Eckart Hasselbrink

List of Publications by Year
in descending order

97	2,443	185998 28	223531 46
papers	citations	h-index	g-index

100	100	100	1323
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Wavelength dependence of the photochemistry of O2on Pd(111) and the role of hot electron cascades. Journal of Chemical Physics, 1993, 99, 682-694.	1.2	123
2	Cross sections and NO product state distributions resulting from substrate mediated photodissociation of NO2adsorbed on Pd(111). Journal of Chemical Physics, 1990, 92, 3154-3169.	1.2	120
3	Hydrogen adsorption on and desorption from Si: Considerations on the applicability of detailed balance. Physical Review Letters, 1994, 72, 1356-1359.	2.9	113
4	Oxygen Abstraction from Dioxygen on the Al(111) Surface. Physical Review Letters, 2001, 87, 246103.	2.9	103
5	Dynamics of the ultraviolet photochemistry of water adsorbed on Pd(111). Journal of Chemical Physics, 1991, 94, 4609-4619.	1.2	95
6	On the interaction of excited alkali atoms with rare gas targets in scattering processes. Zeitschrift FÃ¼r Physik A, 1982, 307, 1-11.	1.4	84
7	Coupling of the rotational and translational degrees of freedom in molecular DIET: A classical trajectory study. Chemical Physics Letters, 1990, 170, 329-334.	1.2	78
8	How non-adiabatic are surface dynamical processes?. Current Opinion in Solid State and Materials Science, 2006, 10, 192-204.	5.6	73
9	Orientation of the CN X 2Î£+ fragment following photolysis of ICN by circularly polarized light. Chemical Physics, 1988, 126, 191-200.	0.9	70
10	The adsorbate state specific photochemistry of dioxygen on Pd(111). Journal of Chemical Physics, 1990, 93, 5327-5336.	1.2	67
11	Polarization probe of excitation mechanisms in surface photochemistry. Chemical Physics Letters, 1991, 176, 459-466.	1.2	64
12	O2/Pd(111). Clarification of the correspondence between thermal desorption features and chemisorption states. Chemical Physics Letters, 1994, 219, 113-117.	1.2	62
13	Beam investigations of D2 adsorption on Si(100): On the importance of lattice excitations in the reaction dynamics. Journal of Chemical Physics, 1994, 101, 7082-7094.	1.2	60
14	Electronic excitations induced by surface reactions of H and D on gold. Chemical Physics Letters, 2006, 432, 133-138.	1.2	59
15	An AFM study of the growth kinetics of the self-assembled octadecylsiloxane monolayer on oxidized silicon. Surface Science, 2003, 532-535, 963-969.	0.8	51
16	Unoccupied adsorbate states of analyzed with two-photon photoemission. Surface Science, 1994, 317, L1147-L1151.	0.8	50
17	Abstractive chemisorption of O2 on Al(111). Faraday Discussions, 2000, 117, 313-320.	1.6	49
18	Ultravioletâ€laser induced dissociation and desorption of water adsorbed on Pd(111). Journal of Chemical Physics, 1990, 92, 1509-1510.	1.2	46

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19	Photofragment orientation as a probe of near-threshold non-adiabatic phenomena in the photodissociation of ICN. Molecular Physics, 1990, 71, 1143-1153.	0.8	38
20	The surprisingly short vibrational lifetime of the internal stretch of CO adsorbed on Si(100). Journal of Chemical Physics, 2005, 123, 051102.	1.2	38
21	Electronic excitations induced by hydrogen surface chemical reactions on gold. Journal of Chemical Physics, 2011, 134, 034705.	1.2	37
22	Non-adiabaticity in surface chemical reactions. Surface Science, 2009, 603, 1564-1570.	0.8	36
23	1D Nanofabrication with a Micrometer-Sized Laser Spot. Nano Letters, 2006, 6, 2358-2361.	4.5	35
24	Preparation of two-dimensionally patterned layers of functionalised calcium phosphate nanoparticles by laser direct writing. Journal of Materials Chemistry, 2006, 16, 1798.	6.7	33
25	Coherence Observed as Left-Right Asymmetry in the Scattering ofK(4P322)from Ar. Physical Review Letters, 1983, 50, 1983-1986.	2.9	29
26	Internal quantum state distributions of NH3 photodesorbed from Cu(111) at 6.4 eV. Chemical Physics, 1996, 205, 205-219.	0.9	29
27	The role of nonadiabatic pathways and molecular rotations in the oxygen abstraction reaction on the Al(111) surface. Chemical Physics Letters, 2003, 373, 366-371.	1.2	28
28	Preparation of Submicron-Structured Alkylsiloxane Monolayers Using Prepatterned Silicon Substrates by Laser Direct Writing. Langmuir, 2004, 20, 3525-3527.	1.6	28
29	Density-functional theory study of vibrational relaxation of CO stretching excitation on Si(100). Journal of Chemical Physics, 2008, 129, 174702.	1.2	27
30	The stretching vibration of hydrogen adsorbed on epitaxial graphene studied by sum-frequency generation spectroscopy. Chemical Physics Letters, 2011, 508, 1-5.	1.2	26
31	Resonant electron scattering from benzene chemisorbed on Pt(111). Surface Science, 1995, 342, 101-110.	0.8	25
32	Isotope and Quantum Effects in Vibrational State Distributions of Photodesorbed Ammonia. Physical Review Letters, 1997, 78, 1174-1177.	2.9	25
33	Laser-assisted fabrication of submicron-structured hydrophilic/ hydrophobic templates for the directed self-assembly of alkylsiloxane monolayers into confined domains. Applied Physics A: Materials Science and Processing, 2006, 82, 15-18.	1.1	23
34	Classical and quantum-mechanical modeling of the stimulated desorption of ammonia from Cu(111). Surface Science, 1996, 363, 179-184.	0.8	22
35	Two-Dimensional Aggregation of Species with Weak and Strong Bonding Interactions:Â Modeling the Growth of Self-Assembled Alkylsiloxane Monolayers. Langmuir, 2003, 19, 6590-6593.	1.6	22
36	Investigations of the adsorption dynamics of D 2 on Si(100). Surface Science, 1995, 331-333, 485-489.	0.8	21

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37	Preparation of Graphene with Graphane Areas of Controlled Hydrogen Isotope Composition on Opposite Sides. Journal of Physical Chemistry Letters, 2013, 4, 2094-2098.	2.1	21
38	Electronically Nonadiabatic Processes in the Interaction of H with a Au Surface Revealed Using MIM Junctions: The Temperature Dependence. Journal of Physical Chemistry C, 2013, 117, 6337-6345.	1.5	21
39	On the significance of thermoelectric and thermionic emission currents induced by chemical reactions catalyzed on nanofilm metalâ€“semiconductor heterostructures. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, 021101.	0.9	20
40	Adsorption of NO on Pd(111). Vacuum, 1990, 41, 76-78.	1.6	19
41	Photostimulated chemistry at the metal-adsorbate interface. Applied Physics A: Solids and Surfaces, 1991, 53, 403-409.	1.4	19
42	Adsorbate structure and angular dependence of desorption dynamics:O2photodesorbed from Pd(111). Physical Review Letters, 1993, 70, 1147-1150.	2.9	19
43	Optical response of metalâ€“insulatorâ€“metal heterostructures and their application for the detection of chemicurrents. New Journal of Physics, 2010, 12, 113014.	1.2	19
44	Keynote article. Molecular Physics, 1992, 76, 777-786.	0.8	18
45	Direct Laser Patterning of Soft Matter: Photothermal Processing of Supported Phospholipid Multilayers with Nanoscale Precision. Small, 2009, 5, 2099-2104.	5.2	18
46	Abstraction of Oxygen from Dioxygen on Al(111) Revealed by Resonant Multiphoton Ionization Laser Spectrometryâ€. Journal of Physical Chemistry B, 2004, 108, 14677-14684.	1.2	16
47	Vibrational dynamics of hydrogen on Ge surfaces. Journal of Chemical Physics, 2009, 130, 134701.	1.2	15
48	Is there <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:msup><mml:mrow><mml:mi mathvariant="italic">sp</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msup></mml:mrow></mml:m H on epitaxial graphene? Evidence for adsorption on both sides of the sheet. Chemical Physics Letters, 2012, 546, 12-17.	1.2	15
49	Chemical energy dissipation at surfaces under UHV and high pressure conditions studied using metalâ€“insulatorâ€“metal and similar devices. Chemical Society Reviews, 2016, 45, 3747-3755.	18.7	15
50	Energy partitioning in the reaction 2H2+ O2? 2H2O on Pd(111). Faraday Discussions, 1993, 96, 265.	1.6	14
51	Dynamics of the Câ€“O stretch vibration on Si(100). Surface Science, 2006, 600, 4275-4279.	0.8	13
52	Photochemistry on Thin Metal Films: Probe of Electron Dynamics in Metal-Semiconductor Heterosystems. Physical Review Letters, 2006, 96, 196807.	2.9	13
53	Isotope effects in the vibrational lifetime of hydrogen on germanium(100): Theory and experiment. Journal of Chemical Physics, 2009, 131, 124502.	1.2	13
54	Laser-induced local dehydroxylation on surface-oxidized silicon substrates: mechanistic aspects and prospects in nanofabrication. Applied Physics A: Materials Science and Processing, 2009, 94, 95-103.	1.1	13

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55	Interactions in co-adsorbed layers. Surface Science, 1995, 334, 19-28.	0.8	12
56	Incidence angle dependence of scattering and dissociation of O2 on Al(111): Possible weakly bound molecular precursors. Journal of Chemical Physics, 2003, 118, 8010-8015.	1.2	12
57	Conformational disorder in alkylsiloxane monolayers at elevated temperatures. Journal of Chemical Physics, 2013, 139, 244902.	1.2	12
58	On the 2Î£ potentials for the interaction of K(4P) and K(5P) with argon. Chemical Physics Letters, 1982, 89, 218-222.	1.2	11
59	Scattering of O2 from Al(111). Journal of Chemical Physics, 2004, 121, 1901-1909.	1.2	11
60	Plasmonic Effects of Au Nanoparticles on the Vibrational Sum Frequency Spectrum of 4-Nitrothiophenol. Journal of Physical Chemistry C, 2019, 123, 24234-24242.	1.5	11
61	Electron dynamics in a heterogeneous system: thin Ag films on Si(100). Surface Science, 2006, 600, 4269-4274.	0.8	10
62	Capturing the Complexities of Molecule-Surface Interactions. Science, 2009, 326, 809-810.	6.0	10
63	Differential cross sections for fine-structure inelastic collisions of K(42P) with Ar, Kr and N2. Chemical Physics Letters, 1984, 112, 441-444.	1.2	8
64	Fluorescence studies of the K2 diffuse band at 572.5 nm. Chemical Physics Letters, 1986, 128, 145-149.	1.2	8
65	Photodesorption of disilane physisorbed on hydrogen terminated Si(100) and the dramatic consequences of weak molecular chemisorption. Journal of Chemical Physics, 2001, 114, 7228-7238.	1.2	8
66	Photochemistry on ultrathin metal films: Strongly enhanced cross sections for NO2 on Agâ•Si(100). Journal of Chemical Physics, 2006, 125, 224707.	1.2	8
67	Noninvasive measurement and control of the temperature of Pt nanofilms on Si supports. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	0.9	8
68	Vibrational Sum Frequency Spectroscopy Study of Alcohol Adsorption on Thin-Film TiO2 at Ambient Pressure and Temperature. Journal of Physical Chemistry C, 2021, 125, 7721-7727.	1.5	8
69	The interactions of Na, NO, and H2O on the graphite (0001) surface. Journal of Chemical Physics, 2003, 119, 6753-6767.	1.2	7
70	Thin tantalum films on crystalline silicon â€“ a metallic glass. Physica Status Solidi - Rapid Research Letters, 2011, 5, 68-70.	1.2	7
71	Electronic Excitations in the Course of the Reaction of H with Coinage and Noble Metal Surfaces: AÂComparison. Zeitschrift Fur Physikalische Chemie, 2013, , 130617035227002.	1.4	7
72	A HREELS investigation of : the b2g(Ï€â—) resonance. Surface Science, 1996, 357-358, 190-194.	0.8	6

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73	Nonadiabatic pathways in the dissociative adsorption of simple molecules. Israel Journal of Chemistry, 2005, 45, 37-44.	1.0	6
74	Vibrational relaxation of adsorbates at semiconductor surfaces: H on Ge(100). Journal of Physics Condensed Matter, 2008, 20, 224008.	0.7	6
75	Quantum-state-resolved investigation of the UV photodesorption of NH3. Surface Science, 1996, 352-354, 189-194.	0.8	5
76	Photochemical routes to silicon epitaxy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 1135-1139.	0.9	5
77	Evidence for oxygen abstraction from NO 2 upon thermal scattering from an Al(111) surface. Applied Physics A: Materials Science and Processing, 2004, 78, 201-204.	1.1	5
78	Thermal desorption spectroscopy from the surfaces of metal-oxide-semiconductor nanostructures. Review of Scientific Instruments, 2014, 85, 104102.	0.6	5
79	Vibrational Sum Frequency Spectroscopy Study of Methanol Adsorption on Thin Film TiO₂ at Ambient Pressure and Temperature. Journal of Physical Chemistry C, 2020, 124, 16069-16075.	1.5	5
80	Negative-ion resonances in vibrational excitation and photochemistry of chemisorbed molecules: a critical case study of O2/Pt(111). Journal of the Chemical Society, Faraday Transactions, 1995, 91, 3633.	1.7	4
81	The Rotational State Distributions of Photodesorbed Ammonia as a Local Probe of Corrugation. Israel Journal of Chemistry, 1998, 38, 329-337.	1.0	4
82	Photoinduced interface charging in multiphoton photoemission from ultrathin Ag films on Si(100). Applied Physics A: Materials Science and Processing, 2007, 88, 459-464.	1.1	4
83	A fresh look at the structure of aromatic thiols on Au surfaces from theory and experiment. Journal of Chemical Physics, 2021, 155, 044707.	1.2	4
84	Laser induced dissociation of NO2 adsorbed on Pd(111). Vacuum, 1990, 41, 287-288.	1.6	3
85	The influence of lateral interactions on the angular distribution in photodesorption. Surface Science, 1993, 287-288, 160-164.	0.8	3
86	Photodesorption and photofragmentation of disilane adsorbed on a hydrogen terminated Si(100) surface. Surface Science, 1997, 390, 209-213.	0.8	3
87	Photodesorption from ultra-thin metal films â€“ a comparison of SO2 and NO2 on Ag/Si(100). Applied Physics A: Materials Science and Processing, 2007, 88, 559-569.	1.1	3
88	Photochemistry on ultrathin metal films. Surface Science, 2008, 602, 3184-3187.	0.8	3
89	Chapter 13 Photon Driven Chemistry at Surfaces. Handbook of Surface Science, 2008, 3, 621-679.	0.3	3
90	Thermally induced conformational changes of Ca-arachidate Langmuir-Blodgett Films at different compression. Journal of Chemical Physics, 2014, 141, 044912.	1.2	3

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91	Order and melting stability of calcium arachidate Langmuir-Blodgett monolayers prepared at different pH. Thin Solid Films, 2017, 642, 1-7.	0.8	3
92	Photochemistry of disilane adsorbed on a H terminated Si(100) surface. Journal of Chemical Physics, 1999, 111, 10287-10302.	1.2	2
93	Energy transfer in argon atom â€“ Surface interactions studied by Ptâ€“SiO 2 â€“Si thin film chemoelectronic devices. Vacuum, 2015, 111, 137-141.	1.6	2
94	Metal-insulator-metal sensors monitoring charge flow during thermal desorption. Surface Science, 2018, 678, 91-98.	0.8	2
95	Bimodal velocity distributions in the photodesorption of CO from Si(1 0 0) suggest V-to-T energy transfer. Chemical Physics Letters, 2018, 713, 277-281.	1.2	2
96	Vibrational Energy Redistribution between CH Stretching Modes in Alkyl Chain Monolayers Revealed by Time-Resolved Two-Color Pumpâ€“Probe Sum Frequency Spectroscopy. Journal of Physical Chemistry Letters, 2020, 11, 108-112.	2.1	2
97	Dynamics of Molecular Hydrogen Interactions with Silicon Surfaces. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1995, 99, 1077-1081.	0.9	0