

# Lutz Hammer

## List of Publications by Year in descending order

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121  
papers

3,808  
citations

101384

36  
h-index

155451

55  
g-index

125  
all docs

125  
docs citations

125  
times ranked

2682  
citing authors

#	ARTICLE	IF	CITATIONS
1	Subsurface cation vacancy stabilization of the magnetite (001) surface. <i>Science</i> , 2014, 346, 1215-1218.	6.0	222
2	Strong relaxations at the Cr <sub>2</sub> O <sub>3</sub> (0001) surface as determined via low-energy electron diffraction and molecular dynamics simulations. <i>Surface Science</i> , 1997, 372, L291-L297.	0.8	140
3	A LEED investigation of clean and oxygen covered Rh(100). <i>Surface Science</i> , 1988, 207, 55-65.	0.8	120
4	The (0001)-surface of 6H- $\alpha$ -SiC: morphology, composition and structure. <i>Applied Surface Science</i> , 1995, 89, 175-185.	3.1	112
5	Dynamics of the reconstruction process Ir(100) $1\sqrt{3}\times 1\sqrt{3}$ . <i>Physical Review B</i> , 1985, 32, 6214-6221.	1.1	106
6	Hydrogen-induced restructuring of close-packed metal surfaces: H/Ni(111) and H/Fe(110). <i>Physical Review B</i> , 1993, 47, 15969-15972.	1.1	105
7	Structure of ultrathin Ni/Cu(001) films as a function of film thickness, temperature, and magnetic order. <i>Physical Review B</i> , 1999, 59, 12641-12646.	1.1	99
8	Surface structure of polar Co <sub>3</sub> O <sub>4</sub> (111) films grown epitaxially on Ir(100)-(1 $\sqrt{3}$ $\times$ 1 $\sqrt{3}$ ) Tj ETQq0.0 0 rgBT <sub>96</sub> /Overlock	0.7	96
9	Oxidation of low-index FeAl surfaces. <i>Surface Science</i> , 1997, 380, 335-351.	0.8	76
10	Adsorption and Activation of CO on Co <sub>3</sub> O <sub>4</sub> (111) Thin Films. <i>Journal of Physical Chemistry C</i> , 2015, 119, 16688-16699.	1.5	72
11	Reversible H-Induced Switching of the Magnetic Easy Axis in Ni/Cu(001) Thin Films. <i>Physical Review Letters</i> , 2004, 93, 247203.	2.9	71
12	Coexistence of Rocksalt and Wurtzite Structure in Nanosized CoO Films. <i>Physical Review Letters</i> , 2008, 101, 016103.	2.9	69
13	Unusual adsorption site of hydrogen on the unreconstructed Ir(100) surface. <i>Physical Review B</i> , 2006, 73, .	1.1	67
14	A route to continuous ultra-thin cerium oxide films on Cu(1 1 1). <i>Surface Science</i> , 2009, 603, 3382-3388.	0.8	67
15	Hydrogen on W(110): an adsorption structure revisited. <i>Surface Science</i> , 1997, 382, 288-299.	0.8	66
16	Epitaxial cobalt oxide films on Ir(100) – the importance of crystallographic analyses. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 173001.	0.7	65
17	Surface relaxation change by hydrogen adsorption on Rh(110). <i>Surface Science</i> , 1987, 188, L729-L734.	0.8	61
18	Fe thin-film growth on Au(100): A self-surfactant effect and its limitations. <i>Physical Review B</i> , 1999, 59, 15966-15974.	1.1	58

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19	Deep-going reconstruction of Ir(100)-5 Å. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 12353-12365.	0.7	53
20	Composition and structure of the (100) and (110) surfaces of FeAl. <i>Surface Science</i> , 1995, 322, 103-115.	0.8	51
21	Ordered phases of C <sub>2</sub> H <sub>2</sub> and C <sub>2</sub> H <sub>4</sub> on the Ni(111) face. <i>Surface Science</i> , 1986, 178, 693-703.	0.8	50
22	LEED structure analysis of p(√3 × √3)R30°-O/Ni(111). <i>Surface Science</i> , 1991, 253, 99-106.	0.8	50
23	Phases and phase transitions of hexagonal cobalt oxide films on Ir(100)-(1 × 1). <i>Journal of Physics Condensed Matter</i> , 2009, 21, 185003.	0.7	49
24	Crystallography of ultrathin iron, cobalt and nickel films grown epitaxially on copper. <i>Journal of Physics Condensed Matter</i> , 1999, 11, 9437-9454.	0.7	43
25	Structure of the c(2 × 2)-Br/Pt(110) surface. <i>Physical Review B</i> , 2002, 65, .	1.1	43
26	Ultrathin cobalt oxide films on Ir(100)-(1 × 1). <i>Physical Review B</i> , 2006, 74, .	1.1	43
27	Segregation in Strongly Ordering Compounds: A Key Role of Constitutional Defects. <i>Physical Review Letters</i> , 2002, 89, 266102.	2.9	42
28	Hydrogen-Induced Self-Organized Nanostructuring of the Ir(100) Surface. <i>Physical Review Letters</i> , 2003, 91, 156101.	2.9	42
29	Kinetics of the irreversible transition Pt(110)1 × 1 → 1 × 2 as observed by LEED. <i>Surface Science</i> , 1987, 191, 174-184.	0.8	41
30	In-Plane Lattice Reconstruction of Cu(100). <i>Physical Review Letters</i> , 1995, 75, 2859-2862.	2.9	39
31	The role of an energy-dependent inner potential in quantitative low-energy electron diffraction. <i>Surface Science</i> , 2000, 458, 155-161.	0.8	39
32	Adsorbate cluster expansion for an arbitrary number of inequivalent sites. <i>Physical Review B</i> , 2008, 78, .	1.1	39
33	Segregation phenomena on surfaces of the ordered bimetallic alloy FeAl. <i>Surface Science</i> , 1998, 412-413, 69-81.	0.8	38
34	The hydrogenated and bare diamond (110) surface: a combined LEED-, XPS-, and ARPES study. <i>Surface Science</i> , 1999, 443, 177-185.	0.8	37
35	Homogeneous surface iron silicide formation on Si(111): The c(8 × 4) phase. <i>Physical Review B</i> , 2003, 68, .	1.1	37
36	Adsorption of hydrogen on Fe(110) at cryogenic temperatures investigated by low energy electron diffraction. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1992, 10, 501-507.	0.9	35

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37	Structure determination of $c(4 \times 2)$ Cs/Rh(100) by LEED. Surface Science, 1989, 221, 11-22.	0.8	34
38	Superstructure in the termination of CoO(111) surfaces: Low-energy electron diffraction and scanning tunneling microscopy. Physical Review B, 2009, 79, .	1.1	33
39	Orbital-Driven Rashba Effect in a Binary Honeycomb Monolayer AgTe. Physical Review Letters, 2020, 124, 176401.	2.9	33
40	Submonolayer iron film growth on reconstructed Ir(100) $\sqrt{5} \times \sqrt{5}$ . Physical Review B, 2003, 67, .	1.1	32
41	Self-Organized Growth, Structure, and Magnetism of Monatomic Transition-Metal Oxide Chains. Physical Review Letters, 2016, 117, 046101.	2.9	32
42	Application of chemical tensor LEED to $\text{Mo}_x\text{Re}_{1-x}$ (100) surfaces. Surface Science, 1994, 307-309, 434-439.	0.8	31
43	Adsorption and desorption of hydrogen on Rh(311) and comparison with other Rh surfaces. Surface Science, 1999, 421, 279-295.	0.8	31
44	Low temperature ordering of potassium on Ir(100) $1 \times 1$ and Ir(100) $5 \times 5$ . Surface Science, 1985, 152-153, 303-313.	0.8	30
45	Thermal desorption kinetics of hydrogen on rhodium (110). Surface Science, 1994, 303, 1-15.	0.8	30
46	Pseudomorphic growth of Fe monolayers on $\text{Ir}(100)$ from a fct precursor to a bct film. Physical Review B, 2007, 76, .	1.1	30
47	Substrate-induced structural modulation of a CoO(111) bilayer on Ir(100). Physical Review B, 2010, 81, .	1.1	29
48	Adsorption Structures of Hydrogen on Transition Metal Surfaces as Detected by LEED. Zeitschrift Fur Physikalische Chemie, 1996, 197, 173-191.	1.4	27
49	LEED STRUCTURE ANALYSES OF THE CLEAN AND FULLY HYDROGEN-COVERED W(110) and Mo(110) SURFACES. Surface Review and Letters, 1997, 04, 1291-1295.	0.5	27
50	Tuning the Growth Orientation of Epitaxial Films by Interface Chemistry. Physical Review Letters, 2012, 108, 066101.	2.9	27
51	Reactivity of carbon dioxide at nickel (110). Journal of Electron Spectroscopy and Related Phenomena, 1987, 44, 141-148.	0.8	26
52	ORDERED AND DISORDERED RIPPLING IN THE $\text{CoAl}(110)\text{-}(1 \times 1)$ SURFACE. Surface Review and Letters, 1996, 03, 1409-1415.	0.5	26
53	Segregation and ordering at $\text{Fe}_{1-x}\text{Al}_x(100)$ surfaces – a model case for binary alloys. Surface Science, 2001, 474, 81-97.	0.8	26
54	Hydrogen on Rh(110): a walk through the phase diagram. Surface Science, 1991, 249, 61-74.	0.8	25

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55	Evidence for On-Site Carboxylation in the Self-Assembly of 4,4'-Biphenyl Dicarboxylic Acid on Cu(111). <i>Journal of Physical Chemistry C</i> , 2016, 120, 1043-1048.	1.5	25
56	First-Principles-Based Surface Phase Diagram of Fully Relaxed Binary Alloy Surfaces. <i>Physical Review Letters</i> , 2004, 92, 195503.	2.9	24
57	(3Å-1)-Br/Pt(110) structure and the charge-density-wave-assisted (2Å-2) to (3Å-1) phase transition. <i>Physical Review B</i> , 2004, 69, .	1.1	23
58	Deep layer oscillatory segregation and relaxation of substitutionally disordered $\text{MoxRe}_{1-x}$ (100) surfaces. <i>Surface Science</i> , 1997, 376, 319-329.	0.8	22
59	Surface crystallography by low energy electron diffraction. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1998, 213, 615-634.	0.4	22
60	Surfactant-induced surface restructuring: (4Å-4)-Pb/Cu(111). <i>Journal of Physics Condensed Matter</i> , 2001, 13, 1793-1803.	0.7	22
61	Structure of ultrathin Fe films on Cu(100) prepared by pulsed laser deposition. <i>Physical Review B</i> , 2001, 63, .	1.1	22
62	Competitive surface segregation of C, Al and S impurities in Fe(100). <i>Journal of Physics Condensed Matter</i> , 2003, 15, 3517-3529.	0.7	22
63	Hydrogen induced missing row reconstruction of Fe(211). <i>Surface Science</i> , 1995, 326, 93-100.	0.8	20
64	Hydrogen on Metals: Adsorption Sites and Substrate Reconstructions. <i>Physica Status Solidi A</i> , 1997, 159, 225-233.	1.7	20
65	Nanostructure formation on Ir(100). <i>Progress in Surface Science</i> , 2009, 84, 2-17.	3.8	20
66	Segregation-induced subsurface restructuring of FeAl(100). <i>Physical Review B</i> , 1996, 54, R5275-R5278.	1.1	19
67	Lateral nanoscale Fe-Ir superlattices on Ir(100). <i>Europhysics Letters</i> , 2004, 65, 830-836.	0.7	19
68	Thermal evolution of cobalt deposits on $\text{Co}_{3-x}\text{O}_{4-x}$ (111): atomically dispersed cobalt, two-dimensional CoO islands, and metallic Co nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 23538-23546.	1.3	19
69	Structure and ordering of oxygen on unreconstructed Ir(100). <i>Physical Review B</i> , 2016, 93, .	1.1	19
70	Equilibration processes in surfaces of the binary alloy Fe-Al. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 4145-4164.	0.7	18
71	Surface structure and segregation of bimetallic bcc-type alloys. <i>Journal of Physics Condensed Matter</i> , 1999, 11, 8377-8396.	0.7	17
72	Quantification of substitutional disorder and atomic vibrations by LEED - the role of parameter correlations. <i>Surface Science</i> , 2001, 488, 219-232.	0.8	17

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73	Incommensurate Moiré overlayer with strong local binding: CoO(111) bilayer on Ir(100). Physical Review B, 2012, 86, .	1.1	17
74	Face-dependent segregation and relaxation in Mo <sub>0.75</sub> Re <sub>0.25</sub> random alloy surfaces. Surface Science, 1999, 431, 220-231.	0.8	16
75	Surfactant action in heteroepitaxy: Growth of Co on (4 $\times$ 4)Pb/Cu(111) studied by LEED and STM. Physical Review B, 2000, 62, 5144-5149.	1.1	16
76	Fe/Cu(100) as a test case for the understanding of epitaxially grown magnetic thin films. Surface Science, 2004, 569, 1-3.	0.8	16
77	Hydrogen adsorption on Fe(211): structural, thermodynamic and kinetic properties. Surface Science, 1995, 324, 289-304.	0.8	15
78	ADSORBATE-INDUCED VARIATION OF THE STRUCTURE AND COMPOSITION OF THE Mo <sub>0.75</sub> Re <sub>0.25</sub> (100) SURFACE. Surface Review and Letters, 1996, 03, 1701-1711.	0.5	14
79	Hydrogen-induced buckling of Mo(110) at submonolayer coverage. Journal of Physics Condensed Matter, 1997, 9, 6481-6491.	0.7	14
80	Equilibration of stoichiometrically distorted Fe <sub>1-x</sub> Al <sub>x</sub> (100) surfaces. Journal of Physics Condensed Matter, 2001, 13, 1781-1791.	0.7	14
81	Role of Coantisite segregation in the CoAl(111) surface. Physical Review B, 2005, 71, .	1.1	14
82	Structural elements in the oxidation process of a single cobalt layer on Ir(100)- $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mo} \text{stretchy="false"} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \text{Å} \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle$ TjETQq0 0 U rgBT /Ov	1.1	14
83	Surface structure and stacking of the commensurate (13 $\times$ 13)R13.9 charge density wave phase of 1T-TaS <sub>2</sub> (0001). Physical Review B, 2019, 100, .	1.1	14
84	The structure of the surface compound CrN formed by cosegregation on a Fe-15%Cr-N(100) single crystal surface. Surface Science, 1998, 400, 87-94.	0.8	13
85	Spontaneous symmetry breaking of the Ir(100)-(5 $\times$ 1) hex surface induced by hydrogen adsorption. Physical Review B, 2006, 74, .	1.1	13
86	Transition metal superlattices and epitaxial films on $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mtext} \rangle \text{Ir} \langle \text{mml:mtext} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 100 \langle \text{mml:mn} \rangle$ Physical Review B, 2008, 78, .	1.1	13
87	Segregation-induced surface structures of carbon-doped Mo <sub>0.75</sub> Re <sub>0.25</sub> (100). Surface Science, 1996, 352-354, 592-596.	0.8	12
88	Combined Application of LEED and STM in Surface Crystallography. Journal of Physical Chemistry B, 2004, 108, 14579-14584.	1.2	12
89	Substoichiometric cobalt oxide monolayer on Ir(100)-(1 $\times$ 1). Journal of Physics Condensed Matter, 2009, 21, 474211.	0.7	12
90	Unusual multilayer relaxation of the Mo(111) surface induced by hydrogen. Journal of Physics Condensed Matter, 1999, 11, 1873-1888.	0.7	11

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91	Phase diagram for hydrogen adsorption on Rh(311). Surface Science, 1993, 287-288, 84-88.	0.8	10
92	Complex adsorbate-substrate interplay of H on Ir(100) $\sqrt{5 \times 5}$ -hex: Density functional calculations. Physical Review B, 2006, 74, .	1.1	10
93	Adsorption and Intermolecular Interaction of Cobalt Phthalocyanine on CoO(111) Ultrathin Films: An STM and DFT Study. Journal of Physical Chemistry C, 2017, 121, 2889-2895.	1.5	10
94	Adsorption of hydrogen on stable and metastable Ir(100) surfaces. Surface Science, 2017, 656, 66-76.	0.8	9
95	Structure and ordering of 2,3-dimethyl-2-butene and 2-butyne on the Ni(111) surface. Surface Science, 1992, 272, 182-188.	0.8	8
96	Nanowire formation without surface steps. Applied Surface Science, 2004, 237, 520-528.	3.1	8
97	Adsorption and thermal induced decomposition of ethylene and isobutene on the Ni(111) surface. Progress in Surface Science, 1990, 35, 103-111.	3.8	7
98	Adsorption and thermal induced decomposition of isobutene on Ni(111). Journal of Electron Spectroscopy and Related Phenomena, 1990, 54-55, 687-696.	0.8	7
99	Strain relief through stair-rod dislocations in ultrathin epitaxial metal films: Defect geometry and energetics. Physical Review B, 2008, 78, .	1.1	7
100	Oxygen induced missing row reconstruction of substitutionally disordered Mo <sub>0.75</sub> Re <sub>0.25</sub> (100). Surface Science, 1995, 337, 224-231.	0.8	6
101	Müller et al. Reply. Physical Review Letters, 1996, 76, 3660-3660.	2.9	6
102	Hydrogen on Mo <sub>x</sub> Re <sub>1-x</sub> (100) – the impact of alloying on the adsorption structure. Surface Science, 1998, 401, 455-468.	0.8	6
103	Monatomic Co, $\sqrt{2 \times 2}$ CoO, $\sqrt{3 \times 3}$ CoO, and $\sqrt{2 \times 2}$ CoO nanowires on Ir(100) and Pt(100) surfaces: Formation, structure, and energetics. Physical Review B, 2017, 96, .	1.1	6
104	Surfactant-induced structures in the heteroepitaxial growth of Co on Cu(111). Journal of Physics Condensed Matter, 2001, 13, 9897-9911.	0.7	5
105	The power of joint application of LEED and DFT in quantitative surface structure determination. Journal of Physics Condensed Matter, 2008, 20, 304204.	0.7	5
106	CuTe chains on Cu(111) by deposition of one-third of a monolayer of Te: Atomic and electronic structure. Physical Review B, 2020, 102, .	1.1	5
107	On the kinetics of hydrocarbon decomposition on the Ni(111) surface – a time-resolved HREELS study. Vacuum, 1990, 41, 121-125.	1.6	4
108	Reduced coercivity in ferromagnetic Co/Cu coevaporated epitaxial films on Cu(111). Applied Physics Letters, 2000, 77, 889-891.	1.5	4

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109	Hydrogen-Induced and Defect-Mediated Structural Transition ( $5\text{\AA}-1$ )-hex $\hat{a}t'$ ( $5\text{\AA}-1$ )-H on Ir(100). Zeitschrift Fur Physikalische Chemie, 2004, 218, 997-1010.	1.4	4
110	Submonolayer copper telluride phase on Cu(111): Ad-chain and trough formation. Physical Review B, 2021, 104, .	1.1	4
111	Ligand Effect in Hydrogen Adsorption on Epitaxial Nickel Films. Zeitschrift Fur Physikalische Chemie, 2009, 223, 75-88.	1.4	3
112	AES-depth-profiling of thin annealed Pt-films on Si(100). European Physical Journal D, 1994, 44, 239-243.	0.4	2
113	Growth of metal nanowires of tunable width. Physical Review B, 2010, 81, .	1.1	2
114	Laterally nanostructured cobalt oxide films on Ir(100). Physical Review B, 2012, 85, .	1.1	2
115	Epitaxial Cobalt Oxide Films with Wurtzite Structure on Au(111). Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100383.	1.2	2
116	Cosegregation-Induced Epitaxial Growth of Two- and Three-Dimensional Compounds on Multicomponent Alloy Surfaces. Materials Research Society Symposia Proceedings, 1998, 528, 3.	0.1	1
117	Point defects in the NiAl(100) surface. Journal of Physics Condensed Matter, 2009, 21, 134007.	0.7	1
118	Adsorption of Hydrogen on Rhodium (110). Springer Series in Surface Sciences, 1988, , 201-206.	0.3	1
119	Atomic Structure of Ultrathin Iron Silicide Films on Si(111): Metastable Phases and a New Template Structure. Materials Research Society Symposia Proceedings, 2002, 749, 1.	0.1	0
120	In honour of Professor Klaus Heinz. Journal of Physics Condensed Matter, 2009, 21, 130301.	0.7	0
121	Crystallographic structure and energetics of the Rh( $1\hat{a}t\%0\hat{a}t\%0$ )-(3 $\text{\AA}-1$ )-2O phase. Journal of Physics Condensed Matter, 2017, 29, 365001.	0.7	0