

# Hydrogen adsorption on metal surfaces

Surface Science

136, 59-81

DOI: [10.1016/0039-6028\(84\)90655-1](https://doi.org/10.1016/0039-6028(84)90655-1)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Electronic Damping of Atomic and Molecular Vibrations at Metal Surfaces. Physica Scripta, 1984, 29, 360-371.	1.2	163
2	Defect trapping of ion-implanted deuterium in copper. Journal of Applied Physics, 1984, 56, 3384-3393.	1.1	70
3	Adsorption of hydrogen and deuterium on Ru(001). Journal of Chemical Physics, 1984, 81, 6371-6378.	1.2	95
4	Trends in the density of states of hydrogen chemisorbed on the transition metal series. Solid State Communications, 1984, 52, 1025-1027.	0.9	4
5	Interaction of deuterium with lattice defects in nickel. Nuclear Instruments & Methods in Physics Research B, 1984, 4, 374-387.	0.6	31
6	Theory of chemisorption and heterogeneous catalysis. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1984, 127, 193-202.	0.9	10
7	Hydrogen chemisorption on Pd(100) studied with He scattering. Surface Science, 1984, 148, 139-147.	0.8	41
8	Normal unenhanced Raman spectra of CO and residual gas adsorbed on Ni(111). Surface Science, 1984, 147, 477-496.	0.8	11
9	Theory of hydrogen and helium impurities in metals. Physical Review B, 1984, 29, 5382-5397.	1.1	146
10	Surface states and the local electronic structure at surfaces. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1985, 51, 223-241.	0.6	59
11	Chemical decontamination of the tritium-sorbing surface of Type 316 stainless steel. Journal of Nuclear Materials, 1985, 136, 179-185.	1.3	19
12	Oxygen chemisorption and incorporation on transition metal surfaces. Surface Science Letters, 1985, 152-153, A141.	0.1	0
13	Absorbed states of hydrogen on the Ni(110) surface. Surface Science Letters, 1985, 151, L179-L184.	0.1	0
14	Classical surface rainbow scattering from a reconstructed W(001) surface. Surface Science Letters, 1985, 157, A384.	0.1	0
15	SCLO study of the electronic structure of chemisorbed hydrogen on Ni(100). Surface Science Letters, 1985, 154, A232.	0.1	0
16	A helium diffraction study of the p(2x2) phase of oxygen on Pd(100). Surface Science Letters, 1985, 150, L66-L70.	0.1	1
17	Interaction of hydrogen with defects in metals. Nuclear Instruments & Methods in Physics Research B, 1985, 7-8, 55-66.	0.6	78
18	Ion beam studies of hydrogen in metals. Materials Science and Engineering, 1985, 69, 397-409.	0.1	69

#	ARTICLE	IF	CITATIONS
19	Toward A Coherent Theory of Chemisorption. <i>Science</i> , 1985, 227, 876-881.	6.0	79
20	Adsorbate-Surface Interactions. <i>Springer Series in Solid-state Sciences</i> , 1985, , 94-103.	0.3	1
21	Role of elastic and electronic interactions in trapping of hydrogen by impurities in transition metals. <i>Physical Review B</i> , 1985, 31, 7612-7616.	1.1	17
22	Experimental Investigation of $^2\text{H}$ on W(100) Using High-Resolution Electron-Energy-Loss Spectroscopy: Bond Distances, Scattering Mechanisms, and Impact-Scattering Selection Rules. <i>Physical Review Letters</i> , 1985, 55, 2595-2598.	2.9	32
23	First-Principles Total-Energy Calculation for a Single Adatom on a Crystal. <i>Physical Review Letters</i> , 1985, 54, 2627-2630.	2.9	99
24	Excitation of Hydrogen Motion inside a Nickel Vacancy. <i>Physical Review Letters</i> , 1985, 55, 852-855.	2.9	29
25	Electronic structure of interstitial impurities near surfaces. <i>Physical Review B</i> , 1985, 31, 3398-3404.	1.1	11
26	Adsorption geometry of hydrogen on Fe(110). <i>Journal of Chemical Physics</i> , 1985, 83, 1959-1968.	1.2	115
27	Interactions of $\text{H}_2$ with the Ni(110) surface: EELS and LEED studies. <i>Surface Science</i> , 1985, 154, 417-434.	0.8	48
28	The adsorption of hydrogen on ruthenium (001): Adsorption states, dipole moments and kinetics of adsorption and desorption. <i>Surface Science</i> , 1985, 154, 465-488.	0.8	269
29	SCLO study of the electronic structure of chemisorbed hydrogen on Ni(100). <i>Surface Science</i> , 1985, 154, 614-622.	0.8	6
30	Adsorbed states of hydrogen on the Ni(110) surface. <i>Surface Science</i> , 1985, 151, L179-L184.	0.8	16
31	Indirect electronic interaction between hydrogen atoms adsorbed on metals. <i>Surface Science</i> , 1985, 159, 443-465.	0.8	57
32	Oxygen chemisorption and incorporation on transition metal surfaces. <i>Surface Science</i> , 1985, 152-153, 660-683.	0.8	71
33	Classical surface rainbow scattering from a reconstructed W(001) surface. <i>Surface Science</i> , 1985, 157, 245-260.	0.8	9
34	Hydrogen chemisorbed on nickel surfaces: A wave-mechanical treatment of proton motion. <i>Surface Science</i> , 1985, 157, 413-435.	0.8	86
35	The coverage-dependent ordering of chemisorbed hydrogen on the (110) surface of nickel. <i>Surface Science</i> , 1985, 164, 55-84.	0.8	78
36	UPS spectra of $\text{H}_2\text{O}$ , $\text{CH}_3\text{OH}$ and $\text{C}_5\text{H}_9\text{OH}$ adsorbed onto Cu(111)/Na and Na(cp). <i>Surface Science</i> , 1985, 160, 599-617.	0.8	38

#	ARTICLE	IF	CITATIONS
37	Normal unenhanced Raman spectra of CO adsorbed on Ni(100) at liquid-nitrogen temperature and at room temperature. Surface Science, 1985, 161, 462-478.	0.8	6
38	Immobilization mechanisms for ion-implanted deuterium in aluminum. Journal of Applied Physics, 1985, 58, 1841-1850.	1.1	55
39	The lattice response to embedding of helium impurities in BCC metals. Journal of Physics F: Metal Physics, 1985, 15, 2409-2420.	1.6	11
40	On an attempt to calculate the geometry of the (001) surface of bcc transition metals by a phenomenological approach. Surface Science, 1986, 165, L85-L89.	0.8	3
41	Theoretical examination of the trapping of ion-implanted hydrogen in metals. Physical Review B, 1986, 33, 854-863.	1.1	106
42	Ordered hydrogen overlayers on metal surfaces. Physical Review B, 1986, 33, 8136-8145.	1.1	45
43	Chemisorption and surface barrier structure. Surface Science, 1986, 176, 691-700.	0.8	11
44	Modification of Cu-H bonding near a Ru(0001) surface. Surface Science, 1986, 173, L582-L589.	0.8	20
45	Field adsorption and desorption of hydrogen on W(110) – an atom-probe study. Surface Science, 1986, 176, 249-260.	0.8	13
46	Vibrational motion of hydrogen atoms chemisorbed on Ni(100). Surface Science, 1986, 175, L759-L766.	0.8	55
47	TDS and EELS observations for CO, O <sub>2</sub> , and CH <sub>3</sub> OH bound to Ru(0001)/Cu. Surface Science, 1986, 172, 151-173.	0.8	40
48	A theoretical study of carbon chemisorption on nickel surfaces. Surface Science, 1986, 166, 539-553.	0.8	23
49	Extension of the Anderson-Newns model for hydrogen chemisorption on Ni(100), Ni(111) and W(110). Surface Science, 1986, 167, 437-450.	0.8	23
50	Gaseous Fission Product Retention by Solid Surfaces: Its Role in the Source Term Reduction. Nuclear Technology, 1986, 75, 326-331.	0.7	2
51	Vibrational motion of hydrogen atoms chemisorbed on Ni(100). Surface Science Letters, 1986, 175, L759-L766.	0.1	2
52	Modification of Cu-H bonding near a Ru(0001) surface. Surface Science Letters, 1986, 173, L582-L589.	0.1	0
53	On an attempt to calculate the geometry of the (001) surface of bcc transition metals by a phenomenological approach. Surface Science Letters, 1986, 165, L85-L89.	0.1	0
54	Macroscopic measurements and microscopic information in surface science. Vacuum, 1986, 36, 427-432.	1.6	2

#	ARTICLE	IF	CITATIONS
55	Classical trajectory treatment of diatomic molecules reacting with solid surfaces: a study of mass effects. <i>Chemical Physics</i> , 1986, 101, 45-54.	0.9	16
56	Chemisorption phenomena: Analytic modeling based on perturbation theory and bond-order conservation. <i>Surface Science Reports</i> , 1986, 6, 1-63.	3.8	308
57	A theoretical study of hydrogen surface coverage over Ni(100). <i>International Journal of Quantum Chemistry</i> , 1986, 29, 1351-1364.	1.0	9
58	Analysis of the reactivity of small cobalt clusters. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1986, 3, 205-209.	1.0	13
59	Surface vibrations and $(2\sqrt{3}-1)$ superstructures on fcc (110) metal surfaces. <i>Physical Review B</i> , 1986, 33, 6758-6770.	1.1	50
60	Ordering of hydrogen overlayers on the (110) surfaces of nickel and palladium. <i>Physical Review B</i> , 1986, 34, 8863-8869.	1.1	12
61	Self-consistent model of hydrogen chemisorption on ferromagnetic transition metals. <i>Physical Review B</i> , 1986, 34, 3750-3762.	1.1	9
62	Chemisorption on disordered binary alloys. <i>Physical Review B</i> , 1986, 33, 2263-2269.	1.1	19
63	Annealing behavior of hydrogen traps in Ne-implanted Ta. <i>Physical Review B</i> , 1986, 34, 8981-8984.	1.1	25
64	Quantum diffusion of hydrogen on metal surfaces. <i>Journal of Chemical Physics</i> , 1986, 84, 5181-5195.	1.2	40
65	Dissociative chemisorption dynamics of H <sub>2</sub> on Ni and Cu surfaces: Morphology and surface temperature effects. <i>Journal of Chemical Physics</i> , 1986, 85, 4161-4171.	1.2	92
66	Hyperthermal alkali-ion scattering from a metal surface: A theoretical study of the potential. <i>Physical Review B</i> , 1986, 34, 5030-5042.	1.1	51
67	Photoemission from H adsorbed on Ni(111) and Pd(111) surfaces. <i>Physical Review B</i> , 1986, 33, 736-746.	1.1	90
68	Trapping of ion-implanted deuterium in molybdenum. <i>Journal of Applied Physics</i> , 1986, 60, 3499-3507.	1.1	34
69	Trends in hydrogen heats of solution and vacancy trapping energies in transition metals. <i>Journal of Physics F: Metal Physics</i> , 1986, 16, 1161-1171.	1.6	101
70	Theoretical Analysis of Vibrational Modes of an OH Molecule Adsorbed on a Transition Metal Surface. <i>Physica Scripta</i> , 1987, 35, 181-184.	1.2	4
71	Adsorbate-induced reconstruction in the Ni(110)-H system. <i>Physical Review Letters</i> , 1987, 59, 1452-1455.	2.9	45
72	Vibrational spectroscopy of H on Pt(111): Evidence for universally soft parallel modes. <i>Physical Review B</i> , 1987, 36, 9797-9800.	1.1	66

#	ARTICLE	IF	CITATIONS
73	Bond weakening by hydrogen in transition metals. <i>Physical Review B</i> , 1987, 35, 1076-1081.	1.1	14
74	Angle-resolved photoemission study of the Ni(110)(12)-H reconstructed surface at 80 K. <i>Physical Review B</i> , 1987, 36, 922-928.	1.1	14
75	Inelastic electron-tunneling studies of the effect of hydrogen on the growth of MgO. <i>Physical Review B</i> , 1987, 36, 6651-6656.	1.1	6
76	Calculation of the barrier for oxygen incorporation into metal and metal-oxide surfaces. <i>Physical Review B</i> , 1987, 36, 4982-4989.	1.1	21
77	Hydrogen and deuterium decoration of In-vacancy complexes in nickel. <i>Physical Review B</i> , 1987, 35, 6059-6063.	1.1	21
78	Barrier to oxygen penetration on metal and oxide surfaces. <i>Physical Review B</i> , 1987, 35, 9403-9406.	1.1	25
79	The influence of adsorbate-adsorbate interactions on surface structure: The coadsorption of CO and H <sub>2</sub> on Rh(100). <i>Journal of Chemical Physics</i> , 1987, 86, 477-490.	1.2	67
80	A leed analysis of the (2 $\times$ 1)-H-Ni(110) structure. <i>Surface Science</i> , 1987, 186, 45-54.	0.8	82
81	Theory of surface segregation in transition-metal alloys. <i>Surface Science</i> , 1987, 188, L742-L748.	0.8	63
82	Theoretical aspects of surface reactions. <i>Surface Science</i> , 1987, 189-190, 91-105.	0.8	71
83	Surface segregation in transition-metal alloys and in bimetallic alloy clusters. <i>Surface Science</i> , 1987, 189-190, 1135-1142.	0.8	49
84	Change in density of states due to chemisorption on a substrate containing an impurity. <i>Surface Science</i> , 1987, 185, 343-351.	0.8	3
85	Adsorption position of deuterium on the Pd(100) surface determined with transmission channeling. <i>Surface Science</i> , 1987, 191, 288-301.	0.8	69
86	Investigation of a disordered adsorption system by electron reflection: H/Ru(001) at intermediate coverages. <i>Surface Science</i> , 1987, 192, 421-437.	0.8	56
87	Interatomic interactions in the effective-medium theory. <i>Physical Review B</i> , 1987, 35, 7423-7442.	1.1	868
88	Theory of Adsorbate-Induced Surface Relaxations: Hydrogen on Cu(110). <i>Physical Review Letters</i> , 1987, 59, 2764-2767.	2.9	67
89	Theory of hydrogen interaction with metals. <i>Journal of the Less Common Metals</i> , 1987, 130, 475-490.	0.9	155
90	Theory of H bonding and vibration on Pt(111). <i>Surface Science</i> , 1987, 182, 411-422.	0.8	103

#	ARTICLE	IF	CITATIONS
91	Effect of hydrogen adsorption on the charge exchange process in atom-surface collisions. <i>Surface Science</i> , 1987, 182, 245-256.	0.8	10
92	Dynamics of molecule-surface interactions. <i>Surface Science</i> , 1987, 179, L41-L48.	0.8	91
93	Theory of H bonding and vibration on Ru(0001). <i>Surface Science</i> , 1987, 179, 153-162.	0.8	42
94	Impurity effects on chemisorption. <i>Surface Science</i> , 1987, 180, 605-614.	0.8	5
95	Theoretical descriptions of atomic and molecular chemisorption on metals. <i>Progress in Surface Science</i> , 1987, 25, 191-210.	3.8	5
96	LEED structure analysis of the clean and (2 $\text{\AA}$ -1)H covered Pd(110) surface. <i>Journal of Chemical Physics</i> , 1987, 87, 6191-6198.	1.2	93
97	Multiple hydrogen occupancy of vacancies in Fe. <i>Journal of Applied Physics</i> , 1987, 61, 1788-1794.	1.1	104
98	Dynamics of molecule-surface interactions. <i>Surface Science Letters</i> , 1987, 179, L41-L48.	0.1	2
99	Theory of surface segregation in transition-metal alloys. <i>Surface Science Letters</i> , 1987, 188, L742-L748.	0.1	6
100	Surface-limited release of deuterium from iron. <i>Journal of Nuclear Materials</i> , 1987, 145-147, 313-316.	1.3	33
101	Neutron inelastic spectroscopy of hydrogen adsorbed at different pressures on a raney nickel catalyst(l). <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1987, 45, 281-290.	0.8	8
102	Hydrogen vibrations at transition metal surfaces. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1987, 44, 1-16.	0.8	23
103	Electronic structure and bonding in metal hydrides, studied with photoelectron spectroscopy. <i>European Physical Journal B</i> , 1987, 66, 441-458.	0.6	29
104	Calorimetric heat of adsorption measurements on palladium II. Influence of crystallite size and support on CO adsorption. <i>Journal of Catalysis</i> , 1987, 104, 17-30.	3.1	63
105	MINDO/SR calculations of nickel surface properties as a function of hydrogen coverage. <i>Theoretica Chimica Acta</i> , 1988, 74, 137-150.	0.9	13
106	Interaction of hydrogen with solid surfaces. <i>Surface Science Reports</i> , 1988, 9, 1-163.	3.8	1,051
107	Surface infrared spectroscopy. <i>Surface Science Reports</i> , 1988, 8, 211-357.	3.8	883
108	Theory of classical surface diffusion. <i>Progress in Surface Science</i> , 1988, 27, 161-237.	3.8	3

#	ARTICLE	IF	CITATIONS
109	Neutron scattering study of hydrogen adsorption on platinum catalysts. Journal of Catalysis, 1988, 113, 509-516.	3.1	29
110	Corrected effective medium method. II. N-body formulation. Journal of Chemical Physics, 1988, 88, 2596-2608.	1.2	72
111	Hydrogen adsorption on Al(100). Physical Review B, 1988, 37, 6164-6174.	1.1	78
112	Deuterium on the Ni(111) surface: An adsorption-position determination by transmission channeling. Surface Science, 1988, 205, 433-446.	0.8	45
113	Inelastic neutron scattering studies of the interaction of hydrogen with palladium black. Surface Science, 1988, 197, 67-80.	0.8	22
114	An ehmo study of the interaction of CO molecules absorbed on a Ni(111) surface with neighboring CO molecules, H atoms and O atoms. Surface Science, 1988, 195, 59-76.	0.8	14
115	Hydrogen adsorption on alkali modified aluminum. Surface Science, 1988, 194, 419-437.	0.8	46
116	Positronium desorption of positrons bound to alkali-metal-covered Ni surfaces. Physical Review B, 1988, 37, 2465-2474.	1.1	30
117	Quantum-mechanical scattering of H <sub>2</sub> from metal surfaces: Diffraction and dissociative adsorption. Journal of Chemical Physics, 1988, 88, 7197-7208.	1.2	77
118	Corrections to the effective-medium theory of embedding energies: Interstitial hydrogen in metals. Physical Review B, 1988, 38, 1077-1086.	1.1	5
119	Many-body effects in the interpretation of the electron energy loss spectrum for an adsorbate. Physica Scripta, 1988, 38, 878-884.	1.2	0
120	Calculating Barriers to Oxygen Penetration on Metal Oxides with the Effective-Medium Theory. Materials Research Society Symposia Proceedings, 1988, 141, 279.	0.1	0
121	Hydrogen-induced ordering of Cs atoms on the Pd(110)-(1 $\sqrt{2}$ )-Cs surface. Physical Review B, 1989, 40, 1308-1311.	1.1	4
122	Trapping of deuterium by helium bubbles and defects in ion-implanted tantalum. Journal of Applied Physics, 1989, 66, 1137-1148.	1.1	28
123	The role of hydrogen in altering the electrical properties of gold, titanium, and tungsten films. Journal of Applied Physics, 1989, 65, 3107-3117.	1.1	13
124	New Mechanism for Hydrogen Desorption from Covalent Surfaces: The Monohydride Phase on Si(100). Physical Review Letters, 1989, 62, 567-570.	2.9	344
125	Modification of the surface electronic structure of Cu(111) by monolayer Ni adsorption and the effects on H <sub>2</sub> chemisorption. Physical Review B, 1989, 39, 940-948.	1.1	50
126	Determination of the structure of hydrogen on a W(211) surface. Physical Review Letters, 1989, 63, 1408-1411.	2.9	29



#	ARTICLE	IF	CITATIONS
127	Physics with catalytic metal gate chemical sensors. Critical Reviews in Solid State and Materials Sciences, 1989, 15, 201-278.	6.8	165
128	Ion-beam studies of hydrogen-metal interactions. Journal of Nuclear Materials, 1989, 165, 9-64.	1.3	179
129	Surface science and catalysis. Journal of Molecular Catalysis, 1989, 54, 343-352.	1.2	6
130	Size dependence in hydrogen chemisorption on nickel(100). Journal of Molecular Catalysis, 1989, 54, 406-416.	1.2	0
131	Quantitative comparison of a tungsten and a tantalum cracker cell for epitaxy with arsine. Thin Solid Films, 1989, 174, 75-78.	0.8	0
132	Hydrogen adsorption and the adsorbate-induced Ni(110) reconstruction- an EELS study. Surface Science, 1989, 208, 113-135.	0.8	87
133	Diffusion anisotropy of oxygen and hydrogen adatoms on W(110). Surface Science, 1989, 218, L476-L482.	0.8	16
134	Effective-medium theory of chemical binding: Delimitations on its use and application to hydrogen in GaAs and Si. Surface Science, 1989, 214, 1-16.	0.8	2
135	Hydrogen adsorption on platinum single-crystal surfaces. Surface Science, 1989, 220, 18-28.	0.8	160
136	Time-of-flight scattering and recoiling spectrometry. III. The structure of hydrogen on the W(211) surface. Physical Review B, 1989, 40, 10163-10180.	1.1	31
137	Multiple deuterium occupancy of vacancies in Pd and related metals. Physical Review B, 1989, 40, 1990-1992.	1.1	92
138	Model of metallic cohesion: The embedded-atom method. Physical Review B, 1989, 39, 7441-7452.	1.1	285
139	Effective medium potentials for molecule-surface interactions: H <sub>2</sub> on Cu and Ni surfaces. Journal of Chemical Physics, 1989, 90, 7461-7471.	1.2	106
140	Diffusion of hydrogen to a crack tip. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1989, 59, 161-170.	0.8	9
141	Unified theory of effects of segregated interstitials on grain boundary cohesion. Materials Science and Technology, 1990, 6, 806-810.	0.8	6
142	Chemisorption on metal surfaces. Reports on Progress in Physics, 1990, 53, 1253-1295.	8.1	313
144	Interaction of hydrogen isotopes with metals: Deuterium trapped at lattice defects in palladium. Journal of Fusion Energy, 1990, 9, 257-261.	0.5	20
145	Angle and speed distributions of hydrogen desorbing thermally from metal surfaces. Applied Physics A: Solids and Surfaces, 1990, 50, 551-564.	1.4	7

#	ARTICLE	IF	CITATIONS
146	The dynamics of molecule-surface interaction. Computer Physics Reports, 1990, 12, 383-450.	2.3	57
147	Finite cluster studies of electron correlation effects. Phase Transitions, 1990, 24-26, 529-575.	0.6	1
148	Theoretical determination of work functions and adsorption energies of atoms on metal surfaces from small-cluster calculations: A local-spin-density approach. Physical Review B, 1990, 42, 5046-5056.	1.1	46
149	Hydrogen desorption from the monohydride phase on Si(100). Journal of Chemical Physics, 1990, 92, 5700-5711.	1.2	364
150	Hydrogen adsorption on the $\sqrt{2}\times\sqrt{2}$ -N-covered W(100) surface: An infrared study of the W-H stretch. Physical Review B, 1990, 41, 3406-3425.	1.1	7
151	Chapter 1 Surface Spectroscopic Techniques. Studies in Surface Science and Catalysis, 1990, 57, A1-A78.	1.5	1
152	Strengthening of grain boundaries by segregated interstitials in iron. Materials Science and Technology, 1990, 6, 121-123.	0.8	29
153	Molecular beam studies of H <sub>2</sub> and D <sub>2</sub> dissociative chemisorption on Pt(111). Journal of Chemical Physics, 1990, 93, 5240-5246.	1.2	170
154	The influence of potential energy surface topologies on the dissociation of H <sub>2</sub> . Journal of Chemical Physics, 1990, 93, 2859-2870.	1.2	171
155	Surface segregation effect for transition-metal alloys in the coherent-potential approximation: general considerations and calculations for Cu-Ni alloys. Journal of Physics Condensed Matter, 1990, 2, 869-885.	0.7	14
156	Lattice vacancies and electronic properties of zirconium hydrides. Journal of the Less Common Metals, 1990, 167, 1-9.	0.9	1
157	Successive population of subsurface and surface sites upon hydrogen chemisorption on 1 $\times$ 2-reconstructed Pt(110). Surface Science, 1990, 231, L183-L188.	0.8	31
158	Indirect interactions of H/Ni(111) and H/Pd(100) using embedded atom method. Surface Science, 1990, 227, 114-122.	0.8	34
159	Hydrogen adsorption on iridium single-crystal surfaces. Surface Science, 1990, 226, 221-225.	0.8	44
160	Electron stimulated desorption in the Anderson model. Surface Science, 1990, 226, 286-292.	0.8	15
161	Vibrational properties of hydrogen chemisorbed on W(001) and Mo(001). Surface Science, 1990, 234, 412-420.	0.8	11
162	Electronic theory of surface segregation for dilute transition metal alloys: predictions based on rigid-band-like approach. Surface Science, 1991, 247, 215-221.	0.8	25
163	Theory of surface stress and surface reconstruction. Surface Science, 1991, 242, 215-221.	0.8	164

#	ARTICLE	IF	CITATIONS
164	Electron-stimulated disordering in adsorbed layers. <i>Surface Science</i> , 1991, 251-252, 846-850.	0.8	12
165	Change in the work function of zirconium by oxidation at high temperatures and low oxygen pressures. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1991, 87, 1399.	1.7	4
166	Up-hill diffusion and hydrogen-hydrogen interaction in palladium-platinum alloys. <i>Journal of the Less Common Metals</i> , 1991, 167, 305-317.	0.9	8
167	Surface segregation of Pt-Ni alloys. <i>Solid State Communications</i> , 1991, 78, 429-432.	0.9	12
168	Segregation behaviour in Pt <sub>x</sub> Ni <sub>1-x</sub> (110) and (111) surfaces. <i>Solid State Communications</i> , 1991, 79, 759-761.	0.9	4
169	Transition metal bonding functions and their application in adsorptions and catalytic reactions. <i>Journal of Molecular Catalysis</i> , 1991, 64, 53-84.	1.2	6
170	Hydrogen chemisorption on contaminated composite catalysts. <i>Applied Surface Science</i> , 1991, 48-49, 139-142.	3.1	11
171	Calculation of the force-dipole tensor for hydrogen in palladium and platinum. <i>European Physical Journal B</i> , 1991, 83, 213-216.	0.6	3
172	Electronic factors in catalysis. <i>Progress in Surface Science</i> , 1991, 38, 103-144.	3.8	143
173	Adsorption of O and CO on the Ag <sub>1-x</sub> Pd Alloy Surface. <i>Physica Status Solidi (B): Basic Research</i> , 1991, 164, K19.	0.7	1
174	Vibrational and rotational effects in the dissociative adsorption of H <sub>2</sub> . <i>Journal of Physics Condensed Matter</i> , 1991, 3, S43-S54.	0.7	32
175	Nucleation and growth of a H-induced reconstruction of Ni(110). <i>Physical Review B</i> , 1991, 44, 13156-13159.	1.1	92
176	First-principles calculations of adatom binding and interaction on Rh(001). <i>Physical Review B</i> , 1991, 43, 9452-9458.	1.1	43
177	Energy shifts and broadening of atomic electron levels near impurity-covered metal surfaces. <i>Physical Review B</i> , 1991, 44, 13681-13688.	1.1	64
178	A simple model for the adsorption of a monovalent atom on a metal surface and the field desorption. <i>Journal of Physics Condensed Matter</i> , 1992, 4, 2239-2246.	0.7	1
179	Vibrational spectra of atomic H and D on Cu(110): Evidence for H quantum delocalization. <i>Physical Review Letters</i> , 1992, 68, 90-93.	2.9	60
180	Angular and vibrational effects in the sticking and scattering of H <sub>2</sub> . <i>Journal of Chemical Physics</i> , 1992, 97, 5182-5192.	1.2	43
181	Model of diffusion on deformable lattices. III. Adatom-interaction effects. <i>Physical Review B</i> , 1992, 46, 846-854.	1.1	34

#	ARTICLE	IF	CITATIONS
182	Hydrogen adsorption site on the Ni{110}-p(1 Å <sup>-2</sup> )-H surface from time-of-flight scattering and recoiling spectrometry (TOF-SARS). Surface Science, 1992, 271, 68-80.	0.8	20
183	Desorption induced by electronic transitions studied with a time-dependent quantum mechanical method. Surface Science, 1992, 269-270, 175-179.	0.8	2
184	Vibrational excitation in recombinative desorption of hydrogen on metal surfaces: Eley-Rideal mechanism. Surface Science, 1992, 269-270, 195-200.	0.8	39
185	Multiple-band theory of dynamics for interacting adsorbates coupled to phonons. II. Single adsorbate dynamics. Journal of Chemical Physics, 1992, 97, 6975-6990.	1.2	13
186	Theory of classical surface diffusion. Progress in Surface Science, 1992, 39, 227-323.	3.8	146
187	Surface segregation in small bimetallic particles. Solid State Communications, 1992, 84, 663-667.	0.9	5
188	Understanding the trends in the hydrodesulfurization activity of the transition metal sulfides. Catalysis Letters, 1992, 13, 1-8.	1.4	143
189	Surface properties and activation. Topics in Applied Physics, 1992, , 15-95.	0.4	34
190	Hydrogen decoration of defects produced by Na implantation into polycrystalline Cr and Ta. Nuclear Instruments & Methods in Physics Research B, 1992, 66, 209-214.	0.6	5
191	Enhanced diffraction of vibrationally excited molecules from surfaces. Chemical Physics Letters, 1992, 191, 396-400.	1.2	26
192	How steeply curved reaction paths influence dissociation and vibrational excitation processes. Journal of Electron Spectroscopy and Related Phenomena, 1993, 64-65, 571-576.	0.8	7
193	Vibrational modes and line widths for hydrogen adsorbed on Ru(100). Journal of Electron Spectroscopy and Related Phenomena, 1993, 64-65, 591-598.	0.8	14
194	A model study of non-adiabatic effects in H <sub>2</sub> fragmentation. Journal of Electron Spectroscopy and Related Phenomena, 1993, 64-65, 633-639.	0.8	2
195	Optical phonons and delocalization in hydrogen overlayers: lattice dynamics without displacement coordinates. Surface Science Letters, 1993, 291, A568.	0.1	3
196	Surface segregation and catalytic properties of Pd <sub>1-x</sub> Ru <sub>x</sub> alloys. Surface Science Letters, 1993, 289, A509.	0.1	4
197	Electronic theory of surface segregation in the coherent potential approximation. Surface Science Letters, 1993, 280, L285-L290.	0.1	0
198	Dissociative adsorption of H <sub>2</sub> on Ni(111). Journal of Chemical Physics, 1993, 98, 5039-5049.	1.2	92
199	Calculation of Reaction Rate and Selectivity of Dehydrolinalool Hydrogenation over Pd-Ru Alloy Membrane Catalysts. Mendeleev Communications, 1993, 3, 62-64.	0.6	6

#	ARTICLE	IF	CITATIONS
200	A He-scattering study of the hydrogen-induced "œstreaky phase" of Ni(100). Surface Science, 1993, 297, 162-166.	0.8	9
201	Surface segregation and catalytic properties of Pd-Ru alloys. Surface Science, 1993, 289, 357-362.	0.8	11
202	Electronic theory of surface segregation in the coherent potential approximation. Surface Science, 1993, 280, L285-L290.	0.8	10
203	The concept of linear relaxation: basic considerations for the simple quadratic lattice. Surface Science, 1993, 280, 430-440.	0.8	2
204	Chemisorption and vibration of hydrogen on Cu(111). Surface Science, 1993, 285, 27-30.	0.8	43
205	The interaction of atomic hydrogen with Cu(110). Surface Science, 1993, 291, 29-38.	0.8	34
206	Optical phonons and delocalization in hydrogen overlayers: lattice dynamics without displacement coordinates. Surface Science, 1993, 291, 207-214.	0.8	14
207	Auger electron, electron energy loss, secondary electron emission and secondary ion mass spectroscopic studies on the oxidation of hafnium at room temperature. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 3611.	1.7	5
208	A theoretical molecular orbital approach to the adsorption and absorption of atomic hydrogen on Ni(111). Journal of Alloys and Compounds, 1993, 191, 173-178.	2.8	16
209	The embedded-atom method: a review of theory and applications. Materials Science and Engineering Reports, 1993, 9, 251-310.	5.8	1,343
210	Atomistic States of Hydrogen in Metals. Springer Series in Materials Science, 1993, , 120-206.	0.4	0
211	Theory of adsorbate-induced surface reconstruction on W(100). Physical Review B, 1993, 47, 2333-2343.	1.1	5
212	Interaction of hydrogen with the Ag(110) surface. Physical Review B, 1993, 48, 14436-14446.	1.1	39
213	Ab initio calculations of hydrogen adsorption on (100) surfaces of palladium and rhodium. Physical Review B, 1994, 50, 2548-2560.	1.1	74
214	Conduction-electron effect in quantum tunneling diffusion of hydrogen on metal surfaces. Physical Review B, 1994, 50, 11279-11282.	1.1	9
215	Hydrogen Covered W(110) Surface: A Hydrogen Liquid with a Propensity for One-Dimensional Order. Physical Review Letters, 1994, 73, 854-857.	2.9	43
216	Hydrogen Chemisorption on Supported Semiconductor Films. Physica Status Solidi (B): Basic Research, 1994, 185, 373-378.	0.7	1
217	Influence of changes in the total surface area and in the crystalline surface composition of Pt electrodes on their electrocatalytic properties with respect to the electro-oxidation of hydrazine. Electrochimica Acta, 1994, 39, 1909-1914.	2.6	25

#	ARTICLE	IF	CITATIONS
218	Impurity effect on chemisorption properties of composite catalysts. Solid State Communications, 1994, 91, 691-694.	0.9	1
219	Theory of adsorption and adsorbate-induced reconstruction. Surface Science, 1994, 299-300, 690-705.	0.8	38
220	Chemisorption of Moisture-Induced Hydrogen and the Embrittlement Effects in Transition Metal Aluminides. Materials Research Society Symposia Proceedings, 1994, 364, 1177.	0.1	0
221	Steering effects in non-activated adsorption. Chemical Physics Letters, 1995, 245, 311-318.	1.2	106
222	Electronic theory of surface segregation in binary transition metal alloys. Progress in Surface Science, 1995, 49, 227-264.	3.8	12
223	The dynamics of desorption induced by atomic hydrogen: HD/Cu(111). Zeitschrift für Physik B-Condensed Matter, 1995, 99, 571-576.	1.1	13
224	The dynamics of desorption induced by atomic hydrogen: HD/Cu(111). Zeitschrift für Physik B-Condensed Matter, 1995, 99, 571-576.	1.1	1
225	Surface segregation of PdRh, PdNi and PdCo alloys. Journal of Electron Spectroscopy and Related Phenomena, 1995, 71, 79-86.	0.8	14
226	Electron-stimulated mobility of adsorbed particles. Nuclear Instruments & Methods in Physics Research B, 1995, 101, 207-215.	0.6	23
227	Coverage dependence of quantum tunneling diffusion of hydrogen and deuterium on Ni(111). Physical Review B, 1995, 51, 4418-4425.	1.1	22
228	Surface diffusion of H on Ni(100): Interpretation of the transition temperature. Physical Review B, 1995, 51, 9985-10002.	1.1	67
229	Interaction of hydrogen with the Ag(111) surface. Physical Review B, 1995, 51, 7250-7261.	1.1	78
230	Chapter II Theory of surface structure and bonding. Cohesion and Structure, 1995, 4, 63-119.	0.0	2
231	Effects of oxidation and hydroxidation on the H <sub>2</sub> reactivities with Ni, Co, NiCo and LaNi <sub>2.5</sub> Co <sub>2.5</sub> . Journal of Alloys and Compounds, 1995, 231, 684-688.	2.8	15
232	Hydrogen chemisorption at the surface and interface of Pd/W(110) and Pd/Ta(110). Surface Science, 1995, 331-333, 736-740.	0.8	2
233	Ab initio chemisorption studies of H on Fe(110). Surface Science, 1995, 330, 255-264.	0.8	24
234	STM investigation of the coadsorption and reaction of oxygen and hydrogen on Ni(110). Surface Science, 1995, 344, 98-110.	0.8	42
235	Electronic factors determining the reactivity of metal surfaces. Surface Science, 1995, 343, 211-220.	0.8	2,087

#	ARTICLE	IF	CITATIONS
236	Chapter 1 Structure and properties of metals and alloys. Studies in Surface Science and Catalysis, 1995, 95, 7-72.	1.5	3
237	Pd deposits on Ni(111): a theoretical study. Surface Science, 1996, 350, 301-314.	0.8	23
238	A microscopic theory of desorption induced by electronic transitions. Surface Science, 1996, 363, 214-222.	0.8	9
239	Coverage and structure of deuterium on Cu(111). Surface Science, 1996, 357-358, 717-720.	0.8	33
240	General potential-energy function for H/Ni and dynamics calculations of surface diffusion, bulk diffusion, subsurface-to-surface transport, and absorption. Physical Review B, 1996, 53, 11222-11241.	1.1	39
241	Chemisorption of H on Pd(111): An ab initio approach with ultrasoft pseudopotentials. Physical Review B, 1996, 54, 2157-2166.	1.1	135
242	Density-functional periodic study of the adsorption of hydrogen on a palladium (111) surface. Physical Review B, 1996, 53, 8015-8027.	1.1	120
243	The adsorption entropy of H on W(110). Surface Science, 1996, 367, L91-L94.	0.8	3
244	Reconstruction of Clean and Adsorbate-Covered Metal Surfaces. Chemical Reviews, 1996, 96, 1291-1306.	23.0	131
245	Reaction of gas phase atomic oxygen with chemisorbed hydrogen atoms on a tungsten surface. Chemical Physics Letters, 1996, 258, 239-247.	1.2	8
246	Theory of chemisorption and reactions on metal surfaces. Surface Science Reports, 1996, 24, 55-124.	3.8	296
247	First-principles study of the H-induced reconstruction of W(110). Physical Review B, 1996, 53, 13734-13739.	1.1	22
248	Substrate and hydrogen phonons of the ordered $(2\sqrt{3}\times 1)$ and $(2\sqrt{3}\times 2)$ phase and of the anomalous $(1\sqrt{3}\times 1)$ phase of hydrogen on W(110). Physical Review B, 1996, 53, 7479-7491.	1.1	53
249	Guided ion beam studies of the reactions of Fe+n ( $n=2\text{--}15$ ) with D <sub>2</sub> : Cluster deuteride bond energies as a chemical probe of cluster structures. Journal of Chemical Physics, 1996, 104, 3976-3988.	1.2	46
250	Quantum delocalization of H on Pd(110): A vibrational study. Physical Review B, 1996, 53, 13767-13771.	1.1	25
251	EELS study of the clean and hydrogen-covered Mo(110) surface. Physical Review B, 1997, 55, 10895-10904.	1.1	54
252	Diffusion of Hydrogen on Ni(111) over a Wide Range of Temperature: Exploring Quantum Diffusion on Metals. Physical Review Letters, 1997, 79, 3696-3699.	2.9	94
253	Atoms embedded in an electron gas: the generalized gradient approximation. Physica Scripta, 1997, 55, 499-506.	1.2	9

#	ARTICLE	IF	CITATIONS
254	Parametrization of the screening charge density induced by a proton in a metal. Radiation Effects and Defects in Solids, 1997, 140, 133-140.	0.4	4
255	Compound formation and hydrogen activity at sulfided catalysts: A combined surface science and quantum chemical approach. Studies in Surface Science and Catalysis, 1997, , 303-306.	1.5	1
256	Dynamics of Gas-Surface Interactions: Reaction of Atomic Oxygen with Chemisorbed Hydrogen on Tungsten. Journal of Physical Chemistry A, 1997, 101, 4523-4534.	1.1	14
258	Electronic Structure and Magnetism of Ordered Palladium-Manganese and Palladium-Chromium Alloys. Chemistry of Materials, 1997, 9, 3072-3082.	3.2	12
259	H <sub>2</sub> dissociative adsorption on Pd(111). Physical Review B, 1997, 56, 15396-15403.	1.1	151
260	Hydrogen on W(110): an adsorption structure revisited. Surface Science, 1997, 382, 288-299.	0.8	66
261	Theoretical study of nitrogen adsorption on Zr(0001) surface. Surface Science, 1997, 387, 300-311.	0.8	14
262	A Theoretical Study of Butadiene Adsorption on the Pd-Ni Bimetallic System. Journal of Catalysis, 1997, 167, 33-42.	3.1	15
263	Muonium desorption to vacuum from hot iridium surface. , 1997, 106, 283-289.		1
264	Dissociative adsorption of H <sub>2</sub> on the Pd(111) surface. Journal of Molecular Catalysis A, 1997, 119, 69-76.	4.8	43
265	Electrocatalysis for hydrogen electrode reactions in the light of fermi dynamics and structural bonding FACTORS. I. individual electrocatalytic properties of transition metals. International Journal of Hydrogen Energy, 1998, 23, 1121-1156.	3.8	65
266	Absolute deuterium coverage determination for the Mo <sub>0.75</sub> Re <sub>0.25</sub> (100), (110), and (111) surfaces. Surface Science, 1998, 417, 1-8.	0.8	4
267	Vibrationally Excited OD Radicals from the Reaction of Oxygen Atoms with Chemisorbed Deuterium on Tungsten. Journal of Physical Chemistry A, 1998, 102, 2372-2380.	1.1	12
268	Comparing quantum and classical dynamics: H <sub>2</sub> dissociation on W(100). Journal of Chemical Physics, 1998, 108, 4614-4627.	1.2	36
269	Azimuthal dependence of classical over-barrier hopping diffusion of hydrogen on a vicinal Ni(111) surface. Physical Review B, 1998, 58, R7552-R7555.	1.1	5
270	Quantum coherence in surface-tip transfer of adatoms in AFM/STM. Physical Review B, 1998, 57, 4720-4729.	1.1	7
271	Ion neutralization on composite catalysts. Physical Review B, 1998, 58, 10953-10958.	1.1	0
272	Indication of a size-dependent transition from molecular to dissociative chemisorption on clusters. Physical Review B, 1999, 60, 15639-15642.	1.1	32



#	ARTICLE	IF	CITATIONS
273	Density functional periodic study of CO adsorption on the Pd <sub>3</sub> Mn(100) alloy surface: Comparison with Pd(100). <i>Physical Review B</i> , 1999, 59, 5142-5153.	1.1	44
274	Dissociative chemisorption of hydrogen on Ir(111): Evidence for terminal site adsorption. <i>Physical Review B</i> , 1999, 60, R14016-R14018.	1.1	64
275	Hydrogen affinity at Cr/±â€“Cr <sub>2</sub> O <sub>3</sub> metal/oxide interfaces studied by the <sup>1</sup> H(15N, <sup>1</sup> ± <sup>1</sup> ) <sup>12</sup> C nuclear resonance reaction. <i>Vacuum</i> , 1999, 52, 291-294.	1.6	4
276	Concentrationâ€“distance profiles resulting from the hydrogen-charging of metal lattices under high fugacity conditions. <i>Acta Materialia</i> , 1999, 47, 2225-2242.	3.8	4
277	Hydrogen on the Fe(110) surface and near bulk bcc Fe vacancies. <i>Surface Science</i> , 1999, 421, 1-16.	0.8	72
278	Vibrational spectra of hydrogen on the Rh(111) surface. <i>Surface Science</i> , 1999, 441, 507-514.	0.8	33
279	Comparison of hydrogen gasâ€“, atomâ€“ and ionâ€“metal interactions. <i>Journal of Nuclear Materials</i> , 2000, 277, 130-142.	1.3	36
280	Covalent interaction of H with the d electrons at the (111) surface of Ag. <i>Physical Review B</i> , 2000, 62, 1651-1654.	1.1	14
281	Hydrogen on the Fe(111,12) surface and hydrogen pairs near bcc mixed (a/2)[111,1] dislocation: electronic structure. <i>Surface Science</i> , 2000, 466, 97-110.	0.8	16
282	The adsorption of hydrogen on Ru(1 1 2 1). <i>Surface Science</i> , 2001, 482-485, 21-25.	0.8	11
283	Behavior of H atom in adsorption states on metal surfaces â€“ localization and delocalization. <i>Surface Science</i> , 2001, 493, 271-277.	0.8	36
284	Implication of palladium geometric and electronic structures to hydrogen activation on bulk surfaces and clusters. <i>Journal of Molecular Catalysis A</i> , 2001, 173, 19-59.	4.8	71
285	The thermodynamics aspects of hydrogen induced embrittlement. <i>Engineering Fracture Mechanics</i> , 2001, 68, 647-669.	2.0	44
286	Liquid-Phase Citral Hydrogenation over SiO <sub>2</sub> -Supported Group VIII Metals. <i>Journal of Catalysis</i> , 2001, 199, 73-84.	3.1	163
287	Quantum mechanical behavior of an H atom on Cu(111) and Pt(111). <i>Journal of Applied Physics</i> , 2002, 91, 1855-1859.	1.1	20
288	Correlations between the Heat of Adsorption and the Position of the Center of the D-Band:â€“ Differences between Computation and Experiment. <i>Journal of Physical Chemistry A</i> , 2002, 106, 3084-3091.	1.1	45
289	Guided ion beam studies of the reactions of Vn <sup>+</sup> (n=2â€“13) with D <sub>2</sub> : Clusterâ€“deuteride bond energies as a chemical probe of cluster electronic structure. <i>Journal of Chemical Physics</i> , 2002, 116, 936-945.	1.2	28
290	Formation of Csâ€“H surface compounds. <i>Surface Science</i> , 2002, 519, 101-114.	0.8	4

#	ARTICLE	IF	CITATIONS
291	On the Energetics of nh3 Adsorption and Decomposition on nb(100) Surface : a ubi-qep Study. Reaction Kinetics and Catalysis Letters, 2002, 76, 43-51.	0.6	4
292	Hydrogen recombination on a mixed adsorption layer at saturation on a metal surface: Hât'(D+H)sat+Ni(). Surface Science, 2003, 529, 11-22.	0.8	11
293	The active site for dissociative adsorption of H2: Was Langmuir right?. Surface Science, 2003, 540, 1-3.	0.8	9
294	Anomalous Behavior of Atomic Hydrogen Interacting with Gold Clusters. Journal of the American Chemical Society, 2003, 125, 14205-14209.	6.6	90
295	A Theoretical Study of a Hâ€H Pair on the BCC Fe(100) Surface. Surface Review and Letters, 2003, 10, 661-668.	0.5	3
296	Effects of adsorbates on charge exchange in Li+ ion scattering from Ni(100). Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1317-1321.	0.9	11
297	A first-principles potential energy surface and vibrational states for hydrogen on Cu(100). Journal of Chemical Physics, 2004, 121, 7434-7439.	1.2	15
298	A novel approach for CO-free H production via catalytic decomposition of hydrazine. International Journal of Hydrogen Energy, 2005, 30, 1081-1089.	3.8	103
299	Potentialâ€pH diagrams for hydroxyl and hydrogen adsorbed on a copper surface. Electrochimica Acta, 2005, 51, 408-417.	2.6	61
300	Quantum delocalization of hydrogen on metal surfaces. Surface Science Reports, 2005, 57, 113-156.	3.8	40
301	Atomistic States of Hydrogen in Metals. Springer Series in Materials Science, 2005, , 147-302.	0.4	0
302	Energetics of hydrogen coverage on group VIII transition metal surfaces and a kinetic model for adsorption/desorption. Journal of Chemical Physics, 2005, 122, 014704.	1.2	38
303	3.4.1 Adsorbate properties of hydrogen on solid surfaces. , 0, , 1-130.		0
304	Molecular Surface Chemistry: Reactions of Gas-Phase Metal Clusters. Advances in Chemical Physics, 2007, , 211-261.	0.3	69
305	A New Electrogenated Chemiluminescence Peak of Lucigenin in the Hydrogen-Evolution Region Induced by Platinum Nanoparticles. Journal of Physical Chemistry C, 2007, 111, 606-611.	1.5	14
306	A theoretical study of hydrogen adsorption and diffusion on a W(110) surface. Surface Science, 2007, 601, 3003-3011.	0.8	45
307	Nature of Hydrogen Interaction and Saturation on Small Titanium Clusters. Journal of Physical Chemistry A, 2008, 112, 2846-2854.	1.1	28
308	Preparation and thermal desorption properties of dc sputtered zirconium-hydrogen-helium thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 1511-1518.	0.9	2

#	ARTICLE	IF	CITATIONS
310	Ab-initio calculations of the hydrogen-uranium system: Surface phenomena, absorption, transport and trapping. Acta Materialia, 2009, 57, 4707-4715.	3.8	43
311	Hydrogen multicenter bonds and reversible hydrogen storage. Journal of Chemical Physics, 2009, 130, 114301.	1.2	23
312	Hydrogen adsorption on the surface of metals. , 2012, , 3-26.		3
313	Water Chemistry on Model Ceria and Pt/Ceria Catalysts. Journal of Physical Chemistry C, 2012, 116, 12103-12113.	1.5	108
314	Hydrogen on metal surfaces: Forever young. Surface Science, 2012, 606, 690-691.	0.8	28
315	Optimal Electron Density Mechanism for Hydrogen on the Surface and at a Vacancy in Tungsten. Chinese Physics Letters, 2012, 29, 077101.	1.3	7
317	Surface free energy and surface stress as elastic components of the surface tension of condensed matter. Protection of Metals and Physical Chemistry of Surfaces, 2012, 48, 27-41.	0.3	2
318	An atomic study of hydrogen effect on the early stage oxidation of transition metal surfaces. International Journal of Hydrogen Energy, 2013, 38, 1644-1656.	3.8	29
319	Decomposition kinetics of metal hydrides: Experiments and modeling. Journal of Alloys and Compounds, 2013, 580, S243-S246.	2.8	22
320	Informatics guided discovery of surface structure-chemistry relationships in catalytic nanoparticles. Journal of Chemical Physics, 2014, 140, 094705.	1.2	34
321	Ab initio study of H-vacancy interactions in fcc metals: Implications for the formation of superabundant vacancies. Physical Review B, 2014, 89, .	1.1	104
322	Dynamics of H <sub>2</sub> Eley-Rideal abstraction from W(110): Sensitivity to the representation of the molecule-surface potential. Journal of Chemical Physics, 2014, 141, 024701.	1.2	15
323	Effects of carbon nanotubes on the dehydrogenation behavior of magnesium hydride at relatively low temperatures. Journal of Materials Chemistry A, 2014, 2, 16369-16372.	5.2	19
324	A review of modelling and simulation of hydrogen behaviour in tungsten at different scales. Nuclear Fusion, 2014, 54, 086001.	1.6	159
325	First-principles thermodynamic description of hydrogen electroadsorption on the Pt(111) surface. Surface Science, 2014, 625, 104-111.	0.8	41
326	Hydrogen Spillover between Single Gold Nanorods and Metal Oxide Supports: A Surface Plasmon Spectroscopy Study. ACS Nano, 2015, 9, 7846-7856.	7.3	65
327	Effect of the band structure of the electrodes on the non-adiabatic electron tunneling through a one-level redox molecule. Chemical Physics, 2015, 459, 155-171.	0.9	3
331	Modelling of surface segregation for palladium alloys in vacuum and gas environments. International Journal of Hydrogen Energy, 2018, 43, 2212-2223.	3.8	20

#	ARTICLE	IF	CITATIONS
332	Hydrogen gettering of titanium palladium/palladium nanocomposite films synthesized by cosputtering and vacuum-annealing. International Journal of Hydrogen Energy, 2018, 43, 19990-19997.	3.8	5
333	Interactions of incident H atoms with metal surfaces. Surface Science Reports, 2018, 73, 153-189.	3.8	21
334	Palladium, Iridium, and Rhodium Supported Catalysts: Predictive H <sub>2</sub> Chemisorption by Statistical Cuboctahedron Clusters Model. Materials, 2018, 11, 819.	1.3	14
335	Hydrogen interactions with low-index surface orientations of tungsten. Journal of Physics Condensed Matter, 2019, 31, 255002.	0.7	12
336	Catalyst- and Etchant-Dependent Mechanisms of Single-Walled Carbon Nanotube Nucleation during Chemical Vapor Deposition. Journal of Physical Chemistry C, 2019, 123, 10622-10629.	1.5	4
337	Tin, The Enabler—Hydrogen Diffusion into Ruthenium. Nanomaterials, 2019, 9, 129.	1.9	20
338	Slow strain rate tests coupled with hydrogen permeation: New possibilities to assess the role of hydrogen in stress corrosion cracking tests part I: Methodology and commissioning results. Corrosion Science, 2019, 152, 45-53.	3.0	20
339	Conversion of Carbon Monoxide into Methanol on Alumina-Supported Cobalt Catalyst: Role of the Support and Reaction Mechanism—A Theoretical Study. Catalysts, 2019, 9, 6.	1.6	8
340	Zero-point vibration of the adsorbed hydrogen on the Pt(110) surface. Adsorption, 2020, 26, 453-459.	1.4	6
341	Role of Defective Sites in CO Adsorption over $\mu\text{-Fe}_2\text{C}$ and $\lambda\text{-Fe}_2\text{C}$ Fischer-Tropsch Catalysts. Chemistry - an Asian Journal, 2020, 15, 4014-4022.	1.7	9
342	Quantum motion of hydrogen on Ni(100) surfaces. Physical Review B, 2020, 102, .	1.1	1
343	Synergism effect of first row transition metals in experimental and theoretical activity of NiM/rGO alloys at hydrogen evolution reaction in alkaline electrolyzer. Renewable Energy, 2020, 154, 1122-1131.	4.3	17
344	Surface Segregation of Ternary Alloys: Effect of the Interaction between Solute Elements. Advanced Materials Interfaces, 2020, 7, 1901784.	1.9	4
345	Reactivity of bimetallic nanostructured electrocatalysts for the hydrogen adsorption. An atomistic view. Surface Science, 2020, 697, 121605.	0.8	7
346	Kinetics of the reaction of H <sub>2</sub> with Pt <sup>0</sup> -nanoparticles in aqueous suspensions monitored by the catalytic reduction of PW <sub>12</sub> O <sub>40</sub> <sup>3-</sup> . Inorganic Chemistry Frontiers, 2021, 8, 989-995.	3.0	2
347	The mechanism underlying the functionalisation of cobalt nanoparticles by carboxylic acids: a first-principles computational study. Journal of Materials Chemistry B, 2021, 9, 4915-4928.	2.9	4
348	Hydrogenation and Hydrogenolysis with Ruthenium Catalysts and Application to Biomass Conversion. , 0, , .		0
349	An inertial electrostatic confinement fusion system based on graphite. Physics of Plasmas, 2021, 28, .	0.7	5

#	ARTICLE	IF	CITATIONS
350	Factors that influence hydrogen binding at metal-atop sites. Journal of Chemical Physics, 2021, 155, 024703.	1.2	7
351	Solvent effects on catalytic reactions and related phenomena at liquid-solid interfaces. Surface Science Reports, 2021, 76, 100541.	3.8	31
352	Atomistic Simulations of Surfaces and Interfaces. , 1992, , 89-122.		4
353	Embedded Atom Method: Many-Atom Description of Metallic Cohesion. , 1989, , 181-191.		10
354	Theory of Adsorption-Desorption Kinetics and Dynamics. , 1990, , 567-598.		1
355	Theoretical Aspects of Adsorption. , 1990, , 213-254.		2
356	Activation and Chemisorption of Hydrogen on Aluminum Clusters. , 1987, , 755-768.		9
357	Applications of Neutron Scattering to Catalysis. Fundamental and Applied Catalysis, 1994, , 347-375.	0.9	24
358	Reaction Path Approach to Dynamics at a Gas-Solid Interface: Quantum Tunneling Effects for an Adatom on a non-rigid Metallic Surface. , 1994, , 1-34.		10
359	Hydrogen at Metallic Surfaces and Interfaces. NATO ASI Series Series B: Physics, 1986, , 397-421.	0.2	10
360	Adsorption Phenomena. , 1996, , 411-538.		3
361	Theory of Phase Transitions on H/W(110) and H/Mo(110) Systems. Springer Series in Surface Sciences, 1988, , 470-474.	0.3	5
362	Adsorption and Catalysis on the Transition Metals. Springer Series in Surface Sciences, 1989, , 315-391.	0.3	2
363	Calculation of Surface Structural Energies. Springer Series in Surface Sciences, 1988, , 8-43.	0.3	1
364	The Embedded Atom Method: A Review. Springer Proceedings in Physics, 1990, , 48-63.	0.1	5
365	Atoms Embedded in Electron Gas. Springer Proceedings in Physics, 1990, , 134-143.	0.1	3
366	The Binding of Adsorbates to Metal Surfaces. Springer Series in Surface Sciences, 1985, , 18-28.	0.3	3
367	Photoelectron Spectroscopy. Springer Series in Cluster Physics, 2003, , 29-54.	0.3	3

#	ARTICLE	IF	CITATIONS
368	The Chemisorbed State of Hydrogen on a Metal Surface Studied via Quantum Path Integral Molecular Dynamics Simulations. Jerusalem Symposia on Quantum Chemistry and Biochemistry, 1986, , 269-279.	0.2	1
369	Theory of Adsorption and Surface Reactions. , 1997, , 285-351.		69
370	Quantum Mechanical Calculations of Chemical Interactions on Transition Metal Surfaces. , 1992, , 253-359.		3
371	A Density Functional Theory Study of Methoxy and Atomic Hydrogen Chemisorption on Au(100) Surface. Journal of Modern Physics, 2013, 04, 409-417.	0.3	6
372	Reactions of Gas-Phase Atomic Hydrogen with Chemisorbed Hydrogen on a Graphite Surface. Bulletin of the Korean Chemical Society, 2007, 28, 635-646.	1.0	6
373	What Is the Real State of Single-Atom Catalysts under Electrochemical Conditionsâ€”From Adsorption to Surface Pourbaix Plots?. Catalysts, 2021, 11, 1207.	1.6	6
374	Cu-based tri-metallic nanoparticles with noble metals (Ag, Pd, and Ir) and their catalytic activities for hydrogen generation. International Journal of Hydrogen Energy, 2021, 46, 39754-39767.	3.8	8
375	Cryogenic viscous pump analysis based on hemisphere model. Journal of Physics: Conference Series, 2021, 2054, 012068.	0.3	0
376	Theory of Hydrogen on Metal Surfaces. Springer Series in Surface Sciences, 1985, , 41-45.	0.3	0
377	Analysis of the Reactivity of Small Cobalt Clusters. , 1986, , 105-109.		0
378	Reference List and Table for Surface Structures. Springer Series in Surface Sciences, 1986, , 467-524.	0.3	0
379	Analysis of the Electronic Properties of Small Niobium Clusters. , 1987, , 511-516.		0
380	Hydrogen Adsorption Studies on Transition Metals: The Role of Surface Resonances in Vibrational Cross Section Enhancements. , 1987, , 192-202.		0
381	Self-Consistent Model of Hydrogen Chemisorption on Nickel. , 1987, , 112-115.		0
382	Adsorption Position of Deuterium on the Pd(100) and Ni(111) Surface Determined by Transmission Channeling. Springer Series in Surface Sciences, 1988, , 195-200.	0.3	2
383	The Effective-Medium Theory. Springer Proceedings in Physics, 1990, , 34-47.	0.1	0
384	Effective-Medium Theory: Considering Corrections and Delimitations. Springer Proceedings in Physics, 1990, , 232-241.	0.1	0
385	Adsorption Phenomena. Springer Series in Surface Sciences, 1993, , 381-498.	0.3	0

#	ARTICLE	IF	CITATIONS
386	Diffusion of Hydrogen and Deuterium on Ni(111) Over a Wide Range of Temperature: Exploring Quantum Diffusion on Metals. NATO ASI Series Series B: Physics, 1997, , 607-616.	0.2	0
387	Synergistic Effect of Coordination Fields and Hydrosolvents on the Single-Atom Catalytic Property in H <sub>2</sub> O <sub>2</sub> Synthesis: A Density Functional Theory Study. Journal of Physical Chemistry C, 2022, 126, 2349-2364.	1.5	9
389	Silver-Cobalt bimetallic nanoparticles to the generation of hydrogen from formic acid decomposition. Arabian Journal of Chemistry, 2022, 15, 103795.	2.3	6
390	Development of a Radio-Frequency Quadrupole Accelerator for the HL-2A/2M Tokamak Diagnostic System. Applied Sciences (Switzerland), 2022, 12, 4031.	1.3	5
391	The Key Role of Competition between Orbital and Electrostatic Interactions in the Adsorption on Transition Metal Single-Atom Catalysts Anchored by N-doped Graphene. ChemCatChem, 2022, 14, .	1.8	12
392	A Career in Catalysis: Jens Kehlet Nørskov. ACS Catalysis, 2022, 12, 9679-9689.	5.5	19
393	Role of Electronic Structure on Nitrate Reduction to Ammonium: A Periodic Journey. Journal of the American Chemical Society, 2022, 144, 14809-14818.	6.6	59
394	Influence of Impurity Atoms on Hydrogen Diffusion into Ruthenium. Journal of Physical Chemistry C, 2022, 126, 19895-19903.	1.5	1
395	On the Catalytic Mechanism of 3d and 4d Transition-Metal-Based Materials on the Hydrogen Sorption Properties of Mg/MgH <sub>2</sub> . Catalysts, 2023, 13, 519.	1.6	3