Kurt W Kolasinski

List of Publications by Year
in descending order

120 papers	3,398 citations	126907 33 h-index	168389 53 g-index
159 all docs	159 docs citations	159 times ranked	2715 citing authors

#	Article	IF	Citations
1	Catalytic growth of nanowires: Vaporâ€“liquidâ€“solid, vaporâ€“solidâ€“solid, solutionâ€“liquidâ€“solid and solidâ€“liquidâ€“solid growth. Current Opinion in Solid State and Materials Science, 2006, 10, 182-191.	11.5	259
2	Formation of nano-textured conical microstructures in titanium metal surface by femtosecond laser irradiation. Applied Physics A: Materials Science and Processing, 2008, 90, 399-402.	2.3	146
3	Silicon nanostructures from electroless electrochemical etching. Current Opinion in Solid State and Materials Science, 2005, 9, 73-83.	11.5	137
4	Hydrogen adsorption on and desorption from Si: Considerations on the applicability of detailed balance. Physical Review Letters, 1994, 72, 1356-1359.	7.8	113
5	The mechanism of Si etching in fluoride solutions. Physical Chemistry Chemical Physics, 2003, 5, 1270-1278.	2.8	98
6	Normally unoccupied states on C(111) (diamond) (2Ã—1): Support for a relaxedÏ€-bonded chain model. Physical Review B, 1989, 39, 1381-1384.	3.2	90
7	Internalâ€state distribution of recombinative hydrogen desorption from Si(100). Journal of Chemical Physics, 1992, 96, 3995-4006.	3.0	87
8	Rotational population and alignment distributions for inelastic scattering and trapping/desorption of NO on Pt(111). Journal of Chemical Physics, 1989, 91, 3182-3195.	3.0	83
9	Etching of silicon in fluoride solutions. Surface Science, 2009, 603, 1904-1911.	1.9	82
10	Recombinative desorption of H2 on Si(100)â€(2Ã—1) and Si(111)â€(7Ã—7): Comparison of internal state distributions. Journal of Chemical Physics, 1992, 97, 1520-1530.	3.0	81
11	Spontaneous formation of nanospiked microstructures in germanium by femtosecond laser irradiation. Nanotechnology, 2007, 18, 195302.	2.6	78
12	The structure of water on the () surface of graphite. Surface Science, 2003, 532-535, 166-172.	1.9	75
13	Rotational alignment of NO desorbing from Pt(111). Journal of Chemical Physics, 1987, 87, 5038-5039.	3.0	70
14	Effects of Stain Etchant Composition on the Photoluminescence and Morphology of Porous Silicon. Journal of the Electrochemical Society, 2006, 153, C19.	2.9	69
15	O2/Pd(111). Clarification of the correspondence between thermal desorption features and chemisorption states. Chemical Physics Letters, 1994, 219, 113-117.	2.6	62
16	Beam investigations of D2 adsorption on Si(100): On the importance of lattice excitations in the reaction dynamics. Journal of Chemical Physics, 1994, 101, 7082-7094.	3.0	60
17	Infrared spectroscopic investigation of the rhodium gemâ€dicarbonyl surface species. Journal of Chemical Physics, 1983, 79, 1026-1030.	3.0	59
18	Internalâ€state distributions of H2 desorbed from monoâ€•and dihydride species on Si(100). Journal of Chemical Physics, 1992, 97, 3704-3709.	3.0	59

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19	Charge Transfer and Nanostructure Formation During Electroless Etching of Silicon. Journal of Physical Chemistry C, 2010, 114, 22098-22105.	3.1	58
20	The mechanism of galvanic/metal-assisted etching of silicon. Nanoscale Research Letters, 2014, 9, 432.	5.7	57
21	The Composition of Fluoride Solutions. Journal of the Electrochemical Society, 2005, 152, J99.	2.9	55
22	Photoelectrochemical etching of Si and porous Si in aqueous HF. Physical Chemistry Chemical Physics, 2000, 2, 277-281.	2.8	52
23	Depletion-electric-field-induced second-harmonic generation near oxidized GaAs(001) surfaces. Physical Review B, 1997, 55, 10694-10706.	3.2	47
24	On the role of the pore filling medium in photoluminescence from photochemically etched porous silicon. Journal of Applied Physics, 2000, 88, 2472-2479.	2.5	46
25	Using Effusive Molecular Beams and Microcanonical Unimolecular Rate Theory to Characterize CH4Dissociation on Pt(111). Journal of Physical Chemistry B, 2006, 110, 6705-6713.	2.6	46
26	Laser-Assisted Formation of Porous Si in Diverse Fluoride Solutions:â€‰ Reaction Kinetics and Mechanistic Implications. Journal of Physical Chemistry B, 2001, 105, 3864-3871.	2.6	43
27	Probing the dynamics of hydrogen recombination on Si(100). Journal of Chemical Physics, 1991, 95, 5482-5485.	3.0	39
28	Fabrication of ordered arrays of silicon cones by optical diffraction in ultrafast laser etching with SF6. Applied Physics A: Materials Science and Processing, 2004, 78, 381-385.	2.3	39
29	Solid structure formation during the liquid/solid phase transition. Current Opinion in Solid State and Materials Science, 2007, 11, 76-85.	11.5	39
30	Laser-Assisted Formation of Porous Silicon in Diverse Fluoride Solutions:Â Hexafluorosilicate Deposition. Journal of Physical Chemistry B, 2002, 106, 4424-4431.	2.6	35
31	Ultrafast-laser-assisted chemical restructuring of silicon and germanium surfaces. Applied Surface Science, 2007, 253, 6580-6583.	6.1	35
32	Stain Etching with Fe(III), V(V), and Ce(IV) to Form Microporous Silicon. Electrochemical and Solid-State Letters, 2009, 12, D22.	2.2	34
33	Dynamics of porous silicon formation by etching in HF + V2O5solutions. Molecular Physics, 2010, 108, 1033-1043.	1.7	34
34	The Stoichiometry of Electroless Silicon Etching in Solutions of V₂O₅ and HF. Angewandte Chemie - International Edition, 2013, 52, 6731-6734.	13.8	34
35	Controlled Microfabrication of Highâ€Aspectâ€Ratio Structures in Silicon at the Highest Etching Rates: The Role of H₂O₂ in the Anodic Dissolution of Silicon in Acidic Electrolytes. Advanced Functional Materials, 2017, 27, 1604310.	14.9	30
36	Laser assisted and wet chemical etching of silicon nanostructures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1474-1479.	2.1	28

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37	Laser-etched silicon pillars and their porosification. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1647-1651.	2.1	27
38	Non-lithographic method of forming ordered arrays of silicon pillars and macropores. Journal Physics D: Applied Physics, 2005, 38, 632-636.	2.8	26
39	The stoichiometry of metal assisted etching (MAE) of Si in V2O5+HF and HOOH+HF solutions. Electrochimica Acta, 2015, 158, 219-228.	5.2	26
40	Test of Marcus Theory Predictions for Electroless Etching of Silicon. Journal of Physical Chemistry C, 2012, 116, 21472-21481.	3.1	25
41	Regenerative Electroless Etching of Silicon. Angewandte Chemie - International Edition, 2017, 56, 624-627.	13.8	25
42	Tunable pulsed vacuum ultraviolet light source for surface science and materials spectroscopy based on high order harmonic generation. Review of Scientific Instruments, 2001, 72, 1977-1983.	1.3	23
43	Structure and photoluminescence studies of porous silicon formed in ferric ion containing stain etchants. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1240-1244.	1.8	23
44	Electron transfer during metal-assisted and stain etching of silicon. Semiconductor Science and Technology, 2016, 31, 014002.	2.0	23
45	Solidification driven extrusion of spikes during laser melting of silicon pillars. Nanotechnology, 2006, 17, 2741-2744.	2.6	22
46	Investigations of the adsorption dynamics of D 2 on Si(100). Surface Science, 1995, 331-333, 485-489.	1.9	21
47	Surface texturing of Si, porous Si and TiO2 by laser ablation. Applied Surface Science, 2007, 253, 6575-6579.	6.1	21
48	Mechanisms of visible photoluminescence from nanoscale silicon cones. Journal of Applied Physics, 2002, 91, 3294-3298.	2.5	20
49	Ion angular distribution of species desorbed from single crystal surfaces by electron impact. Nuclear Instruments & Methods in Physics Research B, 1987, 27, 147-154.	1.4	19
50	Non-adiabatic and ultrafast dynamics of hydrogen adsorbed on silicon. Current Opinion in Solid State and Materials Science, 2004, 8, 353-366.	11.5	19
51	Stain etching of silicon pillars and macropores. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1422-1426.	1.8	19
52	Stain etching of silicon with V2O5. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1749-1753.	0.8	18
53	Observation and application of optical interference and diffraction effects in reflection from photochemically fabricated Gaussian interfaces. Journal of Applied Physics, 1999, 86, 1800-1807.	2.5	17
54	Stateâ€specific study of hydrogen desorption from Si(100)â€(2Ã—1): Comparison of disilane and hydrogen adsorption. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1992, 10, 2287-2291.	2.1	16

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55	Crystallographically Determined Etching and Its Relevance to the Metal-Assisted Catalytic Etching (MACE) of Silicon Powders. Frontiers in Chemistry, 2019, 6, 651.	3.6	16
56	Stain Etching of Silicon With and Without the Aid of Metal Catalysts. ECS Transactions, 2013, 50, 25-30.	0.5	15
57	Energy partitioning in the reaction 2H2+ O2? 2H2O on Pd(111). Faraday Discussions, 1993, 96, 265.	3.2	14
58	The Mechanism of Photohydrosilylation on Silicon and Porous Silicon Surfaces. Journal of the American Chemical Society, 2013, 135, 11408-11412.	13.7	14
59	Low-Load Metal-Assisted Catalytic Etching Produces Scalable Porosity in Si Powders. ACS Applied Materials & Interfaces, 2020, 12, 48969-48981.	8.0	14
60	Vacuum ultraviolet surface photochemistry of water adsorbed on graphite. Journal of Chemical Physics, 2002, 117, 6667-6672.	3.0	13
61	Effusive Molecular Beam Study of C2H6Dissociation on Pt(111). Journal of Physical Chemistry B, 2006, 110, 6714-6720.	2.6	13
62	(Invited) Rational Design of Etchants for Electroless Porous Silicon Formation. ECS Transactions, 2011, 33, 23-28.	0.5	13
63	Molecular orientation on metal surfaces by electrostatic interactions: The adsorption of cyclopentene on a stepped (221) silver surface. Journal of Chemical Physics, 1986, 85, 6093-6099.	3.0	12
64	Interactions in co-adsorbed layers. Surface Science, 1995, 334, 19-28.	1.9	12
65	Wet Etching of Pillar-Covered Silicon Surfaces: Formation of Crystallographically Defined Macropores. Journal of the Electrochemical Society, 2008, 155, H164.	2.9	12
66	Electroless etching of Si with IO3â€“ and related species. Nanoscale Research Letters, 2012, 7, 323.	5.7	12
67	Controlling the Nature of Etched Si Nanostructures: High- versus Low-Load Metal-Assisted Catalytic Etching (MACE) of Si Powders. ACS Applied Materials & Interfaces, 2020, 12, 4787-4796.	8.0	11
68	In situ photoluminescence studies of photochemically grown porous silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 69-70, 157-160.	3.5	10
69	Bubbles: A review of their relationship to the formation of thin films and porous materials. Open Material Sciences, 2014, 1, .	0.8	10
70	Negative ion resonances in electron scattering from chemisorbed O 2 on Pd(111). Surface Science, 1995, 331-333, 267-271.	1.9	9
71	Applications of a novel method for determining the rate of production of photochemical porous silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 69-70, 132-135.	3.5	9
72	Rotational alignment of NO from Pt(111). Inelastic scattering and molecular desorption. Journal of the Chemical Society, Faraday Transactions 2, 1989, 85, 1325.	1.1	8

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73	Surface photochemistry in the vacuum and extreme ultraviolet (VUV and XUV): high harmonic generation, H2O and O2. Journal of Physics Condensed Matter, 2006, 18, S1655-S1675.	1.8	8
74	Development of endothelial cells on pillarâ€covered silicon. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1356-1360.	1.8	8
75	Hierarchical Nanostructuring of Porous Silicon with Electrochemical and Regenerative Electroless Etching. ACS Nano, 2019, 13, 13056-13064.	14.6	8
76	Summary Abstract: Characterization of empty states on C(111) (diamond) (2Ã—1) via angleâ€resolved twoâ€photon photoemission. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 814-816.	2.1	7
77	Quantum state-resolved study of NH3 photodesorbed from GaAs(1 0 0). Nuclear Instruments & Methods in Physics Research B, 1995, 101, 49-52.	1.4	7
78	The Effect of Etchant Composition on Film Structure during Laser-Assisted Porous Si Growth. Physica Status Solidi A, 2000, 182, 87-91.	1.7	7
79	Chapter 16 Growth and Etching of Semiconductors. Handbook of Surface Science, 2008, , 787-870.	0.3	7
80	Surface photochemistry induced by ultrafast pulses of vacuum ultraviolet light: Physisorbed oxygen on graphite. Physical Review B, 2002, 66, .	3.2	6
81	Etchant composition effects on porous silicon morphology and photoluminescence. Physica Status Solidi A, 2003, 197, 117-122.	1.7	5
82	Fabrication of electrospun nanofiber composite of g-C3N4 and Au nanoparticles as plasmonic photocatalyst. Surfaces and Interfaces, 2021, 26, 101367.	3.0	5
83	Hydrogen desorption and subsequent reconstruction on natural diamond surfaces. Carbon, 1990, 28, 751-752.	10.3	4
84	Pillars formed by laser ablation and modified by wet etching. , 2007, 6586, 122.		4
85	Sum frequency generation from planar and porous silicon in contact with liquids. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 1356-1361.	1.8	4
86	Porous Silicon Formation by Stain Etching. , 2014, , 35-48.		4
87	Photochemical and nonthermal chemical modification of porous silicon for biomedical applications. , 2014, , 52-80.		4
88	Regenerative Electroless Etching of Silicon. Angewandte Chemie, 2017, 129, 639-642.	2.0	4
89	Plume and Nanoparticle Formation During Laser Ablation. , 2018, , 594-603.		4
90	Subtractive methods to form pyrite and sulfide nanostructures of Fe, Co, Ni, Cu and Zn. Current Opinion in Solid State and Materials Science, 2016, 20, 371-373.	11.5	3

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91	Controlled Fabrication of High-Aspect-Ratio Microstructures in Silicon at Etching Rates Beyond State-of-the-Art Microstructuring Technologies. ECS Transactions, 2017, 77, 199-205.	0.5	3
92	Silicon Surface Photochemistry. , 2018, , 611-620.		3
93	Hierarchical Porous Silicon and Porous Silicon Nanowires Produced with Regenerative Electroless Etching (ReEtching) and Metal Assisted Catalytic Etching (MACE). ECS Transactions, 2018, 86, 65-70.	0.5	3
94	Response of Photoluminescence of H-Terminated and Hydrosilylated Porous Si Powders to Rinsing and Temperature. Surfaces, 2020, 3, 366-380.	2.3	3
95	Crystallographically Defined Silicon Macropore Membranes. Open Material Sciences, 2018, 4, 33-41.	0.8	2
96			1
97	Stain Etching with Ferric Ion to Produce Thick Porous Silicon Films. ECS Transactions, 2009, 16, 323-328.	0.5	1
98	Porous Silicon Formation by Galvanic Etching. , 2014, , 23-33.		1
99	Porous Silicon Formation by Galvanic Etching. , 2014, , 1-11.		1
100	Silicon Microfabrication: Controlled Microfabrication of Highâ€Aspectâ€Ratio Structures in Silicon at the Highest Etching Rates: The Role of H₂O₂ in the Anodic Dissolution of Silicon in Acidic Electrolytes (Adv. Funct. Mater. 6/2017). Advanced Functional Materials, 2017, 27, .	14.9	1
101	Effect of Metal-Assisted Catalytic Etching (MACE) on Single-Crystal Si Wafers With Faceted Macropores. Microscopy and Microanalysis, 2019, 25, 2124-2125.	0.4	1
102	Metal-Assisted Catalytic Etching (MACE) for Nanofabrication of Semiconductor Powders. Micromachines, 2021, 12, 776.	2.9	1
103	Porous Silicon Formation by Stain Etching. , 2018, , 39-59.		1
104	Porous Silicon Formation by Stain Etching. , 2017, , 1-21.		1
105	Characterization of chemisorption on porous silicon by sum frequency generation. , 2006, , .		0
106	Porous Silicon Formation by Stain Etching. , 2014, , 1-14.		0
107	Porous Layers Composed of Oxide Crystallites Formed by the Combination of Laser Ablation and Anodization of Metal. ECS Transactions, 2015, 69, 155-160.	0.5	0
108	(Invited) The Effects of Laser Ablation Texturing and Nanoparticles on Anodic Nanotube and Porous Film Formation. ECS Transactions, 2016, 75, 3-8.	0.5	0

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109	Laser etching processes : Towards sub-picosecond X-UV irradiation. European Physical Journal Special Topics, 2001, 11, Pr2-499-Pr2-502.	0.2	0
110	Source UVX par gÃ©nÃ©ration d'harmoniques d'ordre Ã©levÃ© : applications potentielles Ã la physique des surfaces. European Physical Journal Special Topics, 2001, 11, Pr7-73-Pr7-76.	0.2	0
111	(Invited) The Effects of Laser Ablation Texturing and Nanoparticles on Anodic Nanotube and Porous Film Formation. ECS Meeting Abstracts, 2016, , .	0.0	0
112	Porous Silicon Formation by Galvanic Etching. , 2017, , 1-13.		0
113	Controlled Fabrication of High-Aspect-Ratio Microstructures in Silicon at Etching Rates Beyond State-of-the-Art Microstructuring Technologies. ECS Meeting Abstracts, 2017, , .	0.0	0
114	Regenerative Electroless Etching of Silicon. ECS Meeting Abstracts, 2017, , .	0.0	0
115	Hierarchical Porous Silicon and Porous Silicon Nanowires Produced with Regenerative Electroless Etching (ReEtching) and Metal Assisted Catalytic Etching (MACE). ECS Meeting Abstracts, 2018, , .	0.0	0
116	Porous Silicon Formation by Galvanic Etching. , 2018, , 25-37.		0
117	Photochemical and nonthermal chemical modification of porous silicon. , 2021, , 51-112.		0
118	A Tribute to Professor Gaetano Granozzi and His Contributions to Surface Science on the Occasion of His 70th Birthday. Surfaces, 2021, 4, 293-294.	2.3	0
119	Injection Metal-Assisted Catalytic Etching (MACE) of Si Powder: Discovery of Low-Load MACE and Pore Distribution Tunability Using Ag, Au, Pd, Pt and Cu Catalysts. ECS Meeting Abstracts, 2020, MA2020-02, 1219-1219.	0.0	0
120	Characterization of Mechanochemical Modification of Porous Silicon with Arginine. Surfaces, 2022, 5, 143-154.	2.3	0