

# Leonid V Zhigilei

## List of Publications by Year in descending order

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186  
papers

10,795  
citations

30070

54  
h-index

33894

99  
g-index

192  
all docs

192  
docs citations

192  
times ranked

6505  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrashort pulse laser ablation in liquids: probing the first nanoseconds of underwater phase explosion. <i>Light: Science and Applications</i> , 2022, 11, 111.	16.6	5
2	Computational study of laser fragmentation in liquid: Phase explosion, inverse Leidenfrost effect at the nanoscale, and evaporation in a nanobubble. <i>Science China: Physics, Mechanics and Astronomy</i> , 2022, 65, .	5.1	14
3	Atomistic simulation of the generation of vacancies in rapid crystallization of metals. <i>Acta Materialia</i> , 2021, 203, 116465.	7.9	12
4	Limited Elemental Mixing in Nanoparticles Generated by Ultrashort Pulse Laser Ablation of AgCu Bilayer Thin Films in a Liquid Environment: Atomistic Modeling and Experiments. <i>Journal of Physical Chemistry C</i> , 2021, 125, 2132-2155.	3.1	24
5	Atomistic View of Laser Fragmentation of Gold Nanoparticles in a Liquid Environment. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13413-13432.	3.1	27
6	Computational study of the effect of core-skin structure on the mechanical properties of carbon nanofibers. <i>Journal of Materials Science</i> , 2021, 56, 14598-14610.	3.7	7
7	Kinetics of solid-liquid interface motion in molecular dynamics and phase-field models: crystallization of chromium and silicon. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200320.	3.4	10
8	Mechanisms of Acoustic Desorption of Atomic Clusters and Exfoliation of Graphene Multilayers. <i>Journal of Physical Chemistry C</i> , 2021, 125, 23313-23326.	3.1	1
9	Generation and Annealing of Crystalline Disorder in Laser Processing of Silicon. , 2021, , 797-827.		0
10	Laser-Induced Thermal Processes: Heat Transfer, Generation of Stresses, Melting and Solidification, Vaporization, and Phase Explosion. , 2021, , 83-163.		10
11	Thermoelastic modeling of laser-induced generation of strong surface acoustic waves. <i>Journal of Applied Physics</i> , 2021, 130, .	2.5	9
12	Molecular dynamics modeling of nonlinear propagation of surface acoustic waves. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	9
13	The effect of pulse duration on nanoparticle generation in pulsed laser ablation in liquids: insights from large-scale atomistic simulations. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 7077-7099.	2.8	79
14	Effect of a liquid environment on single-pulse generation of laser induced periodic surface structures and nanoparticles. <i>Nanoscale</i> , 2020, 12, 7674-7687.	5.6	34
15	Thermal conductivity of two-dimensional disordered fibrous materials defined by interfiber thermal contact conductance and intrinsic conductivity of fibers. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	8
16	Graphene reinforced carbon fibers. <i>Science Advances</i> , 2020, 6, eaaz4191.	10.3	87
17	Laser-Induced Thermal Processes: Heat Transfer, Generation of Stresses, Melting and Solidification, Vaporization, and Phase Explosion. , 2020, , 1-81.		7
18	Generation and Annealing of Crystalline Disorder in Laser Processing of Silicon. , 2020, , 1-31.		2

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19	Unveiling Carbon Ring Structure Formation Mechanisms in Polyacrylonitrile-Derived Carbon Fibers. ACS Applied Materials & Interfaces, 2019, 11, 42288-42297.	8.0	36
20	Generation and characterization of carbon fiber microstructures by atomistic simulations. Carbon, 2019, 152, 396-408.	10.3	49
21	Thermodynamic analysis and atomistic modeling of subsurface cavitation in photomechanical spallation. Computational Materials Science, 2019, 166, 311-317.	3.0	16
22	Acoustic processes in materials. MRS Bulletin, 2019, 44, 345-349.	3.5	4
23	Femtosecond laser generation of microbumps and nanojets on single and bilayer Cu/Ag thin films. Physical Chemistry Chemical Physics, 2019, 21, 11846-11860.	2.8	24
24	Compression of dry lysozyme targets: The target preparation pressure as a new parameter in protein thin film production by pulsed laser deposition. Applied Surface Science, 2019, 481, 120-124.	6.1	2
25	Computational Study of Short-Pulse Laser-Induced Generation of Crystal Defects in Ni-Based Single-Phase Binary Solid-Solution Alloys. Journal of Physical Chemistry C, 2019, 123, 2202-2215.	3.1	24
26	Phase transformation as the mechanism of mechanical deformation of vertically aligned carbon nanotube arrays: Insights from mesoscopic modeling. Carbon, 2019, 143, 587-597.	10.3	19
27	Laser-Rewriteable Ferromagnetism at Thin-Film Surfaces. ACS Applied Materials & Interfaces, 2018, 10, 15232-15239.	8.0	32
28	Mesoscopic modeling of structural self-organization of carbon nanotubes into vertically aligned networks of nanotube bundles. Carbon, 2018, 130, 69-86.	10.3	13
29	Spallation-induced roughness promoting high spatial frequency nanostructure formation on Cr. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	37
30	Mesoscopic modeling of the uniaxial compression and recovery of vertically aligned carbon nanotube forests. Composites Science and Technology, 2018, 166, 66-85.	7.8	23
31	Two mechanisms of nanoparticle generation in picosecond laser ablation in liquids: the origin of the bimodal size distribution. Nanoscale, 2018, 10, 6900-6910.	5.6	173
32	Pulsed laser ablation and incubation of nickel, iron and tungsten in liquids and air. Applied Surface Science, 2018, 433, 772-779.	6.1	53
33	Experimental and computational study of the effect of 1 atm background gas on nanoparticle generation in femtosecond laser ablation of metals. Applied Surface Science, 2018, 435, 1114-1119.	6.1	18
34	Evolution of Dirac Cone in Disclinated Graphene. Reviews on Advanced Materials Science, 2018, 57, 137-142.	3.3	7
35	Insights into Laser-Materials Interaction Through Modeling on Atomic and Macroscopic Scales. Springer Series in Materials Science, 2018, , 107-148.	0.6	12
36	Phase-Change Magnetic Memory: Rewritable Ferromagnetism by Laser Quenching of Chemical Disorder in $\langle \text{Fe} \rangle_{60} \langle \text{Al} \rangle_{40}$ Alloy. Physical Review Applied, 2018, 10, .	3.8	17

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37	Mechanism of Single-pulse Ablative Generation of Laser-induced Periodic Surface Structures. , 2018, , .		0
38	Laser interaction with materials: introduction. Journal of the Optical Society of America B: Optical Physics, 2018, 35, LIM1.	2.1	3
39	Atomistic Simulations of the Generation of Nanoparticles in Short-Pulse Laser Ablation of Metals: Effect of Background Gas and Liquid Environments. , 2018, , 425-470.		0
40	Melt dynamics and melt-through time in continuous wave laser heating of metal films: Contributions of the recoil vapor pressure and Marangoni effects. International Journal of Heat and Mass Transfer, 2017, 112, 300-317.	4.8	40
41	Generation of Subsurface Voids, Incubation Effect, and Formation of Nanoparticles in Short Pulse Laser Interactions with Bulk Metal Targets in Liquid: Molecular Dynamics Study. Journal of Physical Chemistry C, 2017, 121, 16549-16567.	3.1	75
42	Generation of nanocrystalline surface layer in short pulse laser processing of metal targets under conditions of spatial confinement by solid or liquid overlayer. Applied Surface Science, 2017, 417, 54-63.	6.1	28
43	Mechanism of single-pulse ablative generation of laser-induced periodic surface structures. Physical Review B, 2017, 96, .	3.2	69
44	Atomistic modeling of nanoparticle generation in short pulse laser ablation of thin metal films in water. Journal of Colloid and Interface Science, 2017, 489, 3-17.	9.4	114
45	Computational Studies of Thermal Transport Properties of Carbon Nanotube Materials. , 2017, , 129-161.		6
46	High energy electron sintering of icy regoliths: Formation of the PacMan thermal anomalies on the icy Saturnian moons. Icarus, 2017, 285, 211-223.	2.5	13
47	Highly-regular laser-induced periodic surface structures: Experiment and atomistic modelling. , 2017, , .		1
48	Molecular Dynamics Simulations of Laser-Materials Interactions. , 2016, , .		0
49	Growth Twinning and Generation of High-Frequency Surface Nanostructures in Ultrafast Laser-Induced Transient Melting and Resolidification. ACS Nano, 2016, 10, 6995-7007.	14.6	90
50	Fundamentals of ultrafast laser-material interaction. MRS Bulletin, 2016, 41, 960-968.	3.5	185
51	Molecular dynamics investigation of desorption and ion separation following picosecond infrared laser (PIRL) ablation of an ionic aqueous protein solution. Journal of Chemical Physics, 2016, 145, 204202.	3.0	19
52	Experimental characterization and atomistic modeling of interfacial void formation and detachment in short pulse laser processing of metal surfaces covered by solid transparent overlayers. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	13
53	Thermal conductance of carbon nanotube contacts: Molecular dynamics simulations and general description of the contact conductance. Physical Review B, 2016, 94, .	3.2	31
54	Nanocrystalline and Polyicosahedral Structure of a Nanospike Generated on Metal Surface Irradiated by a Single Femtosecond Laser Pulse. Journal of Physical Chemistry C, 2016, 120, 4438-4447.	3.1	51

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55	Computational Study of Nanomaterials: From Large-Scale Atomistic Simulations to Mesoscopic Modeling. , 2016, , 633-645.		3
56	Strong enhancement of surface diffusion by nonlinear surface acoustic waves. Physical Review B, 2015, 91, .	3.2	16
57	Generation of subsurface voids and a nanocrystalline surface layer in femtosecond laser irradiation of a single-crystal Ag target. Physical Review B, 2015, 91, .	3.2	101
58	Computational Study of Nanomaterials: From Large-Scale Atomistic Simulations to Mesoscopic Modeling. , 2015, , 1-14.		0
59	Laser interaction with materials: introduction. Journal of the Optical Society of America B: Optical Physics, 2014, 31, LIM1.	2.1	0
60	Laser interaction with materials: introduction. Applied Optics, 2014, 53, LIM1.	2.1	4
61	The Minimum Amount of "Matrix" Needed for Matrix-Assisted Pulsed Laser Deposition of Biomolecules. Journal of Physical Chemistry B, 2014, 118, 13290-13299.	2.6	30
62	Atomistic simulation study of short pulse laser interactions with a metal target under conditions of spatial confinement by a transparent overlayer. Journal of Applied Physics, 2014, 115, .	2.5	32
63	Microscopic mechanisms of laser spallation and ablation of metal targets from large-scale molecular dynamics simulations. Applied Physics A: Materials Science and Processing, 2014, 114, 11-32.	2.3	267
64	Molecular dynamics simulations of thermal conductivity of carbon nanotubes: Resolving the effects of computational parameters. International Journal of Heat and Mass Transfer, 2014, 70, 954-964.	4.8	96
65	Nanoparticle generation and transport resulting from femtosecond laser ablation of ultrathin metal films: Time-resolved measurements and molecular dynamics simulations. Applied Physics Letters, 2014, 104, .	3.3	42
66	Atomic Movies of Laser-Induced Structural and Phase Transformations from Molecular Dynamics Simulations. Springer Series in Materials Science, 2014, , 67-100.	0.6	11
67	Molecular Dynamics Simulations of Laser-Materials Interactions: General and Material-Specific Mechanisms of Material Removal and Generation of Crystal Defects. Springer Series in Materials Science, 2014, , 27-49.	0.6	9
68	Computational study of the role of gas-phase oxidation in CW laser ablation of Al target in an external supersonic air flow. Applied Physics A: Materials Science and Processing, 2013, 110, 537-546.	2.3	7
69	Atomistic simulations, mesoscopic modeling, and theoretical analysis of thermal conductivity of bundles composed of carbon nanotubes. Journal of Applied Physics, 2013, 114, 104301.	2.5	33
70	Acoustic Enhancement of Surface Diffusion. Journal of Physical Chemistry C, 2013, 117, 9252-9258.	3.1	21
71	Mechanism of acoustically induced diffusional structuring of surface adatoms. Applied Physics Letters, 2013, 103, 221601.	3.3	6
72	Carbon Nanotube-Metal Contact. , 2012, , 388-391.		1

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73	Molecular dynamics study of femtosecond laser interactions with Cr targets. AIP Conference Proceedings, 2012, , .	0.4	26
74	Enhancing and tuning phonon transport at vibrationally mismatched solid-solid interfaces. Physical Review B, 2012, 85, .	3.2	157
75	Heat conduction in carbon nanotube materials: Strong effect of intrinsic thermal conductivity of carbon nanotubes. Applied Physics Letters, 2012, 101, 043113.	3.3	64
76	Acoustic energy dissipation and thermalization in carbon nanotubes: Atomistic modeling and mesoscopic description. Physical Review B, 2012, 86, .	3.2	17
77	Capacitive MEMS Switches. , 2012, , 363-374.		0
78	Effect of bending buckling of carbon nanotubes on thermal conductivity of carbon nanotube materials. Journal of Applied Physics, 2012, 111, .	2.5	37
79	Chitosan Nanoparticles. , 2012, , 427-433.		0
80	What determines MALDI ion yields? A molecular dynamics study of ion loss mechanisms. Analytical and Bioanalytical Chemistry, 2012, 402, 2511-2519.	3.7	45
81	Selective Ablation of Xe from Silicon Surfaces: Molecular Dynamics Simulations and Experimental Laser Patterning. Journal of Physical Chemistry A, 2011, 115, 6250-6259.	2.5	8
82	Vibrational Contribution to Thermal Conductivity of Silicon Near Solid-Liquid Transition. , 2011, , .		0
83	Runaway lattice-mismatched interface in an atomistic simulation of femtosecond laser irradiation of Ag film/Cu substrate system. Applied Physics A: Materials Science and Processing, 2011, 104, 781-792.	2.3	37
84	The effect of the target structure and composition on the ejection and transport of polymer molecules and carbon nanotubes in matrix-assisted pulsed laser evaporation. Applied Physics A: Materials Science and Processing, 2011, 105, 529-546.	2.3	31
85	Implications of cross-species interactions on the temperature dependence of Kapitza conductance. Physical Review B, 2011, 84, .	3.2	62
86	Structural Stability of Carbon Nanotube Films: The Role of Bending Buckling. ACS Nano, 2010, 4, 6187-6195.	14.6	80
87	Scaling Laws and Mesoscopic Modeling of Thermal Conductivity in Carbon Nanotube Materials. Physical Review Letters, 2010, 104, 215902.	7.8	105
88	Molecular dynamics simulations of MALDI: laser fluence and pulse width dependence of plume characteristics and consequences for matrix and analyte ionization. Journal of Mass Spectrometry, 2010, 45, 333-346.	1.6	58
89	Nanocrystalline structure of nanobump generated by localized photoexcitation of metal film. Journal of Applied Physics, 2010, 107, .	2.5	59
90	Biography of Barbara J. Garrison. Journal of Physical Chemistry C, 2010, 114, 5241-5246.	3.1	0

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91	Mesoscopic Interaction Potential for Carbon Nanotubes of Arbitrary Length and Orientation. Journal of Physical Chemistry C, 2010, 114, 5513-5531.	3.1	64
92	Molecular Dynamics Simulation of Laser Melting of Nanocrystalline Au. Journal of Physical Chemistry C, 2010, 114, 5686-5699.	3.1	80
93	Atomic/Molecular-Level Simulations of Laser-Induced Materials Interactions. Springer Series in Materials Science, 2010, , 43-79.	0.6	23
94	The Effect of Interstitial Layers on Thermal Boundary Conductance Between Lennard-Jones Crystals. , 2010, , .		1
95	Atomistic modeling of femtosecond laser-induced melting and atomic mixing in Au film on Cu substrate system. Applied Surface Science, 2009, 255, 9605-9612.	6.1	39
96	Interatomic potentials for atomic scale modeling of metal-matrix ceramic particle reinforced nanocomposites. Composites Part B: Engineering, 2009, 40, 461-467.	12.0	15
97	Molecular dynamics study of nanoparticle evolution in a background gas under laser ablation conditions. Applied Surface Science, 2009, 255, 5116-5119.	6.1	5
98	Atomistic Modeling of Short Pulse Laser Ablation of Metals: Connections between Melting, Spallation, and Phase Explosion. Journal of Physical Chemistry C, 2009, 113, 11892-11906.	3.1	383
99	Mesoscopic Simulation of Self-assembly of Carbon Nanotubes into a Network of Bundles. , 2009, , .		6
100	Angular-dependent embedded atom method potential for atomistic simulations of metal-covalent systems. Physical Review B, 2009, 80, .	3.2	35
101	Generation of surface features in films deposited by matrix-assisted pulsed laser evaporation: the effects of stress confinement and droplet landing velocity. Applied Physics A: Materials Science and Processing, 2008, 92, 821-829.	2.3	37
102	The mechanism of nanobump formation in femtosecond pulse laser nanostructuring of thin metal films. Applied Physics A: Materials Science and Processing, 2008, 92, 791-796.	2.3	95
103	Electron-phonon coupling and electron heat capacity of metals under conditions of strong electron-phonon nonequilibrium. Physical Review B, 2008, 77, .	3.2	1,073
104	Computational study of the generation of crystal defects in a bcc metal target irradiated by short laser pulses. Physical Review B, 2008, 77, .	3.2	95
105	Fractal Structures in Fullerene Layers: Simulation of the Growth Process. Journal of Physical Chemistry C, 2008, 112, 4687-4695.	3.1	57
106	Mesoscopic Model for Simulation of CNT-Based Materials. , 2008, , .		6
107	Formation of nanoparticles by short and ultra-short laser pulses. Proceedings of SPIE, 2008, , .	0.8	1
108	Molecular dynamics simulation study of the ejection of polymer molecules and generation of molecular balloons in matrix-assisted pulsed laser evaporation. , 2008, , .		3

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109	Computational study of cooling rates and recrystallization kinetics in short pulse laser quenching of metal targets. <i>Journal of Physics: Conference Series</i> , 2007, 59, 413-417.	0.4	30
110	Making Molecular Balloons in Laser-Induced Explosive Boiling of Polymer Solutions. <i>Physical Review Letters</i> , 2007, 98, 216101.	7.8	45
111	Generation of nanoparticles by laser ablation: Combined MD-DSMC computational study. <i>Journal of Physics: Conference Series</i> , 2007, 59, 44-49.	0.4	8
112	Ejection of matrix-polymer clusters in matrix-assisted laser evaporation: Experimental observations. <i>Journal of Physics: Conference Series</i> , 2007, 59, 314-317.	0.4	21
113	Time-resolved diffraction profiles and structural dynamics of Ni film under short laser pulse irradiation. <i>Journal of Physics: Conference Series</i> , 2007, 59, 11-15.	0.4	13
114	Ejection of matrix-polymer clusters in matrix-assisted laser evaporation: Coarse-grained molecular dynamics simulations. <i>Journal of Physics: Conference Series</i> , 2007, 59, 126-131.	0.4	16
115	Molecular dynamics simulation study of the ejection and transport of polymer molecules in matrix-assisted pulsed laser evaporation. <i>Journal of Applied Physics</i> , 2007, 102, .	2.5	135
116	Hydrodynamic multi-phase model for simulation of laser-induced non-equilibrium phase transformations. <i>Journal of Physics: Conference Series</i> , 2007, 59, 640-645.	0.4	17
117	Temperature dependences of the electron-phonon coupling, electron heat capacity and thermal conductivity in Ni under femtosecond laser irradiation. <i>Applied Surface Science</i> , 2007, 253, 6295-6300.	6.1	87
118	Computational and experimental study of the cluster size distribution in MAPLE. <i>Applied Surface Science</i> , 2007, 253, 6456-6460.	6.1	48
119	Numerical modeling of short pulse laser interaction with Au nanoparticle surrounded by water. <i>Applied Surface Science</i> , 2007, 253, 6394-6399.	6.1	101
120	Mechanisms of small clusters production by short and ultra-short laser ablation. <i>Applied Surface Science</i> , 2007, 253, 7656-7661.	6.1	83
121	Effects of temperature and disorder on thermal boundary conductance at solid-solid interfaces: Nonequilibrium molecular dynamics simulations. <i>International Journal of Heat and Mass Transfer</i> , 2007, 50, 3977-3989.	4.8	306
122	Kinetic Limit of Heterogeneous Melting in Metals. <i>Physical Review Letters</i> , 2007, 98, 195701.	7.8	110
123	The Role of Thermal Excitation of D Band Electrons in Ultrafast Laser Interaction With Noble (Cu) and Transition (Pt) Metals. , 2007, , .		3
124	Time-resolved diffraction profiles and atomic dynamics in short-pulse laser-induced structural transformations: Molecular dynamics study. <i>Physical Review B</i> , 2006, 73, .	3.2	95
125	Évolution temporelle des agrégats crâs par impulsions laser courtes: Évaporation et condensation. <i>European Physical Journal Special Topics</i> , 2006, 138, 83-88.	0.2	0
126	Molecular Dynamics Study of Short-Pulse Laser Melting, Recrystallization, Spallation, and Ablation of Metal Targets. , 2006, , 725.		4



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127	Thermal excitation of d band electrons in Au: implications for laser-induced phase transformations. , 2006, , .		51
128	Laser processing of polymer nanocomposite thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1618-1622.	2.1	32
129	Simulation of shock-induced melting of Ni using molecular dynamics coupled to a two-temperature model. Physical Review B, 2006, 74, .	3.2	46
130	Molecular dynamics simulation of sputtering from a cylindrical track: EAM versus pair potentials. Nuclear Instruments & Methods in Physics Research B, 2005, 228, 163-169.	1.4	19
131	Channels of energy redistribution in short-pulse laser interactions with metal targets. Applied Surface Science, 2005, 248, 433-439.	6.1	45
132	Molecular Dynamics Model of Ultraviolet Matrix-Assisted Laser Desorption/Ionization Including Ionization Processes. Journal of Physical Chemistry B, 2005, 109, 22947-22957.	2.6	82
133	Mesoscopic model for dynamic simulations of carbon nanotubes. Physical Review B, 2005, 71, .	3.2	65
134	COMPUTATIONAL INVESTIGATION OF THE EFFECT OF CLUSTER IMPACT ENERGY ON THE MICROSTRUCTURE OF FILMS GROWN BY CLUSTER DEPOSITION. , 2005, , .		0
135	Computer modeling of laser melting and spallation of metal targets. , 2004, 5448, 505.		51
136	Molecular Dynamics Study of Thermal Boundary Resistance: Evidence of Strong Inelastic Scattering Transport Channels. , 2004, , 37.		9
137	Combined atomistic-continuum model for simulation of laser interaction with metals: application in the calculation of melting thresholds in Ni targets of varying thickness. Applied Physics A: Materials Science and Processing, 2004, 79, 977-981.	2.3	57
138	Microscopic mechanisms of short pulse laser spallation of molecular solids. Applied Physics A: Materials Science and Processing, 2004, 79, 753-756.	2.3	27
139	Photomechanical spallation of molecular and metal targets: molecular dynamics study. Applied Physics A: Materials Science and Processing, 2004, 79, 1643-1655.	2.3	202
140	Materials science under extreme conditions of pressure and strain rate. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2587-2607.	2.2	82
141	Molecular Dynamics Simulations of Shocks Including Electronic Heat Conduction and Electron-Phonon Coupling. AIP Conference Proceedings, 2004, , .	0.4	4
142	Combined atomistic-continuum modeling of short-pulse laser melting and disintegration of metal films. Physical Review B, 2003, 68, .	3.2	614
143	Dynamics of the plume formation and parameters of the ejected clusters in short-pulse laser ablation. Applied Physics A: Materials Science and Processing, 2003, 76, 339-350.	2.3	263
144	Computer Simulations of Laser Ablation of Molecular Substrates. ChemInform, 2003, 34, no.	0.0	0

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145	Big molecule ejection—SIMS vs. MALDI. Applied Surface Science, 2003, 203-204, 69-71.	6.1	13
146	Molecular dynamics simulations of matrix-assisted laser desorption—connections to experiment. International Journal of Mass Spectrometry, 2003, 226, 85-106.	1.5	68
147	Computer Simulations of Laser Ablation of Molecular Substrates. Chemical Reviews, 2003, 103, 321-348.	47.7	278
148	Substrate-Assisted Laser-Initiated Ejection of Proteins Embedded in Water Films. Journal of Physical Chemistry B, 2003, 107, 2362-2365.	2.6	38
149	Evolution of a Plume in Laser Ablation: Dependence on the Spot Size. , 2003, , .		1
150	Effect of Pressure Relaxation on the Mechanisms of Short-Pulse Laser Melting. Physical Review Letters, 2003, 91, 105701.	7.8	108
151	Limit of overheating and the threshold behavior in laser ablation. Physical Review E, 2003, 68, 041501.	2.1	106
152	A Hybrid MD-DSMC Model of Picosecond Laser Ablation and Desorption. AIP Conference Proceedings, 2003, , .	0.4	2
153	Combined molecular dynamics—direct simulation Monte Carlo computational study of laser ablation plume evolution. Journal of Applied Physics, 2002, 92, 2181-2193.	2.5	54
154	Atomistic simulation study of misfit strain relaxation mechanisms in heteroepitaxial islands. Materials Research Society Symposia Proceedings, 2002, 749, 1.	0.1	0
155	Direct Simulation Monte Carlo Calculation: Strategies for Using Complex Initial Conditions. Materials Research Society Symposia Proceedings, 2002, 731, 381.	0.1	2
156	Metal ablation by picosecond laser pulses: A hybrid simulation. Physical Review B, 2002, 66, .	3.2	236
157	Pressure-transmitting boundary conditions for molecular-dynamics simulations. Computational Materials Science, 2002, 24, 421-429.	3.0	85
158	Multiscale simulation of laser ablation of organic solids: evolution of the plume. Applied Surface Science, 2002, 197-198, 27-34.	6.1	10
159	Microscopic Mechanisms of Matrix Assisted Laser Desorption of Analyte Molecules:—Insights from Molecular Dynamics Simulation. Journal of Physical Chemistry B, 2002, 106, 303-310.	2.6	42
160	Explosive Boiling of Water Films Adjacent to Heated Surfaces:—A Microscopic Description—. Journal of Physical Chemistry A, 2001, 105, 2748-2755.	2.5	185
161	Computational model for multiscale simulation of laser ablation. Materials Research Society Symposia Proceedings, 2001, 677, 211.	0.1	10
162	Short-laser-pulse-driven emission of energetic ions into a solid target from a surface layer spalled by a laser prepulse. Applied Physics A: Materials Science and Processing, 2001, 73, 741-747.	2.3	19

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163	The role of the photochemical fragmentation in laser ablation: a molecular dynamics study. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2001, 145, 173-181.	3.9	40
164	Thickness effects of water overlayer on its explosive evaporation at heated metal surfaces. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2001, 180, 105-111.	1.4	34
165	Photochemical fragmentation processes in laser ablation of organic solids. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2001, 180, 171-175.	1.4	16
166	Laser ablation in a model two-phase system. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2001, 180, 209-215.	1.4	10
167	Matrix-assisted pulsed laser evaporation of polymeric materials: a molecular dynamics study. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2001, 180, 238-244.	1.4	36
168	Molecular dynamics simulations of laser disintegration of amorphous aerosol particles with spatially nonuniform absorption. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2001, 180, 245-250.	1.4	20
169	Laser ablation of bicomponent systems: A probe of molecular ejection mechanisms. <i>Applied Physics Letters</i> , 2001, 78, 1631-1633.	3.3	36
170	Laser expulsion of an organic molecular nanojet from a spatially confined domain. <i>Journal of Applied Physics</i> , 2001, 90, 4755-4760.	2.5	15
171	Molecular Dynamics Simulation of the Laser Disintegration of Aerosol Particles. <i>Analytical Chemistry</i> , 2000, 72, 5143-5150.	6.5	46
172	Microscopic mechanisms of laser ablation of organic solids in the thermal and stress confinement irradiation regimes. <i>Journal of Applied Physics</i> , 2000, 88, 1281-1298.	2.5	387
173	Molecular dynamics simulation study of the fluence dependence of particle yield and plume composition in laser desorption and ablation of organic solids. <i>Applied Physics Letters</i> , 1999, 74, 1341-1343.	3.3	103
174	A combined molecular dynamics and finite element method technique applied to laser induced pressure wave propagation. <i>Computer Physics Communications</i> , 1999, 118, 11-16.	7.5	65
175	Phase transition at low fluences in laser desorption of organic solids: a molecular dynamics study. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 1999, 153, 167-171.	1.4	10
176	Mechanisms of laser ablation from molecular dynamics simulations: dependence on the initial temperature and pulse duration. <i>Applied Physics A: Materials Science and Processing</i> , 1999, 69, S75-S80.	2.3	74
177	Velocity distributions of analyte molecules in matrix-assisted laser desorption from computer simulations. <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 1273-1277.	1.5	62
178	Computer simulation study of damage and ablation of submicron particles from short-pulse laser irradiation. <i>Applied Surface Science</i> , 1998, 127-129, 142-150.	6.1	54
179	A Microscopic View of Laser Ablation. <i>Journal of Physical Chemistry B</i> , 1998, 102, 2845-2853.	2.6	170
180	Microscopic simulation of short-pulse laser damage of melanin particles. , 1998, , .		15

#	ARTICLE	IF	CITATIONS
181	Intermediate metastable structure of the C{111}/(1 $\bar{1}$ –1)H-C{111}/(2 $\bar{1}$ –1) surface phase transition. Physical Review B, 1997, 55, 1838-1843.	3.2	14
182	Molecular Dynamics Model for Laser Ablation and Desorption of Organic Solids. Journal of Physical Chemistry B, 1997, 101, 2028-2037.	2.6	193
183	Velocity distributions of molecules ejected in laser ablation. Applied Physics Letters, 1997, 71, 551-553.	3.3	98
184	Vibrational dynamics of the CH stretching mode of H-terminated diamond surfaces. Surface Science, 1997, 374, 333-344.	1.9	27
185	On the threshold behavior in laser ablation of organic solids. Chemical Physics Letters, 1997, 276, 269-273.	2.6	82
186	Molecular dynamics study of medium-range order in metallic glasses. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1994, 69, 421-436.	0.6	23