

Hans-Joachim Freund

Books:

"Adsorption on Ordered Surfaces of Ionic Solids and Thin Films"
Springer Ser. in Surf. Sci. Vol. 33, Springer, Berlin (1993)
Editors: H.-J. Freund, E. Umbach

"Laser Techniques for Surfaces Science III"
Proceedings of SPIE, The International Society for Optical Engineering, 1998
Editors: H.-L. Dai, H.-J. Freund

"Ultrathin Epitaxial Oxides"
Proceedings of Symposium N, E-MRS 2001 Spring Conference, Strasbourg, France,
June 5-8, 2001; Special Issue *Thin Solid Films*, 400, 1-176 (2001)
Editors: G. Granozzi, S. Chambers, H.-J. Freund

"Towards an Understanding of Catalytically Active Centers in Selective Oxidation Catalysis"
Topics in Catalysis, Vol. 38, Nos. 1-3, Springer 2006, 1-220
Editors: R. S. Grasselli, H.-J. Freund

Patents:

Patent DE 44 28 567 A1, Germany 1995
H.-J. Freund, J. Wambach, O. Seiferth, B. Dillmann

Patent DE 44 28 566 C1, Germany 1995
H.-J. Freund, J. Wambach, O. Seiferth, B. Dillmann

1. "Charging and Rotational Dependence of Line Position"
J. Electron Spectrosc. Relat. Phenom. 12, 425-434 (1977)
H.-J. Freund, H. Gonska, H. Lohneiß, G. Hohlneicher
2. "On the Importance of Photoconduction in ESCA Experiments"
J. Electron Spectrosc. Relat. Phenom. 12, 435-441 (1977)
H. Gonska, H.-J. Freund, G. Hohlneicher
3. "Influence of Matrix Effects on Quantitative Chemical Analysis by ESCA"
Proc. 7th Intern. Vac. Congr. & 3rd Intern. Conf. Sol. Surf., Wien Vol. III,
S. 2263 (1977)
H.-J. Freund, H. Gonska, H.D. Polaschegg
4. "Zur Bestimmung absoluter Bindungsenergien aus XPS-Messungen"
Ber. Bunsenges. Phys. Chem. 82, 1252 (1978)
G. Hohlneicher, H. Gonska, H.-J. Freund

5. "Experimentelle und theoretische Beiträge zum Verständnis der elektronischen Struktur von Übergangsmetalladsorbaten durch Vergleich mit Übergangsmetallkomplexverbindungen"
Dissertation, Köln, 1-329 (1978)
H.-J. Freund
6. "Comparative Study of Adsorbate Systems and Corresponding Compounds Using X-ray and UV-photoemission.
I. Hexagonal (0001)Co/CO, O₂ versus oxides and carbonyls"
Ber. Bunsenges. Phys. Chem. 83, 100-108 (1979)
H.-J. Freund, G. Hohlneicher
7. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism.
I. Method of Calculation and Application to mono-, di- and tetranuclear compounds"
Theor. Chim. Acta (Berl.) 51, 145-162 (1979)
H.-J. Freund, G. Hohlneicher
8. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism.
II. Metal to Metal Bonding in Binuclear Transition Metal Compounds"
Theor. Chim. Acta (Berl.) 57, 181-207 (1980)
H.-J. Freund, B. Dick, G. Hohlneicher
9. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism
III. Application to the CO-insertion Reaction as an Example for Mechanistic Studies"
J. Organomet. Chem. 186, 63-75 (1980)
D. Saddei, H.-J. Freund, G. Hohlneicher
10. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism
IV. CNDO-CI-calculations on Electron Excitation Spectra of Ni(CO)₄ and Fe(CO)₅; Electronic Spectra and Photochemical implications"
Mol. Phys. 45, 427-439 (1982)
B. Dick, H.-J. Freund, G. Hohlneicher
11. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism. V. Many Body Effects in the Inner Valence Shell Photoionization Spectra of Free and Coordinated Carbon Monoxide"
Chem. Phys. 55, 339-354 (1981)
D. Saddei, H.-J. Freund, G. Hohlneicher
12. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism
VI. Simple Interpretation of Many-body Effects in the Valence Shell Photoionization of Adsorbates by the Study of CO/Ni and N₂/Ni Model Systems"
Surf. Sci. 95, 527-554 (1980)
D. Saddei, H.-J. Freund, G. Hohlneicher

13. "Calculation of Transition Metal Compounds Using an Extension of the CNDO Formalism
VII. Simple Interpretation of Many-body effects in the Core Photoionization of Adsorbates by the Study of CO/Ni and N₂/Ni Model Systems"
Surf. Sci. 102, 359-387 (1981)
D. Saddei, H.-J. Freund, G. Hohlneicher
14. "Zur elektronischen Struktur von trans-chloromethylcarbin-tetracarbonyl-chrom ClCr(CO)₄CCH₃"
J. Organomet. Chem. 216, 235-243 (1981)
D. Saddei, H.-J. Freund, G. Hohlneicher
15. "Der Einfluß von Matrix Effekten auf die quantitative Analyse durch ESCA Messungen"
Vakuum-Technik 28, 200-203 (1979)"
H.-J. Freund, H. Gonska, H.D. Polaschegg
16. "Connection Between the Manne-Åberg Theorem and a Sum Rule Derived in the Framework of the Green's-function Formalism"
Chem. Phys. Lett. 68, 222-224 (1979)
D. Saddei, H.-J. Freund, G. Hohlneicher
17. "Temperature-dependent Ultraviolet Photoemission Linewidths of Molecular Solids: Isopropyl Benzene"
Phys. Rev. Lett. 45, 280-283 (1980)
W.R. Salaneck, C.B. Duke, W. Eberhardt, E.W. Plummer, H.-J. Freund
18. "The Influence of Coordination on Many Particle Effects in Photoemission Spectra"
Proc. 6th Conf. Vac. Ultraviol. Rad. Phys., Charlottesville, Vol. II, S. 82-84 (1980)
G. Hohlneicher, H.-J. Freund, D. Saddei, B. Dick
19. "A New Fast Photoelectron Spectrometer for Surface Studies"
Proc. 8th Vac. Congr. 4th Int. Conf. Sol. Surf., Cannes, Vol. II, 1323 (1980)
W.R. Salaneck, H.R. Thomas, E.W. Plummer, B. Tonner, H.-J. Freund
20. "Explanation of the Satellite Structure Observed in the Photoemission Spectra of Coordinated CO"
Phys. Rev. B 23, 4859-4878 (1981)
H.-J. Freund, E.W. Plummer
21. "An XPS Study of Intensity Borrowing in Core Ionization of Free and Coordinated CO"
J. Chem. Phys. 75, 4275-4284 (1981)
H.-J. Freund, E.W. Plummer, W.R. Salaneck, R.W. Bigelow
22. "Summary Abstract: An XPS Study of "Intensity Borrowing" in Core Ionizations of CO upon Coordination to Transition Metal Atoms"
J. Vac. Sci. Technol. 18, 464-465 (1981)
H.-J. Freund, E.W. Plummer, W.R. Salaneck
23. "Solid State Effects on Core-hole Spectra"
Chem. Phys. Lett. 77, 261-266 (1981)
R.W. Bigelow, H.-J. Freund

24. "Shake-up Phenomena in D^+-Ar-A^- Structures: A CNDO/S Equivalent-Core Study on *N,N*-Dimethyl-*p*-nitroaniline in the Vapor and Condensed Phases"
Chem. Phys. 55, 407-427 (1981)
H.-J. Freund, R.W. Bigelow
25. "X-ray Photoelectron Spectroscopy of Gaseous and Solid I_2 : Ion-state-enhanced Intermolecular Interactions"
Phys. Rev. B 24, 2403-2411 (1981)
W.R. Salaneck, R.W. Bigelow, H.-J. Freund, E.W. Plummer
26. "Intense Core-hole Satellite Structure in Aromatic Donor/acceptor Molecules"
Chem. Phys. Lett. 82, 305-310 (1981)
R.W. Bigelow, R.J. Weagley, H.-J. Freund
27. "The Adsorption of N_2 : Chemisorbed on Ni(110) and Physisorbed on Pd(111)"
Surf. Sci. 118, 465-495 (1982)
K. Horn, J. DiNardo, W. Eberhardt, H.-J. Freund, E.W. Plummer
28. "Summary Abstract: Angle-resolved Photoemission Study of CO/Co(0001)"
J. Vac. Sci. Technol. 20, 623-624 (1982)
D. Heskett, F. Greuter, H.-J. Freund, E.W. Plummer
29. "Satellite Structure Accompanying Photoionization of Transition Metal Compounds and Adsorbates"
NATO Advanced Study Institute, Ser. B 87, 508 (1983)
H.-J. Freund
30. "Core-hole Spectra of D^+-Ar-A^- Molecules in the Solid State: (D = dialkylamino; A = pyridinium, pyrylium and thiopyrylium derivatives)"
J. Electron Spectrosc. Relat. Phenom. 28, 149-170 (1982)
R.W. Bigelow, R.J. Weagley, H.-J. Freund
31. "The Core-hole Excitation Spectrum of Benzene: A Symmetry-adapted CNDO/S Equivalent-Core Study Including "spin-symmetry-breaking" Configurations"
J. Chem. Phys. 77, 5552-5561 (1982)
R.W. Bigelow, H.-J. Freund
32. "Excitation Energy Dependence in the Photoemission Satellite Structures in Solid CO and N_2 "
J. Chem. Phys. 78, 700-707 (1983)
W. Eberhardt, H.-J. Freund
33. "Chemisorption of CO on Co(0001). Structure and Electronic Properties"
Phys. Rev. B 27, 7117-7135 (1983)
F. Greuter, D. Heskett, E.W. Plummer, H.-J. Freund
34. "Chemisorption of CO on Co(0001) II. Multielectron Excitations"
Phys. Rev. B 28, 1727-1733 (1983)
H.-J. Freund, F. Greuter, D. Heskett, E.W. Plummer

35. "The T_1 State of *p*-nitroaniline and Related Molecules: A CNDO/S Study"
Theoret. Chim. Acta (Berl.) 63, 177-194 (1983)
R.W. Bigelow, H.-J. Freund, B. Dick
36. "Analysis of Bonding Properties in Molecular Ground and Excited States by a Cohen-type Bond order"
Intern. J. Quantum Chem. 24, 747-765 (1983)
B. Dick, H.-J. Freund
37. "Influence of Multielectron Excitations on the Bands Structure of Adsorbate Overlayers"
Phys. Rev. Lett. 50, 768-771 (1983)
H.-J. Freund, W. Eberhardt, D. Heskett, E.W. Plummer
38. " π -electron Delocalization in poly(*p*-phenylene), poly(*p*-phenylene sulfide), and poly(*p*-phenylene oxide)"
Phys. Rev. B 28, 1802-1808 (1983)
G. Crecelius, J. Fink, J.J. Ritsko, M. Stamm, H.-J.Freund, H. Gonska
39. " π -electron Delocalization in poly(*p*-phenylene (PPP)), polyphenylene sulfide (PPS) and polyphenylene oxide (PPO) and AsF₅ Doping of PPP"
J. Phys. C3 44, 741-744 (1983)
J. Fink, G. Crecelius, J.J. Ritsko, M. Stamm, H.-J.Freund, H. Gonska
40. "X-ray Photoemission Study of Satellite Structure Accompanying Core Ionization from Coordinated Nitrogen"
Chem. Phys. 81, 99-112 (1983)
H.-J. Freund, H. Pulm, B. Dick, R. Lange
41. "Influence of Multi-Electron Effects on Banddispersion in Two Dimensional Adsorbate Systems: CO on Cu(111)"
Ann. Isr. Phys. Soc. 6, 185-187 (1983)
H.-J.Freund, W. Eberhardt, D. Heskett, E.W. Plummer
42. "Comparison of Core-hole Excitation Spectra of Organic Donor/acceptor Molecules in the Vapor and Condensed Phases: *p*-nitroaniline, 2-amino-6-nitronaphthalene and 1-amino-4-nitronaphthalene"
J. Chem. Phys. 81, 2535-2555 (1984)
H.-J. Freund, A.R.Slaughter, S.M.Ballina, M.S. Banna, R.W. Bigelow, B. Dick, J. Lex, H.M. Deger
43. " π -bonded N₂ on Fe(111): The Precursor for Dissociation"
Phys. Rev. Lett. 53, 850-853 (1984)
M. Grunze, M. Golze, W. Hirschwald, H.-J. Freund, H. Pulm, U. Seip, M.C. Tsai, G. Ertl, J. Küppers
44. "Photoionization Study of the CN-anion: A study of the NaCN(001) Surface in Comparison with CO and N₂"
Chem. Phys. 92, 457-470 (1985)
H. Pulm, B. Marquardt, H.-J. Freund, R. Engelhardt, K. Seki, U. Karlsson, E.E. Koch, W. von Niessen

45. "Configuration Interaction Study of Shake-up Structure Accompanying Core-ionization of Substituted Aromatic Molecules in the Vapor and Condensed Phases: Nitrosobenzene, Diazobenzene Dioxide and the NO Dimer"
Chem. Phys. 94, 215-233 (1985)
H.-J. Freund, R.W. Bigelow, B. Börsch-Pulm, H. Pulm
46. "Identification of Shake-up Satellites in Valence Photoelectron Spectra of Organic Compounds by Comparison with Electronic Absorption Spectra of Radical Cations. Case Study: Octafluoronaphthalene"
Chem. Phys. Lett. 111, 151-156 (1984)
G. Hohlneicher, D. Distler, M. Müller, H.-J. Freund
47. "X-ray Photoelectron Spectroscopy Study of Silica-alumina Catalysts Used for a New Pyridine Synthesis"
J. Catal. 94, 69-78 (1985)
R. Bicker, H. Deger, W. Herzog, K. Rieser, H. Pulm, G. Hohlneicher, H.-J. Freund
48. "A Comparison of Surface Electron Spectroscopes"
Surf. Sci. 158, 58-83 (1985)
E.W. Plummer, C.T. Chen, W.K. Ford, W. Eberhardt, R.P. Messmer, H.-J. Freund
49. "Interpretation of Electronic Excitations in Coordinated CO Systems as Observed by Electron-energy-loss Spectroscopy"
Phys. Rev. B 33, 5228-5240 (1986)
H.-J. Freund, R.P. Messmer, W. Spiess, H. Behner, G. Wedler, C.M. Kao
50. "Interpretation of the N1s Photoelectron Spectra of Chemisorbed N₂ in Terms of Local Molecule-metal Interactions"
Phys. Rev. B 31, 4848-4853 (1985)
H.-J. Freund, R.P. Messmer, C.M. Kao, E.W. Plummer
51. "Photoemission from Ordered Physisorbed Adsorbate Phases: N₂ on Graphite and CO on Ag(111)"
Phys. Rev. Lett. 54, 2095-2098 (1985)
D. Schmeisser, F. Greuter, E.W. Plummer, H.-J. Freund
52. "Interpretation of the N1s-photoelectron Spectra of Chemisorbed N₂ in Terms of Local Metal-molecule Interactions"
Proc. of the Surface Science Symposium, Obertraun, Österreich, p. 35-38 (1985)
H.-J. Freund, R.P. Messmer, C.M. Kao, E.W. Plummer
53. "Electronic and Geometric Structure of CO on Ni(110): Experiment and Theory"
Proc. 7th Conf. Surf. Sci. ECA 9c, p. 234 (1985)
H. Kuhlenbeck, A. Baalman, M. Neumann, H.-J. Freund
54. "Charge Distribution in Some Ternary Zintl Phases as Studied by X-ray Photoelectron Spectroscopy"
J. Less-Common Met. 115, 127-143 (1986)
H. Pulm, G. Hohlneicher, H.-J. Freund, H.-U. Schuster, J. Drews, U. Eberz

55. "Auger Electron Spectroscopic Study of the CN Anion: A Study of the NaCN(001) Surface in Comparison with CO and N₂"
Chem. Phys. Lett. 119, 344-350 (1985)
H. Pulm, C.-M. Liegener, H.-J. Freund
56. "Vapor-phase X-ray Core-photoelectron Spectra of *N,N*-dimethyl-*p*-nitrosoaniline: An Experimental and Theoretical study"
J. Am. Chem. Soc. 108, 1801-1805 (1986)
A.R. Slaughter, M.S. Banna, R.W. Bigelow, H. Pulm, H.-J. Freund
57. "Electronic Structure of Pyrrole-based Conducting Polymers: An Electron-energy-loss-spectroscopy Study"
Phys. Rev. B 34, 1101-1115 (1986)
J. Fink, B. Scheerer, W. Wernet, M. Monkenbusch, G. Wegner, H.-J. Freund, H. Gonska
58. "On the Separation of Initial and Final State Effects in Photoelectron Spectroscopy Using an Extension of the Auger-parameter Concept"
J. Electron Spectrosc. Relat. Phenom. 37, 209-224 (1985)
G. Hohlneicher, H. Pulm, H.-J. Freund
59. "Ab *Initio* Bandstructure of a Layer of Nitrogen Molecules Oriented in a Herringbone Structure"
Solid State Commun. 55, 895-898 (1985)
M. Seel, H.-J. Freund
60. "Electronic and Geometric Structure of CO on Ni(110): Experiment and Theory"
Surf. Sci. 173, 194-214 (1986)
H. Kuhlenbeck, M. Neumann, H.-J. Freund
61. "Photoionization of Inner Valence Electrons of CO₂ in the Gas Phase: A Synchrotron Radiation Study Using Photon Energies Between 40 and 100 eV"
Chem. Phys. Lett. 123, 463-470 (1986)
H.-J. Freund, H. Kossmann, V. Schmidt
62. "An MNDO and CNDO/S (S + DES CI) Study on the Structural and Electronic Properties of a Model Squaraine Dye and Related Cyanine"
Chem. Phys. 107, 159-174 (1986)
R.W. Bigelow, H.-J. Freund
63. "Photoemission from Ordered Physisorbed Molecular Phases N₂/graphite, N₂ and CO/Ag(111)"
Ber. Bunsenges. Phys. Chem. 90, 228-231 (1986)
D. Schmeißer, I.W. Lyo, F. Greuter, E.W. Plummer, H.-J. Freund, M. Seel
64. "On the Bonding and Reactivity of CO₂ on Metal Surfaces"
Surf. Sci. 172, 1-30 (1986)
H.-J. Freund, R.P. Messmer
65. "Theoretical Evidence for "bent bonds" in the CO₂ Molecule"
Chem. Phys. Lett. 126, 176-180 (1986)
R.P. Messmer, P.A. Schultz, R.C. Tatar, H.-F. Freund

66. "Bremsstrahlung Isochromat Spectroscopic Study of the System CO/Ni(110): Strong Intermolecular Interaction"
Surf. Sci. 175, 651-658 (1986)
H.-J. Freund, J. Rogozik, V. Dose, M. Neumann
67. "CO₂ Adsorption and CO₂/O Co-adsorption and Reaction on Ni(110): An Angle Resolved Photoemission Study"
Proc. 8th Conf. Surf. Sci. ECA 10b, 66 (1986)
B. Bartos, H.-J. Freund, H. Kuhlenbeck, M. Neumann
68. "Adsorption and Reaction of CO₂ and CO₂/O Co-adsorption on Ni(110): Angle Resolved Photoemission (ARUPS) and Electron Energy Loss Studies (HREELS)"
Surf. Sci. 179, 59-89 (1987)
B. Bartos, H.-J. Freund, H. Kuhlenbeck, M. Neumann, H. Lindner, K. Müller
69. "CO₂ Adsorption and Reaction on Fe(111): An Angle Resolved Photoemission (ARUPS) Study"
Surf. Sci. 180, 550-564 (1987)
H.-J. Freund, H. Behner, B. Bartos, G. Wedler, H. Kuhlenbeck, M. Neumann
70. "Autoionization of CO after C 1s→2π* Excitation: A Comparison with Photoemission and Auger Decay"
Chem. Phys. Lett. 134, 70-75 (1987)
H.-J. Freund, C.-M. Liegener
71. "Optical Spectra of Two-dimensional Butadiene Iron Tricarbonyl in the Adsorbed State"
Phys. Rev. B 35, 4060-4066 (1987)
B. Vennemann, R. Marx, H.-J. Freund
72. "Dynamic Effects in VUV- and XUV-spectroscopy of Organic Molecular Solids"
Physica Scripta T 17, 50-63 (1987)
H.-J. Freund, R.W. Bigelow
73. "Charge Transfer Shake-up Satellites Accompanying Core Ionization in Organic Donor Acceptor Molecules: Bis (4-dimethylaminophenyl) Squaraine and its Derivatives"
J. Electron Spectrosc. Relat. Phenom. 46, 1-17 (1988)
R.W. Bigelow, K.-Y. Law, D.H.-K. Pan, H.-J. Freund
74. "Coordination of Carbon Dioxide to Nickel: An Alternative Theoretical Model" in "Catalytic activation of carbon dioxide" (Ed. W.M. Ayers), ACS Symposium Series Vol. 363, Chapter 3 (1988) p. 16-25
R.P. Messmer, H.-J. Freund
75. "The Adsorption of N₂ on Fe(111): Angle Resolved Photoemission and Theoretical Model Studies"
Surf. Sci. 185, 187-202 (1987)
H.-J. Freund, B. Bartos, R.P. Messmer, M. Grunze, H. Kuhlenbeck, M. Neumann
76. "Photoionization of Inner Valence Electrons in Gaseous NO: A Synchrotron Radiation Study"
Chem. Phys. Lett. 137, 425-430 (1987)
H.-J. Freund, H. Kossmann, V. Schmidt

77. "Electron Energy Loss Study of the Electronically Excited States of Adsorbed CO₂: Case Study CO₂/Fe"
Surf. Sci. 184, 335-344 (1987)
H. Behner, W. Spiess, G. Wedler, D. Borgmann, H.-J. Freund
78. "Adsorption and Reaction of CO₂ on Metal Surfaces. Detection of an Intrinsic Precursor to Dissociation"
Springer Ser. in Surface Science 8, "Kinetics of Interface Reactions", (Ed. M. Grunze, H.J. Kreuzer) Springer Verlag S. 164-174 (1987)
B. Bartos, H.-J. Freund, H. Kuhlenbeck, M. Neumann
79. "UV Laser-stimulated Resonant Desorption from Metal Surfaces: NO/Ni(100)"
Chem. Phys. Lett. 136, 106-113 (1987)
D. Weide, P. Andresen, H.-J. Freund
80. "On the Electronic Structure of the Coadsorbate System CO+O(2x1)/Pd(111): A Precursor for CO₂ Formation"
Surf. Sci. 198, 331-359 (1988)
G. Odörfer, E.W. Plummer, H.-J. Freund, H. Kuhlenbeck, M. Neumann
81. "Thermal Evolution of Benzene Adsorbate Phases on a Os(0001) Surface"
Surf. Sci. 223, 33-55 (1989)
H.H. Graen, M. Neuber, M. Neumann, G. Illing, H.-J. Freund, F.-P. Netzer
82. "A Direct Observation of the Two-dimensional π -*d* Bands for Adsorbed CO"
Appl. Phys. A 44, 83-86 (1987)
H. Kuhlenbeck, H.B. Saalfeld, M. Neumann, H.-J. Freund, E.W. Plummer
83. "Core Ionization of Nitrosobenzene-dimer Compounds: Phenazon-di-N-oxide"
Chem. Phys. 118, 101-112 (1987)
B. Sjögren, H.-J. Freund, W.R. Salaneck, R.W. Bigelow
84. "Unoccupied Electron Band Structure of Na Overlayers on Al(111)"
Phys. Rev. B 36, 1276-1279 (1987)
D. Heskett, K.-H. Frank, E.E. Koch, H.-J. Freund
85. "Condensed Molecules"
in Landolt-Börnstein "Electronic Structure of Solids Photoemission Spectra and Related Data" (Eds. A. Goldmann, E.E. Koch) New Series III, Vol. 23a, p. 162-278 (1989)
H.-J. Freund
86. "Photodesorption of NO from Ni(100)-O"
Phys. Rev. Lett. 60, 1518-1521 (1988)
F. Budde, A.V. Hamza, P.M. Ferm, G. Ertl, D. Weide, P. Andresen, H.-J. Freund
87. "Adsorption and Reaction of CO₂ on Ni{110}: X-ray Photoemission, Near-edge X-ray Absorption Fine-structure and Diffuse LEED Studies"
Surf. Sci. 206, 1-19 (1988)
G. Illing, D. Heskett, E.W. Plummer, H.-J. Freund, J. Somers, Th. Lindner, A.M. Bradshaw, U. Buskotte, M. Neumann, U. Starke, K. Heinz, P.L. De Andres, D. Saldin, J.B. Pendry

88. "Photoemission of Molecular Adsorbates"
Appl. Phys. A 47, 3-23 (1988)
H.-J. Freund, M. Neumann
89. "Autoionization of the Systems P2mgCO/Ni(110) and CO₂/Ni(110) after Core-to-bound Excitation"
Proc. of the 3th Symposium on Surface Science, 22.-28.5.1988, Austria
G. Illing, T. Porwol, H.-J. Freund, H. Kuhlenbeck, M. Neumann, S. Bernstorff
90. " π -*d* Backbonding Band Dispersion and Final-state Effects for the (2x1) *p*2mg Phase of CO on Ni(110)"
Phys. Rev. B 39, 3475-3488 (1989)
H. Kuhlenbeck, H.B. Saalfeld, U. Buskotte, M. Neumann, H.-J. Freund, E.W. Plummer
91. "Influence of Alkali-coadsorption on the Adsorption and Reaction of CO₂ on Pd(111)"
Surf. Sci. 209, 159-172 (1989)
J. Wambach, G. Odörfer, H.-J. Freund, H. Kuhlenbeck, M. Neumann
92. "Correlation Between Electron Loss and Inverse Photoemission Measurements of Alkali Metals on Metal Surfaces"
Phys. Rev. B 37, 10387-10390 (1988)
D. Heskett, K.-H. Frank, K. Horn, E.E. Koch, H.-J. Freund, A. Baddorf, K.-D. Tsuei, E.W. Plummer
93. "Autoionization Versus Photoionization of Molecular Adsorbates: CO₂ Physisorbed on Ni(110)"
Phys. Rev. B 41, 10510-10522 (1990)
T. Porwol, G. Illing, H.-J. Freund, H. Kuhlenbeck, M. Neumann, S. Bernstorff, W. Braun, W. von Niessen, C.-M. Liegener
94. "UV-laser-induced Photodesorption of NO from NiO"
Surf. Sci. 218, 467-493 (1989)
P.M. Ferm, F. Budde, A.V. Hamza, S. Jakubith, G. Ertl, D. Weide, P. Andresen, H.-J. Freund
95. "Adsorption and UV-Laserdesorption of NO/O/Ni(100)"
Proc. on DIET IV, Gloggnitz, Austria (1989) Springer Ser. in Surf. Sci. Vol 19, 169-173 (1990)
Th. Mull, H. Kuhlenbeck, G. Odörfer, R. Jaeger, C. Xu, B. Baumeister, M. Menges, G. Illing, H.-J. Freund, D. Weide, P. Andresen
96. "Promoter Action of Alkali in the Activation of CO₂ on Pd(111): A HREELS Case Study"
Surf. Sci. 220, 243-252 (1989)
S. Wohlrab, D. Ehrlich, J. Wambach, H. Kuhlenbeck, H.-J. Freund
97. "Identification of Precursor States in the Dissociation of Adsorbed Benzene on Os (0001): A HREELS Study"
Chem. Phys. Lett. 165, 137-141 (1990)
H.H. Graen, M. Neumann, J. Wambach, H.-J. Freund

98. "Electron Spectroscopy of Adsorbates via Autoionization of Core-to-bound Excited States: Experiment and Theory"
J. Electron Spectrosc. Relat. Phenom. 51, 149-165 (1990)
G. Illing, T. Porwol, I. Hemmerich, G. Dömötör, H. Kuhlenbeck, H.-J. Freund, C.-M. Liegener, W. von Niessen
99. "UV-Laserphotochemistry of Molecules on Solid Surfaces: NO/Ni(100)-O"
Physica Scripta 41, 134 (1990)
Th. Mull, M. Menges, B. Baumeister, G. Odörfer, H. Geisler, G. Illing, R. M. Jaeger, H. Kuhlenbeck, H.-J. Freund, D. Weide, U. Schüller, P. Andresen, F. Budde, P. Ferm, V. Hamza, G. Ertl
100. "Reaction of CO₂ on Pd(111) Activated via Promotor Action of Alkali Coadsorption"
Vacuum 41, 157-160 (1990)
D. Ehrlich, S. Wohlrab, J. Wambach, H. Kuhlenbeck, H.-J. Freund
101. "Adsorption, Thermal and Photochemical Reactions of NO on Clean and Oxygen Precovered Ni(100) Surfaces"
Vacuum 41, 34-36 (1990)
H. Kuhlenbeck, G. Odörfer, R. Jaeger, C. Xu, Th. Mull, B. Baumeister, G. Illing, M. Menges, H.-J. Freund, D. Weide, P. Andresen, G. Watson, E.W. Plummer
102. "Lateral Interaction in Ordered Hydrocarbon Overlayers: C-H Band Dispersion of Adsorbed Benzene"
Europhys. Lett. 12, 173-177 (1990)
H.H. Graen, M. Neuber, M. Neumann, G. Odörfer, H.-J. Freund
103. "UV-Laser Induced Desorption from Surfaces: NO/NiO(100)"
Proc. of the 4th Surface Science Symposium, La Plagne, Frankreich,
p. 147-150 (1990).
B. Baumeister, M. Menges, T. Mull, H.-J. Freund, D. Weide, P. Andresen
104. "NO₂ Adsorption on Ni(100): A Comparison of NO₂ with CO₂ Adsorption"
Surf. Sci. 234, 237-250 (1990)
H. Geisler, G. Odörfer, G. Illing, R. Jaeger, H.-J. Freund, G. Watson, E.W. Plummer, M. Neuber, M. Neumann
105. "Adsorption of NO on an Oxygen Precovered Ni(100) Surface"
Surf. Sci. 233, 44-58 (1990)
G. Odörfer, R. Jaeger, G. Illing, H. Kuhlenbeck, H.-J. Freund
106. "Oberflächen und Grenzflächen"
Kapitel 13 aus: Erforschung kondensierter Materie und Atomphysik Schriftenreihe:
"Naturwissenschaftliche Grundlagenforschung im Verbund mit Großgeräten"
(Ausgabe 1989-1) S. 109-116
H.-J. Freund, J. Peisl, G. Kaindl

107. "Molecular Adsorption on Oxide Surfaces: Electronic Structure and Orientation of NO on NiO(100)/Ni(100) and on NiO(100) as Determined from Electron Spectroscopies and *ab initio* Cluster Calculations"
Phys. Rev. B 43, 1969-1986 (1991)
H. Kuhlenbeck, G. Odörfer, R. Jaeger, G. Illing, M. Menges, Th. Mull, H.-J. Freund, M. Pöhlchen, V. Staemmler, S. Witzel, C. Scharfschwerdt, K. Wennemann, T. Liedtke, M. Neumann
108. "The Structure of Thin NiO(100) Films Grown on Ni(100) as Determined by Low-energy-electron Diffraction and Scanning Tunneling Microscopy"
Surf. Sci. 253, 116-128 (1991)
M. Bäumer, D. Cappus, H. Kuhlenbeck, H.-J. Freund, G. Wilhelmi, A. Brodde, H. Neddermeyer
109. "Adsorption and Reaction on Oxide Surfaces: NO, NO₂ on Cr₂O₃(111)/Cr(110)"
Surf. Sci. 258, 23-34 (1991)
C. Xu, M. Hassel, H. Kuhlenbeck, H.-J. Freund
110. "Formation of a Well-ordered Aluminium Oxide Overlayer by Oxidation of NiAl(110)"
Surf. Sci. 259, 235-252 (1991)
R.M. Jaeger, H. Kuhlenbeck, H.-J. Freund, M. Wuttig, W. Hoffmann, R. Franchy, H. Ibach
111. "Adsorption of Small Molecules on Oxide Surfaces: Cr₂O₃(111)/Cr(110)"
Proc. of 3s'91, 10.-16.2.1991, Obertraun, Österreich, p. 341-346
C. Xu, H. Kuhlenbeck, M. Hassel, B. Adam, H.-J. Freund
112. "Unusual State of Adsorbed CO: CO($\sqrt{3} \times \sqrt{3}$) R30°/ Cr₂O₃(111)"
Phys. Rev. Lett. 67, 3551-3554 (1991)
C. Xu, B. Dillmann, H. Kuhlenbeck, H.-J. Freund
113. "CO₂ Activation and Reaction with Hydrogen on Ni (110): Formate Formation"
Chem. Phys. Lett. 184, 239-244 (1991)
J. Wambach, G. Illing, H.-J. Freund
114. "Bimodal Velocity Distributions after Ultraviolet-laser-induced Desorption of NO from Oxide Surfaces. Experiments and Results of Model Calculations"
J. Chem. Phys. 96, 7108-7116 (1992)
Th. Mull, B. Baumeister, M. Menges, H.-J. Freund, D. Weide, C. Fischer, P. Andresen
115. "Adsorption and Reaction on Oxide Surfaces: CO and CO₂ on Cr₂O₃(111)"
Ber. Bunsenges. Phys. Chem. 96, 15-27 (1992)
H. Kuhlenbeck, C. Xu, B. Dillmann, M. Häbel, B. Adam, D. Ehrlich, S. Wohlrab, H.-J. Freund, U.A. Ditzinger, H. Neddermeyer, M. Neuber, M. Neumann
116. "Surface Science Studies of Molecular Adsorbates on Solid Surfaces: A Series of Case Studies"
"Metal-Ligand-Interactions: From Atoms, to Clusters, to Surfaces" (Eds. D.R. Salahub, N. Russo) Nato Advanced Study Institute, Series Vol. 378, p. 37-70 (1992) Kluwer Acad. Publishers
H. Kuhlenbeck, H.-J. Freund

117. "Ultrathin, Epitaxial Aluminum Oxide on NiAl(110)"
Mat. Res. Soc. Symp. Proc. 221, 143-148 (1991)
M. Wuttig, W. Hoffmann, R. Jaeger, H. Kuhlenbeck, H.-J. Freund
118. "Autoionization Versus Photoionization and Auger Decay of Physisorbed Molecular Adsorbates: Condensed Benzene on Cu(110)"
Physica Scripta T 41, 197-207 (1992)
T. Porwol, G. Dömötör, H.-J. Freund, R. Dudde, C.-M. Liegener, W. von Niessen
119. "Influence of the Defects of a Thin NiO(100) Film on the Adsorption of NO"
J. Vac. Sci. Technol. A 10, 2407-2411 (1992)
M. Bäumer, D. Cappus, G. Illing, H. Kuhlenbeck, H.-J. Freund
120. "Elektronische Struktur von Adsorbaten auf Oberflächen"
Vorlesungsskripte des 23. Ferienkurses des Instituts für
Festkörperforschung der KFA Jülich 1992 (ISBN 3-89336-088-3)
H.-J. Freund
121. "Molecular Chemisorption"
in: "Angle Resolved Photoemission" (Ed. S.D. Kevan), Stud. in Surf. Sci. Catal. 74,
Chapter 9, Elsevier (1992)
H.-J. Freund, M. Neumann
122. "Angular-resolved Autoionization study of CO on Ni(110): Experiment and Theory"
Phys. Rev. B 49, 10557-10571 (1994)
T. Porwol, G. Dömötör, I. Hemmerich, J. Klinkmann, H.-J. Freund, C.-M. Liegener
123. "Low Energy Excitations and Desorption Dynamics from Oxide Surfaces"
Desorption Induced by Electron Transitions DIET V, Springer Ser. in Surf. Sci. 31,
275-283 (1993)
M. Menges, B. Baumeister, K. Al-Shamery, B. Adam, Th. Mull, H.-J. Freund, C. Fischer,
D. Weide, P. Andresen
124. "Adsorption and Reaction of Small Molecules on Oxide Surfaces"
in "Springer Proceedings in Physics" 73, 227-241 (1993)
H. Kuhlenbeck, H.-J. Freund
125. "The Influence of Defects on the Ni 2p and O 1s XPS of NiO"
J. Phys.: Condens. Matter 4, 7973-7978 (1992)
St. Uhlenbrock, Chr. Scharfschwerdt, M. Neumann, G. Illing, H.-J. Freund
126. "Metallic-to-nonmetallic Transition of Na Coadsorbed with CO₂ and H₂O on the
Cr₂O₃(111)/Cr(110) Surfaces"
Phys. Rev. B 46, 12892-12895 (1992)
C.A. Ventrice Jr., D. Ehrlich, E.L. Garfunkel, B. Dillmann, D. Heskett, H.-J. Freund
127. "Lifetimes of Electronically Excited States of Molecules on Oxide Versus
Metal Surface"
Chem. Phys. Lett. 203, 41-45 (1993)
R.M. Jaeger, Homann, H. Kuhlenbeck, H.-J. Freund

128. "UHV-ESR Investigation of NO₂/Au(111)"
 J. Phys.: Condens. Matter 5, 5471-5480 (1993)
 M. Beckendorf, U.J. Katter, H. Schlienz, H.-J. Freund
129. "The Electronic Structure of Adsorbed Aromatic Molecules: Perylene and PTCDA on Si(111) and Ag(111)"
 J. Mol. Struct. 293, 239-244 (1993)
 M. Jung, U. Baston, G. Schnitzler, M. Kaiser, J. Papst, T. Porwol, H.-J. Freund, E. Umbach
130. "Electron Spin-Resonance (ESR) Studies of Adsorbate Dynamics on Single Crystal Surfaces: Possibilities and Limitations"
 Ber. Bunsenges. Phys. Chem. 97, 340-352 (1993)
 U.J. Katter, H. Schlienz, M. Beckendorf, H.-J. Freund
131. "Adsorption and Reaction of Molecules on Surfaces of Metal-metal Oxide Systems"
 J. Mol. Catal. 82, 143-169 (1993)
 H.-J. Freund, B. Dillmann, D. Ehrlich, M. Häbel, R.M. Jaeger, H. Kuhlenbeck, C.A. Ventrice Jr., F. Winkelmann, S. Wohlrab, C. Xu, Th. Bertrams, A. Brodde, H. Neddermeyer
132. "Electronic Surface States of NiO(100)"
 Chem. Phys. Lett. 210, 10-14 (1993)
 A. Freitag, V. Staemmler, D. Cappus, C.A. Ventrice Jr., K. Al-Shamery, H. Kuhlenbeck, H.-J. Freund
133. "Hydroxyl Groups on Oxide Surfaces: NiO(100), NiO(111), and Cr₂O₃(111)"
 Chem. Phys. 177, 533-546 (1993)
 D. Cappus, C. Xu, D. Ehrlich, B. Dillmann, C.A. Ventrice Jr., K. Al-Shamery, H. Kuhlenbeck, H.-J. Freund
134. "Adsorption on Metals"
 in "Handbook of Surfaces" Vol. 2: Electronic Structure, Chapter 10 (Eds. K. Horn, M. Scheffler), Elsevier, Amsterdam 2000, p. 670-747
 H.-J. Freund, H. Kuhlenbeck
135. "2. Band-Structure Determination of Adsorbates"
 in "Applications of Synchrotron Radiation" (Ed. W. Eberhardt), Springer Ser. in Surf. Sci. 35, 9-63 (1995)
 H.-J. Freund, H. Kuhlenbeck
136. "Molecular Adsorption on Thin Ordered Oxide Films and Single Crystal Oxide Surfaces"
 WEH-Seminar on "Adsorption on ordered surfaces of ionic solids and thin films"
 Eds. E. Umbach, H.-J. Freund), Springer Ser. in Surf. Sci. 33, 136-145 (1993)
 H.-J. Freund, H. Kuhlenbeck, M. Neumann
137. "ESR under UHV Conditions on Single Crystal Metal and Metal Oxide Surfaces"
 Symposium on Surface Science Contributions (3S'93), Kaprun/ Austria, May 9-15, 1993, 121-126
 H. Schlienz, U.J. Katter, M. Beckendorf, H.-J. Freund

138. "Angular Resolved Autoionization Spectroscopy of N₂ on Ni(110)"
J. Electron Spectrosc. Relat. Phenom. 70, 197-206 (1995)
N. Sauerwald, J. Klinkmann, T. Porwol, G. Dömötör, I. Hemmerich, H.-J. Freund
139. "Synchrotronstrahlung und Oberflächenchemie"
in "Dokumentation zur BMFT-Verbundförderung der naturwissenschaftlichen Grundlagenforschung" (Hrg. G. Kaindl, M. Steiner, T. Walcher) p.101-104 (1993)
H.-J. Freund
140. "Vibrational Structure of Excited States of Molecules on Oxide Surfaces"
J. Electron Spectrosc. Relat. Phenom. 64/65, 217-225 (1993)
R.M. Jaeger, J. Libuda, M. Bäumer, K. Homann, H. Kuhlenbeck, H.-J. Freund
141. "Electronic and Geometric Structure of Adsorbates on Oxide Surfaces"
J. Electron Spectrosc. Relat. Phenom. 68, 347-355 (1994)
D. Cappus, M. Menges, C. Xu, D. Ehrlich, B. Dillmann, C.A. Ventrice Jr., J. Libuda, M. Bäumer, S. Wohlrab, F. Winkelmann, H. Kuhlenbeck, H.-J. Freund
142. "Adsorption on Oxide Surfaces: Structure and Dynamics"
Surf. Sci. 307-309, 1148-1160 (1994)
F. Winkelmann, S. Wohlrab, J. Libuda, M. Bäumer, D. Cappus, M. Menges, K. Al-Shamery, H. Kuhlenbeck, H.-J. Freund
143. "Structural Characterization of Platinum Deposits Supported on Ordered Alumina Films"
J. Vac. Sci. Technol. A 12, 2259-2264 (1994)
J. Libuda, M. Bäumer, H.-J. Freund
144. "CO₂-activation on Transition Metal Surfaces"
in "Carbon Dioxide Chemistry: Environmental Issues" (Eds.: J. Paul, C.-M. Pradier)
The Royal Society of Chemistry Special Publ. No. 153, p. 31-43 (1994)
J. Wambach, H.-J. Freund
145. "Structure and Defects of an Ordered Alumina Film on NiAl(110)"
Surf. Sci. 318, 61-73 (1994)
J. Libuda, F. Winkelmann, M. Bäumer, H.-J. Freund, Th. Bertrams, H. Neddermeyer, K. Müller
146. "UV-Laser-induced Desorption of CO from Cr₂O₃(111). A Fully Quantum State Resolved Mapping of the Desorbing Species"
Chem. Phys. Lett. 222, 107-112 (1994)
K. Al-Shamery, I. Beauport, H.-J. Freund, H. Zacharias
147. "State and Spatially Resolved Studies of the UV-laser Induced Desorption of Molecules from Oxide Surfaces"
Proc. of the SPIE'S OE/LASER '94 conference, Vol. 2125, 182 (1994)
K. Al-Shamery, I. Beauport, B. Baumeister, T. Klüner, Th. Mull, M. Menges, C. Fischer, H.-J. Freund, P. Andresen, J. Freitag, V. Staemmler

148. "Dynamical Studies of UV-laser-induced NO-desorption from Polar NiO(111) Versus the Nonpolar NiO(100) Surfaces"
J. Chem. Phys. 101(4), 3318-3325 (1994)
M. Menges, B. Baumeister, K. Al-Shamery, H.-J. Freund, C. Fischer, P. Andresen
149. "Two-dimensional State Resolved Imaging after UV-laser Induced Desorption: NO/NiO(111)"
Surf. Sci. 316, 103-111 (1994)
M. Menges, B. Baumeister, K. Al-Shamery, H.-J. Freund, C. Fischer, P. Andresen
150. "Wie Licht das Molekül zum Schwingen bringt"
Forschung, Mitteilungen der DFG (1995) Heft 1/95, S. 19-21
"How Light Causes Molecules to Vibrate"
Englische Ausgabe German research Jg. 95, p. 11-13
H.-J. Freund, K. Al-Shamery, P. Andresen
151. "Moleküle auf komplexen Festkörperoberflächen: Auf dem Weg zum Modellkatalysator"
(Die DFG-Forschergruppe MODELKAT) RUBIN Heft 1, p. 24-33 (1994)
H.-J. Freund, M. Baerns, H. Hamann, H. Kuhlenbeck, H. Papp, V. Staemmler, H. Neddermeyer
152. "Adsorption on Epitaxial Oxide Films as Model Systems for Heterogeneous Catalysis"
in "Surface Science: Principles and Current Applications"(Eds. R.J. MacDonald, E.C. Taglauer, K. Wandelt), Springer Verlag 1996, 193-202
S. Wohlrab, F. Winkelmann, J. Libuda, M. Bäumer, H. Kuhlenbeck, H.-J. Freund
153. "Hydroxyl Driven Reconstruction of the Polar NiO(111) Surface"
Surf. Sci. 315, L977-L982 (1994)
F. Rohr, K. Wirth, J. Libuda, D. Cappus, M. Bäumer, H.-J. Freund
154. "Sodium Adsorption and Reaction on NiO(111)/Ni(111)"
Langmuir 10, 3081-3085 (1994)
M. Bender, K. Al-Shamery, H.-J. Freund
155. "Principles of Chemisorption" (Chapter 5)
Handbook of Heterogeneous Catalysis, (Eds.: G. Ertl, H. Knözinger, J. Weitkamp),
Vol. 3, VCH-Verlag, Weinheim 1997, 911-942
H.-J. Freund
156. "Charge Transfer Effects and Photoemission in Transition Metal Oxides"
Chem. Phys. Lett. 251, 90-94 (1996)
P.S. Bagus, H.-J. Freund, T. Mineva, G. Pacchioni, F. Parmigiani
157. "Computer Simulations of State-Specific Laser-Induced Desorption of NO from NiO"
J. Phys. Chem. 98, 11962-11968 (1994)
B. Baumeister, H.-J. Freund
158. "Oxide Surfaces"
Rep. Prog. Phys. 59, 283-347 (1996)
H.-J. Freund, H. Kuhlenbeck, V. Staemmler

159. "Polar Surfaces of Oxides: Reactivity and Reconstruction "
Surf. Sci. (K. Müller memorial volume) 337, 268-277 (1995)
D. Cappus, M. Hassel, E. Neuhaus, M. Heber, F. Rohr, H.-J. Freund
160. "The Temperature Dependent Growth Mode of Nickel on the Basal Plane of Graphite"
Surf. Sci. 327, 321-329 (1995)
M. Bäumer, J. Libuda, H.-J. Freund
161. "Angle Resolved Autoionization Spectra of Adsorbates on Metal Oxide Surfaces"
J. Electr. Spectr. Rel. Phen. 72, 37-41 (1995)
J. Klinkmann, D. Cappus, H.-J. Freund
162. "NO on CoO(111)/Co(0001): Hydroxyl Assisted Adsorption"
Surf. Sci. 325, 163-168 (1995)
M. Hassel, H.-J. Freund
163. "Electronic Surface States of CoO(100): An Electron Energy Loss Study"
Chem. Phys. Lett. 240, 205-209 (1995)
M. Hassel, H. Kuhlenbeck, H.-J. Freund, S. Shi, A. Freitag, V. Staemmler, S. Lütkehoff,
M. Neumann
164. "Structural Characterization of a Model Catalyst: Pt/Al₂O₃/NiAl(110)"
Surf. Sci. 331-333, 1515-1519 (1995)
Th. Bertrams, F. Winkelmann, Th. Uttich, H.-J. Freund, H. Neddermeyer
165. "Clean and Modified Oxide Surfaces: Structure and Dynamics of Adsorbed Molecules"
"Metal-Ligand Interactions: Structure and Reactivity" (Eds. N. Russo, D.R. Salahub)
Nato Advanced Study Institute NATO ASI Series C Vol. 474, Kluwer Acad. Press 1996,
p. 232-248
H.-J. Freund
166. "N₂ Adsorption and Dissociation on Thin Iron Films on W(110)"
Surf. Sci. 327, 216-224 (1995)
K. Homann, H. Kuhlenbeck, H.-J. Freund
167. "Electron Spin Resonance Investigations of the Molecular Motion of NO₂ on Al₂O₃/(111)
under Ultrahigh Vacuum Conditions"
Phys. Rev. Lett. 74, 761-764 (1995)
H. Schlienz, M. Beckendorf, U. J. Katter, Th. Risse, H.-J. Freund
168. "CO on NiO(100): Orientation and Bonding"
Surf. Sci. 325, L 421-L 427 (1995)
D. Cappus, J. Klinkmann, H. Kuhlenbeck, H.-J. Freund
169. "Laser Induced Desorption of NO from NiO(100): Ab *initio* Calculations of Potential
Surfaces for Intermediate Excited States"
J. Chem. Phys. 104, 10030-10040 (1996)
T. Klüner, H.-J. Freund, J. Freitag, V. Staemmler

170. "Evidence for Pd_x(CO)_y Compound Formation on an Alumina Substrate"
Chem. Phys. Lett. 240, 429-434 (1995)
J. Libuda, A. Sandell, M. Bäumer, H.-J. Freund
171. "Structural Rearrangement and Surface Magnetism on Oxide Surfaces: A Temperature-dependent Low-energy Electron Diffraction-electron Loss Spectroscopy Study of Cr₂O₃(111)/Cr(110)"
J. Phys.: Condensed Matter 7, 5289-5301 (1995)
M. Bender, D. Ehrlich, I.N. Yakovkin, F. Rohr, M. Bäumer, H. Kuhlenbeck, H.-J. Freund, V. Staemmler
172. "Surface Chemistry of Carbon Dioxide"
Surf. Sci. Rep. 25, 225-273 (1996)
H.-J. Freund, M.W. Roberts
173. "Coherent Forward Emission (CFE) from Adsorbed Molecules: ($\sqrt{3}\times\sqrt{3}$)R30° CO/Pd(111) and (2x1)CO+O/Pd(111)"
J. Electron Spectros. Relat. Phenom. 77, 33-40 (1996)
H. Geisler, J. Wambach, H. Kuhlenbeck, H.-J. Freund, M. Neuber, M. Neumann
174. "Metal Oxide Surfaces: Electronic Structure and Molecular Adsorption"
Phys. Stat. Sol. (b) 192, 407-440 (1995)
H.-J. Freund
175. "Autoionization Spectroscopy of CO on Metal Oxide Surfaces"
J. Electron Spectros. Relat. Phenom. 77, 155-171 (1996)
J. Klinkmann, D. Cappus, K. Homann, T. Risse, A. Sandell, T. Porwol, H.-J. Freund, K. Fink, R. Fink, V. Staemmler
176. "Adsorption of CO and NO on NiO and CoO: A Comparison"
Surf. Sci. 347, 337-345 (1996)
M. Schönnenbeck, D. Cappus, J. Klinkmann, H.-J. Freund, L.G.M. Pettersson, P.S. Bagus
177. "High Resolution XPS study of a Thin Cr₂O₃(111) Film Grown on Cr(110)"
Surf. Sci. Spectra 4, 246-252 (1998)
M. Hassel, I. Hemmerich, H. Kuhlenbeck, H.-J. Freund
178. "High Resolution XPS Study of a Thin CoO(111) Film Grown on Co(0001)"
Surf. Sci. Spectra 4, 273-278 (1998)
M. Hassel, H.-J. Freund
179. "Adsorption of Gases on Solid Surfaces"
Berichte der Bunsengesellschaft, 99, 1261-1281 (1995)
H.-J. Freund
180. "The Growth and Properties of Pd and Pt on Al₂O₃/NiAl(110)"
Berichte der Bunsengesellschaft 99, 1381-1386 (1995)
M. Bäumer, J. Libuda, A. Sandell, H.-J. Freund, G. Graw, Th. Bertrams, H. Neddermeyer

181. "Orientation and Dynamics of NO₂ in a N₂O₄ Host Matrix Prepared on a Plane Surface Investigated by ESR Line Shape Analysis"
J. Phys. Chem. 100, 9242-9246 (1996)
M. Beckendorf, U.J. Katter, Th. Risse, H. Schlienz, H.-J. Freund
182. "Interaction of CO with Pd Clusters Supported on a Thin Alumina Film"
J. Vac. Sci. Technol. A 14, 1546-1551 (1996)
A. Sandell, J. Libuda, P.A. Brühwiler, S. Andersson, A.J. Maxwell, M. Bäumer, N. Mårtensson, H.-J. Freund
183. "Electron Spectroscopy Studies of Small Deposited Metal Particles"
J. Electron Spectros. Relat. Phenom. 76, 301-306 (1995)
A. Sandell, J. Libuda, P. Brühwiler, S. Andersson, A. Maxwell, M. Bäumer, N. Mårtensson, H.-J. Freund
184. "Metal Deposition in Adsorbate Atmosphere: Growth and Decomposition of a Palladium Carbonyl-like Species"
Surf. Sci. 346, 108-126 (1996).
A. Sandell, J. Libuda, M. Bäumer, H.-J. Freund
185. "Molecules on Oxide Surfaces"
Catalysis Today, 32, 1-10 (1996)
H.-J. Freund, B. Dillmann, O. Seiferth, G. Klivenyi, M. Bender, D. Ehrlich, I. Hemmerich, D. Cappus
186. "Rotational Alignment in the UV-Laser Induced Desorption of CO from Cr₂O₃(0001)"
Chem. Phys. Lett. 256, 641-648 (1996)
I. Beauport, K. Al-Shamery, H.-J. Freund
187. "Transition from a Molecular to a Metallic Adsorbate System: Core-Hole Creation and Decay Dynamics for CO Coordinated to Pd"
Phys. Rev. B 55, 7233-7243 (1997)
A. Sandell, J. Libuda, P. A. Brühwiler, S. Andersson, M. Bäumer, A. J. Maxwell, N. Mårtensson, H.-J. Freund
188. "Size Dependent CO Dissociation on Rh Particles Supported on Thin Alumina Films"
"Elementary Processes and Excitations and Reactions on Solid Surfaces", Vol. 121,
Springer Series in Solid State Sciences 1996, 210-216
J. Libuda, M. Frank, A. Sandell, S. Andersson, P.A. Brühwiler, M. Bäumer, N. Mårtensson, H.-J. Freund
189. "Electronic Excitations at Oxide Surfaces"
"Elementary Processes and Excitations and Reactions on Solid Surfaces", Vol. 121,
Springer Series in Solid State Sciences 1996, 65-77
H. Kuhlenbeck, M. Bäumer, M. Bender, D. Cappus, B. Dillmann, D. Ehrlich, F. Rohr, M. Schönnenbeck, O. Seiferth, H.-J. Freund
190. "Mechanisms of the UV-laser-induced Desorption of CO from Cr₂O₃ (0001)"
Surf. Sci. 363, 252-261 (1996)
I. Beauport, K. Al-Shamery, H.-J. Freund

191. "Adsorption and Reaction of Magnesium on Cr₂O₃ (0001)/Cr(110)"
Surf. Sci., 365, 394-402 (1996)
M. Bender, I.N. Yakovkin, H.-J. Freund
192. "Adsorption and Reaction of Ethene on Cr₂O₃ (0001)/Cr(110)"
Z. Phys. Chem. 202, 31-43 (1997)
I. Hemmerich, F. Rohr, O. Seiferth, B. Dillmann, H.-J. Freund
193. "The Interaction of N₂ with Iron on W(110), Pd(111) and Rh(111)"
Z. Physik. Chem. 198, 135-147 (1997)
K. Homann, H. Kuhlenbeck, H.-J. Freund
194. "Adsorption of the Stable Radical di-*tert*-butyl Nitroxide (DTBN) on an Epitaxially Grown Al₂O₃ Film"
J. Phys. Chem. B 101, 552-560 (1997)
U.J. Katter, T. Hill, T. Risse, H. Schlienz, M. Beckendorf, T. Klüner, H. Hamann, H.-J. Freund
195. "Electron Spin Resonance Spectroscopic Investigation of the Rotational Motion of Self-Assembled Fatty Acid Films on Al₂O₃/NiAl(110)"
Langmuir 12, 5512-5514 (1996)
T. Risse, T. Hill, M. Beckendorf, U.J. Katter, H. Schlienz, H. Hamann, H.-J. Freund
196. "Adsorption von Gasen an komplexen Festkörperoberflächen"
Angew. Chem. 109, 444-468 (1997)
H.-J. Freund
197. "Adsorption of Gases on Complex Solid Surfaces"
Angew. Chem. Int. Ed. 36, 452-475 (1997)
H.-J. Freund
198. "Adsorption on a Polar Oxide Surface: O₂, C₂H₄ and Na on Cr₂O₃(0001)/Cr(110)"
Farad. Disc. 105, 295-315 (1996)
B. Dillmann, F. Rohr, O. Seiferth, G. Klivenyi, M. Bender, K. Homann, I.N. Yakovkin, D. Ehrlich, M. Bäumer, H. Kuhlenbeck, H.-J. Freund
199. "Structure and Electronic Properties of Ultrathin Oxide Films on Metallic Substrates",
in "The Chemical Physics of Solid Surfaces", Eds. D.A. King, D.P. Woodruff, Vol. 8,
Growth and Properties of Ultrathin Epitaxial Layers, Chapter 9, Elsevier Science B.V.
1997, p. 340-374
H. Kuhlenbeck, H.-J. Freund
200. "Laser-Stimulated Desorption from Surfaces"
Current Opinion in Solid State and Materials Science, Vol. 1 Issue 5, p. 622-629 (1996)
K. Al-Shamery, H.-J. Freund
201. "Laser induced desorption of NO from NiO(100): Characterization of Potential Energy Surfaces of Excited States"
J. Mol. Catal. A: Chemical 119, 155-163 (1997)
T. Klüner, H.-J. Freund, J. Freitag, V. Staemmler

202. "Metal Deposits on Thin Well Ordered Oxide Films: Morphology, Adsorption and Reactivity"
in "Chemisorption and Reactivity on Supported Clusters and Thin Films", Eds. R.M. Lambert and G. Pacchioni. Nato-Advanced Study Institute, NATO ASI Ser. Vol. E, Kluwer Acad. Publ. 1997, 61-104
M. Bäumer, J. Libuda, H.-J. Freund
203. "Oberflächenchemie", in: Perspektiven der Forschung und ihrer Förderung 1997-2001. DFG-Mitteilungen, Part 2.9, Wiley-VCH 1997, p. 262-279
H.-J. Freund
204. "SMART: A Planned Ultrahigh-resolution Spectromicroscope for BESSY II"
J. Electron Spectros. Relat. Phenom. 84, 231-250 (1997)
R. Fink, M.R. Weiss, E. Umbach, D. Preikszas, H. Rose, R. Spehr, P. Hartel, W. Engel, R. Degenhardt, R. Wichtendahl, H. Kuhlenbeck, W. Erlebach, K. Ihmann, R. Schlögl, H.-J. Freund, A.M. Bradshaw, G. Lilienkamp, Th. Schmidt, E. Bauer, G. Benner
205. "Dynamics of the Stable Radical Di-*tert*-butyl Nitroxide on an Epitaxially Grown Al₂O₃ Film"
J. Phys. Chem. B 101, 3776-3780 (1997)
U.J. Katter, T. Hill, T. Risse, H. Schlienz, M. Beckendorf, T. Klüner, H. Hamann, H.-J. Freund
206. "Strong Relaxations at the Cr₂O₃(0001) Surface as Determined via Low-energy Electron Diffraction and Molecular Dynamics Simulations"
Surf. Sci., 372, L 291-L297 (1997), Erratum to Surf. Sci. 389, 391 (1997)
F. Rohr, M. Bäumer, H.-J. Freund, J.A. Mejias, V. Staemmler, S. Müller, L. Hammer, K. Heinz
207. "Electronic States of the Cr₂O₃(0001) Surface from *Ab initio* Embedded Cluster Calculations"
J. Phys. Cond. Matter 11, 7881-7891 (1999)
J.A. Mejias, V. Staemmler, H.-J. Freund
208. "Transmission-Electron-Microscopic Investigation of an Ordered Al₂O₃ Film on NiAl(110)"
Surf. Sci. 385, 66-76 (1997)
M. Klimenkov, S. Nepijko, H. Kuhlenbeck, H.-J. Freund
209. "ESR and TPD Investigations of the Adsorption of Di-*tert*-butyl Nitroxide on Au(111) and NiO(111). Evidence for Long-range Interactions"
J. Magn. Resonance 126, 242-247 (1997)
U.J. Katter, T. Risse, H. Schlienz, M. Beckendorf, T. Klüner, H. Hamann, H.-J. Freund
210. "Angular Distributions of NO in Laser-Induced Desorption from Pt(111)"
Surf. Sci. 427-428, 27-33 (1999)
M. Wilde, K. Fukutani, Y. Murata, M. Kampling, K. Al-Shamery, H.-J. Freund

211. "The Structure of Pt-aggregates on a Supported Thin Aluminium Oxide Film in Comparison with Unsupported Alumina: A Transmission Electron Microscopy Study" Surf. Sci. 391, 27-36 (1997)
M. Klimenkov, S. Nepijko, H. Kuhlenbeck, M. Bäumer, R. Schlögl, H.-J. Freund
212. "Concept and Design of the SMART Spectromicroscope at BESSY II" Conf. Proc. "X-ray Microscopy and Spectromicroscopy", in "X-ray Microscopy and Spectromicroscopy", Vol. V. (eds. G. Schmahl, D. Rudolph, J. Thieme, E. Umbach), Springer Heidelberg, 1997, p. III-55.
W. Engel, R. Degenhardt, A. M. Bradshaw, W. Erlebach, K. Ihmann, H. Kuhlenbeck, R. Wichtendahl, H.-J. Freund, R. Schlögl, D. Preikszas, H. Rose, R. Spehr, P. Hartel, R. Fink, M.R. Weiss, E. Umbach, G. Lilienkamp, Th. Schmidt, E. Bauer, G. Benner
213. "Interaction of Rhodium with Hydroxylated Alumina Model Substrates" Surf. Sci. 384, 106-119 (1997)
J. Libuda, M. Frank, A. Sandell, S. Andersson, P.A. Brühwiler, M. Bäumer, N. Mårtensson, H.-J. Freund
214. "Current Activities in Photodynamics at the Department of Chemical Physics at the Fritz-Haber Institute in Berlin" Gas Surface News, Research Report 17, 2-5 (1997)
K. Al-Shamery, H.-J. Freund
215. "High-temperature Micro Catalysis: A New Design for Comparative Reaction Studies in Technical and Model Systems" Proc. 1. Intern. Conf. Micro React. Technol. 1997, Ed. W. Ehrfeld, Springer Verlag Berlin 1998, p. 55-61
M. Bender, A. Knocks, S. Hövel, H.-J. Freund
216. "Photoinduced Processes on Alkali Covered Surfaces: NO Desorption from K/Cr₂O₃(0001)" Surf. Sci. 390, 186-193 (1997)
M. Wilde, I. Beauport, K. Al-Shamery, H.-J. Freund
217. "Growth and Morphology of Rh Deposits on an Alumina Film under UHV Conditions and under the Influence of CO" Surf. Sci. 391, 204-215 (1997)
M. Bäumer, M. Frank, J. Libuda, S. Stempel, H.-J. Freund
218. "Particle Size Dependent CO Dissociation on Alumina-supported Rh: A Model Study" Chem. Phys. Lett. 279, 92-99 (1997)
Erratum: Chem. Phys. Lett. 310, 229-230 (1999)
M. Frank, S. Andersson, J. Libuda, S. Stempel, A. Sandell, B. Brena, A. Giertz, P.A. Brühwiler, M. Bäumer, N. Mårtensson, H.-J. Freund
219. "Interaction of CO and NO with WC(0001)" Surf. Sci. 397, 137-144 (1998)
J. Brillo, R. Sur, H. Kuhlenbeck, H.-J. Freund

220. "Infrared Spectroscopic Investigation of CO Adsorbed on Pd Aggregates Deposited on an Alumina Model Support"
Surf. Sci. 399, 190-198 (1998)
K. Wolter, O. Seiferth, H. Kuhlenbeck, M. Bäumer, H.-J. Freund
221. "Observation of a Low-energy Adsorbate Core-level Satellite for CO bonded to Palladium: Coordination-dependent Effects"
Phys. Rev. B57, 13199-13208 (1998)
A. Sandell, A. Beutler, R. Nyholm, J.N. Andersen, S. Andersson, P.A. Brühwiler, N. Mårtensson, J. Libuda, K. Wolter, O. Seiferth, M. Bäumer, H. Kuhlenbeck, H.-J. Freund
222. "Investigation of the Molecular Motion of Self Assembled Fatty Acid Films"
J. Phys. Chem. 102, 2668-2676 (1998)
T. Risse, T. Hill, J. Schmidt, G. Abend, H. Hamann, H.-J. Freund
223. "CO Dissociation Characteristics on Size-distributed Rhodium Islands on Alumina Model Substrates"
J. Chem. Phys. 108, 2967-2974 (1998)
S. Andersson, M. Frank, A. Sandell, A. Giertz, B. Brena, P.A. Brühwiler, N. Mårtensson, J. Libuda, M. Bäumer, H.-J. Freund
224. "IR Spectroscopy of a Pd-carbonyl Surface Compound"
Chem. Phys. Lett. 277, 513-520 (1997)
K. Wolter, O. Seiferth, J. Libuda, H. Kuhlenbeck, M. Bäumer, H.-J. Freund
225. "Interaction of O₂ with WC(0001)"
Surf. Sci. 409, 199-206 (1998)
J. Brillo, H. Kuhlenbeck, H.-J. Freund
226. "Investigation of the Rotational Motion of Self-assembled Fatty Acid Films: An Electron Paramagnetic Resonance Line Shape Analysis"
J. Chem. Phys. 108, 8615-8625 (1998)
Th. Risse, T. Hill, J. Schmidt, G. Abend, H. Hamann, H.-J. Freund
227. "Infrared Study of CO Adsorption on Alumina Supported Palladium Particles"
Surf. Sci. 402-404, 428-432 (1998)
K. Wolter, O. Seiferth, J. Libuda, H. Kuhlenbeck, M. Bäumer and H.-J. Freund
228. "STM Studies of Rhodium Deposits on an Ordered Alumina Film-resolution and Tip Effects"
Surf. Sci. 402-404, 424-427 (1998)
S. Stempel, M. Bäumer, H.-J. Freund
229. "The Role of the Initial Population of Molecular Vibrations in Surface Photochemistry"
Chem. Phys. 228, 185-203 (1998)
St. Thiel, T. Klüner, M. Wilde, K. Al-Shamery, H.-J. Freund
230. "Temperature Dependent XPS Study of CO Dissociation on Small Rh Particles"
Vacuum 49, 167-170 (1998)
S. Andersson, M. Frank, A. Sandell, J. Libuda, B. Brena, A. Giertz, P. A. Brühwiler, M. Bäumer, N. Mårtensson, H.-J. Freund

231. "Electron Spectroscopic Study of the Interaction of WC(0001) with Different Adsorbates (C₆H₆, CO and NO)"
J. Electr. Spectr. Rel. Phenom. 88-91, 809-815 (1998)
J. Brillo, R. Sur, H. Kuhlenbeck, H.-J. Freund
232. "Adsorption of Potassium on Cr₂O₃ (0001) at Ionic and Metallic Coverages and UV-laser-induced Desorption"
Phys. Rev. B 59, 13401-13412 (1999)
M. Wilde, I. Beauport, F. Stuhl, K. Al-Shamery, H.-J. Freund
233. "Theoretical Investigation of Laser Induced Desorption of Small Molecules from Oxide Surfaces: A First Principles Study"
Phys. Rev. Lett. 80, 5208-5211 (1998)
T. Klüner, H.-J. Freund, V. Staemmler, R. Kosloff
234. "Properties and Identification of Oxygen Sites at the V₂O₅ (010) Surface: Theoretical Cluster Studies and Photoemission Experiments"
J. Electr. Spectr. Rel. Phen. 98-99, 245-256 (1999)
K. Hermann, M. Witko, R. Druzinic, A. Chakrabarti, B. Tepper, M. Elsner, A. Gorschlüter, H. Kuhlenbeck, H.-J. Freund
235. "Size-dependent Luminescence of Small Palladium Particles"
Chem. Phys. Lett. 291, 425-432 (1998)
M. Adelt, S. Nepijko, W. Drachsel, H.-J. Freund
236. "UV-Laser Induced Desorption of NO from the Pure and Modified Cr₂O₃(0001) Surfaces: Spin Effects in Surface State Induced Desorption"
In: Laser Techniques in Surface Science III", Vol. 3272, Proc. SPIE Conference, USA 1998, p. 152-159.
M. Wilde, K. Al-Shamery, H.-J. Freund
237. "Laser-Induced Desorption of NO from NiO(100): *Ab-initio*- and Wave Packet Calculations"
In: Laser Techniques in Surface Science III", Vol. 3272, Proc. SPIE Conference, USA 1998, p. 177-186
T. Klüner, S. Thiel, H.-J. Freund, V. Staemmler
238. "IR Investigations of CO₂ Adsorption on Chromia Surfaces: Cr₂O₃(0001)/Cr(110) versus Polycrystalline α - Cr₂O₃"
Surf. Sci. 421, 176-190 (1999)
O. Seiferth, K. Wolter, B. Dillmann, G. Klivenyi, H.-J. Freund, D. Scarano, A. Zecchina
239. "Interference-effects in the Laser-induced Desorption of Small Molecules from Surfaces: A Model Study"
Chem. Phys. 236, 263-276 (1998)
S. Thiel, T. Klüner, H.-J. Freund
240. "Transmission Electron Microscopy Study of Platinum Clusters on Al₂O₃/NiAl(110) under the Influence of Electron Irradiation"
J. Vac. Sci. Technol. A17, 577-583 (1999)
S.A. Nepijko, M. Klimenkov, H. Kuhlenbeck, H.-J. Freund

241. "TEM Study of Tantalum Clusters on Al₂O₃/NiAl(110)"
Surf. Sci. 412/413, 192-201 (1998)
S.A. Nepijko, M. Klimenkov, H. Kuhlenbeck, D. Zemlyanov, D. Herein, R. Schlögl, H.-J. Freund
242. "Influence of CO Adsorption on the Magnetism of Small Co Particles Deposited on Al₂O₃"
Chem. Phys. Lett. 292, 524-530 (1998)
T. Hill, M. Mozaffari-Afshar, J. Schmidt, T. Risse, S. Stempel, M. Heemeier, H.-J. Freund
243. "The Vibrational Excitation of NO desorbing from NiO(100) after UV Laser Irradiation: Is NO⁻ a Possible Intermediate Species?"
Chem. Phys. Lett. 294, 413-418 (1998)
T. Klüner, S. Thiel, H.-J. Freund, V. Staemmler
244. "Structural Studies of WC(0001) and the Adsorption of Benzene"
J. Electr. Spectr. Rel. Phenom. 96, 53-60 (1998)
J. Brillo, A. Hammoudeh, H. Kuhlenbeck, N. Panagiotides, S. Schwegmann, H. Over, H.-J. Freund
245. "Catalysis and Surface Science"
Physics Today 52, 32-38 (1999) January Issue
G. Ertl, H.-J. Freund
246. "FMR Studies on Ultrathin Metallic Films Grown on Al₂O₃ Surfaces"
J. Magn. Mag. Mater. 198/199, 354-356 (1999)
T. Hill, S. Stempel, T. Risse, M. Bäumer, H.-J. Freund
247. "Structural Investigation of Pd Clusters on γ - Al₂O₃ (111)/NiAl(110) with Transmission Electron Microscopy"
Langmuir 15, 5309-5313 (1999)
S.A. Nepijko, M. Klimenkov, M. Adelt, H. Kuhlenbeck, R. Schlögl, H.-J. Freund
248. "Metal Aggregates on Oxide Surfaces: Structure and Adsorption"
Crystal Res. and Technol. 33, 977-1008 (1998)
H.-J. Freund, M. Bäumer, J. Libuda, H. Kuhlenbeck, K. Al-Shamery, H. Hamann
249. "Velocity Distributions after Laser-Induced Desorption of NO from NiO(100) - The Role of the Angular Coordinate"
Israel J. Chem. (in honour of Wolf-Prize recipients) 38, 321-327 (1998)
St. Thiel, Th. Klüner, H.-J. Freund, R. Kosloff
250. "TDS Study of the Bonding of CO and NO to Vacuum Cleaved NiO(100)"
Surf. Sci. 423, 90-98 (1999)
R. Wichtendahl, U. Härtel, H. Kuhlenbeck, H.-J. Freund
251. "Oxide-supported Rh Particle Structure Probed with Carbon Monoxide"
Surf. Sci. 427/428, 288-293 (1999)
M. Frank, R. Kühnemuth, M. Bäumer, H.-J. Freund

252. "Ultraviolet-laser Induced Desorption of NO from the Cr₂O₃(0001) Surface: Involvement of a Precursor State?"
J. Chem. Phys. 111, 1158-1168 (1999)
M. Wilde, O. Seiferth, K. Al-Shamery, H.-J. Freund
253. "Molecules on Clean and Modified Oxide Surfaces"
in: "Metal-Ligand Interactions in Chemistry, Physics and Biology", Eds. N. Russo, D. Salahub, NATO ASI Ser. C, Vol. 546, 2000 Kluwer Academic Publ., Dordrecht 2000, 91-128
H.-J. Freund, Th. Klüner, R. Wichtendahl, S. Thiel, M. Adelt, W. Drachsel, M. Bäumer, H. Kuhlenbeck, T. Risse, K. Al-Shamery, M. Kampling, H. Hamann
254. Field Ion Microscopy of Platinum Adatoms Deposited on a Thin Al₂O₃ Film on NiAl(110)"
Ultramicroscopy 79, 231-238 (1999)
N. Ernst, B. Duncombe, G. Bozdech, M. Naschitzki, H.-J. Freund
255. "SMART: An Aberration-corrected XPEEM/LEEM with Energy Filter"
Surface Rev. and Lett. 5, 1249-1256 (1998)
R. Wichtendahl, R. Fink, H. Kuhlenbeck, D. Preikszas, H. Rose, R. Spehr, P. Hartel, W. Engel, R. Schlögl, H.-J. Freund, A.M. Bradshaw, G. Lilienkamp, Th. Schmidt, E. Bauer, G. Benner, E. Umbach
256. "Photochemistry of Methane on Pd/Al₂O₃ Model Catalyst: Control of Photochemistry on Transition Metal Surfaces"
Angew. Chem. Int. Ed. 38, 2192-2194 (1999)
"Photochemie von Methan auf Pd/Al₂O₃ Modellkatalysatoren: Kontrolle der Photochemie auf Übergangsmetalloberflächen"
Angewandte Chemie 111, 2328-2331 (1999)
K. Watanabe, Y. Matsumoto, M. Kampling, K. Al-Shamery, H.-J. Freund
257. "Thermodesorption of CO and NO from Vacuum Cleaved NiO(100) and MgO(100)"
Physica Status Solidi (a), 173, 93-100 (1999)
R. Wichtendahl, M. Rodriguez-Rodrigo, U. Härtel, H. Kuhlenbeck, H.-J. Freund
258. "NEXAFS Measurements of Molecules Ordering in the Bonding Layers of Liquid Crystalline, Free Standing Films"
Liq. Cryst. 26, 1713-1716 (1999)
P. Fortmeier, T. Risse, H. Stegemeyer, H.-J. Freund
259. "Changes in the Magnetism of Small Supported Cobalt Particles During the Oxidation Process Observed by Ferromagnetic Resonance"
Surf. Sci. 429, 246-254 (1999)
Th. Hill, M. Mozaffari-Afshar, J. Schmidt, T. Risse, H.-J. Freund
260. "Palladium Nanocrystals on Al₂O₃: Structure and Adhesion Energy"
Phys. Rev. Lett. 83, 4120-4123 (1999)
K. H. Hansen, T. Worren, S. Stempel, E. Laegsgaard, M. Bäumer, H.-J. Freund, F. Besenbacher, I. Stensgaard

261. "Metal Deposits on Well-Ordered Oxide Films"
Progress in Surf. Sci. 61, 127-198 (1999)
M. Bäumer, H.-J. Freund
262. "Oxide Surfaces"
Faraday Discussion, The Royal Society of Chemistry 2000, Introductory Lecture,
114, 1-31 (1999)
H.-J. Freund
263. "Catalysis and Surface Science: What Do We Learn from Studies of Oxide-supported
Cluster Model Systems?"
Adv. in Catal. 45, 333-384 (2000)
H.-J. Freund, M. Bäumer, H. Kuhlenbeck
264. "Adsorption on Oxide Surface"
In: Physics of Covered Solid Surfaces, Vol. 42, Ed. H. P. Bonzel, Landolt-Börnstein New
Series, Group III Condensed Matter, Chapter 3.9, Springer Berlin-Heidelberg-New York
2006, p. 332-403
H. Kuhlenbeck, H.-J. Freund
265. "Interaction and Diffusion of Potassium on Cr₂O₃(0001)/Cr(110)"
Phys. Rev. B 62, 7527-7534 (2000)
W. Zhao, G. Kerner, M. Asscher, X. M. Wilde, K. Al-Shamery, H.-J. Freund, V.
Staemmler, M. Wieszbowska
266. "A Low Stray Light, High Current, Low Energy Electron Source"
Rev. Sci. Instruments 70, 3886-3888 (1999)
M. Adelt, R. Körber, W. Drachsel, H.-J. Freund
267. "Metal-oxide Interaction for Metal Clusters on a Metal-supported Thin Alumina Film"
Surf. Sci. Lett. 442, L964-L970 (1999)
S. Andersson, P.A. Brühwiler, A. Sandell, M. Frank, J. Libuda, A. Giertz, B. Brena, A.J.
Maxwell, M. Bäumer, H.-J. Freund, N. Mårtensson
268. "Vibrational Spectroscopy of CO Adsorbed on Supported Ultra-small Transition Metal
Particles and Single Metal Atoms"
Surf. Sci. 454-456, 968-973 (2000)
M. Frank, R. Kühnemuth, M. Bäumer, H.-J. Freund
269. "Nucleation and Growth of Transition Metals on a Thin Alumina Film"
Surf. Sci. 454-456, 957-962 (2000)
M. Bäumer, M. Frank, M. Heemeier, R. Kühnemuth, S. Stempel, H.-J. Freund
270. "Epitaxial Growth of SiO₂ on Mo(112)"
Surf. Rev. Lett. 7, 7-14 (2000)
T. Schröder, M. Adelt, B. Richter, M. Naschitzki, M. Bäumer, H.-J. Freund
271. "Metal Particles on Oxide Surfaces: Structure and Adsorption Behaviour"
Studies in Surf. Sci. and Catal. 130, 311-316 (2000)
M. Bäumer, M. Frank, R. Kühnemuth, M. Heemeier, S. Stempel, H.-J. Freund

272. "Design of an SFG-compatible UHV-high Pressure Reaction Cell: Studies of CO and NO Adsorption on Ni and NiO(100) by IR-vis Sum Frequency Generation Vibrational Spectroscopy"
Studies in Surf. Sci. and Catal. 130, 3131-3136 (2000)
G. Rupprechter, T. Dellwig, H. Unterhalt, H.-J. Freund
273. "Photon Emission Spectroscopy of NiAl(110) in the Scanning Tunneling Microscope"
Phys. Rev. B 61, 12682-12685 (2000)
N. Nilius, N. Ernst, H.-J. Freund, P. Johansson
274. "Electronic Structure of a Pt-Ge Surface Alloy"
Surf. Sci. 464, 48-56 (2000)
K. Fukutani, Y. Murata, J. Brillo, H. Kuhlenbeck, H.-J. Freund, M. Taguchi
275. "Growth and Well-ordered Silicon Dioxide Films on Mo(112)"
Microelectronics Reliability 40, 841-844 (2000)
T. Schröder, M. Adelt, B. Richter, M. Naschitzki, M. Bäumer, H.-J. Freund
276. "Photon Emission Spectroscopy of Individual Oxide-Supported Silver Clusters in a Scanning Tunneling Microscope"
Phys. Rev. Lett. 84, 3994-3997 (2000)
N. Nilius, N. Ernst, H.-J. Freund
277. "Observation of a Localized Surface Phonon on an Oxide Surface"
Chem. Phys. Lett. 320, 206-211 (2000)
K. Wolter, D. Scarano, J. Fritsch, H. Kuhlenbeck, A. Zecchina, H.-J. Freund
278. "CO Adsorption on Ni(100) and Pt(111) Studied by Infrared-visible Sum Frequency Generation Spectroscopy: Design and Application of an SFG-compatible UV-high-pressure Reaction Cell"
Topics in Catalysis 15, 19-26 (2001)
G. Rupprechter, T. Dellwig, H. Unterhalt, H.-J. Freund
279. "The Influence of OH Groups on the Growth of Rhodium on Alumina: A Model Study"
Catal. Lett. 68, 19-24 (2000)
M. Heemeier, M. Frank, J. Libuda, K. Wolter, H. Kuhlenbeck, M. Bäumer, H.-J. Freund
280. "Bridging the Pressure and Materials Gaps: High Pressure Sum Frequency Generation Study on Supported Pd Nanoparticles"
Phys. Rev. Lett. 85, 776-779 (2000)
T. Dellwig, G. Rupprechter, H. Unterhalt, H.-J. Freund
281. "Aktueller Forschungsschwerpunkt: Struktur und Reaktivität kleiner Metallpartikel auf Oxidoberflächen"
Jahrbuch der Max-Planck-Gesellschaft 1999, p. 514-524.
J. Libuda, M. Frank, S. Stempel, M. Bäumer, H.-J. Freund
282. "A Molecular Beam/Surface Spectroscopy Apparatus for the Study of Reactions on Complex Model Catalysts"
Rev. Sci. Instrum. 71, 4395-4408 (2000)
J. Libuda, I. Meusel, J. Hartmann, H.-J. Freund

283. "Single Crystalline Silicon Dioxide Films on Mo(112)"
Solid State Electronics 45, 1471-1478 (2001)
T. Schröder, A. Hammoudeh, M. Pykavy, M. Adelt, M. Bäumer, H.-J. Freund
284. "High-pressure Carbon Monoxide Adsorption on Pt(111) Revisited: A Sum Frequency Generation Study"
J. Phys. Chem. B 105, 3797-3802 (2001)
G. Rupprechter, T. Dellwig, H. Unterhalt, H.-J. Freund
285. "Bridging the Pressure and Materials Gaps Between Catalysis and Surface Science: Clean and Modified Oxide Surfaces"
Topics in Catalysis 15, 201-209 (2001)
H.-J. Freund, H. Kuhlenbeck, J. Libuda, G. Rupprechter, M. Bäumer, H. Hamann
286. "Adsorption of CO on Cr₂O₃(0001)"
Surf. Sci. 479, 11-25 (2001)
M. Pykavy, V. Staemmler, O. Seiferth, H.-J. Freund
287. "Complex Model Catalysts under UHV and High Pressure Conditions: CO Adsorption and Oxidation on Alumina-supported Pd Particles"
J. Mol. Catal. A: Chemical 162, 51-66 (2000)
T. Dellwig, J. Hartmann, J. Libuda, I. Meusel, G. Rupprechter, H. Unterhalt, H.-J. Freund
288. "Adsorbate-induced Restructuring and Pressure-dependent Adsorption on Metal Nanoparticles Studied by Electron Microscopy and Sum Frequency Generation Spectroscopy"
Topics in Catalysis 14, 3-14 (2001)
G. Rupprechter, H.-J. Freund
289. "Electron, Photon and Thermally Induced Chemistry in Alkali-NO Coadsorbates on Oxide Surfaces"
Surf. Sci. 513, 221-232 (2002)
M. Bender, O. Seiferth, A.F. Carley, A. Chambers, H.-J. Freund, M. W. Roberts
290. "The Interaction of Oxygen with Alumina-Supported Palladium Particles"
Catal. Lett. 71, 5-13 (2001)
I. Meusel, J. Hoffmann, J. Hartmann, M. Heemeier, M. Bäumer, J. Libuda, H.-J. Freund
291. "Structure-Reactivity Relationships on Supported Metal Model Catalysts: Adsorption and Reaction of Ethene and Hydrogen on Pd/ Al₂O₃/NiAl(110)"
J. Catal. 200, 330-339 (2001)
Sh. Shaikhoutdinov, M. Heemeier, M. Bäumer, T. Lear, D. Lennon, R. J. Oldman, S. D. Jackson, H.-J. Freund
292. "Clusters and Islands on Oxides: From Catalysis via Electronics and Magnetism to Optics"
Surf. Sci. 500, 271-299 (2002)
H.-J. Freund

293. "Experiments on Individual Alumina-supported adatoms and Clusters"
Progr. Surf. Sci. 67, 99-121 (2001)
N. Nilius, A. Cörper, G. Bozdech, N. Ernst, H.-J. Freund
294. "The CO Oxidation Kinetics on Supported Pd Model Catalysts: A Molecular Beam/*in situ* Time-resolved Infrared Reflection Absorption Spectroscopy Study"
J. Chem. Phys. 114, 4669-4684 (2001)
J. Libuda, I. Meusel, J. Hoffmann, J. Hartmann, L. Piccolo, C.R. Henry, H.-J. Freund
295. "Adsorption and Reaction of Ethene on Oxide-supported Pd, Rh and Ir Particles"
J. Vac. Sci. Technol. A19, 1497-1501 (2001)
M. Frank, M. Bäumer, R. Kühnemuth, H.-J. Freund
296. "Reaction Kinetics on Supported Model Catalysts: Molecular Beam/*in situ* Time-resolved Infrared Reflection Absorption spectroscopy Study of the CO Oxidation on Alumina Supported Pd Particles"
J. Vac. Sci. Technol. A19, 1516-1523 (2001)
J. Libuda, I. Meusel, J. Hoffmann, J. Hartmann, H.-J. Freund
297. "Molecules on Well Structured Oxide Surfaces"
in „The Chemical Physics of Solid Surfaces“, (Eds. D.A. King, D.P. Woodruff) Vol. 9, „Oxide Surfaces“ Chapter 8, Elsevier Science, Amsterdam 2001, 326-372.
H.-J. Freund, H. Kuhlenbeck, T. Risse
298. "Size Dependent Reaction Kinetics on Supported Model Catalysts: A Molecular Beam/IRAS Study of the CO Oxidation on Alumina Supported Pd Particles"
J. Phys. Chem. 105, 3567-3576 (2001)
I. Meusel, J. Hoffmann, J. Hartmann, J. Libuda, H.-J. Freund
299. "Model Systems for Heterogeneous Catalysis: Quo Vadis Surface Science"
in „Surface Chemistry and Catalysis“ (Eds. A. Carley, P. Davis, G. Hutchings, M. Spencer) Kluwer Academic/Plenum Publishers, New York 2002, p. 103-141
H.-J. Freund, N. Ernst, M. Bäumer, G. Rupprechter, J. Libuda, H. Kuhlenbeck, T. Risse, W. Drachsel, K. Al-Shamery, H. Hamann
300. "Small Deposited Metal Particles on Well-Characterized Oxide Surfaces: Models for Heterogeneous Catalyst"
Proc. of the 9th Intern. Symp. on Heterogeneous Catalysis (Eds. L. Petrov, Ch. Bonev, G. Kadinov), Inst. of Catalysis, Bulgarian Academy of Sciences, Marion Drinov Academic Publishing House, Sofia 2000, 9-10
H.-J. Freund
301. "Local Melting of the NiAl Substrate Under Deposited Pd Clusters During Irradiation in a Transmission Electron Microscope"
Crystal. Res. Technol. 35, 745-749 (2000)
S. A. Nepijko, M. Klimenkov, H. Kuhlenbeck, H.-J. Freund
302. "Cathodoluminescence of Small Silver Particles on Al₂O₃/NiAl(110)"
J. Electr. Spectr. Rel. Phen. 122, 239-249 (2002)
W. Drachsel, M. Adelt, N. Nilius, H.-J. Freund

303. "Photon Emission from Individual Supported Gold Clusters: Thin Film Versus Bulk Oxide"
Surf. Sci. 478, L327-L332 (2001)
N. Nilius, N. Ernst, H.-J. Freund
304. "Metal Atoms and Particles on Oxide Supports: Probing Structure and Charge by Infrared Spectroscopy"
J. Phys. Chem. B 105, 8569-8576 (2001)
M. Frank, M. Bäumer, R. Kühnemuth, H.-J. Freund
305. "Models in Heterogeneous Catalysis: Surface Science Quo Vadis?"
Phys. Stat. Sol. (a) 187, 257-274 (2001)
H.-J. Freund, N. Ernst, T. Risse, H. Hamann, G. Rupprechter
306. "Three-dimensional *ab initio* Quantum Dynamics of the Photodesorption of CO from Cr₂O₃(0001): Stereodynamic Effects"
Phys. Rev. Lett. 87, 077601-1-077601-4 (2001)
S. Thiel, M. Pykavy, T. Klüner, H.-J. Freund, R. Kosloff, V. Staemmler
307. "Rotational Alignment in the Photodesorption of CO from Cr₂O₃(0001): A Systematic Three-dimensional *ab initio* Study"
J. Chem. Phys. 116, 762-773 (2002)
S. Thiel, M. Pykavy, T. Klüner, H.-J. Freund, R. Kosloff, V. Staemmler
308. "On Energy Transfer Processes at Cluster-Oxide Interfaces: Silver on Titania"
Chem. Phys. Lett. 349, 351-357 (2001)
N. Nilius, N. Ernst, H.-J. Freund
"On Energy Transfer Processes at Cluster-Oxide Interfaces: Silver on Titania"
Erratum: Chem. Phys. Lett. 356, 188 (2002)
N. Nilius, N. Ernst, H.-J. Freund
309. "Phonons of Clean and Metal-modified Oxide Films: An Infrared and HREELS Study"
Surf. Sci. 492, 270-284 (2001)
M. Frank, K. Wolter, N. Magg, M. Heemeier, R. Kühnemuth, M. Bäumer, H.-J. Freund
310. "CO Interaction with Small Rhodium Clusters from Density Functional Theory: Spectroscopic Properties and Bonding Analysis"
J. Phys. Chem. A 105, 10723-10730 (2001)
T. Mineva, N. Russo, H.-J. Freund
311. "Surface Photochemistry on Confined Systems: UV-laser-induced Photodesorption of NO from Pd-nanostructures on Al₂O₃"
Phys. Chem. Chem. Phys. 4, 2629-2637 (2002)
M. Kampling, K. Al-Shamery, H.-J. Freund, M. Wilde, K. Fukutani, Y. Murata
312. "Reaction Kinetics on Heterogeneous Model Catalysts: The CO Oxidation on Alumina-Supported Pd Particles"
J. Catal. 204, 378-392 (2001)
J. Hoffmann, I. Meusel, J. Hartmann, J. Libuda, H.-J. Freund

313. "Reaction Kinetics on Complex Model Catalysts under Single Scattering Conditions"
J. Phys. Chem. B 106, 4901-4915 (2002)
J. Libuda, H.-J. Freund
314. "Interaction of Oxygen with Palladium Deposited on a Thin Alumina Film"
Surf. Sci. 501, 270-281 (2002)
S. Shaikhutdinov, M. Heemeier, J. Hoffmann, I. Meusel, B. Richter, M. Bäumer, H. Kuhlenbeck, J. Libuda, H.-J. Freund, R. Oldman, S. D. Jackson, C. Konvicka, M. Schmid, P. Varga
315. "Oxygen-induced $p(2 \times 3)$ Reconstruction on Mo(112) Studied by LEED and STM"
Phys. Rev. B 65, 115411-1-8 (2002)
Th. Schroeder, J. B. Giorgi, A. Hammoudeh, N. Magg, M. Bäumer, H.-J. Freund
316. "Adsorption of Molecular and Atomic Hydrogen on Vacuum Cleaved $V_2O_5(001)$ "
Surf. Sci. 496, 64-72 (2002)
B. Tepper, B. Richter, A.-C. Dupuis, H. Kuhlenbeck, C. Hucho, P. Schilbe, M. A. bin Yarmo, H.-J. Freund
317. "Vibrational Sum Frequency Spectroscopy on Pd(111) and Supported Pd Nanoparticles: CO Adsorption from Ultrahigh Vacuum to Atmospheric Pressure"
J. Phys. Chem. B 106, 356-367 (2002)
H. Unterhalt, G. Rupprechter, H.-J. Freund
318. "Study of CO Adsorption on Crystalline-Silica-Supported Palladium Particles"
Surf. Sci. Lett. 498, L71-L77 (2002)
J. B. Giorgi, Th. Schroeder, M. Bäumer, H.-J. Freund
319. "Nanofacet-resolved CO Oxidation Kinetics on Alumina-supported Pd Particles"
Chem. Phys. Lett. 354, 403-408 (2002)
J. Hoffmann, S. Schauermann, J. Hartmann, V. P. Zhdanov, B. Kasemo, J. Libuda, H.-J. Freund
320. "Tip Influence on Plasmon Excitations in Single Gold Particles in an STM"
Phys. Rev. B 65, 115421-115428 (2002)
N. Nilius, N. Ernst, H.-J. Freund
321. "High-dimensional Quantum Dynamics of Molecules on Surfaces: A Massively Parallel Implementation"
Comput. Phys. Commun. 143, 162-173 (2002)
St. Borowski, St. Thiel, T. Klüner, H.-J. Freund, R. Tisma, H. Lederer
322. "Sum Frequency Generation Vibrational Spectroscopy at Solid-Gas Interfaces: CO Adsorption on Pd Model Catalysts at High Pressure"
Surf. Sci. 502-503, 109-122 (2002)
G. Rupprechter, H. Unterhalt, M. Morkel, P. Galletto, L. Hu, H.-J. Freund
323. "Sum Frequency Generation of CO Adsorption on Palladium Model Catalysts"
Phys. Stat. Sol. 188, 1495-1503 (2001)
H. Unterhalt, P. Galletto, M. Morkel, G. Rupprechter, H.-J. Freund

324. "CO₂ Adsorption on Na Precovered Cr₂O₃(0001)"
Surf. Sci. 505, 215-224 (2002)
O. Seiferth, K. Wolter, H. Kuhlenbeck, H.-J. Freund
325. "Characterization of a Model Ziegler-Natta Catalyst for Ethylene Polymerization"
J. Chem. Phys. 116, 10861-10868 (2002)
J. Schmidt, T. Risse, H. Hamann, H.-J. Freund
326. "Direct Observation of Radicals in the Activation of Ziegler-Natta-Catalysts"
Angew. Chem. Int. Ed. 41, 1517-1520 (2002)
T. Risse, J. Schmidt, H. Hamann, H.-J. Freund
327. "Direkte Beobachtung von Radikalen bei der Aktivierung von Ziegler-Natta-Katalysatoren"
Angew. Chem. 114, 1587-1591 (2002)
T. Risse, J. Schmidt, H. Hamann, H.-J. Freund
328. "Palladium Deposits on a Single Crystalline Cr₂O₃(0001) Surface"
J. Phys. Chem. B 106, 6723-6731 (2002)
K. Wolter, H. Kuhlenbeck, H.-J. Freund
329. "Effect of Carbon Deposits on Reactivity of Supported Pd Model Catalysts"
Catal. Lett. 80, 115-122 (2002)
S. Shaikhutdinov, M. Frank, M. Bäumer, S.D. Jackson, R. Oldman, J. C. Hemminger, H.-J. Freund
330. "Structure Sensitivity of CO Dissociation on Rh Surfaces"
Catal. Lett. 81, 153-156 (2002)
M. Mavrikakis, M. Bäumer, H.-J. Freund, J. K. Nørskov
331. "Preparation of Vanadium and Vanadium Oxide Clusters by Means of Inert Gas Aggregation"
Catal. Lett. 81, 219-221 (2002)
M. Melzer, J. Urban, H. Sack-Kongehl, K. Weiss, H.-J. Freund, R. Schlögl
332. "Structure Investigation of the Topmost Layer of a Thin Ordered Alumina Film Grown on NiAl(110) by Low Temperature Scanning Tunneling Microscopy"
Chem. Phys. Lett. 359, 41-47 (2002)
G. Ceballos, Z. Song, J. J. Pascual, H.-P. Rust, H. Conrad, M. Bäumer, H.-J. Freund
333. "Model Catalyst Studies on Vanadia Particles Deposited onto a Thin Film Alumina Support: 1. Structural Characterization"
J. Phys. Chem. B 106, 8756-8761 (2002)
N. Magg, J. B. Giorgi, T. Schroeder, M. Bäumer, H.-J. Freund
334. "Catalytic Activity and Poisoning of Specific Sites on Supported Metal Nanoparticles"
Angew. Chem., Int. Ed. 41, 2532-2535 (2002)
S. Schaueremann, J. Hoffmann, V. Johánek, J. Hartmann, J. Libuda, H.-J. Freund

335. "Katalytische Aktivität und Vergiftung spezifischer Plätze auf getragenen Metall-Nanopartikeln"
Angew. Chem. 114, 2643-2646 (2002)
S. Schauer mann, J. Hoffmann, V. Johánek, J. Hartmann, J. Libuda, H.-J. Freund
336. "Morphological and Electronic Properties of Ultrathin Crystalline Silica Epilayers on a Mo(112) Substrate"
Phys. Rev. B 66, 165422-1-11 (2002)
T. Schroeder, J. Giorgi, M. Bäumer, H.-J. Freund
337. "Rovibrational Preexcitation in the Photodesorption of CO from Cr₂O₃"
Chem. Phys. 282, 361-370 (2002)
S. Thiel, T. Klüner, D. Lemoine, H.-J. Freund
338. "On the Thermal Stability of Metal Particles Supported on a Thin Alumina Film"
Surf. Sci. 523, 103-110 (2003)
M. Heemeier, S. Stempel, Sh. K. Shaikhutdinov, J. Libuda, M. Bäumer, R. J. Oldman, S. D. Jackson, H.-J. Freund
339. "V₂O₃(0001) on Au(111) and W(110): Growth Termination and Electronic Structure"
Surf. Sci. 539, 99-112 (2003)
A.-C. Dupuis, M. Abu Haija, B. Richter, H. Kuhlenbeck, H.-J. Freund
340. "Preparation and Characterization of a Model Bimetallic Catalyst: Co-Pd Nanoparticles Supported on Al₂O₃"
Angew. Chem. Int. Ed. 41, 4073-4076 (2002)
M. Heemeier, A.F. Carlsson, M. Naschitzki, M. Schmal, M. Bäumer, H.-J. Freund
341. "Präparation und Charakterisierung eines bimetallichen Modellkatalysators: Co-Pd-Nanopartikel auf Al₂O₃"
Angew. Chem. 114, 4242-4245 (2002)
M. Heemeier, A.F. Carlsson, M. Naschitzki, M. Schmal, M. Bäumer, H.-J. Freund
342. "Preparation and Characterization of a Model Catalysts: From Ultrahigh Vacuum to in situ Conditions at the Atomic Dimension"
J. Catal., 40th Anniversary Issue, 216, 223-235 (2003)
H.-J. Freund, M. Bäumer, J. Libuda, T. Risse, G. Rupprechter, S. Shaikhutdinov
343. "SFG Spectroscopy from 10⁻⁸ to 1000 mbar: Less-ordered CO Structures and Coadsorption on Pd(111)"
Surf. Sci. 532-535, 103-107 (2003)
M. Morkel, H. Unterhalt, M. Salmeron, G. Rupprechter, H.-J. Freund
344. "Cluster Core-Level Binding-Energy Shifts: The Role of Lattice Strain"
Phys. Rev. Lett. 93, 026805-1-4 (2004)
B. Richter, H. Kuhlenbeck, P. S. Bagus, H.-J. Freund
345. "Extending UHV Studies to the mbar Range: Vibrational SFG Spectroscopy of High-pressure CO Adsorption on Pt(111) and Pd(111)"
Vacuum (Proc. 3 VC) 71, 83-87 (2003)
G. Rupprechter, H. Unterhalt, M. Morkel, P. Galletto, T. Dellwig, H.-J. Freund

346. "The Molecular Origins of Selectivity in Methanol Decomposition on Pd Nanoparticles"
Catal. Lett. **84**, 209-217 (2002)
S. Schauer mann, J. Hoffmann, V. Johánek, J. Hartmann, J. Libuda, H.-J. Freund
347. "From Real World Catalysis to Surface Science and Back: Can Nanoscience Help to Bridge the Gap?"
NATO Advanced Study Institute on "Metal-Ligand-Interactions in Molecular Nano-, Micro- and Macro-Systems in Complex Environments", Cetraro, Italy 2002 (Eds. N. Russo, D.R. Salahub, M. Witko), Kluwer Acad. Publishers, Dordrecht, Netherlands, p. 65-92 (2003)
H.-J. Freund, G. Rupprechter, M. Bäumer, Th. Risse, N. Ernst, J. Libuda
348. "A Double Lamellae Dropoff Etching Procedure for Tungsten Tips Attached to Tuning Fork Atomic Force Microscopy Scanning Tunneling"
Rev. of Sci. Instrum. **74**, 1027-1030 (2003)
M. Kulawik, M. Nowicki, G. Thielsch, L. Cramer, H.-P. Rust, H.-J. Freund, T. P. Pearl, P. S. Weiss
349. "The Structure and Reactivity of Al₂O₃-supported Cobalt-Palladium Particles: A CO-TPD-, STM- and XPS Study"
J. Phys. Chem. B **107**, 778-785 (2003)
A. F. Carlsson, M. Naschitzki, M. Bäumer, H.-J. Freund
350. "High-Pressure Studies of CO Adsorption on Pd(111) by X-Ray Photoelectron Spectroscopy and Sum-Frequency Generation"
J. Phys. Chem. B **107**, 3522-3527 (2003)
V. V. Kaichev, I. P. Prosvirin, V.I. Bukhtiyarov, H. Unterhalt, G. Rupprechter, H.-J. Freund
351. "CO Adsorption on Pd Nanoparticles: Density Functional and Vibrational Spectroscopy Studies"
J. Phys. Chem. B **107**, 255-264 (2003)
I. V. Yudanov, R. Sahnoun, K. M. Neyman, N. Rösch, J. Hoffmann, S. Schauer mann, V. Johánek, H. Unterhalt, G. Rupprechter, J. Libuda, H.-J. Freund
352. "Comparison of Oxidized Polycrystalline Copper Foil with Small Deposited Copper Clusters on Their Behaviour in the Ammonia Oxidation: An Investigation by Means of in situ NEXAFS Spectroscopy in the Soft X-ray Range"
Catal. Lett. **86**, 245-250 (2003)
R. W. Mayer, M. Melzer, M. Hävecker, A. Knop-Gericke, J. Urban, H.-J. Freund, R. Schlögl
353. "Size and Support Effects for CO Adsorption on Gold Model Catalysts"
Catal. Lett. **86**, 211-219 (2003)
Sh. K. Shaikhutdinov, R. Meyer, M. Naschitzki, M. Bäumer, H.-J. Freund
354. "Two Dimensional Growth of Pd on a Thin FeO(111) Film: A Physical Manifestation of Strong Metal-support Interaction"
Surf. Sci. Lett. **546**, L813-L819 (2003)
R. Meyer, M. Bäumer, Sh. K. Shaikhutdinov, H.-J. Freund

355. "XPEEM with Energy-filtering: Advantages and First Results from the SMART Project"
Surf. Rev. Lett. 9, 223-232 (2002)
Th. Schmidt, U. Groh, R. Fink, E. Umbach, O. Schaff, W. Engel, B. Richter, H. Kühlenbeck, R. Schlögl, H.-J. Freund, A. M. Bradshaw, D. Preikszas, P. Hartel, R. Spehr, H. Rose, G. Lilienkamp, E. Bauer, G. Benner
356. "Femtosecond Photodesorption of Small Molecules from Surfaces: A theoretical Investigation From First Principles"
Phys. Rev. Lett. 90, 117601-1 – 117601-4 (2003)
C. P. Koch, T. Klüner, H.-J. Freund, R. Kosloff
357. "Structural Changes in Nanoparticle Catalysts as Monitored by their Magnetic Properties"
Angew. Chem. Int. Ed. 43/4, 517-520 (2004)
T. Risse, M. Mozaffari-Afshar, H. Hamann, H.-J. Freund
358. "Magnetische Eigenschaften als Sonde für strukturelle Modifikationen nanostrukturierter Metallträgerkatalysatoren"
Angew. Chem. 116, 523-526 (2004)
T. Risse, M. Mozaffari-Afshar, H. Hamann, H.-J. Freund
359. "Determination of Atomic Structure of the Metal-Oxide Interface: Pd Nanodeposits on an FeO(111) Film"
Phys. Rev. Lett. 91, 076102-1-4 (2003)
S. Shaikhutdinov, R. Meyer, D. Lahav, M. Bäumer, T. Klüner, H.-J. Freund
360. "Model Catalyst Studies on Vanadia Particles Deposited onto a Thin-film Alumina Support. 2. Interaction with Carbon Monoxide"
J. Phys. Chem. B 107, 9003-9010 (2003)
N. Magg, J.B. Giorgi, A. Hammoudeh, T. Schröder, M. Bäumer, H.-J. Freund
361. "Adsorption and Reaction on Pristine and Oxidized Co-Pd Bimetallic Particles Supported on Al₂O₃ Thin Films"
Surf. Sci. 545, 143-153 (2003)
A.F. Carlsson, M. Naschitzki, M. Bäumer, H.-J. Freund
362. "Surface Structure of Co-Pd Bimetallic Particles Supported on Al₂O₃ Thin Films Studied Using Infrared Reflection Absorption Spectroscopy of CO"
J. Chem. Phys. 119, 10885-10894 (2003)
A.F. Carlsson, M. Bäumer, Th. Risse, H.-J. Freund
363. "Site Occupation and Activity of Catalyst Nanoparticles Monitored by in situ Vibrational Spectroscopy"
Angew. Chem., Int. Ed. 42, 3035-3038 (2003)
V. Johánek, S. Schauer mann, M. Laurin, J. Libuda, H.-J. Freund
364. "In-situ Schwingungsspektroskopie zur Untersuchung der Aktivität und Adsorbatplatzbesetzung von Katalysator-Nanopartikeln"
Angew. Chem. 115, 3143-3147 (2003)
V. Johánek, S. Schauer mann, M. Laurin, J. Libuda, H.-J. Freund

365. "Surrogate Hamiltonian Study of Electronic Relaxation in the Femtosecond Laser Induced Desorption of NO/NiO(100)"
J. Chem. Phys. 119, 1750-1765 (2003)
C.P. Koch, T. Klüner, H.-J. Freund, R. Kosloff
366. "Cluster, Facets and Edges: Site-Dependent Selective Chemistry on Model Catalysts"
Chem. Rec. 3, 181-200 (2003)
H.-J. Freund, J. Libuda, M. Bäumer, Th. Risse, A. Carlsson
367. "Lateral Velocity Distributions in Laser-induced Desorption of CO from Cr₂O₃(0001): Experiment and Theory"
Appl. Phys. A 78, 223-230 (2004)
S. Borowski, T. Klüner, H.-J. Freund, I. Klinkmann, K. Al-Shamery, M. Pykavy, V. Staemmler
368. "Ultrahigh Vacuum and High-pressure Coadsorption of CO and H₂ on Pd(111): A Combined SFG, TDS, and LEED Study"
J. Chem. Phys. 119, 10853-10866 (2003)
M. Morkel, G. Rupprechter, H.-J. Freund
369. "Hydrogenation on Metal Surfaces: Why are Nanoparticles More Active than Single Crystals?"
Angew. Chem. Int. Ed. 42, 5240-5243 (2003)
A.M. Doyle, Sh.K. Shaikhutdinov, S.D. Jackson, H.-J. Freund
370. "Hydrierung an Metalloberflächen: Warum sind Nanoteilchen aktiver als Einkristalle?"
Angew. Chem. 115, 5398-5401 (2003)
A.M. Doyle, Sh.K. Shaikhutdinov, S.D. Jackson, H.-J. Freund
371. "Using IR Intensities as a Probe for Studying the Surface Chemical Bond"
Surf. Sci. 546, L829-L835 (2003)
T. Risse, A. Carlsson, M. Bäumer, T. Klüner, H.-J. Freund
372. "Ultra-thin Zeolite Films Prepared by Spin-coating Silicate-1 Precursor Solutions"
Chem. Phys. Lett., 382, 404-409 (2003)
A. M. Doyle, G. Rupprechter, J. A. Martens, H.-J. Freund
373. "Complete Analysis of the Angular Momentum Distribution of Molecules Desorbing from a Surface"
J. Chem. Phys. 119, 10367-10375 (2003)
S. Borowski, T. Klüner, H.-J. Freund
374. "Do Quantum Size Effects Control CO Adsorption on Gold Nanoparticles?"
Angew. Chem. Int. Ed. 43, 118-121 (2004)
C. Lemire, R. Meyer, Sh. K. Shaikhutdinov, H.-J. Freund
375. "Steuern Größenquantisierungseffekte die CO-Adsorption auf Au Nanopartikeln?"
Angew. Chem. 116, 121-124 (2004)
C. Lemire, R. Meyer, Sh. Shaikhutdinov, H.-J. Freund

376. "Surface Chemistry of Catalysis by Gold"
Gold Bulletin 37, 72-124 (2004)
R. Meyer, C. Lemire, Sh. K. Shaikhutdinov, H.-J. Freund
377. "Atomic Structure of Antiphase Domain Boundaries of a Thin Al₂O₃ Film on NiAl(110)"
Phys. Rev. Lett. 91, 256101-1-4 (2003)
M. Kulawik, N. Nilius, H.-P. Rust, H.-J. Freund
378. "C-O Bond Scission on "Defect-Rich and Perfect" Pd(111)?"
Surf. Sci. 566-568, 1024-1029 (2004)
V. V. Kaichev, M. Morkel, H. Unterhalt, I. P. Prosvirin, V. I. Bukhtiyarov, G. Rupprechter, H.-J. Freund
379. "The Influence of Surface Defects on Methanol Decomposition on Pd(111) Studied by XPS and PM-IRAS"
Surf. Sci. 566-568, 740 (2004)
O. Rodriguez de la Fuente, M. Borasio, P. Galletto, G. Rupprechter, H.-J. Freund
380. "Low Temperature Decomposition of NO on Ordered Alumina Films"
Chem. Phys. Lett. 381, 298-305 (2003)
S. Schauer mann, V. Johánek, M. Laurin, J. Libuda, H.-J. Freund
381. "Interaction of NO with Alumina Supported Palladium Model Catalysts"
Phys. Chem. Chem. Phys. 5, 5139-5148 (2003)
S. Schauer mann, V. Johánek, M. Laurin, J. Libuda, H.-J. Freund
382. "Surface Reactivity of Pd Nanoparticles Supported on Polycrystalline Substrates as Compared to Thin Films Model Catalysts: Infrared Study of CO Adsorption"
J. Phys. Chem. B 108, 3603 (2004)
S. Bertarione, D. Scarano, A. Zecchina, V. Johane k, J. Hoffmann, S. Schauer mann, M. Frank, J. Libuda, G. Rupprechter, H.-J. Freund
383. "Surface Reactivity of Pd Nanoparticles Supported on Polycrystalline Substrates as Compared to Thin Film Model Catalysts: Infrared Study of CH₃OH Adsorption"
J. Catal. 223, 64-73 (2004)
S. Bertarione, D. Scarano, A. Zecchina, V. Johane k, J. Hoffmann, S. Schauer mann, M. Frank, J. Libuda, G. Rupprechter, H.-J. Freund
384. "On the Role of Different Adsorption and Reaction Sites on Supported Nanoparticles During a Catalytic Reaction: NO Decomposition on a Pd/Alumina Model Catalyst"
J. Phys. Chem. B 10868, 14244 (2004)
V. Johánek, S. Schauer mann, M. Laurin, C. S. Gopinath, J. Libuda, H.-J. Freund
385. "Alumina-Supported Vanadium Nanoparticles: Structural Characterization and CO Adsorption Properties"
J. Amer. Chem. Soc. 126, 3616-3626 (2004)
N. Magg, J.B. Giorgi, M. Frank, B. Immaraporn, T. Schröder, M. Bäumer, H.-J. Freund

386. "Reorganization of Small Co Particles on Al₂O₃ Surfaces Monitored by Ferromagnetic Resonance"
J. Chem. Phys. 122, 164704-1-9 (2005)
T. Hill, T. Risse, H.-J. Freund
387. "Double Quartz Tuning Fork Sensor for Low Temperature Atomic Force and Scanning Tunneling Microscopy"
Rev. Sci. Instrum. 75, 2446-2450 (2004)
M. Heyde, M. Kulawik, H.-P. Rust, H.-J. Freund
388. "Adsorbate Mobilities on Catalyst Nanoparticles Studied via the Angular Distribution of Desorbing Products"
Surf. Sci. Lett. 561, L218-L224 (2004)
V. Johaneck, M. Laurin, J. Hoffmann, S. Schaueremann, A.W. Grant, B. Kasemo, J. Libuda, H.-J. Freund
389. "Defect-induced Gap States in Al₂O₃ thin films on NiAl(110)"
Phys. Rev. B 69, 121401(R) (2004)
N. Nilius, M. Kulawik, H.-P. Rust, H.-J. Freund
390. "CO Adsorption on Oxide Supported Gold: From Small Clusters to Monolayer Islands and Three-dimensional Nanoparticles"
Surf. Sci. 552, 27-34 (2004)
C. Lemire, R. Meyer, Sh. K. Shaikhutdinov, H.-J. Freund
391. "Sum Frequency Generation and Density Functional Studies of CO-H Interaction and Hydrogen Bulk Dissolution on Pd(111)"
Surf. Sci. 554, 43-59 (2004)
G. Rupprechter, M. Morkel, H.-J. Freund, R. Hirschl
392. "Formation of Faceted MoO₂ Epilayer on Mo(112) Studied by XPS, UPS and STM"
Surf. Sci. 552, 85-97 (2004)
T. Schroeder, T.-L. Lee, I. Zegenhagen, N. Magg, B. Immaraporn, H.-J. Freund
393. "Alkene Chemistry on the Palladium Surface: Nanoparticles vs Single Crystals"
J. Catal. 223, 444-453 (2004)
A. M. Doyle, Sh. K. Shaikhutdinov, H.-J. Freund
394. "Surface-Bonded Precursor Determines Particle Size Effects for Alkene Hydrogenation on Palladium"
Angew. Chem. Int. Ed. 44, 629-631 (2005)
A.M. Doyle, Sh. K. Shaikhutdinov, H.-J. Freund
395. "Oberflächengebundene Intermediate verursachen Teilchengrößeneinflüsse bei der Hydrierung von Alkenen auf Palladium"
Angew. Chem. 117, 635-637 (2005)
A.M. Doyle, Sh. K. Shaikhutdinov, H.-J. Freund

396. "CO Oxidation on a Pd/Fe₃O₄(111) Model Catalyst"
Zeitschrift f. Physik. Chemie 218, 905-914 (2004)
G. Wedler zum 75. Geburtstag
R. Meyer, Sh. K. Shaikhutdinov, H.-J. Freund
397. "Vibrational Spectra of Alumina- and Silica-supported Vanadia Revisited: An Experimental and Theoretical Model Catalyst Study"
J. Catal. 226, 88-100 (2004)
N. Magg, B. Immaraporn, J.B. Giorgi, T. Schroeder, J. Döbler, Z. Wu, E. Kondratenko, M. Cherian, M. Baerns, P. C. Stair, M. Bäumer, J. Sauer, H.-J. Freund
398. "Quantization of Electronic States in Individual Oxide-supported Silver Particles"
Surf. Sci. 572, 347-354 (2004), Erratum: Surf. Sci. 600, 3522-3523 (2006)
N. Nilus, M. Kulawik, H.-P. Rust, H.-J. Freund
399. "CO Adsorption and Thermal Stability of Pd Deposited on a Thin FeO(111) Film"
Surf. Sci., 586, 174-182 (2005)
R. Meyer, D. Lahav, T. Schalow, M. Laurin, B. Brandt, S. Schaueremann, S. Guimond, Th. Klüner, H. Kühlenbeck, J. Libuda, Sh. Shaikhutdinov, H.-J. Freund
400. "CO Adsorption Study of V/SiO₂: The Low Vanadium Coverage Regime"
Chem. Phys. Lett. 392, 127-131 (2004)
B. Immaraporn, N. Magg, S. Kaya, J. Wang, M. Bäumer, H.-J. Freund
401. "The Surface Structure of Fe₃O₄(111) Films as Studied by CO Adsorption"
Surf. Sci. 572, 103-114 (2004)
C. Lemire, R. Meyer, V. Henrich, S. K. Shaikhutdinov, H.-J. Freund
402. "Methanol Dehydrogenation and Formation of Carbonaceous Overlayers on Pd(111) Studied by High-pressure SFG and XPS Spectroscopy"
J. Phys. Chem. B 108, 12955-12961 (2004)
M. Morkel, V. V. Kaichev, G. Rupprechter, H.-J. Freund, I. P. Prosvirin, V.I. Bukhtiyarov
403. "A Reverse Pendulum Bath Cryostat Design Suitable for Low Temperature Scanning Probe Microscopy"
Meas. Sci. Technol. 16, 859-864 (2005)
M. Heyde, G. Thielsch, H.-P. Rust, H.-J. Freund
404. "Interaction of CO Molecules with Surface State Electrons on Ag(111)"
Surf. Sci., 590, L253-L258 (2005)
M. Kulawik, H.-P. Rust, M. Heyde, N. Nilus, B. A. Mantooth, P. S. Weiss, H.-J. Freund
405. "In Situ Studies of Methanol Decomposition and Oxidation on Pd(111) by PM-IRAS and XPS Spectroscopy"
J. Phys. Chem. B 109, 17791-17794 (2005)
M. Borasio, O. Rodriguez de la Fuente, G. Rupprechter, H.-J. Freund
406. "Model Studies in Heterogeneous Catalysis. From Structure to Kinetics"
Monatshefte für Chemie 136, 59-75 (2005)
J. Libuda, S. Schaueremann, M. Laurin, T. Schalow, H.-J. Freund

407. "Spectroscopic Characterization of Organometallic Centers on Insulator Single Crystal Surfaces: From Metal Carbonyls to Ziegler-Natta-Catalysts"
In: Topics in Organometallic Chemistry, Vol. 16, Eds. C. Copéret, B. Chaudret, Springer Verlag 2005, p. 117-149
T. Risse, H.-J. Freund
408. "Foreword for the Gerhard Ertl Festschrift"
J. Phys. Chem. B 108, 14183-14215 (2004)
H.-J. Freund, H. Knözinger
409. "Finite Size Effects on Supported Pd Nanoparticles: Interaction of Hydrogen with CO and C₂H₄"
Surf. Sci. 588, L209-L219 (2005)
M. Morkel, G. Rupprechter, H.-J. Freund
410. "Local Reaction Rates and Surface Diffusion on Nanolithographically Prepared Model Catalysts: Experiments and Simulations"
J. Chem. Phys. 122, 084713-1-12 (2005)
M. Laurin, V. Johánek, A. W. Grant, B. Kasemo, J. Libuda, H.-J. Freund
411. "A Model High Surface Area Alumina-supported Palladium Catalyst"
PCCP communication 7, 565-567 (2005)
T. Lear, R. Marshall, E. K. Gibson, Th. Schütt, Th. M. Klapötke, G. Rupprechter, H.-J. Freund, J. M. Winfield, D. Lennon
412. "STM Studies of Ordered ($\sqrt{31} \times \sqrt{31}$)R9° CO Islands on Ag(111)"
Phys. Rev. B71, 153045-1-4 (2005)
M. Kulawik, H.-P. Rust, N. Nilius, M. Heyde, H.-J. Freund
413. "Ferryl (Fe=O) Termination of the Hematite α -Fe₂O₃(0001) Surface"
Phys. Rev. Lett. 94, 166101-1-4 (2005)
C. Lemire, S. Bertarione, A. Zecchina, D. Scarano, A. Chaka, S. Shaikhutdinov, H.-J. Freund
414. "Preparation and Characterization of Well-Ordered, Thin Niobia Films on a Metal Substrate"
Surf. Sci. 599, 14-26 (2005)
D. Starr, F.M.T. Mendes, J. Middeke, R.-P. Blum, H. Niehus, D. Lahav, S. Guimond, A. Uhl, T. Kluener, M. Schmal, H. Kühlenbeck, S. Shaikhutdinov, H.-J. Freund
415. "Two-Photon Photoemission from Silver Nanoparticles on Thin Alumina Films: Role of Plasmon Excitation"
Surf. Sci. 593, 43-48 (2005)
F. Evers, Ch. Rakete, K. Watanabe, D. Menzel, H.-J. Freund
416. "Model Studies on Heterogeneous Catalysts at the Atomic Level"
Catal. Today 100, 3-9 (2005)
H.-J. Freund

417. "Molecular Beam Experiments on Model Catalysts"
Surf. Sci. Rep. 57, 157-298 (2005)
J. Libuda, H.-J. Freund
418. "Field Electron Energy Spectroscopy of Alumina Supported Platinum Adatoms"
Phys. Stat. Sol. (b) 242, 2462-2467 (2005)
A. Cörper, G. Bozdech, N. Ernst, T. Klüner, H.-J. Freund
419. "Photon Emission Spectroscopy of Single Oxide-supported Ag-Au Alloy Clusters"
Phys. Rev. B 72, 045403-1-7 (2005)
W. Bente, N. Nilius, N. Ernst, H.-J. Freund
420. "Light Emission Spectroscopy of Self-Assembled Arrays of Silver Nano-crystals with the STM"
Chem. Phys. Lett. 413, 10-15 (2005)
N. Nilius, H.-M. Benia, C. Salzemann, G. Rupprechter, H.-J. Freund, A. Brioude, M.-P. Pileni
421. "Surface Potential of a Polar Oxide Film: FeO on Pt(111)"
Phys. Rev. B 71, 241404-1-4 (2005)
E. Rienks, N. Nilius, H.-P. Rust, H.-J. Freund
422. "Transient and Steady State CO Oxidation Kinetics on Nanolithographically Prepared Supported Pd Model Catalysts: Experiments and Stimulation"
J. Chem. Phys. 123, 054701-1-054701-12 (2005)
M. Laurin, V. Johánek, A. W. Grant, B. Kasemo, J. Libuda, H.-J. Freund
423. "Geometric Characterization of a Singly Charged Oxygen Vacancy on a Single-Crystalline MgO(001) Film by Electron Paramagnetic Resonance Spectroscopy"
Phys. Rev. Lett. 94, 186101-1-4 (2005)
M. Sterrer, E. Fischbach, Th. Risse, H.-J. Freund
424. "Interpreting Intensities in Vibrational Sum Frequency Generation (SFG) Spectroscopy: CO Adsorption on Pd Surfaces"
Surf. Sci. 586, 146-156 (2005)
M. Morkel, H. Unterhalt, Th. Klüner, G. Rupprechter, H.-J. Freund
425. "Atomic Resolution on MgO(001) by Atomic Force Microscopy Using a Double Quartz Tuning Fork Sensor at Low-temperature and Ultrahigh Vacuum"
Appl. Phys. Lett. 87, 083104-1-3 (2005)
M. Heyde, M. Sterrer, H.-P. Rust, H.-J. Freund
426. "Three-dimensional ab initio Simulation of Laser-induced Desorption of NO from NiO(100)"
Chem. Phys. Lett. 415, 150-154 (2005)
D. Kröner, I. Mehdaoui, H.-J. Freund, Th. Klüner

427. "Atomic Structure of a Thin Silica Film on a Mo(112) Substrate: A Two-Dimensional Network of SiO₄ Tetrahedra"
Phys. Rev. Lett. 95, 076103-076106 (2005)
J. Weissenrieder, S. Kaya, J.-L. Lu, H. Gao, S. Shaikhtudinov, H.-J. Freund, M. Sierka, T. K. Todorova, J. Sauer
428. "The Application of Infrared Spectroscopy to Probe the Surface Morphology of Alumina-supported Palladium Catalysts"
J. Chem. Phys. 123, 174706-1-174706-13 (2005), Erratum: J. Chem. Phys. 124, 069901 (2006)
T. Lear, R. Marshall, J. A. Lopez-Sanchez, S. D. Jackson, Th. M. Klapötke, M. Bäumer, G. Rupprechter, H.-J. Freund, D. Lennon
429. "From Pd Nanoparticles to Single Crystals: 1,3-Butadiene Hydrogenation on Well-Defined Model Catalysts"
Chem. Comm. 1, 80-82 (2006)
J. Silvestre-Albero, G. Rupprechter, H.-J. Freund
430. "Self-Organization of Gold Atoms on a Polar FeO(111) Surface"
Phys. Rev. Lett. 95, 066101-1-4 (2005)
N. Nilius, E. Rienks, H.-P. Rust, H.-J. Freund
431. "Low Temperature Infrared Spectra of CO Adsorbed on the Surface of MgO(001) Thin Films"
Surf. Sci. 596, 222-228 (2005)
M. Sterrer, Th. Risse, H.-J. Freund
432. "Frequency-modulated Atomic Force Spectroscopy on NiAl(110) Partially Covered with a Thin Alumina Film"
Phys. Rev. B 73, 125320-1-6 (2006)
M. Heyde, M. Kulawik, H.-P. Rust, H.-J. Freund
433. "Gold Supported on Oxide Surfaces: Environmental Effects as Studied by STM."
Topics in Catalysis 36, 33-41 (2005)
D.E. Starr, S.K. Shaikhtudinov, H.-J. Freund
434. "Atmospheric Pressure Studies of Selective 1,3-butadiene Hydrogenation on Pd Single Crystals: Effect of CO Addition"
J. Catal. 235, 52-59 (2005)
J. Silvestre-Albero, G. Rupprechter, H.-J. Freund
435. "Oxygen Storage at the Metal/Oxide Interface of Catalyst Nanoparticles"
Angew. Chem. Int. Ed. 44, 7601-7605 (2005)
T. Schalow, M. Laurin, B. Brandt, S. Schauermaun, S. Guimond, H. Kuhlenbeck, D.E. Starr, S. K. Shaikhtudinov, J. Libuda, H.-J. Freund
436. "Sauerstoffspeicherung an der Metall-Oxid-Grenzfläche von Katalysatornanopartikeln"
Angew. Chem. 117, 7773-7777 (2005)
T. Schalow, M. Laurin, B. Brandt, S. Schauermaun, S. Guimond, H. Kuhlenbeck, D.E. Starr, S. K. Shaikhtudinov, J. Libuda, H.-J. Freund

437. „Identification of Color Centers on MgO(100) Thin Films with Scanning Tunneling Microscopy”
J. Phys. Chem. B (Lett.) 110, 46-49 (2006)
M. Sterrer, M. Nowicki, M. Heyde, N. Nilius, T. Risse, H.-P. Rust, G. Pacchioni, H.-J. Freund
438. “Influence of the Metal Substrate on the Adsorption Properties of Thin Oxide Layers: Au Atoms on a Thin Alumina Film on NiAl(110)”
Phys. Rev. Lett. 96, 036103 (2006)
M. Kulawik, N. Nilius, H.-J. Freund
439. “Oxygen-deficient Line Defects in an Ultra-Thin Aluminium Oxide Film”
Phys. Rev. Lett. 97, 046101-1-4 (2006)
M. Schmid, M. Shishkin, G. Kresse, E. Napetschnig, P. Varga, M. Kulawik, N. Nilius, H.-P. Rust, H.-J. Freund
440. “Two-dimensional Surrogate Hamiltonian Investigation of Laser-induced Desorption of NO/NiO(100)”
J. Chem. Phys. 124, 024702-1-8 (2006)
S. Dittrich, H.-J. Freund, Ch. P. Koch, R. Kosloff, T. Klüner
441. “Initial and Final State Contributions to Binding-energy Shifts Due to Lattice Strain: Validation of Auger Parameter Analyses”
Chem. Phys. Lett. 420, 42-46 (2006)
P. S. Bagus, A. Wieckowski, H.-J. Freund
442. “Principles of Chemisorption”
In: Handbook of Heterogeneous Catalysis, 2nd Edition, Volume 3, Chapter 5.1.1 (Eds.: G. Ertl, H. Knözinger, F. Schüth, J. Weitkamp), Wiley-VCH Verlag, 2008, 1375-1415
H.-J. Freund
443. “Effect of Electromagnetic Interactions on Plasmon Excitations in Silver Particle Ensembles”
Surf. Sci. 600, L128-L133 (2006)
H.-M. Benia, N. Nilius, H.-J. Freund
444. “Adsorption of Water on Thin V₂O₃ (0001) Films”
Surf. Sci. 600, 1040-1047 (2006)
M. Abu Haija, S. Guimond, A. Uhl, H. Kuhlenbeck, H.-J. Freund
445. “Low Temperature Adsorption of Oxygen on Reduced V₂O₃ (0001) Surfaces”
Surf. Sci. 600, 1497-1503 (2006)
M. Abu Haija, S. Guimond, A. Uhl, H. Kuhlenbeck, H.-J. Freund, T. K. Todorova, M. V. Ganduglia-Pirovano, J. Döbler, J. Sauer
446. “Frequency Modulated Atomic Force Microscopy on MgO(001) Thin Films: Interpretation of Atomic Image Resolution and Distance Dependence of Tip-sample Interaction”
Nanotechnology 17, S101-S106 (2006)
M. Heyde, M. Sterrer, H.-P. Rust, H.-J. Freund

447. "Deactivation of Pd Particles Supported on Nb₂O₅ /Cu₃Au: SFG and TPD Studies from UHV to 100 mbar"
Surf. Sci. 600, 963-970 (2006)
F. Höbel, A. Bandara, G. Rupprechter, H.-J. Freund
448. "Photo-induced Desorption of NO from NiO(100): Calculation of the Four-dimensional Potential Energy Surfaces and Systematic Wave Packet Studies"
PhysChemChemPhys 8, 1584-1592 (2006)
I. Mehdaoui, D. Kröner, M. Pykavy, H.-J. Freund, Th. Klüner
449. "CO Adsorption on the Surface of MgO(001) Thin Films"
Appl. Catal. A General 307, 58-61 (2006)
M. Sterrer, T. Risse, H.-J. Freund
450. "Oxygen-Induced Restructuring of a Pd/Fe₃O₄ Model Catalyst"
Catal. Lett. 107, 189-196 (2006)
T. Schalow, B. Brandt, M. Laurin, S. Schauermaun, D.E. Starr, Sh. K. Shaikhutdinov, J. Libuda, H.-J. Freund
451. "Vanadium Oxide Surfaces and Supported Vanadium Oxide Nanoparticles"
Top. Catal. 38, 117-125 (2006)
S. Guimond, M. Abu Haija, S. Kaya, J. Lu, J. Weissenrieder, Sh. K. Shaikhutdinov, H. Kühlenbeck, H.-J. Freund, J. Döbler, J. Sauer
452. "Acetylene and Ethylene Hydrogenation on Alumina Supported Pd-Ag Model Catalysts"
Catal. Lett. 108, 159-164 (2006)
N. A. Khan, Sh. K. Shaikhutdinov, H.-J. Freund
453. "Density Functional Model Cluster Studies of EPR g-Tensors of F_s⁺ Centers on the Surface of MgO"
J. Chem. Phys. 124, 044708-1-7 (2006)
C. Di Valentin, K. M. Neymann, T. Risse, M. Sterrer, E. Fischbach, H.-J. Freund, V. A. Nasluzov, G. Pacchioni, N. Rösch
454. "Atomic Structure of a Thin Silica Film on a Mo(112) Substrate: A Combined Experimental and Theoretical Study"
Phys. Rev. B 73, 165414-1-9 (2006)
T. K. Todorova, M. Sierka, J. Sauer, S. Kaya, J. Weissenrieder, J.-L. Lu, H. Gao, S. Shaikhutdinov, H.-J. Freund
455. "Size-dependent Oxidation Mechanism of Supported Pd Nanoparticles"
Angew. Chem. Int. Ed. 45, 3693-3697 (2006)
T. Schalow, B. Brandt, D.E. Starr, M. Laurin, Sh. K. Shaikhutdinov, S. Schauermaun, J. Libuda, H.-J. Freund
456. "Größenabhängiger Oxidationsmechanismus trägerfixierter Pd-Nanopartikel"
Angew. Chem. 118, 3775-3780 (2006)
T. Schalow, B. Brandt, D.E. Starr, M. Laurin, Sh. K. Shaikhutdinov, S. Schauermaun, J. Libuda, H.-J. Freund

457. "Models for Oxidation Catalyst: Characterization and Reaction at the Atomic Level"
Catalysis Today 117, 6-14 (2006)
H.-J. Freund
458. "Influence of Substrate Morphology on Organic Layer Growth: PTCDA on Ag(111)"
Chem. Phys. 325, 178-184 (2006)
H. Marchetto, U. Groh, Th. Schmidt, R. Fink, H.-J. Freund, E. Umbach
459. "Alumina Supported Model Pd-Ag Catalysts: A Combined STM, XPS, TPD and IRAS Study"
Surf. Sci. 600, 1849-1853 (2006)
N. Khan, A. Uhl, S. Shaikhutdinov, H.-J. Freund
460. "Photochemistry on Metal Nanoparticles"
Chem. Rev. 106, 4301-4320 (2006)
K. Watanabe, D. Menzel, N. Nilius, H.-J. Freund
461. "Binding of Single Gold Atoms on Thin MgO(001) Films"
Phys. Rev. Lett. 96, 146804-1-4 (2006)
M. Yulikov, M. Sterrer, M. Heyde, H.-P. Rust, Th. Risse, H.-J. Freund, G. Pacchioni, A. Scagnelli
462. "Interaction of Gold Clusters with Color Centers on MgO(100) Films"
Angew. Chem. Int. Ed. 45, 2630-2632 (2006)
M. Sterrer, M. Yulikov, E. Fischbach, M. Heyde, H.-P. Rust, N. Nilius, G. Pacchioni, Th. Risse, H.-J. Freund
463. "Wechselwirkung kleiner Au Teilchen mit Farbzentren auf einkristallinen MgO(001)-Filmen"
Angew. Chem. 118, 2692-2695 (2006)
M. Sterrer, M. Yulikov, E. Fischbach, M. Heyde, H.-P. Rust, N. Nilius, G. Pacchioni, Th. Risse, H.-J. Freund
464. "Signal Electronics for an Atomic Force Microscope Equipped with a Double Quartz Tuning Fork Sensor"
Rev. Sci. Instr. 77, 043710-1-8 (2006)
H.-P. Rust, M. Heyde, H.-J. Freund
465. "Atmospheric Pressure Studies of Selective 1,3-Butadiene Hydrogenation on Well-defined Pd/Al₂O₃/NiAl(100) Model Catalysts: Effect of Pd Particle Size"
J. Catal. 240, 58-65 (2006)
J. Silvestre-Albero, G. Rupprechter, H.-J. Freund
466. "When the Reporter Induces the Effect: Unusual IR Spectra of CO on Au₁/MgO(100)/Mo(100)"
Angew. Chem. Int. Ed. 45, 2633-2635 (2006)
M. Sterrer, Th. Risse, M. Yulikov, H.-J. Freund, J. Carrasco, F. Illas, C. Di Valentin, L. Giordano, G. Pacchioni

467. "Ungewöhnliches Schwingungsspektrum von CO auf Au₁/MgO(100)/Mo(100): ein Effekt der Sonde"
Angew. Chem. 118, 2695-2698 (2006)
M. Sterrer, M. Yulikov, Th. Risse, H.-J. Freund, J. Carrasco, F. Illas, C. Di Valentin, L. Giordano, G. Pacchioni
468. "Strong Metal Support Interaction of Co/niobia Model Catalysts"
Catal. Lett. 111, 35-41 (2006)
F. M. T. Mendes, A. Uhl, D. E. Starr, S. Guimond, M. Schmal, H. Kuhlenbeck, S. K. Shaikhutdinov, H.-J. Freund
469. "Electron Paramagnetic Resonance and Scanning Tunneling Microscopy Investigations on the Formation of F⁺ and F⁰ Color Center on the Surface of Thin MgO(100) Films"
J. Phys. Chem. B 110, 8665-8669 (2006)
M. Sterrer, E. Fischbach, M. Heyde, N. Nilius, H.-P. Rust, Th. Risse, H.-J. Freund
470. "Formation of One-dimensional Crystalline Silica on a Metal Substrate"
Surf. Sci. Lett. 600, L164-L168 (2006)
J. L. Lu, S. Kaya, J. Weissenrieder, T. K. Todorova, M. Sierka, J. Sauer, H. Gao, S. Shaikhutdinov, H.-J. Freund
471. "Combined UHV and Ambient Pressure Studies of 1,3-Butadiene Adsorption and Reaction on Pd(111) by GC, IRAS and XPS"
Catal. Comm. 8, 292-298 (2007)
J. Silvestre-Albero, M. Borasio, G. Rupprechter, H.-J. Freund
472. "Low Temperature CO Induced Growth of Pd Supported on a Monolayer Silica Film"
Surf. Sci. Lett. 600, L153-L157 (2006)
J. L. Lu, S. Kaya, J. Weissenrieder, H. Gao, S. Shaikhutdinov, H.-J. Freund
473. "Formation of Interface and Surface Oxides on Supported Pd Nanoparticles"
Surf. Sci. 600, 2528-2542 (2006)
T. Schalow, B. Brandt, M. Laurin, S. Schaueremann, S. Guimond, H. Kuhlenbeck, J. Libuda, H.-J. Freund
474. "EPR Properties of Au Atoms Adsorbed on Various Sites of the MgO(100) Surface from Relativistic DFT Calculations"
Surf. Sci. 600, 2434-2442 (2006)
C. Di Valentin, A. Scagnelli, G. Pacchioni, Th. Risse, H.-J. Freund
475. "CO Oxidation on Partially Oxidized Pd Nanoparticles"
J. Catal. 242, 58-70 (2006)
T. Schalow, B. Brandt, M. Laurin, S. Schaueremann, J. Libuda, H.-J. Freund
476. "Molecular Adsorption on V₂O₃(0001)/Au(111) Surfaces"
Top. Catal., 46, 223-230 (2007)
A. Bandara, M. Abu Haija, F. Höbel, H. Kuhlenbeck, G. Rupprechter, H.-J. Freund

477. "Fischer-Tropsch Synthesis on Anchored Co/Nb₂O₅/Al₂O₃ Catalysts: The nature of the Surface and the Effect on Chain Growth"
J. Phys. Chem. B 110, 9155-9163 (2006)
F. M. T. Mendes, C. A. C. Perez, F. B. Noronha, C. D. D. Souza, D. V. Cesar, H.-J. Freund, M. Schmal
478. "Ultrathin Oxide Films"
In: Handbook of Heterogeneous Catalysis, 2nd Edition, Volume 3, Chapter 4.5 (Eds.: G. Ertl, H. Knözinger, F. Schüth, J. Weitkamp), Wiley-VCH Verlag, 2008, 1309-1338
H.-J. Freund, D. W. Goodman
479. "Interplay Between Theory and Experiment in the Quest for Silica with Reduced Dimensionality Grown on a Mo(112) Surface"
Chem. Phys. Lett. 424, 115-119 (2006)
M. Sierka, T. K. Todorova, S. Kaya, D. Stacchiola, J. Weissenrieder, J.-L. Lu, H. Gao, S. Shaikhutdinov, H.-J. Freund, J. Sauer
480. "Bulk and Surface Oxygen Vacancy Formation and Diffusion in Single Crystals, Ultrathin Films, and Metal Grown Oxide Structures"
J. Chem. Phys., 125, 074711 (2006)
J. Carrasco, N. Lopez, F. Illas, H.-J. Freund
481. "Formation and Catalytic Activity of Partially Oxidized Pd Nanoparticles"
Top. Catal., 42-43, 387-391 (2007)
T. Schalow, B. Brandt, M. Laurin, S. Guimond, D. E. Starr, S. K. Shaikhutdinov, S. Schauermaun, J. Libuda, H.-J. Freund
482. "Synthesis and Structure of an Ultrathin Aluminosilicate Film"
Angew. Chem. Int. Ed. 45, 7636 (2006)
D. Stacchiola, S. Kaya, J. Weissenrieder, H. Kuhlenbeck, S. Shaikhutdinov, H.-J. Freund, M. Sierka, T. K. Todorova, J. Sauer
483. "Synthese und Struktur eines ultradünnen Alumino-Silikatfilms"
Angew. Chem. 118, 7798-7801 (2006)
D. Stacchiola, S. Kaya, J. Weissenrieder, H. Kuhlenbeck, S. Shaikhutdinov, H.-J. Freund, M. Sierka, T. K. Todorova, J. Sauer
484. "Formation of an Ordered Ice Layer on a Thin Silica Film"
J. Phys. Chem. C 111, 759-764 (2007)
S. Kaya, Y. Sun, D. Stacchiola, J. Weissenrieder, S. Shaikhutdinov, H.-J. Freund
485. "Morphology and Defect Structure of the CeO₂(111) Films Grown on Ru(0001) as Studied by Scanning Tunneling Microscopy"
Surf. Sci. 600, 5004-5010 (2006)
J.-L. Lu, H. Gao, S. Shaikhutdinov, H.-J. Freund
486. "Oxide Surfaces - Properties"
In: Surface and Interface Science, Chapter X, Vol. 1, Ed. K. Wandelt, Wiley-VCH 2006, accepted
M. Sterrer, H.-J. Freund

487. "Oxidation, Reduction, and Reactivity of Supported Pd Nanoparticles: Mechanism and Microkinetics"
J. Phys. Chem. C 111, 938 (2007)
B. Brandt, T. Schalow, M. Laurin, S. Schauermaun, J. Libuda, H.-J. Freund
488. "Probing Adsorption Sites on Thin Oxide Films by Dynamic Force Microscopy"
Appl. Phys. Lett. 89, 263107-1-3 (2006)
M. Heyde, M. Sterrer, G. Simon, H.-P. Rust, H.-J. Freund
489. "Influence of Pd codeposition on the Magnetic Properties of Co Particles on Alumina/NiAl(110)"
J. Chem. Phys. 129, 114703-1-7 (2008)
O. N. Martyanov, T. Risse, H.-J. Freund
490. "X-ray Spectroscopic Fingerprints of Reactive Oxygen Sites at the MoO₃(010) Surface"
Catal. Tod. 124, 21-27 (2007)
M. Cavalleri, K. Hermann, S. Guimond, Y. Romanyshyn, H. Kuhlenbeck, H.-J. Freund
491. "Morphology and Optical Properties of MgO Thin Films on Mo(001)"
ChemPhysLett., 430, 330-335 (2006)
St. Benedetti, H.-M. Benia, N. Nilius, S. Valeri, H.-J. Freund
492. "Particle Size Dependent Adsorption and Reaction Kinetics on Reduced and Partially Oxidized Pd Nanoparticles"
PhysChemChemPhys 9, 1347-1361 (2007)
T. Schalow, B. Brandt, D. E. Starr, M. Laurin, S. Shaikhutdinov, S. Schauermaun, J. Libuda, H.-J. Freund
493. "Characterization of a PdFe Bimetallic Model Catalyst"
Surf. Sci. 601, 2105-2116 (2007)
M. Felicissimo, O. N. Martyanov, T. Risse, H.-J. Freund
494. "Oxidation of Alumina-supported Co and Co-Pd Model catalysts for the Fischer-Tropsch Reaction"
J. Phys. Chem. C 111, 8566 (2007)
T. Nowitzki, A. F. Carlsson, O. Martyanov, M. Naschitzki, V. Zielasek, T. Risse, M. Schmal, H.-J. Freund, M. Bäumer
495. "Gold Supported on Well-ordered Ceria Films: Nucleation, Growth and Morphology in CO Oxidation Reaction"
Catal. Lett., 114, 8-16 (2007)
J.- L. Lu, H. Gao, S. Shaikhutdinov, H.-J. Freund
496. "On the Geometrical and Electronic Structure of an Ultra-thin Crystalline Silica Film Grown on Mo(112)"
Surf. Sci. 601, 4849-4861 (2007)
S. Kaya, M. Baron, D. Stacchiola, J. Weissenrieder, S. Shaikhutdinov, T. K. Todorova, M. Sierka, J. Sauer, H.-J. Freund

497. "Oxygen Adsorption on Mo(112) Surface Studied by ab initio Genetic Algorithm and Experiment"
J. Chem. Phys. 126, 234710 (2007)
M. Sierka, T. K. Todorova, J. Sauer, S. Kaya, D. Stacchiola, J. Weissenrieder, S. Shaikhutdinov, H.-J. Freund
498. "Control of the Charge State of Metal Atoms on Thin MgO Films"
Phys. Rev. Lett. 98, 096107-1-4 (2007)
M. Sterrer, Th. Risse, U. Martinez Pozzoni, L. Giordano, M. Heyde, H.-P. Rust, G. Pacchioni, H.-J. Freund
499. "Metal-Supported Ultra-Thin Oxide Film Systems as Designable Catalysts and Catalyst Support"
Surf. Sci. Prospectives 601, 1438-1442 (2007)
H.-J. Freund
500. "Photon Mapping of MgO Thin Films with an STM"
Surf. Sci., 601, L55-L58, (2007)
H. M. Benia, N. Nilius, H.-J. Freund
501. "Substrate-mediated Interaction and Electron-induced Diffusion of Single Lithium Atoms on Ag(001)"
Phys. Rev. B 75, 195416-1-5 (2007)
V. Simic-Milosevic, M. Heyde, N. Nilius, M. Nowicki, H.-P. Rust, H.-J. Freund
502. "Ice Assisted Preparation of Silica Supported Vanadium Oxide Particles"
J. Phys. Chem. C 111, 5337 (2007)
S. Kaya, Y.-N. Sun, J. Weissenrieder, J.-L. Lu, D. Stacchiola, S. Shaikhutdinov, H.-J. Freund
503. "Surface-Metal-Insulator Transition on a Vanadium Pentoxide (001) Single Crystal"
Phys. Rev. Lett. 99, 226103-1-4 (2007)
R.-P. Blum, H. Niehus, C. Hucho, M. V. Ganduglia-Pirovano, J. Sauer, K. S. Shaikhutdinov, H.-J. Freund
504. "Adsorption and Reaction of Methanol on Supported Palladium Catalysts: Microscopic-Level Studies from Ultrahigh Vacuum to Ambient Pressure Conditions"
PhysChemChemPhys. 9, 3541-3558 (2007)
M. Bäumer, J. Libuda, K. M. Neyman, N. Rösch, G. Rupprechter, H.-J. Freund
505. "On the Promoting Role of Ag in Selective Hydrogenation Reactions over Pd-Ag Bimetallic Catalysts: A Theoretical Study"
J. Phys. Chem. C 111, 6852 (2007)
S. González, K. M. Neyman, S. Shaikhutdinov, H.-J. Freund, F. Illas
506. "Local Zero-Bias Anomaly in Tunneling Spectra of a Transition-Metal Oxide Thin Film"
Phys. Rev. B 75, 205443-1-5 (2007)
E. D. L. Rienks, N. Nilius, L. Giordano, J. Goniakowski, G. Pacchioni, M. P. Felicissimo, T. Risse, H.-P. Rust, H.-J. Freund

507. "Counting Electrons Transferred Through a Thin Alumina Film into Au Chains"
Phys. Rev. Lett. 100, 096802-1-4 (2008)
N. Nilius, M. V. Ganduglia-Pirovano, V. Brázdová, M. Kulawik, J. Sauer, H.-J. Freund
508. "Crossover from Three-dimensional to Two-dimensional Geometries of Au Nanostructures on Thin MgO(001) Films: A Confirmation of Theoretical Predictions"
Phys. Rev. Lett. 98, 206103-1-4 (2007)
M. Sterrer, T. Risse, M. Heyde, H.-P. Rust, H.-J. Freund
509. "Nucleation and Growth of Gold on MgO Thin Films: A Combined STM and Luminescence Study"
J. Phys. Chem. C 111, 10528-10533 (2007)
H. M. Benia, X. Lin, H. Gao, N. Nilius, H.-J. Freund
510. "Hyperthermal Chaotic Photodesorption of Xenon from Alumina Supported Silver Nanoparticles: Plasmonic Coupling and Plasmon-induced Desorption"
Phys. Rev. Lett. 99, 225501-1-4 (2007)
K. Watanabe, K. H. Kim, D. Menzel, H.-J. Freund
511. "Structure, Thermal Stability and CO Adsorption Properties of Pd Nanoparticles Supported on an Ultra-thin SiO₂ Film"
Surf. Rev. Lett. 14, 927-934 (2007)
J.-L. Lu, J. Weissenrieder, S. Kaya, H. Gao, S. Shaikhutdinov, H.-J. Freund
512. "Der Europäische Forschungsrat: eine Chance ohne Gleichen"
Nachrichten aus der Chemie 55, 639-640 (2007)
H.-J. Freund
513. "The Interplay Between Structural, Magnetic and Electronic Properties in a FeO/Pt(111) Ultra-thin Film"
Phys. Rev. B 76, 075416 (2007)
L. Giordano, G. Pacchioni, J. Goniakowski, N. Nilius, E. D. L. Rienks, H.-J. Freund
514. "Palladium Monomers, Dimers, and Trimers on the MgO(001) Surface Viewed Individually"
Angew. Chem. Int. Ed. 46, 8703-8706 (2007)
M. Sterrer, T. Risse, L. Giordano, M. Heyde, N. Nilius, H.-P. Rust, G. Pacchioni, H.-J. Freund
515. "Palladium-Monomere, -Dimere und -Trimere auf der MgO(001)-Oberfläche: Betrachtung einzelner Cluster"
Angew. Chem. 119, 8858-886 (2007)
M. Sterrer, T. Risse, L. Giordano, M. Heyde, N. Nilius, H.-P. Rust, G. Pacchioni, H.-J. Freund
516. "Growth of Thin Alumina Films on a Vicinal NiAl Surface"
Surf. Sci. 601, 4603-4607 (2007)
S. Ulrich, N. Nilius, H.-J. Freund

517. "Heterogeneous Catalysis on an Atomic Scale"
Wuh (Physics), 36(5), 370 (2007) (in Chinese)
J. L. Lu, H. Gao, D. X. Shi, S. Shaikhutdinov, H.-J. Freund
518. "Identification of the Vanadyl Terminated V₂O₃(0001) Surface by NEXAFS Spectroscopy: A Combined Theoretical and Experimental Study"
Surf. Sci. 601, 5394-5402 (2007)
C. Kolczewski, K. Hermann, S. Guimond, H. Kuhlenbeck, H.-J. Freund
519. "Growth of Stoichiometric Subnanometer Silica Films"
Appl. Phys. Lett. 92, 011911-1-3 (2008)
D. J. Stacchiola, M. Baron, S. Kaya, J. Weissenrieder, S. Shaikhutdinov, H.-J. Freund
520. "Preparation and Structure of Alumina Supported Niobia Model Catalysts"
Surf. Sci. 601, 5605-5610 (2007)
A. Uhl, J. Sainio, S. Shaikhutdinov, H.-J. Freund
521. "Oberflächenchemie, Knockout-Mäuse und Magnetowiderstand"
Nachrichten aus der Chemie 55, 1075-1077 (2007)
H.-J. Freund, P. Bruno, C. Remenyi
522. "A New Analysis of X-ray Adsorption Branching Ratios: Use of Russell-Saunders Coupling"
Chem. Phys. Lett. 455, 331-334 (2008)
P. S. Bagus, H.-J. Freund, H. Kuhlenbeck, E. S. Ilton
523. "Model Systems in Heterogeneous Catalysis: Selectivity Studies at the Atomic Level"
Top. Catal. 48, 137-144 (2008)
H.-J. Freund
524. "Local Band Gap Modulation in Non-stoichiometric V₂O₃ Films Probed by Scanning Tunneling Spectroscopy"
Phys. Rev. B 77, 125112-1-5 (2008)
V. Simic-Milosevic, N. Nilius, H.-P. Rust, H.-J. Freund
525. "Adsorption of Au and Pd Atoms on Thin SiO₂ Films: The Role of Atomic Structure"
J. Phys. Chem. C 112, 3405-3409 (2008)
M. Baron, D. Stacchiola, S. Ulrich, N. Nilius, S. Shaikhutdinov, H.-J. Freund, U. Martinez, L. Giordano, G. Pacchioni
526. "Li Atoms Deposited on a Single Crystalline MgO(001) Surface: A Combined Experimental and Theoretical Study"
Chem. Phys. Lett. 450, 308-311 (2008)
J.C. Lian, E. Finazzi, C. Di Valentin, T. Risse, H. Gao, G. Pacchioni, H.-J. Freund
527. "Hydrogen Absorption in Oxide-supported Palladium Nanocrystals"
Phys. Rev. B 77, 113412-1-4 (2008)
M. Wilde, K. Fukutani, M. Naschitzki, H.-J. Freund

528. "Selectivity in Methanol Oxidation as Studied on Model Systems Involving Vanadium Oxides"
Top. Catal. 50, 106-115 (2008)
Y. Romanyshyn, S. Guimond, H. Kuhlenbeck, S. Kaya, R. P. Blum, H. Niehus, S. Shaikhutdinov, V. Simic-Milosevic, N. Nilius, H.-J. Freund, M. V. Ganduglia-Pirovano, R. Fortrie, J. Döbler, J. Sauer
529. "Properties of Alkali Atoms Deposited on the MgO Surface. A Systematic Experimental and Theoretical Study"
Chem. Eur. J. 14, 4404-4414 (2008)
E. Finazzi, C. Di Valentin, G. Pacchioni, M. Chiesa, E. Giamello, Hongjun Gao, Jichun Lian, T. Risse, H.-J. Freund
530. "Evidence for a Size-Selective Adsorption Mechanisms on Oxide Surfaces: Pd- and Au-Atoms on SiO₂/Mo(112)"
ChemPhysChem 9, 1367-1370 (2008)
S. Ulrich, N. Nilius, H.-J. Freund, U. Martinez, L. Giordano, G. Pacchioni
531. "Isomerization and Hydrogenation of cis-2-butene on Pd Model Catalysts"
J. Phys. Chem. C 112(30), 11408-11420 (2008)
B. Brandt, J.-H. Fischer, W. Ludwig, S. Schauer mann, J. Libuda, F. Zaera, H.-J. Freund
532. "Growth and Characterization of Ultrathin V₂O_y (y~5) Films on Au(111)"
J. Phys. Chem. C 112, 12363-12373 (2008)
S. Guimond, D. Göbke, Y. Romanyshyn, J. M. Sturm, M. Naschitzki, H. Kuhlenbeck, H.-J. Freund
533. "Well-ordered V₂O₅(001) Thin Films on Au(111): Growth and Thermal Stability"
J. Phys. Chem. C 112(31), 11835-11846 (2008)
S. Guimond, J. M. Sturm, D. Göbke, Y. Romanyshyn, M. Naschitzki, H. Kuhlenbeck, H.-J. Freund
534. "Gerhard Ertl: Congratulations!"
Surf. Sci. Rep. 63, iii-iv (2008)
H.-J. Freund
535. "Oxide Ultra-thin Films on Metals: New Materials for the Design of Supported Metal Catalysts"
Chem. Soc. Rev. 37, 2224-2242 (2008)
H.-J. Freund, G. Pacchioni
536. "Gold Supported on Thin Oxide Films: From Single Atoms to Nanoparticles"
Acc. Chem. Res. 41, 949-956 (2008)
T. Risse, S. Shaikhutdinov, N. Nilius, M. Sterrer, H.-J. Freund
537. "Encapsulation of Pt Nanoparticles as a Result of Strong Metal-Support Interaction with Fe₃O₄(111)"
J. Phys. Chem. C 112, 10209-10213 (2008)
Z.-H. Qin, M. Lewandowski, Y.-N. Sun, S. Shaikhutdinov, H.-J. Freund

538. "Influence of Carbon Deposition on the Hydrogen Distribution in Pd Nanoparticles and their Reactivity in Olefin Hydrogenation"
Angew. Chem. Int. Ed. 47, 9289 (2008)
M. Wilde, K. Fukutani, W. Ludwig, B. Brandt, J.-H. Fischer, S. Schauer mann, H.-J. Freund
539. "Einfluss von Kohlenstoffablagerungen auf die Wasserstoffverteilung in Pd Nanopartikeln und deren Reaktivität in der Olefinhydrierung"
Angew. Chem. 120, 9430 (2008)
M. Wilde, K. Fukutani, W. Ludwig, B. Brandt, J.-H. Fischer, S. Schauer mann, H.-J. Freund
540. "Au Dimers on Thin MgO(001) Films: Flat and Charged or Upright and Neutral?"
J. Amer. Chem. Soc. 130, 7814-7815 (2008)
V. Simic-Milosevic, M. Heyde, N. Nilius, T. König, H.-P. Rust, M. Sterrer, T. Risse, H.-J. Freund, L. Giordano, G. Pacchioni
541. "Size Effects in Thermal and Photochemistry of (NO)₂ on Ag Nanoparticles"
Phys. Rev. Lett. 101, 146103-1-4 (2008)
D. Mulugeta, K. H. Kim, K. Watanabe, D. Menzel, H.-J. Freund
542. "When an Encapsulating Oxide Layer Promotes Reaction on Noble Metals: Dewetting and *in situ* Formation of an "Inverted" FeO_x/Pt Catalyst"
Catal. Lett. 126, 31-35 (2008)
Y.-N. Sun, Z.-H. Qin, M. Lewandowski, S. Kaya, S. Shaikhutdinov, H.-J. Freund
543. "Atomically Resolved Force Microscopy Images of Complex Surface Unit Cells: Ultrathin Alumina Film on NiAl(110)"
Phys. Rev. B 78, 113401-1-4 (2008)
G.H. Simon, T. König, N. Nilius, H.-P. Rust, M. Heyde, H.-J. Freund
544. "Charging of Metal Adatoms on Ultra-thin Oxide Films: Au and Pd on FeO/Pt(111)"
Phys. Rev. Lett. 101, 026102-1-4 (2008)
L. Giordano, G. Pacchioni, J. Goniakowski, N. Nilius, E. D. L. Rienks, H.-J. Freund
545. "Gold Atoms and Clusters on MgO(001) Films: an EPR and IRAS Study"
Surf. Sci. 603, 1622-1628 (2009)
M. Yulikov, M. Sterrer, T. Risse, H.-J. Freund
546. "Nobel for Chemistry 2007"
europhysicsnews 39, 10-11 (2008)
H.-J. Freund
547. "A Scanning Tunneling Microscopy Observation of ($\sqrt{3} \times \sqrt{3}$) R30° Reconstructed Ni₂P(0001)"
Jap. J. Appl. Phys. 47, 6088-6091 (2008)
K. Kinoshita, G.H. Simon, T. König, M. Heyde, H.-J. Freund, Y. Nakagawa, S. Suzuki, W.-J. Chun, S. T. Oyama, S. Otani, K. Asakura

548. "Charge-Induced Formation of Linear Au Clusters on Thin MgO Films: Scanning Tunneling Microscopy and Density-functional Theory Study"
Phys. Rev. B 78, 235429-1-6 (2008)
V. Simic-Milosevic, M. Heyde, X. Lin, T. König, H.-P. Rust, M. Sterrer, T. Risse, N. Nilius, H.-J. Freund, L. Giordano, G. Pacchioni
549. "Morphology and CO Adsorption on Platinum Supported on Thin Fe₃O₄(111) Films"
J. Phys. Cond. Mat. 21, 134019-1-6 (2009)
Z.-H. Qin, M. Lewandowski, Y.-N. Sun, S. Shaikhutdinov, H.-J. Freund
550. "Modifying the Adsorption Characteristic of Inert Silica Films by Inserting Anchoring Sites"
Phys. Rev. Lett. 102, 016102 (2009)
S. Ulrich, N. Nilius, H.-J. Freund, U. Martinez, L. Giordano, G. Pacchioni
551. "Realization of an Atomic Sieve: Silica on Mo(112)"
Surf. Sci. 603, 1145-1149 (2009)
S. Ulrich, N. Nilius, H.-J. Freund, U. Martinez, L. Giordano, G. Pacchioni
552. "Photoinduced Abstraction Reactions within NO Dimers on Ag(111)"
J. Amer. Chem. Soc. 131, 1660-1661 (2009)
K. H. Kim, K. Watanabe, D. Menzel, H.-J. Freund
553. "Quantum Well States in Two-dimensional Gold Clusters on MgO Thin Films"
Phys. Rev. Lett. 102, 206801-1-4 (2009)
X. Lin, N. Nilius, H.-J. Freund, M. Walter, P. Frondelium, H. Honkola, H. Häkkinen
554. "Formation of One-dimensional Molybdenum Oxides on Mo(112)"
Surf. Sci. 602, 3338-3342 (2008)
S. Kaya, J. Weissenrieder, D. Stacchiola, T. K. Todorova, M. Sierka, J. Sauer, S. Shaikhutdinov, H.-J. Freund
555. "Towards an Atomic Level Understanding of Niobia Based Catalysts and Catalysis by Combining the Science of Catalysis with Surface Science"
An. Acad. Bras. Cienc. 81, 297-318 (2009)
M. Schmal, H.-J. Freund
556. "Zero-Bias Conductance Anomaly of a FeO-bound Au Atom Triggered by CO Adsorption"
Phys. Rev. B 79, 075427 (2009)
E. D. L. Rienks, N. Nilius, H.-J. Freund, L. Giordano, G. Pacchioni, J. Goniakowski
557. "Nucleation of Gold Atoms on Vanadyl-terminated V₂O₃(0001)"
New J. Physics 11, 093007 (2009)
N. Nilius, V. Brázdová, M.V. Ganduglia-Pirovano, V. Simic-Milosevic, J. Sauer, H.-J. Freund

558. "Formaldehyde formation on vanadia surfaces – $V_2O_3(0001)$ vs. $V_2O_5(001)$: how does the stable methoxy intermediate form? "
Angew. Chem. Int. Ed. 48, 3695-3698 (2009)
D. Göbke, Y. Romanyshyn, S. Guimond, J. M. Sturm, H. Kuhlenbeck, J. Döbler, U. Reinhardt, M. V. Ganduglia-Pirovano, J. Sauer, H.-J. Freund
559. "Formaldehydbildung auf Vanadiumoxidoberflächen- $V_2O_3(0001)$ vs. $V_2O_5(001)$: wie bildet sich der stabile Zwischenstand Methoxy?"
Angew. Chem. 121, 3750-3753 (2009)
D. Göbke, Y. Romanyshyn, S. Guimond, J.M. Sturm, H. Kuhlenbeck, J. Döbler, U. Reinhardt, M.V. Ganduglia-Pirovano, J. Sauer, H.-J. Freund
560. "In situ Spektroskopie an katalytisch aktiven Nanoteilchen"
GIT Labor-Fachzeitschrift 11, 970-975 (2008)
G. Rupprechter, H. Unterhalt, M. Borasio, M. Morkel, H.-J. Freund
561. "Partial Oxidation of Methanol on Well-ordered $V_2O_5(001)/Au(111)$ Thin Films"
Phys. Chem. Chem. Phys. 11, 3290-3299 (2009)
J. M. Sturm, D. Göbke, H. Kuhlenbeck, J. Döbler, U. Reinhardt, M. V. Ganduglia-Pirovano, J. Sauer, H.-J. Freund
562. "Interaction of Gold with Cerium Oxide Supports: $CeO_2(111)$ Thin Films vs CeO_x Nanoparticles"
J. Phys. Chem. C 113, 6042-6049 (2009)
M. Baron, O. Bondarchuk, D. Stacchiola, S. Shaikhutdinov, H.-J. Freund
563. "Tailoring the Interaction Strength Between Gold Particles and Silica Thin Films via Work Function Control"
Phys. Rev. Lett. 103, 056801-1-4 (2009)
U. Martinez, J.-F. Jerratsch, N. Nilius, L. Giordano, G. Pacchioni, H.-J. Freund
564. "Monolayer Iron Oxide Film on Platinum Promotes Low Temperature CO Oxidation"
J. Catal. 266, 359-368 (2009)
Y.-N. Sun, Z.-H. Qin, M. Lewandowski, E. Carrasco, M. Sterrer, S. Shaikhutdinov, H.-J. Freund
565. "Atomic Structure of the Ultrathin Alumina on $NiAl(110)$ and its Antiphase Domain Boundaries as Seen by Frequency Modulation Dynamic Force Microscopy"
New J. Phys. 11, 093009 (2009)
G.H. Simon, T. König, H.-P. Rust, M. Heyde, H.-J. Freund
566. "Resolving the Atomic Structure of Vanadia Monolayer Catalysts: Monomers, Trimers, and Oligomers on Ceria"
Angew. Chem. 121, 8150-8153 (2009)
M. Baron, H. Abbott, O. Bondarchuk, D. Stacchiola, A. Uhl, S. Shaikhutdinov, H.-J. Freund, C. Popa, M.V. Ganduglia-Pirovano, J. Sauer
567. "CO Adsorption and Dissociation on Iron Oxide Supported Pt Particles"
Surf. Sci. 603, 3099-3103 (2009)
Y.-N. Sun, Z.- H. Qin, M. Lewandowski, S. Shaikhutdinov, H.-J. Freund

568. "Alkaline-earth Versus Nobel-metal Particles on MgO Thin Films: Growth and Optical Properties"
J. Phys. Chem. C 113, 18740-18745 (2009)
P. Myrach, N. Nilius, H.-J. Freund
569. "The Complex Core Level Spectra of CeO₂: An Analysis in Terms of Atomic and Charge Transfer Effects"
Chem. Phys. Lett., accepted
P. S. Bagus, C.J. Nelin, E.S. Ilton, M. Baron, H. Abbott, E. Primorac, H. Kuhlenbeck, S. Shaikhutdinov, H.-J. Freund
570. "The Role of Ceria in Oxidative Dehydrogenation Supported Vanadia Catalysts"
J. Amer. Chem. Soc., accepted
M.V. Ganduglia-Pirovano, C. Popa, J. Sauer, H. Abbott, A. Uhl, M. Baron, D. Stacchiola, O. Bondarchuk, S. Shaikhutdinov, H.-J. Freund
571. "Lithium Incorporation into a Silica Thin Film: Scanning Tunneling Microscopy and Density Functional Theory"
Phys. Rev. B 80, 245423-1-8 (2009)
J.-F. Jerratsch, N. Nilius, H.-J. Freund, U. Martinez, L. Giordano, G. Pacchioni
572. "A Portable Microevaporator for Low Temperature Single Atom Studies by Scanning Tunneling and Dynamic Force Microscopy"
Rev. Sci. Instrum. 80, 113705-1-4 (2009)
H.-P. Rust, T. König, G.H. Simon, M. Nowicki, V. Simic-Milosevic, G. Thielsch, M. Heyde, H.-J. Freund
573. "Measuring the Charge State of Point-Defects on MgO/Ag(001)"
J. Am. Chem. Soc., accepted
T. König, G. H. Simon, H.-P. Rust, M. Heyde, H.-J. Freund
574. "Fabricating Arrays of Single Iron Atoms in a Porous Silica/Mo(112) Film"
ACSnano, accepted
J.-F. Jerratsch, N. Nilius, D. Topwal, U. Martinez, G. Pacchioni, H.-J. Freund
575. "Electronic Properties and Charge State of Gold Monomers and Chains Adsorbed on Alumina Thin Films on NiAl(110)"
Phys. Rev. B, accepted
N. Nilius, M.V. Ganduglia-Pirovano, V. Brázdová, M. Kulawik, J. Sauer, H.-J. Freund
576. "Ultradünne Oxidschichten auf Metallsubstraten: eine interessante Materialkombination"
Jahrbuch der Max-Planck-Gesellschaft, 2009
N. Nilius, T. Risse, S. Shaikhutdinov, M. Sterrer, H.-J. Freund