

Zbigniew Postawa

List of Publications by Year in descending order

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114
papers

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citations

236612

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124
all docs

124
docs citations

124
times ranked

841
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of a Charge-Implicit ReaxFF for C/H/O Systems. Journal of Physical Chemistry Letters, 2022, 13, 628-633.	2.1	5
2	Mechanisms of molecular emission from phenylalanine monolayer deposited on free-standing graphene bombarded by C60 projectiles. Applied Surface Science, 2021, 539, 148259.	3.1	3
3	Defect-mediated sputtering process of boron nitride during high incident angle low-energy ion bombardment. Measurement: Journal of the International Measurement Confederation, 2021, 179, 109487.	2.5	5
4	Three-Dimensional Mass Spectrometric Imaging of Biological Structures Using a Vacuum-Compatible Microfluidic Device. Analytical Chemistry, 2020, 92, 13785-13793.	3.2	3
5	Mechanisms of particle ejection from free-standing two-layered graphene stimulated by keV argon gas cluster projectile bombardment – Molecular dynamics study. Surface and Coatings Technology, 2020, 391, 125683.	2.2	5
6	Intuitive Model of Surface Modification Induced by Cluster Ion Beams. Analytical Chemistry, 2020, 92, 7349-7353.	3.2	9
7	MD-Based Transport and Reaction Model for the Simulation of SIMS Depth Profiles of Molecular Targets. Journal of Physical Chemistry C, 2019, 123, 20188-20194.	1.5	2
8	Effect of the Impact Angle on the Kinetic Energy and Angular Distributions of ^{12}C -Carotene Sputtered by 15 keV Ar ₂₀₀₀ Projectiles. Analytical Chemistry, 2019, 91, 9161-9167.	3.2	5
9	Hypervelocity cluster ion impacts on free standing graphene: Experiment, theory, and applications. Journal of Chemical Physics, 2019, 150, 160901.	1.2	10
10	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
11	10.1063/1.5080606.1. , 2019, , .		0
12	10.1063/1.5080606.4. , 2019, , .		0
13	Material Deposition by a Soft-Landing of Mixed Ar Gas Cluster Projectiles at the Ag (111) Surface. Acta Physica Polonica A, 2019, 136, 260-262.	0.2	1
14	Crater function moments: Role of implanted noble gas atoms. Physical Review B, 2018, 97, .	1.1	9
15	“Trampoline”-ejection of organic molecules from graphene and graphite via keV cluster ions impacts. Journal of Chemical Physics, 2018, 148, 144309.	1.2	5
16	Effect of kinetic energy and impact angle on carbon ejection from a free-standing graphene bombarded by kilo-electron-volt C60. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, .	0.6	9
17	Development of a Charge-Implicit ReaxFF Potential for Hydrocarbon Systems. Journal of Physical Chemistry Letters, 2018, 9, 359-363.	2.1	27
18	Sputtering of octatetraene by 15 keV C60 projectiles: Comparison of reactive interatomic potentials. Nuclear Instruments & Methods in Physics Research B, 2017, 393, 29-33.	0.6	4

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19	Effect of substrate thickness on ejection of phenylalanine molecules adsorbed on free-standing graphene bombarded by 10 keV C ₆₀ . Nuclear Instruments & Methods in Physics Research B, 2017, 393, 13-16.	0.6	5
20	Effect of Sample Thickness on Carbon Ejection from Ultrathin Graphite Bombarded by keV C ₆₀ . Acta Physica Polonica A, 2017, 132, 222-224.	0.2	5
21	Physical basis of energy per cluster atom in the universal concept of sputtering. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2016, 34, .	0.6	14
22	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
23	Effect of Oxygen Chemistry in Sputtering of Polymers. Journal of Physical Chemistry Letters, 2016, 7, 1559-1562.	2.1	9
24	Micro- and Macroscopic Modeling of Sputter Depth Profiling. Journal of Physical Chemistry C, 2016, 120, 25473-25480.	1.5	6
25	CO ₂ Cluster Ion Beam, an Alternative Projectile for Secondary Ion Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2016, 27, 1476-1482.	1.2	35
26	Computer simulations of material ejection during C ₆₀ and Ar _n bombardment of octane and β -carotene. Nuclear Instruments & Methods in Physics Research B, 2015, 352, 202-205.	0.6	4
27	Oscillations in the Stability of Consecutive Chemical Bonds Revealed by Ion-Induced Desorption. Angewandte Chemie - International Edition, 2015, 54, 1336-1340.	7.2	17
28	Seduction of Finding Universality in Sputtering Yields Due to Cluster Bombardment of Solids. Accounts of Chemical Research, 2015, 48, 2529-2536.	7.6	18
29	Correction to "On Universality in Sputtering Yields Due to Cluster Bombardment". Journal of Physical Chemistry Letters, 2014, 5, 3435-3435.	2.1	2
30	On Universality in Sputtering Yields Due to Cluster Bombardment. Journal of Physical Chemistry Letters, 2014, 5, 3227-3230.	2.1	17
31	Molecular dynamics computer simulations of sputtering of benzene sample by large mixed Lennard-Jones clusters. Nuclear Instruments & Methods in Physics Research B, 2014, 326, 185-189.	0.6	3
32	Computer simulations of sputtering and fragment formation during keV C ₆₀ bombardment of octane and β -carotene. Surface and Interface Analysis, 2014, 46, 3-6.	0.8	6
33	How material properties affect depth profiles – insight from computer modeling. Surface and Interface Analysis, 2014, 46, 253-256.	0.8	4
34	Modeling dynamic cluster SIMS experiments. Surface and Interface Analysis, 2013, 45, 14-17.	0.8	4
35	Dynamics of large Ar cluster bombardment of organic solids. Surface and Interface Analysis, 2013, 45, 35-38.	0.8	38
36	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

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37	Mixed MD simulation and analytical model analysis of Ag(111), C ₆₀ repetitive bombardment in the context of depth profiling for dynamic SIMS. <i>Surface and Interface Analysis</i> , 2013, 45, 154-157.	0.8	3
38	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
39	Computed Molecular Depth Profile for C ₆₀ Bombardment of a Molecular solid. <i>Analytical Chemistry</i> , 2013, 85, 11628-11633.	3.2	10
40	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
41	Molecular dynamics study of polystyrene bond-breaking and crosslinking under C ₆₀ and Ar cluster bombardment. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 303, 23-27.	0.6	18
42	Dynamics Displayed by Energetic C ₆₀ Bombardment of Metal Overlayers on an Organic Substrate. <i>Analytical Chemistry</i> , 2013, 85, 2348-2355.	3.2	3
43	Molecular Dynamics Simulations of Energetic Ar Cluster Bombardment of Ag(111). <i>Acta Physica Polonica A</i> , 2013, 123, 831-833.	0.2	4
44	Sputtering of Benzene Sample by Large Ne, Ar and Kr Clusters - Molecular Dynamics Computer Simulations. <i>Acta Physica Polonica A</i> , 2013, 123, 825-827.	0.2	4
45	Partnering Analytic Models and Dynamic Secondary Ion Mass Spectrometry Simulations to Interpret Depth Profiles Due to Kiloelectronvolt Cluster Bombardment. <i>Analytical Chemistry</i> , 2012, 84, 3010-3016.	3.2	10
46	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
47	Molecular Dynamics Simulations Elucidate the Synergy of C ₆₀ and Low-Energy Ar Cobombardment for Molecular Depth Profiling. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2635-2638.	2.1	9
48	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
49	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
50	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
51	Depth profiling by cluster projectiles as seen by computer simulations. <i>Surface and Interface Analysis</i> , 2011, 43, 12-15.	0.8	22
52	Temperature effects in the sputtering of a molecular solid by energetic atomic and cluster projectiles. <i>Surface and Interface Analysis</i> , 2011, 43, 78-80.	0.8	2
53	Odd-Even Effects in Ion-Beam-Induced Desorption of Biphenyl-Substituted Alkanethiol Self-Assembled Monolayers. <i>ChemPhysChem</i> , 2011, 12, 140-144.	1.0	12
54	Effect of sample rotation on surface roughness with keV C ₆₀ bombardment in secondary ion mass spectrometry (SIMS) experiments. <i>Chemical Physics Letters</i> , 2011, 506, 129-134.	1.2	13

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55	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
56	Damage analysis of benzene induced by keV fullerene bombardment. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2009, 267, 1440-1443.	0.6	3
57	Molecular dynamics computer simulations of 5keV C60 bombardment of benzene crystal. <i>Vacuum</i> , 2009, 83, S95-S98.	1.6	11
58	Sputtering of thin films of bariated molecules of arachidic acid by large noble gas clusters. <i>Vacuum</i> , 2009, 83, S155-S158.	1.6	13
59	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
60	Internal Energy of Molecules Ejected Due to Energetic C ₆₀ Bombardment. <i>Analytical Chemistry</i> , 2009, 81, 2260-2267.	3.2	50
61	Molecular Dynamics Simulations of Sputtering of Langmuir-Blodgett Multilayers by Kiloelectronvolt C ₆₀ Projectiles. <i>Journal of Physical Chemistry C</i> , 2009, 113, 5641-5648.	1.5	14
62	Molecular dynamics simulations of sputtering of organic overlayers by slow, large clusters. <i>Applied Surface Science</i> , 2008, 255, 841-843.	3.1	13
63	Computational view of surface based organic mass spectrometry. <i>Mass Spectrometry Reviews</i> , 2008, 27, 289-315.	2.8	139
64	Friction model to describe cluster bombardment. <i>Applied Surface Science</i> , 2008, 255, 893-896.	3.1	6
65	Applications of fullerene beams in analysis of thin layers. <i>Vacuum</i> , 2008, 82, 1120-1123.	1.6	10
66	Combined simulations and analytical model for predicting trends in cluster bombardment. <i>Applied Surface Science</i> , 2008, 255, 897-900.	3.1	12
67	Phase-Dependent Desorption from Biphenyl-Substituted Alkanethiol Self-Assembled Monolayers Induced by Ion Irradiation. <i>Journal of Physical Chemistry C</i> , 2008, 112, 2248-2251.	1.5	7
68	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
69	Quadratic Friction Model for Cluster Bombardment of Molecular Solids. <i>Journal of Physical Chemistry C</i> , 2007, 111, 10135-10137.	1.5	12
70	Organic mass spectrometry with low-energy projectiles. <i>Vacuum</i> , 2007, 81, 1233-1237.	1.6	2
71	Coarse-grained molecular dynamics studies of cluster-bombarded benzene crystals. <i>Applied Surface Science</i> , 2006, 252, 6436-6439.	3.1	52
72	Improvements in SIMS continue. <i>Applied Surface Science</i> , 2006, 252, 6836-6843.	3.1	68

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73	Sputtering of thin benzene and polystyrene overlayers by keV Ga and C60 bombardment. Applied Surface Science, 2006, 252, 6419-6422.	3.1	22
74	Desorption of organic overlayers by Ga and C60 bombardment. Vacuum, 2006, 81, 167-173.	1.6	38
75	Microscopic Insights into the Sputtering of Thin Organic Films on Ag{111} Induced by C60 and Ga Bombardment. Journal of Physical Chemistry B, 2005, 109, 11973-11979.	1.2	88
76	Modification and Stability of Aromatic Self-Assembled Monolayers upon Irradiation with Energetic Particles. Journal of Physical Chemistry B, 2005, 109, 5085-5094.	1.2	32
77	Microscopic Insights into the Sputtering of Ag{111} Induced by C60 and Ga Bombardment. Journal of Physical Chemistry B, 2004, 108, 7831-7838.	1.2	182
78	Internal Excitation Mechanisms of Neutral Atoms and Molecules Emitted from Ion Bombarded Organic Thin Films. Journal of Physical Chemistry B, 2004, 108, 15686-15693.	1.2	4
79	Enhancement of Sputtering Yields Due to C60 versus Ga Bombardment of Ag{111} As Explored by Molecular Dynamics Simulations. Analytical Chemistry, 2003, 75, 4402-4407.	3.2	194
80	In situ observation of particle-induced desorption from a self-assembled monolayer by laser-ionization mass spectrometry. Applied Physics Letters, 2003, 82, 1114-1116.	1.5	8
81	Substructure formation during pattern transposition from substrate into polymer blend film. Europhysics Letters, 2003, 62, 855-861.	0.7	25
82	Energetic Ion-Stimulated Desorption of Physisorbed Molecules. Journal of Physical Chemistry B, 2002, 106, 12929-12937.	1.2	13
83	Phase decomposition in polymer blend films cast on homogeneous substrates modified by self-assembled monolayers. Vacuum, 2001, 63, 297-305.	1.6	21
84	Phase decomposition in polymer blend films cast on substrates patterned with self-assembled monolayers. Vacuum, 2001, 63, 307-313.	1.6	47
85	Desorption of neutral molecules from self-assembled monolayers subjected to keV ion bombardment. Applied Surface Science, 1999, 141, 339-344.	3.1	7
86	Molecular Dynamics Simulation Study of Molecular Ejection Mechanisms: A keV Particle Bombardment of C6H6/Ag{111}. Journal of Physical Chemistry B, 1999, 103, 151-163.	1.2	64
87	Ejection of neutral molecules from ion-bombarded organic surfaces. , 1998, 12, 1226-1231.		10
88	Sputtering of atoms in fine structure states: a probe of excitation and de-excitation events. Rapid Communications in Mass Spectrometry, 1998, 12, 1266-1272.	0.7	26
89	Coverage-Dependent Molecular Ejection from Ion-Bombarded C6H6/Ag{111}. Journal of Physical Chemistry B, 1998, 102, 4176-4182.	1.2	22
90	State-selective laser photoionization of neutral benzene molecules ejected from keV ion bombarded C[sub 6]H[sub 6]/Ag{111}. , 1998, , .		2

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91	Spectroscopic behavior of halogen photodesorption from alkali halides under UV and VUV excitation. <i>Physical Review B</i> , 1997, 55, 5448-5454.	1.1	24
92	Desorption Mechanism of Benzene from C ₆ H ⁺ Ag(111) using keV Ion Bombardment and Laser Postionization. , 1997, , .		0
93	Thermal Desorption Induced by Kiloelectronvolt Ion Bombardment of Thiol-Bound Self-Assembled Monolayers on Gold. <i>Journal of the American Chemical Society</i> , 1997, 119, 8089-8094.	6.6	34
94	Multiphoton Ionization of Ion-Beam and Laser Desorbed Molecules from Organic Surfaces. , 1997, , .		0
95	Photon stimulated desorption from alkali halide surfaces at near threshold energies. <i>Surface Science</i> , 1996, 363, 229-233.	0.8	11
96	Temperature dependence of polar-angle distributions of atoms ejected from ion-bombarded Au{111}. <i>Physical Review B</i> , 1996, 53, 2378-2384.	1.1	13
97	Ion-induced emission of excited atoms from (100) surfaces of transition metal single crystals. <i>Vacuum</i> , 1995, 46, 605-608.	1.6	0
98	Electron-stimulated desorption from ionic crystal surfaces. <i>Progress in Surface Science</i> , 1995, 48, 83-96.	3.8	38
99	State-resolved study of keV sputtered neutral atoms by resonance ionization spectroscopy. <i>AIP Conference Proceedings</i> , 1995, , .	0.3	0
100	Band Structure Effects in Ejection of Ni Atoms in Fine Structure States. <i>Physical Review Letters</i> , 1995, 75, 3950-3953.	2.9	30
101	Mechanistic study of atomic desorption resulting from the keV-ion bombardment of fcc{001} single-crystal metals. <i>Physical Review B</i> , 1995, 52, 6006-6014.	1.1	37
102	Desorption of alkali halides stimulated by ion bombardment. <i>Radiation Effects and Defects in Solids</i> , 1994, 128, 107-125.	0.4	7
103	A comparison of electron-stimulated desorption of halogen atoms from different alkali-halide single-crystals. <i>Radiation Effects and Defects in Solids</i> , 1994, 128, 47-54.	0.4	9
104	Thermally assisted desorption processes in electron bombarded alkali halides. <i>Vacuum</i> , 1994, 45, 353-356.	1.6	8
105	Energy-resolved angular distributions and the population partition of excited state Rh atoms ejected from ion bombarded Rh {001}. <i>Journal of Chemical Physics</i> , 1994, 101, 6226-6232.	1.2	8
106	Energy- and angle-resolved measurements of the Rh(4F9/2) and Rh(4F7/2) populations from ion bombarded Rh{100}. <i>Journal of Chemical Physics</i> , 1992, 96, 6314-6317.	1.2	23
107	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
108	Electronic and nuclear effects in ion-induced desorption from NaCl{100}. <i>Journal of Chemical Physics</i> , 1992, 96, 3298-3305.	1.2	24

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109	Energy and angular distributions of excited rhodium atoms ejected from the rhodium (100) surface. <i>Physical Review B</i> , 1991, 43, 12078-12081.	1.1	9
110	Angular and Energy Distributions of RH Atoms Desorbed in an Excited State from Ion-Bombarded Rh{100}. <i>Materials Research Society Symposia Proceedings</i> , 1990, 201, 87.	0.1	0
111	Angular distribution of Rh atoms desorbed from ion-bombarded Rh{100}: Effect of local environment. <i>Physical Review B</i> , 1990, 42, 7311-7316.	1.1	39
112	Directional emission of nonthermal halogen atoms by electron bombardment of alkali halides. <i>Physical Review B</i> , 1989, 39, 12950-12953.	1.1	27
113	Sputtering of alkali halides studied by a mass selected time of flight spectroscopy. <i>Radiation Effects and Defects in Solids</i> , 1989, 109, 189-202.	0.4	17
114	Electronic and Cascade Processes in Ion-Induced Sputtering of Alkali Halides. <i>Physica Status Solidi A</i> , 1989, 112, 431-435.	1.7	0