

Barbara J Garrison

List of Publications by Year in descending order

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170
papers

6,829
citations

50170

46
h-index

74018

75
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170
all docs

170
docs citations

170
times ranked

3024
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	1.1	387
2	Computer Simulations of Laser Ablation of Molecular Substrates. <i>Chemical Reviews</i> , 2003, 103, 321-348.	23.0	278
3	Laser ablation of organic polymers: Microscopic models for photochemical and thermal processes. <i>Journal of Applied Physics</i> , 1985, 57, 2909-2914.	1.1	223
4	Enhancement of Sputtering Yields Due to C ₆₀ versus Ga Bombardment of Ag{111} As Explored by Molecular Dynamics Simulations. <i>Analytical Chemistry</i> , 2003, 75, 4402-4407.	3.2	194
5	Molecular Dynamics Model for Laser Ablation and Desorption of Organic Solids. <i>Journal of Physical Chemistry B</i> , 1997, 101, 2028-2037.	1.2	193
6	Explosive Boiling of Water Films Adjacent to Heated Surfaces: A Microscopic Description. <i>Journal of Physical Chemistry A</i> , 2001, 105, 2748-2755.	1.1	185
7	Microscopic Insights into the Sputtering of Ag{111} Induced by C ₆₀ and Ga Bombardment. <i>Journal of Physical Chemistry B</i> , 2004, 108, 7831-7838.	1.2	182
8	A Microscopic View of Laser Ablation. <i>Journal of Physical Chemistry B</i> , 1998, 102, 2845-2853.	1.2	170
9	Computational view of surface based organic mass spectrometry. <i>Mass Spectrometry Reviews</i> , 2008, 27, 289-315.	2.8	139
10	Microscopic model for the ablative photodecomposition of polymers by far-ultraviolet radiation (193 nm). <i>Journal of Applied Physics</i> , 2000, 88, 1321-1322.	1.5	132
11	Limit of overheating and the threshold behavior in laser ablation. <i>Physical Review E</i> , 2003, 68, 041501.	0.8	106
12	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.	1.5	103
13	Reaction Rates and Dissolution Mechanisms of Quartz as a Function of pH. <i>Journal of Physical Chemistry A</i> , 2008, 112, 2027-2033.	1.1	101
14	Velocity distributions of molecules ejected in laser ablation. <i>Applied Physics Letters</i> , 1997, 71, 551-553.	1.5	98
15	Molecule Liftoff from Surfaces. <i>Accounts of Chemical Research</i> , 2000, 33, 69-77.	7.6	95
16	Microscopic Insights into the Sputtering of Thin Organic Films on Ag{111} Induced by C ₆₀ and Ga Bombardment. <i>Journal of Physical Chemistry B</i> , 2005, 109, 11973-11979.	1.2	88
17	Modeling of Surface Processes as Exemplified by Hydrocarbon Reactions. <i>Chemical Reviews</i> , 1996, 96, 1327-1342.	23.0	87
18	Pressure-transmitting boundary conditions for molecular-dynamics simulations. <i>Computational Materials Science</i> , 2002, 24, 421-429.	1.4	85

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19	Mesoscale Energy Deposition Footprint Model for Kiloelectronvolt Cluster Bombardment of Solids. <i>Analytical Chemistry</i> , 2006, 78, 7206-7210.	3.2	85
20	Diffusion of a Butanethiolate Molecule on a Au{111} Surface. <i>Journal of Physical Chemistry B</i> , 1997, 101, 771-773.	1.2	82
21	On the threshold behavior in laser ablation of organic solids. <i>Chemical Physics Letters</i> , 1997, 276, 269-273.	1.2	82
22	Potential Energy Surfaces for Chemical Reactions at Solid Surfaces. <i>Annual Review of Physical Chemistry</i> , 1995, 46, 373-396.	4.8	75
23	Pressure Waves in Microscopic Simulations of Laser Ablation Leonid. <i>Materials Research Society Symposia Proceedings</i> , 1998, 538, 491.	0.1	73
24	Phase Transitions in a Methyl-Terminated Monolayer Self-Assembled on Au{111}. <i>Langmuir</i> , 1997, 13, 765-769.	1.6	69
25	Molecular dynamics simulations of matrix-assisted laser desorption connections to experiment. <i>International Journal of Mass Spectrometry</i> , 2003, 226, 85-106.	0.7	68
26	Improvements in SIMS continue. <i>Applied Surface Science</i> , 2006, 252, 6836-6843.	3.1	68
27	Initial stages of etching of the silicon Si{100} (2 .times. 1) surface by 3.0-eV normal incident fluorine atoms: a molecular dynamics study. <i>Journal of the American Chemical Society</i> , 1991, 113, 8221-8228.	6.6	66
28	Biological Cluster Mass Spectrometry. <i>Annual Review of Physical Chemistry</i> , 2010, 61, 305-322.	4.8	66
29	Mechanism of ejection of organic molecules from surfaces by keV ion bombardment. <i>Journal of the American Chemical Society</i> , 1980, 102, 6553-6555.	6.6	65
30	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.	3.0	65
31	Molecular Dynamics Simulation Study of Molecular Ejection Mechanisms: keV Particle Bombardment of C6H6/Ag{111}. <i>Journal of Physical Chemistry B</i> , 1999, 103, 151-163.	1.2	64
32	Sputtering Yields for C6O and Au3 Bombardment of Water Ice as a Function of Incident Kinetic Energy. <i>Analytical Chemistry</i> , 2007, 79, 4493-4498.	3.2	64
33	Velocity distributions of analyte molecules in matrix-assisted laser desorption from computer simulations. <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 1273-1277.	0.7	62
34	Sputtering Polymers with Buckminsterfullerene Projectiles: A Coarse-Grain Molecular Dynamics Study. <i>Journal of Physical Chemistry C</i> , 2007, 111, 15312-15324.	1.5	61
35	Molecular dynamics simulations of surface chemical reactions. <i>Chemical Society Reviews</i> , 1992, 21, 155.	18.7	57
36	Surface Sensitivity in Cluster-Ion-Induced Sputtering. <i>Physical Review Letters</i> , 2006, 96, 216104.	2.9	56

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37	Ab Initio Investigation of Dissolution Mechanisms in Aluminosilicate Minerals. <i>Journal of Physical Chemistry A</i> , 2009, 113, 1343-1352.	1.1	55
38	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.	3.1	54
39	Combined molecular dynamics“direct simulation Monte Carlo computational study of laser ablation plume evolution. <i>Journal of Applied Physics</i> , 2002, 92, 2181-2193.	1.1	54
40	Structure of c(4Å–2) Superlattice in Alkanethiolate Self-Assembled Monolayers. <i>Langmuir</i> , 1997, 13, 4038-4043.	1.6	53
41	Microscopic Insight into the Sputtering of Thin Polystyrene Films on Ag{111} Induced by Large and Slow Ar Clusters. <i>Journal of Physical Chemistry C</i> , 2008, 112, 521-531.	1.5	53
42	The dynamics of surface rearrangements in Si adatom diffusion on the Si{100}(2Å–1) surface. <i>Journal of Chemical Physics</i> , 1991, 95, 6885-6891.	1.2	52
43	Coarse-grained molecular dynamics studies of cluster-bombarded benzene crystals. <i>Applied Surface Science</i> , 2006, 252, 6436-6439.	3.1	52
44	Internal Energy of Molecules Ejected Due to Energetic C₆₀ Bombardment. <i>Analytical Chemistry</i> , 2009, 81, 2260-2267.	3.2	50
45	Mechanism for Increased Yield with SF ₅ +Projectiles in Organic SIMS:Â The Substrate Effect. <i>Journal of Physical Chemistry A</i> , 1999, 103, 4587-4589.	1.1	49
46	Molecular Dynamics Simulations of Reactions between Molecules: High-Energy Particle Bombardment of Organic Films. <i>Langmuir</i> , 1995, 11, 1220-1228.	1.6	48
47	Molecular Dynamics Simulation of the Laser Disintegration of Aerosol Particles. <i>Analytical Chemistry</i> , 2000, 72, 5143-5150.	3.2	46
48	Understanding collision cascades in molecular solids. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 180, 159-163.	0.6	46
49	Effect of Cluster Size in Kiloelectronvolt Cluster Bombardment of Solid Benzene. <i>Analytical Chemistry</i> , 2007, 79, 494-499.	3.2	45
50	Microscopic Mechanisms of Matrix Assisted Laser Desorption of Analyte Molecules:Â Insights from Molecular Dynamics Simulation. <i>Journal of Physical Chemistry B</i> , 2002, 106, 303-310.	1.2	42
51	Coarse-Grained Model of the Interaction of Light with Polymeric Material: Onset of Ablation. <i>Journal of Physical Chemistry B</i> , 2005, 109, 16482-16489.	1.2	42
52	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.	2.0	40
53	keV fullerene interaction with hydrocarbon targets: Projectile penetration, damage creation and removal. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007, 255, 223-228.	0.6	40
54	A Theoretical Investigation of the Yield-to-Damage Enhancement with Polyatomic Projectiles in Organic SIMS. <i>Journal of Physical Chemistry B</i> , 2000, 104, 8221-8228.	1.2	39

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55	A Computational Investigation of C60 Depth Profiling of Ag: Molecular Dynamics of Multiple Impact Events. <i>Journal of Physical Chemistry C</i> , 2009, 113, 3270-3276.	1.5	39
56	Substrate-Assisted Laser-Initiated Ejection of Proteins Embedded in Water Films. <i>Journal of Physical Chemistry B</i> , 2003, 107, 2362-2365.	1.2	38
57	On the role of chemical reactions in initiating ultraviolet laser ablation in poly(methyl Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 6	1.1	38
58	Mechanisms of particle ejection from Cu(001) induced by the relative orientation of the bombarding primary ion. <i>Journal of Chemical Physics</i> , 1980, 72, 1018-1027.	1.2	36
59	Matrix-assisted pulsed laser evaporation of polymeric materials: a molecular dynamics study. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 180, 238-244.	0.6	36
60	Laser ablation of bicomponent systems: A probe of molecular ejection mechanisms. <i>Applied Physics Letters</i> , 2001, 78, 1631-1633.	1.5	36
61	Sputtering of amorphous ice induced by C60 and Au3 clusters. <i>Applied Surface Science</i> , 2006, 252, 6423-6425.	3.1	35
62	<i>Ab initio</i> study of dissolution and precipitation reactions from the edge, kink, and terrace sites of quartz as a function of pH. <i>Molecular Physics</i> , 2009, 107, 831-843.	0.8	35
63	Effect of impact angle and projectile size on sputtering efficiency of solid benzene investigated by molecular dynamics simulations. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011, 269, 1578-1581.	0.6	35
64	CO ₂ Cluster Ion Beam, an Alternative Projectile for Secondary Ion Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 1476-1482.	1.2	35
65	Thickness effects of water overlayer on its explosive evaporation at heated metal surfaces. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 180, 105-111.	0.6	34
66	Particle-Induced Desorption of Kilodalton Molecules Embedded in a Matrix: A Molecular Dynamics Study. <i>Journal of Physical Chemistry B</i> , 2003, 107, 2297-2310.	1.2	34
67	Hydrogen Abstraction Reactions in the Kilolectronvolt Particle Bombardment of Organic Films. <i>Journal of the American Chemical Society</i> , 1994, 116, 4465-4466.	6.6	33
68	Electronic structure calculations of radical reactions for poly(methyl methacrylate) degradation. <i>Chemical Physics Letters</i> , 2005, 406, 294-299.	1.2	33
69	Bombardment induced surface chemistry on Si under keV C60 impact. <i>Applied Surface Science</i> , 2006, 252, 6463-6465.	3.1	32
70	Reaction Dynamics Following keV Cluster Bombardment. <i>Journal of Physical Chemistry C</i> , 2007, 111, 12822-12826.	1.5	31
71	Cluster induced chemistry at solid surfaces: Molecular dynamics simulations of keV C60 bombardment of Si. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007, 255, 238-241.	0.6	31
72	Study of a Family of 40 Hydroxylated β -Cristobalite Surfaces Using Empirical Potential Energy Functions. <i>Journal of Physical Chemistry C</i> , 2007, 111, 5169-5177.	1.5	30

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73	Advanced Monte Carlo Approach To Study Evolution of Quartz Surface during the Dissolution Process. <i>Journal of the American Chemical Society</i> , 2009, 131, 9538-9546.	6.6	30
74	Coarse-Grained Chemical Reaction Model. <i>Journal of Physical Chemistry B</i> , 2004, 108, 1815-1821.	1.2	29
75	Photochemical induced effects in material ejection in laser ablation. <i>Chemical Physics Letters</i> , 2002, 364, 237-243.	1.2	28
76	Vibrational dynamics of the CH stretching mode of H-terminated diamond surfaces. <i>Surface Science</i> , 1997, 374, 333-344.	0.8	27
77	Kiloelectronvolt Argon-Induced Molecular Desorption from a Bulk Polystyrene Solid. <i>Journal of Physical Chemistry B</i> , 2004, 108, 15652-15661.	1.2	27
78	Simulations of C60 bombardment of Si, SiC, diamond and graphite. <i>Applied Surface Science</i> , 2008, 255, 837-840.	3.1	27
79	Development of a Charge-Implicit ReaxFF Potential for Hydrocarbon Systems. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 359-363.	2.1	27
80	Sputtering of atoms in fine structure states: a probe of excitation and de-excitation events. <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 1266-1272.	0.7	26
81	Molecular Dynamics Study of the Effect of Surface Topography on Sputtering Induced by 20 keV Au ₃ and C ₆₀ Clusters. <i>Journal of Physical Chemistry C</i> , 2010, 114, 5532-5539.	1.5	26
82	Molecular desorption in bombardment mass spectrometries. <i>Chemical Physics Letters</i> , 1995, 233, 575-579.	1.2	25
83	Ion Emission from Water Ice Due to Energetic Particle Bombardment. <i>Journal of Physical Chemistry A</i> , 2004, 108, 2993-2998.	1.1	24
84	Coupled molecular dynamics-Monte Carlo model to study the role of chemical processes during laser ablation of polymeric materials. <i>Journal of Chemical Physics</i> , 2007, 127, 084705.	1.2	24
85	Angle-resolved velocity distributions of excited Rh atoms ejected from ion-bombarded Rh{100}. <i>Journal of Chemical Physics</i> , 1992, 97, 3846-3854.	1.2	23
86	A microscopic view of particle bombardment of organic films. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1995, 143, 225-233.	1.9	23
87	Angle of incidence effects in a molecular solid. <i>Applied Surface Science</i> , 2008, 255, 844-846.	3.1	23
88	Energy Deposition Control during Cluster Bombardment: A Molecular Dynamics View. <i>Analytical Chemistry</i> , 2008, 80, 5302-5306.	3.2	23
89	Kinetic nucleation model for free expanding water condensation plume simulations. <i>Journal of Chemical Physics</i> , 2009, 130, 174309.	1.2	23
90	Fluid Flow and Effusive Desorption: Dominant Mechanisms of Energy Dissipation after Energetic Cluster Bombardment of Molecular Solids. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2009-2014.	2.1	23

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91	Cluster Size Dependence and Yield Linearity in Cluster Bombardment Simulations of Benzene. <i>Analytical Chemistry</i> , 2008, 80, 6666-6670.	3.2	22
92	Erosion of Ag surface by continuous irradiation with slow, large Ar clusters. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011, 269, 1586-1590.	0.6	22
93	Computational investigation into the mechanisms of UV ablation of poly(methyl methacrylate). <i>Applied Surface Science</i> , 2007, 253, 6382-6385.	3.1	21
94	Molecular dynamics simulations of laser disintegration of amorphous aerosol particles with spatially nonuniform absorption. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 180, 245-250.	0.6	20
95	Gallium-Induced Milling of Silicon: A Computational Investigation of Focused Ion Beams. <i>Microscopy and Microanalysis</i> , 2008, 14, 315-320.	0.2	20
96	Theoretical studies of the angular distributions of oxygen atoms ejected from an ion bombarded c(2Å ⁻²) overlayer of oxygen on Ni(001). I. Effect of geometry. <i>Journal of Chemical Physics</i> , 1981, 75, 445-452.	1.2	19
97	Photochemical ablation of organic solids. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 202, 188-194.	0.6	19
98	Trench formation and lateral damage induced by gallium milling of silicon. <i>Applied Surface Science</i> , 2008, 255, 828-830.	3.1	18
99	Desorption of large molecules with light-element clusters: Effects of cluster size and substrate nature. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011, 269, 1572-1577.	0.6	18
100	Molecular dynamics study of polystyrene bond-breaking and crosslinking under C60 and Arn cluster bombardment. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 303, 23-27.	0.6	18
101	Seduction of Finding Universality in Sputtering Yields Due to Cluster Bombardment of Solids. <i>Accounts of Chemical Research</i> , 2015, 48, 2529-2536.	7.6	18
102	Effects of thermal energy deposition on material ejection in poly(methyl methacrylate). <i>Applied Surface Science</i> , 2007, 253, 6386-6389.	3.1	17
103	On Universality in Sputtering Yields Due to Cluster Bombardment. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 3227-3230.	2.1	17
104	Photochemical fragmentation processes in laser ablation of organic solids. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2001, 180, 171-175.	0.6	16
105	Elucidating the Thermal, Chemical, and Mechanical Mechanisms of Ultraviolet Ablation in Poly(methyl Tj ETQq1 1 0,784314 rgBT /Overl	7.6	16
106	Theoretical Study of the Role of Chemistry and Substrate Characteristics in C₆₀ keV Bombardment of Si, SiC, and Diamond by Molecular Dynamics Simulations. <i>Journal of Physical Chemistry C</i> , 2009, 113, 3239-3245.	1.5	16
107	Microscopic simulation of short-pulse laser damage of melanin particles. , 1998, , .		15
108	Emission of ionic water clusters from water ice films bombarded by energetic projectiles. <i>Applied Surface Science</i> , 2004, 231-232, 72-77.	3.1	15

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109	Growth mechanisms of Si and Ge epitaxial films on the dimer reconstructed Si{100} surface via molecular dynamics. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990, 8, 3506-3511.	0.9	14
110	Electronic distortion in keV particle bombardment. <i>Journal of Chemical Physics</i> , 1994, 100, 8437-8443.	1.2	14
111	Steady-State Statistical Sputtering Model for Extracting Depth Profiles from Molecular Dynamics Simulations of Dynamic SIMS. <i>Journal of Physical Chemistry C</i> , 2012, 116, 1042-1051.	1.5	14
112	Physical basis of energy per cluster atom in the universal concept of sputtering. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016, 34, .	0.6	14
113	Vertical channeling of pyridine molecules ejected in ion bombardment experiments. <i>Chemical Physics Letters</i> , 1985, 114, 237-240.	1.2	13
114	Production of excited Rh atoms via keV particle bombardment of Rh{100}: Simulation of excitations due to collisions above the surface. <i>Journal of Chemical Physics</i> , 1992, 97, 6910-6916.	1.2	13
115	Atoms, clusters and photons: Energetic probes for mass spectrometry. <i>Applied Surface Science</i> , 2006, 252, 6409-6412.	3.1	13
116	Simulations of Laser Ablation of Poly(methyl methacrylate): Fluence versus Number of Photons. <i>Journal of Physical Chemistry C</i> , 2007, 111, 12024-12030.	1.5	13
117	Theoretical advances in the dissolution studies of mineral-water interfaces. <i>Theoretical Chemistry Accounts</i> , 2010, 127, 271-284.	0.5	13
118	Role of Intrasurface Hydrogen Bonding on Silica Dissolution. <i>Journal of Physical Chemistry C</i> , 2010, 114, 2267-2272.	1.5	13
119	Effect of sample rotation on surface roughness with keV C60 bombardment in secondary ion mass spectrometry (SIMS) experiments. <i>Chemical Physics Letters</i> , 2011, 506, 129-134.	1.2	13
120	Angle and energy distributions of neutral atoms sputtered from Ni3Al(100). <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 1236-1240.	0.7	12
121	Quadratic Friction Model for Cluster Bombardment of Molecular Solids. <i>Journal of Physical Chemistry C</i> , 2007, 111, 10135-10137.	1.5	12
122	Combined simulations and analytical model for predicting trends in cluster bombardment. <i>Applied Surface Science</i> , 2008, 255, 897-900.	3.1	12
123	Development of Homogeneous Water Condensation Models Using Molecular Dynamics. <i>AIAA Journal</i> , 2009, 47, 1241-1251.	1.5	12
124	The effect of the H:C ratio on the sputtering of molecular solids by fullerenes. <i>Surface and Interface Analysis</i> , 2011, 43, 116-119.	0.8	12
125	Collision-Induced Dissociation of Water into Ions. <i>Journal of Physical Chemistry B</i> , 2005, 109, 2894-2898.	1.2	11
126	Influence of photoexcitation pathways on the initiation of ablation in poly (methyl methacrylate). <i>Applied Physics A: Materials Science and Processing</i> , 2008, 92, 877-881.	1.1	11

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127	Molecular dynamics computer simulations of 5keV C60 bombardment of benzene crystal. Vacuum, 2009, 83, S95-S98.	1.6	11
128	Depth Profiling of Metal Overlayers on Organic Substrates with Cluster SIMS. Analytical Chemistry, 2013, 85, 10565-10572.	3.2	11
129	Phase transition at low fluences in laser desorption of organic solids: a molecular dynamics study. Nuclear Instruments & Methods in Physics Research B, 1999, 153, 167-171.	0.6	10
130	Laser ablation in a model two-phase system. Nuclear Instruments & Methods in Physics Research B, 2001, 180, 209-215.	0.6	10
131	Multiscale simulation of laser ablation of organic solids: evolution of the plume. Applied Surface Science, 2002, 197-198, 27-34.	3.1	10
132	Gas-Surface Reactions: Molecular Dynamics Simulations of Real Systems. Advances in Chemical Physics, 2007, , 281-334.	0.3	10
133	Interplay between Chemical, Thermal, and Mechanical Processes Occurring upon Laser Excitation of Poly(methyl methacrylate) and Its Role in Ablation. Journal of Physical Chemistry C, 2009, 113, 11491-11506.	1.5	10
134	Partnering Analytic Models and Dynamic Secondary Ion Mass Spectrometry Simulations to Interpret Depth Profiles Due to Kiloelectronvolt Cluster Bombardment. Analytical Chemistry, 2012, 84, 3010-3016.	3.2	10
135	Computed Molecular Depth Profile for C ₆₀ Bombardment of a Molecular solid. Analytical Chemistry, 2013, 85, 11628-11633.	3.2	10
136	Pushing the limits of classical modeling of bombardment events in solids. Radiation Effects and Defects in Solids, 1997, 142, 127-145.	0.4	9
137	Incorporation of chemical reactions into UV photochemical ablation of coarse-grained material. Applied Surface Science, 2007, 253, 6377-6381.	3.1	9
138	Molecular Dynamics Simulations Elucidate the Synergy of C ₆₀ and Low-Energy Ar Cobombardment for Molecular Depth Profiling. Journal of Physical Chemistry Letters, 2011, 2, 2635-2638.	2.1	9
139	Effect of Oxygen Chemistry in Sputtering of Polymers. Journal of Physical Chemistry Letters, 2016, 7, 1559-1562.	2.1	9
140	Effect of Si-C bond formation in 20 keV C60 bombardment of Si. Surface and Interface Analysis, 2011, 43, 123-125.	0.8	8
141	Molecular ions in cluster bombardment: what clues do the molecular dynamics simulations provide?. Surface and Interface Analysis, 2011, 43, 134-136.	0.8	8
142	Sputtering of a coarse-grained benzene and Ag(111) crystals by large Ar clusters – effect of impact angle and cohesive energy. Surface and Interface Analysis, 2013, 45, 27-30.	0.8	8
143	Computer modeling of angular emission from Ag(100) and Mo(100) surfaces due to Ar _n cluster bombardment. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2016, 34, .	0.6	8
144	C-O Bond Dissociation and Induced Chemical Ionization Using High Energy (CO ₂) _n + Gas Cluster Ion Beam. Journal of the American Society for Mass Spectrometry, 2019, 30, 476-481.	1.2	8

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145	Molecular dynamics simulations of 30 and 20 keV Ga in Si. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007, 25, 1417.	0.9	7
146	An experimental and theoretical view of energetic C ₆₀ cluster bombardment onto molecular solids. <i>Surface and Interface Analysis</i> , 2013, 45, 50-53.	0.8	7
147	Friction model to describe cluster bombardment. <i>Applied Surface Science</i> , 2008, 255, 893-896.	3.1	6
148	Surface topography effects in C ₆₀ bombardment of Si. <i>Surface and Interface Analysis</i> , 2013, 45, 93-96.	0.8	6
149	Computer simulations of sputtering and fragment formation during keV C ₆₀ bombardment of octane and <i>i>I</i> ² carotene. <i>Surface and Interface Analysis</i> , 2014, 46, 3-6.	0.8	6
150	Micro- and Macroscopic Modeling of Sputter Depth Profiling. <i>Journal of Physical Chemistry C</i> , 2016, 120, 25473-25480.	1.5	6
151	Charge exchange in gas-surface collisions: Momentum transfer. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1986, 4, 1222-1226.	0.9	5
152	On the correlation between the photoexcitation pathways and the critical energies required for ablation of poly(methyl methacrylate): A molecular dynamics study. <i>Journal of Applied Physics</i> , 2008, 103, 103114.	1.1	5
153	Chemical damage resulting from 15 keV C ₆₀ , Ar ₁₈ and Ar ₆₀ cluster bombardments of solid benzene. <i>Surface and Interface Analysis</i> , 2013, 45, 42-45.	0.8	5
154	The impact of point thermal absorbers in ablation of poly(methyl methacrylate). <i>Applied Physics A: Materials Science and Processing</i> , 2008, 92, 1037-1041.	1.1	4
155	Molecular dynamics simulations of matrix assisted laser desorption ionization: Matrix-analyte interactions. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011, 269, 1744-1747.	0.6	4
156	Modeling dynamic cluster SIMS experiments. <i>Surface and Interface Analysis</i> , 2013, 45, 14-17.	0.8	4
157	Combined molecular dynamics and analytical model for repetitive cluster bombardment of solids. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 303, 196-199.	0.6	4
158	Investigation of Carbon Buildup in Simulations of Multi-Impact Bombardment of Si with 20 keV C ₆₀ Projectiles. <i>Journal of Physical Chemistry A</i> , 2014, 118, 8081-8087.	1.1	4
159	How material properties affect depth profiles – insight from computer modeling. <i>Surface and Interface Analysis</i> , 2014, 46, 253-256.	0.8	4
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