphologies in Phosphatidylcholineâ˜'Ceramide Monolayers. Langmuir, 2009, 25, 4595-4600.	3.5	31
29	Lipid Microdomains: Structural Correlations, Fluctuations, and Formation Mechanisms. Physical Review Letters, 2010, 104, 118101.	7.8	29
30	Size Dependence of Transport Non-Uniformities on Localized Plating in Lithium-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A1147-A1155.	2.9	28
31	Liquid demixing in elastic networks: Cavitation, permeation, or size selection?. Europhysics Letters, 2022, 137, 67001.	2.0	27
32	Recrystallization kinetics: A coupled coarse-grained dislocation density and phase-field approach. Physical Review B, 2007, 76, .	3.2	26
33	Apparent Hysteresis in a Driven System with Self-Organized Drag. Physical Review Letters, 2004, 92, 160603.	7.8	25
34	Phase-Field Crystal Modeling of Compositional Domain Formation in Ultrathin Films. Physical Review Letters, 2010, 105, 126101.	7.8	25
35	Understanding Heterogeneous Nucleation in Binary, Solution-Processed, Organic Semiconductor Thin Films. Chemistry of Materials, 2012, 24, 2920-2928.	6.7	25
36	Continuum Modeling of Bulk Metallic Glasses and Composites. Physical Review Letters, 2010, 105, 125503.	7.8	23

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37	Phase wettability and microstructural evolution in solid oxide fuel cell anode materials. Acta Materialia, 2014, 78, 271-281.	7.9	23
38	Scaling of domain size during spinodal decomposition: Dislocation discreteness and mobility effects. Applied Physics Letters, 2005, 87, 251901.	3.3	21
39	Lipid Domain Co-localization Induced by Membrane Undulations. Biophysical Journal, 2017, 112, 655-662.	0.5	20
40	Dynamics of dislocations and surface instabilities in misfitting heteroepitaxial films. Physical Review B, 2001, 65, .	3.2	18
41	Domain morphology and mechanics of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow><mml:mi mathvariant="normal">H</mml:mi><mml:mo>/</mml:mo><mml:mi mathvariant="normal">T</mml:mi></mml:mrow><mml:mo>â€²</mml:mo></mml:msup></mml:math> transition metal dichalcogenide monolayers. Physical Review Materials, 2018, 2, .	2.4	18
42	Defects, Order, and Hysteresis in Driven Charge-Density Waves. Physical Review Letters, 1999, 83, 3518-3521.	7.8	17
43	Morphological Stability during Electrodeposition. Journal of the Electrochemical Society, 2003, 150, C708.	2.9	17
44	Alloy destabilization by dislocations. Applied Physics Letters, 2005, 86, 181909.	3.3	17
45	Morphological Stability during Electrodeposition. Journal of the Electrochemical Society, 2003, 150, C699.	2.9	16
46	Morphological Instability and Additive-Induced Stabilization in Electrodeposition. Physical Review Letters, 2002, 89, 215509.	7.8	15
47	Classical density functional theory methods in soft and hard matter. Journal of Physics Condensed Matter, 2010, 22, 360301.	1.8	13
48	Dislocation climb strengthening in systems with immobile obstacles: Three-dimensional level-set simulation study. Physical Review B, 2010, 81, .	3.2	11
49	Crystallization in organic semiconductor thin films: A diffuse-interface approach. Physical Review E, 2014, 89, 022407.	2.1	10
50	Compositional interface dynamics within symmetric and asymmetric planar lipid bilayer membranes. Soft Matter, 2013, 9, 2120-2124.	2.7	9
51	Evolution of Polymer Colloid Structure During Precipitation and Phase Separation. Jacs Au, 2021, 1, 936-944.	7.9	9
52	Modeling and Analysis of Electrodeposition in Porous Templates. Journal of the Electrochemical Society, 2017, 164, D875-D887.	2.9	8
53	Simulation study of twisted crystal growth in organic thin films. Physical Review E, 2015, 92, 042404.	2.1	6
54	Capillary effects in guided crystallization of organic thin films. APL Materials, 2015, 3, .	5.1	6

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55	Defect-Enabled Phase Programming of Transition Metal Dichalcogenide Monolayers. Nano Letters, 2021, 21, 4676-4683.	9.1	6
56	Strain Relaxation in Misfitting Transition Metal Dichalcogenide Monolayer Superlattices: Wrinkling vs Misfit Dislocation Formation. Nano Letters, 2019, 19, 8724-8731.	9.1	5
57	Hydrodynamic interaction between overlapping domains during recurrence of registration within planar lipid bilayer membranes. Physical Review E, 2014, 89, 032717.	2.1	4
58	Microstructural stability of supported metal catalysts: A phase field approach. Journal of Power Sources, 2017, 369, 111-121.	7.8	3