Richard I Masel

List of Publications by Year
in descending order

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269 papers	16,530 citations	15504 65 h-index	17105 122 g-index
273 all docs	273 docs citations	273 times ranked	13471 citing authors

#	Article	IF	Citations
1	Ionic Liquidâ€“Mediated Selective Conversion of CO ₂ to CO at Low Overpotentials. Science, 2011, 334, 643-644.	12.6	1,293
2	Direct formic acid fuel cells. Journal of Power Sources, 2002, 111, 83-89.	7.8	777
3	Rapid Production of Metalâ^'Organic Frameworks via Microwave-Assisted Solvothermal Synthesis. Journal of the American Chemical Society, 2006, 128, 12394-12395.	13.7	635
4	Catalysts for direct formic acid fuel cells. Journal of Power Sources, 2003, 115, 229-235.	7.8	491
5	Size Effects in Electronic and Catalytic Properties of Unsupported Palladium Nanoparticles in Electrooxidation of Formic Acid. Journal of Physical Chemistry B, 2006, 110, 13393-13398.	2.6	467
6	Nanoparticle Silver Catalysts That Show Enhanced Activity for Carbon Dioxide Electrolysis. Journal of Physical Chemistry C, 2013, 117, 1627-1632.	3.1	369
7	The effect of electrolyte composition on the electroreduction of CO₂to CO on Ag based gas diffusion electrodes. Physical Chemistry Chemical Physics, 2016, 18, 7075-7084.	2.8	367
8	Performance characterization of Pd/C nanocatalyst for direct formic acid fuel cells. Journal of Power Sources, 2005, 144, 28-34.	7.8	309
9	Grain Boundary Defect Elimination in a Zeolite Membrane by Rapid Thermal Processing. Science, 2009, 325, 590-593.	12.6	289
10	Sustainion Imidazoliumâ€Functionalized Polymers for Carbon Dioxide Electrolysis. Energy Technology, 2017, 5, 929-936.	3.8	284
11	A Priori Catalytic Activity Correlations: The Difficult Case of Hydrogen Production from Ammonia. Catalysis Letters, 2004, 96, 117-122.	2.6	283
12	High power density direct formic acid fuel cells. Journal of Power Sources, 2004, 130, 8-14.	7.8	278
13	Crossover of formic acid through NafionÂ® membranes. Journal of Power Sources, 2003, 117, 35-38.	7.8	275
14	Unusually active palladium-based catalysts for the electrooxidation of formic acid. Journal of Power Sources, 2006, 157, 78-84.	7.8	256
15	An industrial perspective on catalysts for low-temperature CO2 electrolysis. Nature Nanotechnology, 2021, 16, 118-128.	31.5	255
16	The behavior of palladium catalysts in direct formic acid fuel cells. Journal of Power Sources, 2005, 139, 15-20.	7.8	243
17	In Situ Spectroscopic Examination of a Low Overpotential Pathway for Carbon Dioxide Conversion to Carbon Monoxide. Journal of Physical Chemistry C, 2012, 116, 15307-15312.	3.1	230
18	Electrochemical conversion of CO2 to formic acid utilizing Sustainionâ„¢ membranes. Journal of CO2 Utilization, 2017, 20, 208-217.	6.8	227

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19	Direct Formic Acid Fuel Cells with 600â€‰mAâ€‰cm-2at 0.4â€‰V and 22â€‰Â°C. Fuel Cells, 2004, 4, 337-343	2.4	206
20	A nanoparticle catalyst with superior activity for electrooxidation of formic acid. Electrochemistry Communications, 2002, 4, 599-603.	4.7	200
21	Enhancing the stability of metalâ€“organic frameworks in humid air by incorporating water repellent functional groups. Chemical Communications, 2010, 46, 6120.	4.1	199
22	UHV, Electrochemical NMR, and Electrochemical Studies of Platinum/Ruthenium Fuel Cell Catalysts. Journal of Physical Chemistry B, 2002, 106, 9581-9589.	2.6	181
23	UHV and electrochemical studies of CO and methanol adsorbed at platinum/ruthenium surfaces, and reference to fuel cell catalysis. Electrochimica Acta, 2002, 47, 3637-3652.	5.2	179
24	CO₂Electrolysis to CO and O₂at High Selectivity, Stability and Efficiency Using Sustainion Membranes. Journal of the Electrochemical Society, 2018, 165, J3371-J3377.	2.9	179
25	A comparison of electrochemical and gas-phase decomposition of methanol on platinum surfaces. The Journal of Physical Chemistry, 1992, 96, 8509-8516.	2.9	177
26	Polycrystalline Graphene Ribbons as Chemiresistors. Advanced Materials, 2012, 24, 53-57.	21.0	177
27	Submillimeter-scale combustion. AICHE Journal, 2004, 50, 3206-3214.	3.6	174
28	Carbon Dioxide and Water Electrolysis Using New Alkaline Stable Anion Membranes. Frontiers in Chemistry, 2018, 6, 263.	3.6	173
29	An inorganicâ€“organic proton exchange membrane for fuel cells with a controlled nanoscale pore structure. Nature Nanotechnology, 2010, 5, 230-236.	31.5	145
30	Modeling of high-temperature microburners. Proceedings of the Combustion Institute, 2002, 29, 901-907.	3.9	141
31	A miniature air breathing direct formic acid fuel cell. Journal of Power Sources, 2004, 128, 119-124.	7.8	134
32	The effect of membrane on an alkaline water electrolyzer. International Journal of Hydrogen Energy, 2017, 42, 29661-29665.	7.1	132
33	Characterization of a high performing passive direct formic acid fuel cell. Journal of Power Sources, 2006, 158, 129-136.	7.8	125
34	Water Enhancement of CO₂Conversion on Silver in 1-Ethyl-3-Methylimidazolium Tetrafluoroborate. Journal of the Electrochemical Society, 2013, 160, H138-H141.	2.9	122
35	Metalâ^'Organic Frameworks as Adsorbents for Trapping and Preconcentration of Organic Phosphonates. Analytical Chemistry, 2007, 79, 1290-1293.	6.5	115
36	Development of a microreactor for the production of hydrogen from ammonia. Journal of Power Sources, 2004, 137, 53-61.	7.8	109

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37	An infrared study of CO adsorption on Pt(111). Surface Science, 1988, 201, 444-460.	1.9	106
38	Porous anodic alumina optimized as a catalyst support for microreactors. Journal of Catalysis, 2004, 227, 26-32.	6.2	105
39	Effects of Molecular Sieving and Electrostatic Enhancement in the Adsorption of Organic Compounds on the Zeolitic Imidazolate Framework ZIF-8. Langmuir, 2010, 26, 15625-15633.	3.5	105
40	Porous anodic alumina microreactors for production of hydrogen from ammonia. AICHE Journal, 2004, 50, 829-834.	3.6	104
41	Quantum scattering from a sinusoidal hard wall: Atomic diffraction from solid surfaces. Physical Review B, 1975, 12, 5545-5551.	3.2	97
42	XPS, UPS AND XAES studies of the adsorption of nitrogen, oxygen, and nitrogen oxides on W(110) at 300 and 100 K. Surface Science, 1979, 79, 26-38.	1.9	95
43	A reflection-absorption infrared study of carbon monoxide and nitric oxide adsorption on platinum (100). Surface Science, 1984, 137, 339-360.	1.9	94
44	On the Sensing Mechanism in Carbon Nanotube Chemiresistors. ACS Nano, 2011, 5, 153-158.	14.6	91
45	Structure sensitivity of ethylene adsorption on Pt(100): Evidence for vinylidene formation on (1Ã—1) Pt(100). Surface Science, 1987, 185, 479-494.	1.9	88
46	Acid loaded porous silicon as a proton exchange membrane for micro-fuel cells. Journal of Power Sources, 2004, 135, 198-203.	7.8	88
47	Charge Transfer from Metallic Single-Walled Carbon Nanotube Sensor Arrays. Journal of Physical Chemistry B, 2006, 110, 11055-11061.	2.6	86
48	Diffusion flame instabilities in a 0.75mm non-premixed microburner. Proceedings of the Combustion Institute, 2005, 30, 2499-2507.	3.9	81
49	An Experimental Test of Various Models of the Active Site for Nitric Oxide Reduction on Platinum. Catalysis Reviews - Science and Engineering, 1986, 28, 335-369.	12.9	79
50	Trends in the Adsorption of Volatile Organic Compounds in a Large-Pore Metalâ^'Organic Framework, IRMOF-1. Langmuir, 2010, 26, 11319-11329.	3.5	78
51	A model for the plane to plane variations in catalytic activity seen during nitric oxide decomposition on platinum. Surface Science, 1983, 128, 176-190.	1.9	76
52	Carbon-oxygen bond scission during methanol decomposition on (1.times.1)platinum(110). Journal of the American Chemical Society, 1991, 113, 5850-5856.	13.7	76
53	Electrochemical generation of syngas from water and carbon dioxide at industrially important rates. Journal of CO2 Utilization, 2016, 15, 50-56.	6.8	76
54	Onâ€Chip Micro Gas Chromatograph Enabled by a Noncovalently Functionalized Singleâ€Walled Carbon Nanotube Sensor Array. Angewandte Chemie - International Edition, 2008, 47, 5018-5021.	13.8	75

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55	Effects of the Addition of Antimony, Tin, and Lead to Palladium Catalyst Formulations for the Direct Formic Acid Fuel Cell. Journal of Physical Chemistry C, 2010, 114, 11665-11672.	3.1	75
56	Adsorption and interaction of CO and NO on Pt(410). Surface Science, 1985, 155, 341-365.	1.9	74
57	A TPD study of nitric oxide decomposition on Pt(100), Pt(411) and Pt(211). Surface Science, 1989, 209, 44-56.	1.9	74
58	The adsorption of thiophene and tetrahydrothiophene on several faces of platinum. Surface Science, 1987, 183, 44-66.	1.9	71
59	Non-equilibrium electrokinetic micro/nano fluidic mixer. Lab on A Chip, 2008, 8, 625.	6.0	71
60	A semiclassical model for atomic scattering from solid surfacesâ€”He and Ne scattering from W(112). Journal of Chemical Physics, 1976, 64, 45-56.	3.0	70
61	The Effect of Ruthenium on the Binding of CO, H2, and H2O on Pt(110). Journal of Physical Chemistry B, 2001, 105, 9793-9797.	2.6	69
62	The effects of gas adsorption on particle shapes in supported platinum catalysts. Journal of Catalysis, 1989, 120, 421-431.	6.2	68
63	Quantitative MRI study of water distribution during operation of a PEM fuel cell using TeflonÂ® flow fields. Journal of Power Sources, 2007, 171, 678-687.	7.8	68
64	Micromachined GC Columns for Fast Separation of Organophosphonate and Organosulfur Compounds. Analytical Chemistry, 2008, 80, 4087-4094.	6.5	67
65	The effect of microcolumn geometry on the performance of micro-gas chromatography columns for chip scale gas analyzers. Sensors and Actuators B: Chemical, 2010, 150, 456-464.	7.8	67
66	Methanol conditioning for improved performance of formic acid fuel cells. Journal of Power Sources, 2002, 112, 655-659.	7.8	66
67	Decomposition of trimethylgallium on Si(100): Spectroscopic identification of the intermediates. Surface Science, 1989, 216, 173-188.	1.9	65
68	Unexpected Activity of Palladium on Vanadia Catalysts for Formic Acid Electro-oxidation. Electrochemical and Solid-State Letters, 2005, 8, A291.	2.2	65
69	Methanol adsorption and decomposition on (2 Ã— 1)Pt(110): enhanced stability of the methoxy intermediate on a stepped surface. Surface Science, 1991, 243, 199-209.	1.9	64
70	The influence of solution pH on rates of an electrocatalytic reaction: Formic acid electrooxidation on platinum and palladium. Electrochimica Acta, 2009, 54, 4073-4078.	5.2	64
71	Atomic scattering from a sinusoidal hard wall: Comparison of approximate methods with exact quantum results. Journal of Chemical Physics, 1976, 65, 2690-2699.	3.0	63
72	Nitric oxide decomposition on Pt(410). Journal of Catalysis, 1984, 85, 127-134.	6.2	63

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73	Effects of Nafion as a binding agent for unsupported nanoparticle catalysts. Journal of Power Sources, 2003, 115, 35-39.	7.8	62
74	Experimental observations of methaneâ€“oxygen diffusion flame structure in a sub-millimetre microburner. Combustion Theory and Modelling, 2005, 9, 77-92.	1.9	62
75	Ethylene adsorption and decomposition on (2 .times. 1) platinum(110). The Journal of Physical Chemistry, 1990, 94, 1066-1072.	2.9	60
76	Thermal oxidation of tantalum films at various oxidation states from 300 to 700Â°C. Journal of Applied Physics, 2005, 98, 114908.	2.5	60
77	Formation of hydronium and waterâ€“hydronium complexes during coadsorption of hydrogen and water on (2Ã—1)Pt(110). Surface Science, 1999, 419, 150-157.	1.9	59
78	Performance and long-term stability of CO2 conversion to formic acid using a three-compartment electrolyzer design. Journal of CO2 Utilization, 2020, 42, 101349.	6.8	57
79	Ammonia adsorption and decomposition on several faces of platinum. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1989, 7, 1986-1990.	2.1	52
80	Flame dynamics and structure within sub-millimeter combustors. AICHE Journal, 2007, 53, 1568-1577.	3.6	52
81	Superior Formic Acid Oxidation Using Carbon Nanotube-Supported Palladium Catalysts. Journal of Physical Chemistry C, 2011, 115, 19413-19418.	3.1	51
82	Mechanical Activation of CaOâ€Based Adsorbents for CO₂ Capture. ChemSusChem, 2013, 6, 193-198.	6.8	51
83	Engineering approximations for activation energies in hydrogen transfer reactions. AICHE Journal, 2000, 46, 2041-2052.	3.6	50
84	Low temperature Cî—¸C bond scission during ethanol decomposition on Pt(331). Surface Science, 1997, 385, 246-258.	1.9	49
85	Magnetic resonance imaging investigation of water accumulation and transport in graphite flow fields in a polymer electrolyte membrane fuel cell: Do defects control transport?. Journal of Power Sources, 2008, 182, 76-82.	7.8	49
86	Chemical sensors based on randomly stacked graphene flakes. Applied Physics Letters, 2012, 100, .	3.3	49
87	An Improved Miniature Direct Formic Acid Fuel Cell Based on Nanoporous Silicon for Portable Power Generation. Journal of the Electrochemical Society, 2006, 153, A1562.	2.9	48
88	Formic acid decomposition on palladium-coated Pt(110). Surface Science, 2004, 573, 169-175.	1.9	47
89	Nonthermal Current-Stimulated Desorption of Gases from Carbon Nanotubes. Science, 2010, 329, 1327-1330.	12.6	47
90	Partially Buried Microcolumns for Micro Gas Analyzers. Analytical Chemistry, 2009, 81, 3471-3477.	6.5	46

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91	The equilibrium shape and surface energy anisotropy of clean platinum. Journal of Catalysis, 1990, 126, 658-670.	6.2	45
92	Direct conversion of methanol to formaldehyde in the absence of oxygen on Cu(210). Surface Science, 1995, 343, 17-23.	1.9	45
93	Correlations between the Heat of Adsorption and the Position of the Center of the D-Band:â€‰ Differences between Computation and Experiment. Journal of Physical Chemistry A, 2002, 106, 3084-3091.	2.5	45
94	Performance of the direct formic acid fuel cell with electrochemically modified palladiumâ€“antimony anode catalyst. Electrochimica Acta, 2010, 55, 2477-2481.	5.2	45
95	A comparison of nitric oxide decomposition on Pt(210) and Pt(410): An example where an increase in step density has produced a decrease in reactivity. Journal of Catalysis, 1985, 95, 244-248.	6.2	44
96	Development of diode junction nuclear battery using 63Ni. Journal of Radioanalytical and Nuclear Chemistry, 2009, 282, 601-604.	1.5	44
97	Kinetic Study of Electro-oxidation of Formic Acid on Spontaneously-Deposited Pt/Pd Nanoparticles. Journal of the Electrochemical Society, 2004, 151, A131.	2.9	43
98	Why do heats of adsorption of simple gases on platinum surfaces vary so little with surface structure?. Surface Science, 1998, 416, 141-151.	1.9	42
99	Ethylene adsorption and decomposition on platinum (210): chemistry of .pi.-bound ethylene. The Journal of Physical Chemistry, 1990, 94, 5300-5308.	2.9	40
100	A Bidirectional Electrostatic Microvalve With Microsecond Switching Performance. Journal of Microelectromechanical Systems, 2007, 16, 1461-1471.	2.5	40
101	Ethylene adsorption and decomposition on (1Ã—1) Pt(110): Chemistry of the coke formation site on platinum?. Surface Science, 1989, 222, 430-450.	1.9	39
102	The design, fabrication and characterization of a silicon microheater for an integrated MEMS gas preconcentrator. Journal of Micromechanics and Microengineering, 2008, 18, 125001.	2.6	39
103	Platinum (410), a face with unusual activity for the breaking of N-O and C-O bonds. Applications of Surface Science, 1984, 19, 145-160.	1.0	38
104	Hydrogen generation from hydrides in millimeter scale reactors for micro proton exchange membrane fuel cell applications. Journal of Power Sources, 2008, 185, 1334-1339.	7.8	38
105	Methanol oxidation on (2 Ã— 1)Pt(110): formaldehyde on a stepped surface. Surface Science, 1994, 318, 307-320.	1.9	37
106	An XPS study of nitric oxide, carbon monoxide and oxygen adsorption on Pt(210). Surface Science, 1986, 167, 261-270.	1.9	36
107	Methanol adsorption and decomposition on (1 $times; 1)Pt(110) and (2 $times; 1)Pt(110): Identification of the active site for carbon-oxygen bond scission during alcohol decomposition on platinum. Journal of Catalysis, 1990, 126, 519-531.	6.2	36
108	Coadsorption of ethylene and hydrogen on (2 Ã— 1) Pt(110): Observation of a weakly bound form of ethylene. Surface Science, 1990, 226, 51-60.	1.9	36

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109	CO ₂ Conversion to Formic Acid in a Three Compartment Cell with Sustainionâ„¢ Membranes. ECS Transactions, 2017, 77, 1425-1431.	0.5	36
110	Ab Initio Calculations of the Reactions of Hydrogen with Methanol:Â A Comparison of the Role of Bond Distortions and Pauli Repulsions on the Intrinsic Barriers for Chemical Reactions. Journal of Physical Chemistry A, 1998, 102, 9267-9277.	2.5	35
111	Adsorption and interaction of CO and NO on Pt(410). Surface Science, 1985, 155, 653-666.	1.9	33
112	The decomposition of triethylgallium on Si(100). Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1989, 7, 725.	1.6	33
113	A Nanoporous Silicon Membrane Electrode Assembly for On-Chip Micro Fuel Cell Applications. Journal of Microelectromechanical Systems, 2006, 15, 671-677.	2.5	33
114	Structure sensitivity of methanol decomposition on (1Ã—1) and (2Ã—1) Pt(110). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 1879-1884.	2.1	32
115	An Extension of the Marcus Equation for Atom Transfer Reactions. Journal of Physical Chemistry A, 1999, 103, 7047-7054.	2.5	32
116	A miniature direct formic acid fuel cell battery. Journal of Power Sources, 2009, 188, 118-121.	7.8	31
117	Sensitivity of nanotube chemical sensors at the onset of Pooleâ€“Frenkel conduction. Applied Physics Letters, 2010, 96, .	3.3	30
118	Semiclassical trajectory calculations of helium scattering from W(112). Surface Science, 1974, 46, 681-688.	1.9	29
119	An electron energyâ€loss spectroscopy study analysis of the surface species formed during ethylene hydrogenation on Pt(111). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 1789-1792.	2.1	28
120	Vibrational/HREELS, UV/HREELS, and temperature-programmed desorption of benzene and hydrogen on (2Ã—1)Pt(110). Surface Science, 2001, 486, 1-8.	1.9	28
121	Effects of Microreactor Geometry on Performance:â€‰ Differences between Posted Reactors and Channel Reactors. Industrial & Engineering Chemistry Research, 2005, 44, 4267-4271.	3.7	28
122	Porous silicon fuel cells for micro power generation. Journal of Micromechanics and Microengineering, 2007, 17, S243-S249.	2.6	28
123	Trimethylgallium Decomposition on Si(100). Journal of the Electrochemical Society, 1989, 136, 2640-2645.	2.9	27
124	CO on Pd(110): determination of the optimal adsorption site. Surface Science, 1996, 360, 31-42.	1.9	27
125	Chemical vapor etching of copper using oxygen and 1,1,1,5,5,5-hexafluoro-2,4-pentanedione. Thin Solid Films, 1999, 342, 221-229.	1.8	25
126	Kinetic Study of CO Tolerance during Electro-oxidation of Formic Acid on Spontaneously Deposited Pt/Pd and Pt/Ru Nanoparticles. Electrochemical and Solid-State Letters, 2004, 7, A148.	2.2	25

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127	Integrated micro-power source based on a micro-silicon fuel cell and a micro electromechanical system hydrogen generator. Journal of Power Sources, 2008, 185, 1305-1310.	7.8	24
128	Effects of Nafion loading in anode catalyst inks on the miniature direct formic acid fuel cell. Journal of Power Sources, 2010, 195, 6405-6410.	7.8	24
129	The fabrication of all-silicon micro gas chromatography columns using gold diffusion eutectic bonding. Journal of Micromechanics and Microengineering, 2010, 20, 015002.	2.6	23
130	A self-regulating hydrogen generator for micro fuel cells. Journal of Power Sources, 2008, 185, 445-450.	7.8	22
131	Methane formation during ethylene decomposition on (1.times.1)platinum(110). Journal of the American Chemical Society, 1990, 112, 8746-8750.	13.7	21
132	Ab Initio Calculations of the Transition State Energy and Position for the Reaction H + C2H5R â† ' HH + C2H4R, with R = H, CH3, NH2, CN, CF3, C5H6:Â Comparison to Marcus' Theory, Miller's Theory, and Bockris' Model. The Journal of Physical Chemistry, 1996, 100, 10945-10951.	2.9	21
133	The Role of Step Atom Density on the Binding and Reaction of Surface Species. Journal of Catalysis, 1998, 179, 163-170.	6.2	21
134	Methanol oxidation on (2Ã—1)Pt(110): does the Câ€"O or Oâ€"H bond break first?. Surface Science, 1998, 418, 479-483.	1.9	21
135	Hydrogen quick and clean. Nature, 2006, 442, 521-522.	27.8	21
136	Millimeter-Scale Fuel Cell With Onboard Fuel and Passive Control System. Journal of Microelectromechanical Systems, 2008, 17, 1388-1395.	2.5	21
137	The effect of surface protrusions on self-sustained thermal oscillations during hydrogen oxidation on a nickel foil. Journal of Catalysis, 1982, 73, 294-308.	6.2	20
138	Summary Abstract: Methylamine adsorption and decomposition on (5Ã—20) and (1Ã—1) Pt(100). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1987, 5, 1106-1108.	2.1	20
139	Evidence for Pyridinium Cation Formation during Coadsorption of Pyridine and Hydrogen on (2 Ã—) Tj ETQq1 1 0.784314 rgBT /Overlock	2.6	19
140	Synthesis of High-Temperature Titaniaâ^'Alumina Supportsâ€. Industrial & Engineering Chemistry Research, 2006, 45, 3815-3820.	3.7	19
141	Solâ^'Gel Synthesis of Thick Ta2O5Films. Chemistry of Materials, 2007, 19, 3155-3161.	6.7	19
142	Robust fabrication of selective and reversible polymer coated carbon nanotube-based gas sensors. Sensors and Actuators B: Chemical, 2010, 148, 315-322.	7.8	19
143	Design of a calorimeter capable of measuring heats of adsorption on singleâ€crystal surfaces. Review of Scientific Instruments, 1987, 58, 2141-2144.	1.3	18
144	Electrochemical Organophosphate Sensor Based on Oxime Chemistry. Electrochemical and Solid-State Letters, 2007, 10, J19.	2.2	18

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145	An enhanced microfluidic control system for improving power density of a hydride-based micro fuel cell. Journal of Power Sources, 2010, 195, 1866-1871.	7.8	18
146	Synthesis and characterization of a zinc metalâ€“organic framework with chiral nano-pores. CrystEngComm, 2012, 14, 5145.	2.6	18
147	Angular resolved flash desorption of hydrogen from recrystallized nickel. Surface Science, 1982, 116, 13-21.	1.9	17
148	Summary Abstract: Ethylene hydrogenation on Pt(111) and (5Ã—20)Pt(100) near atmospheric pressure. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 1137-1139.	2.1	17
149	Embedded atom calculations of the equilibrium shape of small platinum clusters. Journal of Catalysis, 1992, 136, 320-333.	6.2	17
150	A test of electronegativity equalization during fluorinated ethanol decomposition on Pt(331). Surface Science, 1998, 396, 1-15.	1.9	17
151	Surface energy approach and AFM verification of the (CF)ntreated surface effect and its correlation with adhesion reduction in microvalves. Journal of Micromechanics and Microengineering, 2009, 19, 085017.	2.6	17
152	The decomposition of trumethylgallium, triethylgallium and trimethylaluminum on Si(100). Vacuum, 1990, 41, 951-954.	3.5	16
153	Reactions of trimethylgallium multilayers on silicon (100). Surface Science, 1991, 258, 225-234.	1.9	16
154	Unlocking the Potential of CO2 Conversion to Fuels and Chemicals as an Economically Viable Route to CCR. Energy Procedia, 2014, 63, 7959-7962.	1.8	16
155	Angular resolved flash desorption of carbon monoxide from tungsten (100). Surface Science, 1983, 125, 699-708.	1.9	15
156	An embedded atom method study of the equilibrium shapes of small platinum and palladium clusters. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1993, 26, 310-312.	1.0	15
157	Conservation of Bond Order during Radical Substitution Reactions:â€‰ Implications for the BEBO Model. Journal of Physical Chemistry A, 1998, 102, 9957-9964.	2.5	15
158	Tunable-High Performance Sustainionâ„¢ Anion Exchange Membranes for Electrochemical Applications. ECS Transactions, 2017, 77, 1653-1656.	0.5	15
159	Directed desorption as a probe of the structure of the desorption site. Surface Science, 1982, 116, 22-32.	1.9	14
160	Formaldehyde oxidation on nickel oxide. Industrial & Engineering Chemistry Product Research and Development, 1986, 25, 563-568.	0.5	14
161	Summary Abstract: Development of singleâ€crystal adsorption calorimetry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1986, 4, 1431-1432.	2.1	14
162	The adsorption and decomposition of ethylene on Pt(210), (1Ã—1)Pt(110), and (2Ã—1)Pt(110). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 2610-2615.	2.1	14

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163	The surface chemistry of hexafluoroacetylacetone on clean and oxygen pre-covered Cu(210): a temperature-programmed desorption study. Surface Science, 1998, 409, 428-434.	1.9	14
164	Ab Initio Tests of the Marcus Equation for the Prediction of the Position of the Transition State for the Reaction H + C2H5R â†' CH4+ CH2R with R = H, CH3, NH2, CN, CF3, and C6H5. Journal of Physical Chemistry A, 1998, 102, 2332-2341.	2.5	14
165	Surface-mediated reaction pathways of 2,4-pentanedione on clean and oxygen covered Cu (210). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 3064-3067.	2.1	14
166	Calculated Vibrational Spectra for CHnOHmSpecies. Journal of Physical Chemistry A, 2000, 104, 34-44.	2.5	14
167	An onboard hydrogen generation method based on hydrides and water recovery for micro-fuel cells. Journal of Power Sources, 2009, 192, 556-561.	7.8	14
168	An investigation of the shape of small platinum clusters using the embedded atom method. Catalysis Letters, 1992, 15, 57-64.	2.6	13
169	Intrinsic Activation Barriers as a Guide to Mechanisms of Reactions in the Gas Phase and on Solid Surfaces. Journal of Catalysis, 1997, 165, 80-90.	6.2	13
170	UV/HREELS spectroscopy of benzene on Pt(110). Catalysis Letters, 1998, 56, 105-109.	2.6	13
171	Temperature-programmed desorption study of the etching of Ni(110) with 2,4-pentanedione. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 2581-2584.	2.1	13
172	Role of steps and kinks in catalytic activity. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 1705-1709.	2.1	13
173	An acetylcholinesterase-inspired biomimetic toxicity sensor. Chemosphere, 2013, 91, 1176-1182.	8.2	13
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