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Originalarbeiten in Fachzeitschriften

- 1 *Entwicklung einer Plasmatron-Ionenquelle für einen elektromagnetischen Massentrenner*
Acta Physica Austriaca **33** (1971) 389-97
- 2 *Development of a Plasmatron Ion Source for an Electromagnetic Isotope Separator*
Int. J. Mass Spectrom. Ion Phys. **6** (1971) 393-400
- 3 *Berechnung von Ladungsverteilungen in Elektronenstrahl-Plasmahochladungionenquellen*
gem. mit G. Hertenberger und K. Roch, Z.Naturforschung **28a** (1973) 1687-96
- 4 *Analysis of the Duoplasmatron-type Discharge as a Source of Multiply Charged Heavy Ions*
gem. mit B.H. Wolf, Plasma Physics **16** (1974) 791-811
- 5 *Erzeugung intensiver Strahlen mehrfach geladener Ionen - Eigenschaften klassischer Hochladungionenquellen und neue Möglichkeiten*
Vakuum-Technik **23** (1974) 70-77
- 6 *A c.w.-operated Duoplasmatron Multiply Charged Ion Source*
gem. mit H. Krupp, Nucl. Instr. Meth. **127** (1975) 459-69
- 7 *Limitation of the Ion Charge State in Duoplasmatron-type Multiply Charged Ion Sources*
gem. mit B.H. Wolf, Nucl. Instr. Meth. **127** (1975) 445-457
- 8 *Versatile Source for Intense Multiply Charged Ion Beams*
gem. mit R. Keller, Particle Accelerators **7** (1976) 77-82
- 9 *Abnormale Energieunschärfe intensiver Elektronenstrahlen aus Plasmakathoden*
Appl. Phys. **10** (1976) 269-73
- 10 *The Present State of Controlled Nuclear Fusion Research*
Vacuum **25** (1978) 497-511
- 11 *Ion and Electron Flow in Hot-Cathode PIG Sources for Multiply Charged Heavy Ions*
gem. mit H. Schulte und B.H. Wolf, IEEE Trans. Nucl. Sci. **NS-23** (1976) 1053-60
- 12 *VUV-Spectroscopy of Multiply Charged Ion Source Plasmas*
gem. mit M. Bruck, R. Bruckmüller und G. Hertenberger,
IEEE Trans. Nucl. Sci. **NS-23**, (1976) 967-70

- 13 *Production of Multiply Charged Heavy Ions*
Beitrag in Experimental Methods in Heavy Ion Physics, Herausgeber K. Bethge,
Lecture Notes in Physics **83**, Springer Verlag, Berlin (1978), p. 2-80
- 14 *Excitation of He by Ne^{z+} ($z = 1, 2, 3, 4$) between 20 keV and 1 MeV*
gem. mit F.J. de Heer und E. Bloemen, J. Phys. B: At. Mol. Phys. **10** (1977) L 311-15
- 15 *Electron Capture into Excited Projectile States in Collisions of 100 keV Ne^{z+} ($z = 1, 2, 3, 4$) with He, H₂ and Ar*
gem. mit F.J. de Heer und E. Bloemen, J. Phys. B: At. Mol. Phys. **10** (1977) L 453-57
- 16 *VUV-Radiation and Slow Ions and Electrons Produced in Collisions of Multiply Charged Ne Ions with He and Ar*
gem. mit E. Bloemen und F.J. de Heer, J. Phys. B: At. Mol. Phys. **10** (1977) L 599-604
- 17 *Outer s-Shell Vacancy Production in Collisions of Multiply Charged Neon and Argon Ions with Neon and Argon Atoms*
gem. mit E. Bloemen, F.J. de Heer, R. Fortner und A. Salop,
J. Phys. B: At. Mol. Phys. **11** (1978) 4207-26
- 18 *Non-Radiative Deexcitation after Electron Capture by Multiply Charged Ions*
gem. mit Th.M. El-Sherbini, E. Bloemen, F.J. de Heer und A. Salop,
Physics Letters **68a** (1978) 211-14
- 19 *Detection of Metastable Ions by Ion Neutralization Spectroscopy*
gem. mit E. Rille und P. Varga, Nederlands Tijdschrift voor Vacuumtechniek
16 (1978) 338-39
- 20 *Determination of Metastable Fractions in Noble Gas Ion Beams*
gem. mit P. Varga, Phys. Rev. A **18** (1978) 2453-58
- 21 *Absolute Ionization Cross Sections for Electrons Incident on O⁺, Ne⁺, Xe⁺ and Arⁱ⁺ ($i = 1, \dots, 5$) Ions*
gem. mit A. Müller, E. Salzborn, R. Frodl, R. Becker und H. Klein,
J. Phys. B: At. Mol. Phys. **13** (1980) 1877-99
- 22 *Excitation in Electron Capture Collisions of Ne²⁺ (15 - 50 keV) with Xe*
gem. mit R. Rille, J. Phys. B: Atom. Molec. Phys. **13** (1980) L531-36
- 23 *Electron Impact Ionization of Multiply Charged Ions*
gem. mit A. Müller, E. Salzborn, R. Becker, R. Frodl und H. Klein,
Physica Scripta **23** (1981) 190
- 24 *Apparent Cross Sections for Metastable Ion Production by Electron Impact*
gem. mit P. Varga und W. Hofer, J. Phys. B: At. Mol. Phys. **14** (1981) 1341-51

- 25 *Absolute Emission Cross Sections at 30.4 nm for e-He Collisions and at 20.8 nm for Ne⁴⁺ -He Collisions*
gem. mit E. Bloemen, T.D. Märk, D. Dijkkamp, D. Barends und F.J. de Heer,
J. Phys. B: At. Mol. Phys. **14** (1981) 717-25
- 26 *Auger Neutralisation of Multiply Charged Noble Gas Ions at a Tungsten Surface*
gem. mit P. Varga und W. Hofer, *Surface Science* **117** (1982) 142-53
- 27 *Excitation of Multiply Charged Ions by Electron Capture and Application for Plasma Impurity Ion Transport Studies*
Comments on Atomic and Molecular Physics **12** (1982) 165-95
- 28 *Preparation of Long-Lived Excited Ions for Lifetime Measurement by Selective Electron Capture*
Rev. Sci. Instr. **53** (1982) 1163-66
- 29 *Excitation by Electron Capture in Collisions of Ground State and Metastable Ne²⁺ with Xe at 40 keV*
gem. mit A. Brazuk, *J. Phys. B: At. Mol. Phys.* **15** (1982) 2233-44
- 30 *State-Selective and Total One-Electron Capture in Ne⁺/Ne²⁺ - Li Collisions*
($q = 1, 2, E \leq 30 \text{ q keV}$)
gem. mit E. Rille, *J. Phys. B: At. Mol. Phys.* **15** (1982) 3489-3507
- 31 *Improvement for Monochromator Spectral Calibration with Tungsten Strip Lamp*
gem. mit E. Bloemen, *J. Phys. E* **15** (1982) 1007-9
- 32 *Empirical State Selection Rules for Electron Capture in Low Energy Ion-Atom Collisions*
Physica Scripta **T3** (1983) 159-62
- 33 *Production of Multiply Charged Ions for Experiments in Atomic Physics*
Atomic Physics of Highly Ionized Atoms, ed. R. Marrus, NATO ASI Series B **96**,
Plenum press, New York 1983, p. 455-515
- 34 *Ion Neutralization of Multiply Charged Particles near a Surface*
gem. mit P. Varga und W. Hofer, *Journ. Scanning Electron Microscopy* **1982**, 967-71
- 35 *Potential Emission from Tungsten due to Impact of Slow Metastable Ions*
gem. mit W. Hofer, W. Vanek und P. Varga, *Surface Science* **126** (1983) 605-9
- 36 *Metastable Ion Beam Fractions Measured for Different Ion Sources*
gem. mit W. Hofer, W. Vanek und P. Varga, *Rev. Sci. Instr.* **54** (1983) 150-7
- 37 *State-Selective Single Electron Capture by 80 keV C⁴⁺ Ions from He, H₂ and Li*
gem. mit D. Dijkkamp, A. Brazuk, A.G. Drentje und F.J. de Heer,
J. Phys. B: At. Mol. Phys. **16** (1983) L343-6

- 38 *Comment on "Radiative Decay of Lithium-like Ions following Exchange Collisions of 3 keV amu⁻¹ C⁴⁺ with H₂"*
J. Phys. B: At. Molec. Phys. **16** (1983) L521-3
- 39 *Absolute Emission Cross Sections for Detection of Plasma Impurity Ions with Active Neutral Lithium Beam Diagnostics*
gem. mit A. Brazuk, D. Dijkkamp, A. Boellaard, F.J. de Heer und A.G. Drentje,
Phys. Letters **101 A** (1984) 139-41
- 40 *Measurement of Metastable Fractions in Multiply Charged Ion Beams by Ion Excitation in Core-conserving Capture*
gem. mit A. Brazuk, D. Dijkkamp, A.G. Drentje und F.J. de Heer,
J. Phys. B: At. Mol. Phys. **17** (1984) 2489-2505
- 41 *Single Electron Capture into C³⁺ (n, l)-Subshells in C⁴⁺-Li Collisions (20 - 80 keV)*
gem. mit D. Dijkkamp, A. Brazuk, A.G. Drentje und F.J. de Heer,
J. Phys. B: At. Mol. Phys. **17** (1984) 4371-85
- 42 *Inelastic H⁺-Li (2s) Collisions (2-20 keV): I. Experimental Methods and Li(2p) Excitation*
gem. mit F. Aumayr und M. Fehringer, J. Phys. B: At. Mol. Phys. **17** (1984) 4185-99
- 43 *Inelastic H⁺-Li (2s) Collisions (2-20 keV): II. Electron Capture into H(2p) and H(3, l) Subshells*
gem. mit F. Aumayr und M. Fehringer, J. Phys. B: At. Mol. Phys. **17** (1984) 4201-11
- 44 *State-selective Electron Capture in Atom-Highly Charged Ion Collisions*
gem. mit R.K. Janev, Physics Reports **117** (1984) 265-387
- 45 *Neue diagnostische Verfahren zur Untersuchung der Plasma-Wandwechselwirkung*
gem. mit F.P. Viehböck, G. Betz und W. Husinsky,
Atomkernenergie-Kerntechnik **44** (1984) 269-72
- 46 *Single Electron Capture Cross Sections for Collisions of H⁺, H₂⁺, He⁺ and Ne⁺ (2-20 keV) with Li*; gem. mit F. Aumayr, Phys. Rev. A **31** (1985) 67-71
- 47 *Subshell-selective Electron Capture from Lithium by Slow Multiply Charged Ions*
gem. mit A. Brazuk, D. Dijkkamp, F.J. de Heer und A.G. Drentje,
Nucl. Instr. Meth. Phys. Res. B **9** (1985) 442-7
- 48 *Plasmadiagnostik mit Lithiumatomstrahl-aktivierter Umladungsspektroskopie*
gem. mit F. Aumayr, Ann. Phys. **42** (1985) 228-38
- 49 *Inelastic H⁺-Li(2s) Collisions (2-20 keV): III. Electron Capture into H(2s) Subshell*
gem. mit F. Aumayr, G. Lakits und W. Husinsky,
J. Phys. B: At. Mol. Phys. **18** (1985) 2493-2501

- 50 *State-selective Electron Capture in C³⁺-H, H₂ Collisions (0.7 - 4.6 keV/amu) studied by Photon Spectroscopy*
gem. mit D. Ceric, A. Brazuk, D. Dijkkamp und F.J. de Heer,
J. Phys. B: At. Mol. Phys. **18** (1985) 3629-39
- 51 *Excitation by Impact of He⁺ (2-20 keV) on Li(2s)*
gem. mit F. Aumayr, J. Phys. B: At. Mol. Phys. **18** (1985) L 741-6
- 52 *Scattering Angle-dependent Translational Energy Spectroscopy for Electron Capture by Doubly Charged Ions*
gem. mit U. Jellen-Wutte, J. Schweinzer und W. Vanek,
J. Phys. B: At. Mol. Phys. **18** (1985) L 779-85
- 53 *Electron Capture from Li(2s) by Doubly Charged Ions*
gem. mit F. Aumayr und G. Lakits, Phys. Rev. A **33** (1986) 846-50
- 54 *Primary Ion State Conservation in Electron Capture from Li(2s) by Singly Charged Ions*
gem. mit F. Aumayr und G. Lakits, Phys. Letters **114 A** (1986) 81-3
- 55 *New Developments in Plasma Edge Diagnostics*
Vacuum **37** (1987) 47-51
- 56 *Electron Emission from a Metal Surface Bombarded by Slow Highly Charged Ions*
gem. mit M. Delaunay, M. Fehringer, R. Geller, D. Hitz und P. Varga,
Phys. Rev. B **35** (1987) 4232-5
- 57 *Two- and More-Electron Transitions in Multicharged Ion Impact on He*
mit R. Hoekstra und F.J. de Heer, Nucl. Instr. Meth. Phys. Res. B **23** (1987) 104-8
- 58 *Potential Emission for Multicharged Ion Impact on Clean Tungsten above the Kinetic Emission Threshold*
gem. mit M. Fehringer, M. Delaunay, R. Geller und P. Varga,
Nucl. Instr. Meth. Phys. Res. B **23** (1987) 245-7
- 59 *Translational Energy Spectroscopy for Electron Capture in He²⁺, Ar²⁺ (1-5 keV) - Li(2s) Collisions*
gem. mit U. Jellen-Wutte, J. Schweinzer und M. Krammer,
Nucl. Instr. Meth. Phys. Res. B **23** (1987) 59-63
- 60 *Charge Transfer and Target Excitation in H⁺ - Na(3s) Collisions (2 - 20 keV)*
gem. mit F. Aumayr und G. Lakits, J. Phys. B: At. Mol. Phys. **20** (1987) 2025-30
- 61 *Electron Capture and Target Excitation in Slow Ion-Alkali Atom Collisions: A Systematic Study*
gem. mit F. Aumayr und G. Lakits, Z. Phys. D **6** (1987) 145-53

- 62 *Comment on "Evidence for Correlated Double-Electron Capture in Low-Energy Collisions of O^{6+} with He"*
 gem. mit M. Mack, R. Hoekstra, A. Niehaus und F.J. de Heer,
Phys. Rev. Lett. **58** (1987) 957
- 63 *Auger Electron Emission from Slow Multicharged Ions near a Metal Surface*
 mit M. Delaunay, M. Fehringer, R. Geller und P. Varga, *Europhys. Lett.* **4** (1987) 377-82
- 64 *L_α Emission in H^+ - Na Collisions (1 - 20 keV)*
 gem. mit F. Aumayr, *J. Phys. B: At. Mol. Phys.* **20** (1987) L 803-7
- 65 *Correlated Transitions in Low Energy - Single Electron Capture from Li(2s) by Ne^{2+} and Ar^{2+}*
 gem. mit J. Schweinzer, U. Jellen-Wutte und W. Vanek,
J. Phys. B: At. Mol. Opt. Phys. **21** (1988) 315-28
- 66 *Recent Developments for Plasma Edge Diagnostics using Atomic Beams*
 gem. mit A. Pospieszczyk, F. Aumayr, H.L. Bay, D.L. Hillis, E. Hintz, P. Leismann,
 Y.T. Lie, G.G. Ross, D. Rusbüldt, R.P. Schorn und B. Schweer,
J. Nucl. Materials **162 - 164** (1989) 574-81
- 67 *State-selective Preparation of Long-lived Highly Excited Ions by means of Single Electron Capture*
 gem. mit J. Schweinzer, *J. Phys. B : At. Mol. Opt. Phys.* **22** (1989) 893-905
- 68 *Experimental Investigation on Electron Capture in the Presence of Metastable Ion Beam Fractions;* gem. mit F. Aumayr, *Physica Scripta T* **28** (1989) 96-100
- 69 *Few-Electron Ion Processes Relevant for Plasma Edge Studies*
 gem. mit F. Aumayr, *Spectroscopy and Collisions of Few-Electron Ions*,
 ed. M. Ivascu et al., World Scientific, Singapore 1989, p. 529-45
- 70 *Single Electron Capture from Alkali Atoms into Slow Doubly Charged Ions*
 gem. mit J. Schweinzer und C. Kurz, *J. de Physique* **50** (1989) C1-297-303
- 71 *Statistics of Electron Emission from Metal Surfaces Bombarded by Ions with Different Charge States*
 gem. mit G. Lakits und F. Aumayr, *J. de Physique* **50** (1989) C1-533-9
- 72 *State-Selective Electron Capture in He^{2+} -Li Collisions Studied Jointly by Photon- and Translational Energy Spectroscopy*
 mit F. Aumayr und J. Schweinzer, *J. Phys. B : At. Mol. Opt. Phys.* **22** (1989) 1027-34
- 73 *Statistics of Potential Electron Emission*
 mit G. Lakits und F. Aumayr, *Rad. Effects and Defects in Solids* **109** (1989) 129-36

- 74 *Atomic Collision Processes in Tokamak Edge Plasmas*
Kerntechnik **53** (1989) 197-201
- 75 *Statistics of Ion - induced Electron Emission from Solids*
gem. mit G. Lakits und F. Aumayr, Rev. Sci. Instrum. **60** (1989) 3151-59
- 76 *On the Statistics of Heavy Particle-induced Kinetic Electron Emission from a Clean Metal Surface*
gem. mit G. Lakits und F. Aumayr, Phys. Letters **139 A** (1989) 395-98
- 77 *Electronic Effects in Slow Heavy-Particle-Induced Electron Emission from a Clean Metal Surface*
gem. mit G. Lakits und F. Aumayr, Europhysics Letters **10** (1989) 679-685
- 78 *Electron Emission from Metal Surfaces bombarded by Slow Neutral and Ionized Particles*
gem. mit G. Lakits, Nucl. Instrum. Meth. Phys. Res. B **48** (1990) 597-603
- 79 *Single electron capture from alkali atoms by slow doubly charged ions I:*
 He^{2+} (0,5 - 6 keV) - Li, Na, K
gem. mit J. Schweinzer, J. Phys. B: At. Mol. Opt. Phys. **23** (1990) 3881-3898
- 80 *Single electron capture from alkali atoms by slow doubly charged ions II:*
 Ne^{2+} , Ar^{2+} (0,5 - 6 keV) - Li, Na, K
gem. mit J. Schweinzer, J. Phys. B: At. Mol. Opt. Phys. **23** (1990) 3899-3908
- 81 *Slow particle - induced electron emission from a clean metal surface:
A comparison for neutral and ionized projectiles*
gem. mit G. Lakits und A. Arnau, Phys. Rev. B **42** (1990) 15-24
- 82 *Threshold of ion-induced kinetic electron emission from a clean metal surface*
gem. mit G. Lakits, F. Aumayr und M. Heim, Phys. Rev. A **42** (1990) 5780-3
- 83 *Absolute concentrations of light impurity ions in tokamak discharges measured with lithium beam-activated charge exchange spectroscopy*
gem. mit R.P. Schorn, E. Hintz, D. Rusbüldt, F. Aumayr, M. Schneider und E. Unterreiter, Appl. Phys. B **52** (1991) 71-78
- 84 *On the measurement of statistics for particle-induced electron emission from a clean metal surface*
gem. mit F. Aumayr und G. Lakits, Appl. Surface Science **47** (1991) 139-147
- 85 *Experimental and theoretical investigations of electron capture and target excitation in (1 - 20 keV) H^+ - K collisions*
gem. mit M. Gieler, P. Ziegelwanger und F. Aumayr, J. Phys. B: At. Mol. Opt. Phys. **24** (1991) 647-655

- 86 *L_α emission from (0.1 - 20 keV) H^+ impact on Li, Na, K*
gem. mit M. Gieler, F. Aumayr und P. Ziegelwanger, Phys. Rev. A **43** (1991) 127-133
- 87 *What ions experience on their way into a metal surface*
Z. Phys. D **21** (1991) S129-133
- 88 *Multicharged ion - atom collisions - application for tokamak edge plasma physics*
gem. mit E. Unterreiter und F. Aumayr, Z.Phys. D **21** (1991) S167-168
- 89 *Recent advances in understanding particle - induced electron emission from metal surfaces*
gem. mit F. Aumayr und G. Lakits, Nucl. Instrum. Meth. Phys. Res. B **58** (1991) 301-8
- 90 *Single electron capture for impact of (0,5 - 9 keV) C^{2+} on He, Ar and H_2*
gem. mit E. Unterreiter und J. Schweinzer,
J.Phys.B:At.Mol.Opt.Phys. **24** (1991) 1003-16
- 91 *Comment on "Occupation of fine structure levels in electron capture of Ar^{2+} ions from various alkali atoms"*
gem. mit J. Schweinzer, J.Phys.B:At.Mol.Opt.Phys. **24** (1991) L189-190
- 92 *Laser enhanced L_α emission from (50 eV - 15 keV) H^+ - Na collisions*
gem. mit M. Gieler, F. Aumayr and M. Hütteneder,
J.Phys.B:At.Mol.Opt.Phys. **24** (1991) 4419-29
- 93 *State-selective electron capture by He^{2+} ions from laser-excited $Na^*(3p)$*
gem. mit F. Aumayr, M. Gieler and E. Unterreiter, Europhysics Lett. **16** (1991) 557-61
- 94 *Two-electron transitions in single electron capture from atoms by slow doubly charged ions,*
Comm.At.Mol.Phys. **27** (1991) 91-113
- 95 *Slow particle-induced electron emission from solid surfaces*
gem. mit P. Varga, Particle-induced electron emission II, ed. G. Höhler,
Springer Tracts in Modern Physics, vol. 123, Springer, Berlin 1991, pp. 149-214
- 96 *Slow ion-surface interactions studied by means of ion-induced electron emission statistics, The Physics of Electronic and Atomic Collisions,*
ed. W.R. MacGillivray et al., Adam Hilger, Bristol 1992, p. 475-86
- 97 *Slow particle-induced electron emission from above and below metal surfaces*
in Materials Research with Ion Beams, eds. H. Schmidt-Böcking et al.,
Springer Research Reports in Physics, Springer, Berlin 1992, p. 105-117
- 98 *Development of a compact 2.45 GHz ECR ion source*
gem. mit S. Fiedler, Rev.Sci.Instrum. **63** (1992) 2532-4

- 99 *Radial temperature distributions of C⁶⁺ ions in the TEXTOR edge plasma - measured with Li-CXS*
 gem. mit R.P. Schorn, F. Aumayr, E. Hintz, D. Rusbüldt und E. Unterreiter,
Nucl. Fusion **32** (1992) 351-9
- 100 *Suppressed electron capture in slow O⁺(⁴S^o, ²D^o, ²P^o) - He collisions*
 gem. mit E. Wolfrum und J. Schweinzer *Phys.Rev. A* (rapid communication)
45 (1992) R4218-21
- 101 *Statistics of ion-induced kinetic electron emission - a comparison between experimental and Monte Carlo-simulated results*
 gem. mit K. Ohya und F. Aumayr, *Phys.Rev. B* **46** (1992) 3101-4
- 102 *Electron capture in He²⁺ collisions with aligned Na*(3p) atoms*
 gem. mit F. Aumayr, M. Gieler, J. Schweinzer und J.P. Hansen
Phys.Rev. Letters **68** (1992) 3277-80
- 103 *Reconstruction of plasma edge density profiles from LiI(2s-2p) emission profiles*
 gem. mit J. Schweinzer, E. Wolfrum, F. Aumayr und M. Pöckl
Plasma Phys.Contr. Fusion **34** (1992) 1173-83
- 104 *Electron capture into He^{+(4l)} states in collisions of slow He²⁺ on Li*
 gem. mit R. Hoekstra, E. Wolfrum, J.P.M. Beijers, F.J. de Heer und R. Morgenstern,
J.Phys.B:At.Mol.Opt.Phys. **25** (1992) 2587-96
- 105 *Absolute visible light emission cross sections for electron capture from Li atoms by slow, highly charged ions*
 gem. mit E. Wolfrum, R. Hoekstra, F.J. de Heer und R. Morgenstern,
J.Phys.B:At.Mol.Opt.Phys. **25** (1992) 2597-2606
- 106 *Electron Emission from Slow Hollow Atoms at a Clean Metal Surface*
 gem. mit H. Kurz, K. Töglhofer, F. Aumayr und R. Mann
Phys.Rev. Letters **69** (1992) 1140-43
- 107 *Tokamak Edge Plasma Densities measured by means of Active Lithium Beam Diagnostics*
 gem. mit F. Aumayr, R.P. Schorn, M. Pöckl, J. Schweinzer, E. Wolfrum,
 K. McCormick und E. Hintz, *J.Nucl.Mater.* **196-198** (1992) 928-32
- 108 *Studies on Slow Particle-induced Electron Emission from Clean Metal Surfaces by means of Electron Emission Statistics*
 gem. mit F. Aumayr, in Ionization of Solids by Heavy Particles, ed. R.A. Baragiola,
 NATO-ASI Series B: Physics, vol. 306, Plenum Press, New York 1993, pp. 129-148
- 109 *Ion-induced Electron Emission from a Metal Surface - Insights from the Emission Statistics*
 mit K. Töglhofer und F. Aumayr, *Surf. Sci.* **281** (1993) 143-52

- 110 *Slow Electron Emission from Slow Hollow Atoms near a Clean Metal Surface*
 gem. mit F. Aumayr, H. Kurz und K. Töglhofer,
Nucl.Instrum.Meth.Phys.Res. B **78** (1993) 99-105
- 111 *Do the Projectile-Core Electrons Play a Role in Electron Capture by Highly Charged Ions from Li ?*
 gem. mit R. Hoekstra, H.O. Folkerts, R. Morgenstern, E. Wolfrum, R.E. Olson and J. Pascale, in *AIP Conf. Proceedings* **274**, eds. P. Richard et al., New York 1993, pp. 89-92
- 112 *Electron Capture in collisions of Doubly Charged Rare Gas Ions with Laser-excited alkali atoms*
 gem. mit M. Gieler und F. Aumayr,
 in *AIP Conf. Proceedings* **274**, eds. P. Richard et al., New York 1993, pp. 155-8
- 113 *Electron emission from Slow Highly Charged Ions Interacting with a Metal Surface*
 gem. mit F. Aumayr, H. Kurz und K. Töglhofer,
 in *AIP Conf. Proceedings* **274**, eds. P. Richard et al., New York 1993, pp. 573-82
- 114 *Lithium-Beam Spectroscopy of Tokamak Edge Plasmas*
 gem. mit E. Wolfrum, F. Aumayr, E. Hintz, R.P. Schorn, J. Schweinzer und D. Wutte, *Rev.Sci.Instrum.* **64** (1993) 2285-92
- 115 *Atomic Data Base for Lithium-Beam Edge Plasma Spectroscopy*
 gem. mit R.K. Janev, J.J. Smith, D. Wutte, M. Schneider, F. Aumayr und J. Schweinzer, *IAEA Report Nr. INDC-NDS-267*, IAEA Wien, (1993)
- 116 *Electron Capture by Doubly Charged Ions from Laser Excited Alkali Atoms:
 I: He^{2+} - $\text{Na}^*(3p)$ Collisions*
 gem. mit M. Gieler, F. Aumayr, J. Schweinzer, W. Koppensteiner, W. Husinsky, K. Lozhkin and J.P. Hansen, *J.Phys.B:At.Mol.Opt.Phys.* **26** (1993) 2137-51
- 117 *Electron Capture by Doubly Charged Ions from Laser Excited Alkali Atoms:
 II: He^{2+} - $\text{Li}^*(2p)$ Collisions*
 gem. mit M. Gieler, F. Aumayr, M. Weber und J. Schweinzer, *J.Phys.B:At.Mol.Opt.Phys.* **26** (1993) 2153-64
- 118 *Electron Capture from Li by B^{5+} , N^{5+} and Be^{4+} Ions*
 gem. mit R. Hoekstra, R.E. Olson, H.O. Folkerts, E. Wolfrum, J. Pascale, F.J. de Heer, D. Wutte und R. Morgenstern, *J.Phys.B:At.Mol.Opt.Phys.* **26** (1993) 2029-40
- 119 *Neutralization of Slow Multicharged Ions at a Clean Gold Surface:
 Total Electron Yields*
 mit H. Kurz, F. Aumayr, C. Lemell und K. Töglhofer, *Phys.Rev. A* **48** (1993) 2182-91

- 120 *Neutralization of Slow Multicharged Ions at a Clean Gold Surface: Electron Emission Statistics*
mit H. Kurz, F. Aumayr, C. Lemell and K. Töglhofer,
Phys.Rev. A **48** (1993) 2192-7
- 121 *Near-Threshold Electron Emission from Slow Cluster Impact on Clean Gold*
gem. mit K. Töglhofer, F. Aumayr, H. Kurz, P. Scheier and T.D. Märk,
Europhys. Letters **22** (1993) 597-602
- 122 *The Statistics of Electron Emission from Clean Metal Surfaces Induced by Slow Ions: Measurement and Recent Applications*
gem. mit F. Aumayr and T.D. Märk, Int.J.Mass Spectrom.Ion Proc. **129** (1993) 17-29
- 123 *Near Threshold Electron Emission from Impact of Slow Van der Waals Clusters and Fullerene Ions on Clean Gold*
gem. mit K. Töglhofer, F. Aumayr, H. Kurz, P. Scheier and T.D. Märk,
J.Chem.Phys. **99** (1993) 8254-61
- 124 *Emission of Electrons from a Clean Gold Surface Induced by Slow, Very Highly Charged Ions at the Image Charge Acceleration Limit*
gem. mit F. Aumayr, H. Kurz, D. Schneider, M.E. Briere, J.W. McDonald
and C.E. Cunningham, Phys.Rev. Letters **71** (1993) 1943-46
- 125 *Slow Electrons Produced by Slow Multicharged Ions on a Clean Metal Surface*
gem. mit F. Aumayr and H. Kurz, Nucl.Instrum.Meth.Phys.Res. B **87** (1994) 130-7
- 126 *Electron Emission Induced by Cluster Impact on a Clean Metal Surface*
gem. mit K. Töglhofer, F. Aumayr, H. Kurz, P. Scheier and T.D. Märk,
Nucl.Instrum.Meth.Phys.Res. B **88** (1994) 44-8
- 127 *Electron Emission Induced by Slow Highly Charged Ions on a Clean Metal Surface*
gem. mit F. Aumayr, Nucl.Instrum.Meth.Phys.Res. B **90** (1994) 523-32
- 128 *Emission of Slow and Fast Electrons from Clean Metal Surfaces under Impact of Slow Multicharged Ions*
gem. mit F. Aumayr,
Comm.At.Mol.Phys. **29** (1994) 275-303
- 129 *Distinction between Multicharged Ion Species with equal q/m*
gem. mit F. Aumayr, H. Kurz, D. Schneider, M.E. Briere and J.W. McDonald,
Rev.Sci.Instrum. **64** (1993) 3499-3502
- 130 *A Study of Electron Capture and Excitation Processes in Collisions of Multicharged Ions with Lithium Atoms*
gem. mit J. Schweinzer and D. Wutte,
J.Phys.B:At.Mol.Opt.Phys. **27** (1994) 137-53

- 131 *Single-stage 5 GHz ECR-multicharged Ion Source with High Magnetic Mirror Ratio and Biased Disk,*
 gem. mit M. Leitner, D. Wutte, J. Brandstötter und F. Aumayr,
Rev.Sci.Instrum. **65** (1994) 1091 - 3
- 132 *A 2,45 GHz ECR Multi-mA Li⁺ Ion Gun for Fusion Plasma Diagnostics*
 gem. mit D. Wutte und M. Leitner, *Rev.Sci.Instrum.* **65** (1994) 1094 - 6
- 133 *Electron Emission and Image Charge Acceleration for Impact of Very Highly Charged Ions on Clean Gold*
 gem. mit H. Kurz, F. Aumayr, D. Schneider, M.A. Briere and J.W. McDonald
Phys.Rev. A **49** (1994) 4693-4702
- 134 *Electron Emission from Polycrystalline Lithium Fluoride Induced by Slow Multicharged Ions,*
 gem. mit M. Vana, F. Aumayr and P. Varga, *Europhys. Letters* **29** (1995) 55-60
- 135 *Secondary Ion Emission from Lithium Fluoride under Impact of Slow Multicharged Ions,* gem. mit T. Neidhart, F. Pichler, F. Aumayr, M. Schmid and P. Varga
Nucl. Instrum. Meth. Phys. Res. B **98** (1995) 465-68
- 136 *Electron Emission from Polycrystalline Lithium Fluoride Bombarded by Slow Multicharged Ions,* gem. mit M. Vana, F. Aumayr and P. Varga,
Nucl. Instrum. Meth. Phys. Res. B **100** (1995) 284-9
- 137 *Potential and Kinetic Electron Emission from Clean Gold Induced by Multicharged Nitrogen Ions,* gem. mit M. Vana, H. Kurz and F. Aumayr,
Nucl. Instrum. Meth. Phys. Res. B **100** (1995) 402-6
- 138 *Escape Probabilities for Electrons Emitted During the Interaction of Slow Highly Charged Ions*
 gem. mit C. Lemell, HP. Winter, F. Aumayr, J. Burgdörfer and C. Reinhold
Nucl. Instrum. Meth. Phys. Res. B **102** (1995) 33-6
- 139 *Electron Capture Processes in Slow Collisions of Plasma Impurity Ions with H, H₂ and He,* gem. mit R.K. Janev and W. Fritsch
 Chapter 13 in "Atomic and Molecular Processes in Fusion Edge Plasmas"
 Plenum Press, New York 1995
- 140 *The Physics of Highly Charged Ions*
 gem. mit F. Aumayr, *Comm.At.Mol.Phys.* **31** (1995) 125-34
- 141 *"Potential sputtering" of Lithium Fluoride by Slow Multicharged Ions*
 gem. mit T. Neidhart, F. Pichler, F. Aumayr, M. Schmid and P. Varga
Phys.Rev. Letters **74** (1995) 5280-3

- 142 *Two programs for Calculations of Collisional Atomic Data for Lithium - Beam Plasma Spectroscopy*, gem. mit J. Schweinzer, F. Aumayr, P. Platzer, M. Schneider and D. Wutte, Comp.Phys.Comm. **88** (1995) 83-88
- 143 *Translational Energy Spectroscopy for Studies on Single Electron Capture from He by Ground State and Metastable Ions*
J.Phys.Chem. **99** (1995) 15448-53
- 144 *Information Contents of the Statistics for Ion induced Electron Emission at Solid Surfaces*
gem. mit M. Vana, F. Aumayr and C. Lemell,
Int.J. Mass Spectrom. Ion Proc. **149/150** (1995) 45-57
- 145 *Do hollow atoms exist in front of an insulating LiF(100) surface ?*
gem. mit J. Limburg, S. Schippers, R. Hoekstra, R. Morgenstern, H. Kurz and F. Aumayr, Phys.Rev.Letters **75** (1995) 217-19
- 146 *Interaction of Slow Multicharged Ions with Solid Surfaces: Current Concepts and New Information on Slow Electron Emission*
gem. mit M. Vana, C. Lemell and F. Aumayr
Nucl.Instrum.Meth.Phys.Res. B **115** (1996) 224-32
- 147 *On the Formation of Hollow Atoms in Front of an Insulating LiF Surface*
gem. mit J. Limburg, S. Schippers, R. Hoekstra, R. Morgenstern, H. Kurz, M. Vana and F. Aumayr Nucl.Instrum.Meth.Phys.Res. B **115** (1996) 237-41
- 148 *Image Acceleration of Highly Charged Ions by Metal Surfaces*
gem. mit C. Lemell, F. Aumayr, J. Burgdörfer and F.W. Meyer
Phys.Rev. A **53** (1996) 880-5
- 149 *Electron Capture by Doubly Charged Ions from Laser-excited Atoms: III: Ne^{2+} , Ar^{2+} - $Na^*(3p)$ Collisions*
gem. mit F. Aumayr, M. Gieler and J. Schweinzer
J.Phys.B:At.Mol.Opt.Phys. **29** (1996) 1515-23
- 150 *$Na(3p \leftarrow 3s)$ Excitation by Impact of Slow Multiply Charged Ions*
gem. mit G. Horvath, J. Schweinzer and F. Aumayr
Phys.Rev. A **54** (1996) 3022-8
- 151 *Hollow Atoms make an Appearance above Insulators*
Physics World, Dec. 1996, p. 23
- 152 *Cross Sections for Collision Processes of Li Atoms interacting with Electrons, Protons, Multicharged Ions and Hydrogen Molecules*
gem. mit D. Wutte, R.K. Janev, F. Aumayr, M. Schneider, J. Schweinzer and J.J. Smith, Atomic Data and Nuclear Data Tables **65** (1996) 155-180

- 153 *Precise Total Electron Yield Measurements for Impact of Singly or Multiply Charged Ions on Clean Solid Surfaces*
gem. mit H. Eder, M. Vana and F. Aumayr, Rev.Sci.Instrum. **68** (1997) 165-9
- 154 *Applications of High Performance Multicharged Ion Sources*
Chapter 1 in Accelerator based Atomic Physics: Techniques and Applications
J. Austin and S.M. Shafroth eds., American Institute of Physics press,
Woodbury 1997
- 155 *Structure and Dynamics of Hollow Atoms formed near C- and Al Surfaces*
gem. mit N. Stolterfoht, D. Niemann, M. Grether, A. Spieler, A. Arnau, C. Lemell
and F. Aumayr, Nucl.Instrum.Meth.Phys.Res. B **124** (1997) 303-13
- 156 *Charge State Effects in the Interaction of Multiply Charged Ions with Surfaces*
gem. mit C. Lemell and F. Aumayr, Nucl.Instrum.Meth.Phys.Res. B **125** (1997) 146-52
- 157 *Distinction between Multicharged Fullerene Ions and their Fragment Ions
with Equal Charge-to-Mass*
gem. mit F. Aumayr, M. Vana, H. Drexel, V. Grill, G. Senn, S. Matt,
P. Scheier and T.D. Märk, Int.J.Mass Spectrom. Ion Proc. **163** (1997) 9 - 14L
- 158 *Potential Sputtering of Clean SiO₂ by Slow Highly Charged Ions*
gem. mit M. Sporn, G. Libiseller, T. Neidhart, M. Schmid, F. Aumayr, P. Varga,
M. Grether, D. Niemann and N. Stolterfoht, Phys.Rev. Letters **79** (1997) 945-8
- 159 *Hollow Atom Spectroscopy*
Physica Scripta **T72** (1997) 18-23
- 160 *Sputter Yields of Insulators Bombarded with Hyperthermal Multiply Charged Ions*
gem. mit P. Varga, T. Neidhart, M. Sporn, G. Libiseller, M. Schmid and F. Aumayr
Physica Scripta **T73** (1997) 307-10
- 161 *Electron Emission for Impact of Slow Fullerene Ions on Clean Gold*
gem. mit M. Vana, F. Aumayr, H. Drexel, V. Grill, P. Scheier and T.D. Märk
Physica Scripta **T73** (1997) 318-9
- 162 *Projectile Charge Dependence of Kinetic Electron Emission from Clean Gold*
gem. mit H. Eder, M. Vana, F. Aumayr, J.I. Juaristi und A. Arnau
Physica Scripta **T73** (1997) 322-3
- 163 *Interaction of Slow Multicharged Ions with Solid Surfaces*
gem. mit A. Arnau et al., Surface Science Reports **27** (1997) 113-239
- 164 *Emission of low-energy electrons from slow N⁶⁺ ions interacting with a Au surface*
gem. mit D. Niemann, M. Grether, A. Spieler, N. Stolterfoht, C. Lemell and
F. Aumayr, Phys.Rev. A **56** (1997) 4774-80

- 165 *Suppression of Potential Electron Emission from Impact of Slow Multicharged Fullerenes on Clean Gold*
gem. mit M. Vana, G. Betz, F. Aumayr, H. Drexel, P. Scheier and T.D. Märk
Phys.Rev. A **56** (1997) 3007-10
- 166 *Comment on "Observation of Hollow Atoms or Ions above Insulator and Metal Surfaces"*
gem. mit F. Aumayr, J. Limburg, R. Hoekstra and R. Morgenstern
Phys.Rev. Letters **79** (1997) 2590
- 167 *Final Vibrational State Resolved Single Electron Capture for Impact of ≤ 1 keV C^{2+} on H_2 , N_2 , O_2 and CO*
gem. mit P. Leputsch, D. Dumitriu and F. Aumayr,
J.Phys.B:At.Mol.Opt.Phys. **30** (1997) 5009-24
- 168 *Ion-solid interactions*
McGraw-Hill 1998 Yearbook of Science and Technology
McGraw-Hill, New York 1998, pp. 208-10
- 169 *Electron emission from a Clean Gold Surface Bombarded by Slow Multiply Charged Fullerenes*
gem. mit F. Aumayr, G. Betz, T.D. Märk and P. Scheier,
Int.J. Mass Spectrom. Ion Proc. **174** (1998) 317-28
- 170 *Determination of electron density fluctuation correlation functions via beam emission spectroscopy*
gem. mit S. Zoleznik, S. Fiedler, G. Kocsis, G.K. McCormick and J. Schweinzer
Plasma Phys. Contr. Fusion **40** (1998) 1399-1416
- 171 *Sputtering of Insulator Surfaces by Slow Highly Charged Ions: "Coulomb Explosion" or Defect mediated Desorption ?*
gem. mit F. Aumayr, J. Burgdörfer and P. Varga,
Comm.At.Mol.Phys. **34** (1999) 201-19
- 172 *Photonic, Electronic and Atomic Collisions 1997*
gem. mit F. Aumayr
Comm.At.Mol.Phys. **34** (1999) 341-6
- 173 *Li(2p-2s) excitation by impact of slow ions*
gem. mit R. Brandenburg, J. Schweinzer und F. Aumayr
J.Phys.B:At.Mol.Opt.Phys. **31** (1998) 2585-99
- 174 *Charge state effects in the interaction of multiply charged ions with surfaces*
gem. mit C. Lemell, H. Eder und F. Aumayr
The Nucleus **34** (1997) 215-22

- 175 *Impurity Investigations by means of Li beam induced charge exchange spectroscopy on W7-AS*
 gem. mit S. Fiedler, R. Brandenburg, J. Baldzuhn, K. McCormick, F. Aumayr,
 J. Schweinzer, and W7AS team
J. Plasma Res. SERIES 1 (1998) 287-90
- 176 *Multicharged ion impact on clean Au(111): Suppression of kinetic electron emission in glancing angle scattering*
 gem. mit C. Lemell, J. Stöckl, J. Burgdörfer, G. Betz, und F. Aumayr,
Phys.Rev. Letters **81** (1998) 1965
- 177 *Modelling kinetic electron emission for the impact of slow N⁺on LiF*
 gem. mit S. Zamini, G. Betz, W. Werner, F. Aumayr, J. Anton und B. Fricke
Surface Science **417** (1998) 372-83
- 178 *Search for Projectile Charge Dependence of Kinetic Emission from Clean Polycrystalline Gold*
 gem. mit H. Eder and F. Aumayr
Nucl.Instrum.Meth.Phys.Res. B **154** (1999) 185-93
- 179 *Photonic, Electronic and Atomic Collisions*
 gem. mit F. Aumayr (Hrsgr.)
 ISBN 981-02-3425-2, World Scientific, Singapore 1998 (706 pp.)
- 180 *A Versatile Electron Detector for Studies on Ion-Surface Scattering*
 gem. mit C. Lemell, J. Stöckl and F. Aumayr, *Rev.Sci.Instrum* **70** (1999) 1653-7
- 181 *Edge Plasma Diagnostics on W7-AS and ASDEX upgrade using fast Li Beams*
 gem. mit S. Fiedler, R. Brandenburg, J. Baldzuhn, K. McCormick, F. Aumayr,
 J. Schweinzer, and the W7-AS and ASDEX upgrade teams
J.Nucl.Mater. **266-269** (1999) 1279-84
- 182 *Separation of kinetic and potential electron emission in HCI-surface interactions*
 gem. mit C. Lemell, H. Stöckl, J. Burgdörfer, G. Betz and F. Aumayr
Physica Scripta T **80** (1999) 76-8
- 183 *Projectile charge effects in ion induced kinetic electron emission from solid surfaces*
 gem. mit H. Eder, C. Lemell and F. Aumayr
Physica Scripta T **80** (1999) 236-7
- 184 *Evidence against the “Coulomb explosion” model in desorption from insulator surfaces by slow highly charged ions*
 gem. mit F. Aumayr, J. Burgdörfer, G. Hayderer and P. Varga
Physica Scripta T **80** (1999) 240-42
- 185 *Hollow Atoms*
 gem. mit F. Aumayr, Topical Review, *J.Phys.B:At.Mol.Opt.Phys.* **32** (1999) R39-65

- 186 *Potential Sputtering - Desorption from Insulator Surfaces by Impact of Slow Multicharged Ions*, gem. mit F. Aumayr and P. Varga,
Int.J. Mass Spectrom. Ion Proc. **192** (1999) 415-24
- 187 *Kinetic electron emission in the near-threshold region studied for different projectile charges*
gem. mit H. Eder and F. Aumayr,
Int.J. Mass Spectrom. Ion Proc. **192** (1999) 407-13
- 188 *Potential Sputtering of Insulator Surfaces*
gem. mit F. Aumayr and P. Varga,
Chapter 12, "Trapping Highly Charged Ions: Fundamentals and Applications"
edited by J. Gillaspy (NIST Natl. Inst. for Standards and Technology)
NOVA Science Publisher Inc., ISBN 1-56072-725-X (1999), p. 295 - 308
- 189 *Multicharged Ion induced Electron Emission from Solid Surfaces*
gem. mit F. Aumayr,
Chapter 13, "Trapping Highly Charged Ions: Fundamentals and Applications"
edited by J. Gillaspy (NIST Natl. Inst. for Standards and Technology)
NOVA Science Publisher Inc., ISBN 1-56072-725-X (1999), p. 309 - 331
- 190 *Modelling of Fast Neutral Li Beams for Fusion Edge Plasma Diagnostics*
gem. mit R. Brandenburg, J. Schweinzer, S. Fiedler and F. Aumayr,
Plasma Phys.Contr. Fusion **41** (1999) 471-84
- 191 *Density measurements with combined Li-beam diagnostics and microwave reflectometry during advanced tokamak operation on ASDEX Upgrade*
gem. mit I. Nunes, M. Manso, P. Varela, F. Serra, A. Silva, F. Silva, J. Schweinzer,
R. Brandenburg and F. Aumayr,
Europ. Conf. Abstr. Vol. **23J** (1999) 1633-6
- 192 *Database for Inelastic Collisions of Lithium Atoms with Electrons, Protons and Multiply Charged Ions*
gem. mit J. Schweinzer, R. Brandenburg, I. Bray, R. Hoekstra, F. Aumayr
and R.K. Janev, Atomic and Nuclear Data Tables **72** (1999) 239-73
- 193 *Stability of multiply charged fullerene ions*
gem. mit P. Scheier, B. Dünser, G. Senn, H. Drexel, F. Aumayr, G. Betz, F. Biasioli,
T. Fiegele and T.D. Märk, Europ.J.Phys. D **9** (2000) 91-4
- 194 *Fast lithium beam edge plasma spectroscopy at IPP Garching – status and recent developments*
gem. mit R. Brandenburg, F. Aumayr, G. Petravich, S. Zoletnik, S. Fiedler,
K. McCormick, J. Schweinzer, W7AS- and ASDEX upgrade teams
Fusion Technology **36** (1999) 289-95

- 195 *A highly-sensitive quartz-crystal microbalance for sputtering investigations in slow ion-surface collisions*
gem. mit G. Hayderer, M. Schmid, P. Varga and F. Aumayr
Rev.Sci.Instrum. **70** (1999) 3696-700
- 196 *Threshold for potential sputtering of LiF*
gem. mit G. Hayderer, L. Wirtz, C. Lemell, L. Hägg, M. Schmid, J. Burgdörfer, P. Varga and F. Aumayr, Phys.Rev. Letters **83** (1999) 3948-51
- 197 *Curve crossing analysis for potential sputtering of insulators*
gem. mit L. Wirtz, G. Hayderer, C. Lemell, J. Burgdörfer, L. Hägg, C.O. Reinhold, M. Schmid, P. Varga and F. Aumayr, Surface Science **451** (2000) 197-202
- 198 *Observation of a threshold in potential sputtering of LiF surfaces*
gem. mit G. Hayderer, C. Lemell, L. Wirtz, M. Schmid, J. Burgdörfer, P. Varga and F. Aumayr, Nucl.Instrum.Meth.Phys.Res. **B164-165** (2000) 517-21
- 199 *Coincidence measurements of highly charged ions interacting with a clean Au(111) surface*
gem. mit C. Lemell, J. Stöckl, J. Burgdörfer, G. Betz and F. Aumayr
Phys.Rev. A **61** (2000) 012902-1 – 7
- 200 *Coincidence measurements of highly charged ions interacting with surfaces*
gem. mit C. Lemell, J. Stöckl, J. Burgdörfer, G. Betz and F. Aumayr
The Physics of Electronic and Atomic Collisions (Y. Itikawa et al., edrs.),
AIP Conf. Proc. vol. **500**, American Institute of Physics (2000) p. 656-65
- 201 *Electron emission from clean gold bombarded by slow Au^{q+} ($q = 1 - 3$) ions*
gem. mit H. Eder, W. Messerschmidt and F. Aumayr,
J.Appl.Phys. **87** (2000) 8198-8200
- 202 *Slow ion-induced electron emission from clean surfaces:
Relaxation paths of the potential and kinetic projectile energies*
gem. mit H. Eder, E. Galutschek and F. Aumayr,
Uzbek Physics J. **2** (2000) 1-8
- 203 *Ion induced kinetic electron emission from clean polycrystalline gold:
Impact of C⁺, N⁺, O⁺, Ne⁺ Xe⁺ and Au⁺*
gem. mit J. Lörincik, Z. Sroubek, H. Eder and F. Aumayr
Phys.Rev. B **62** (2000) 16116-25
- 204 *Surface induced dissociation of singly and multiply charged fullerene ions*
gem. mit F. Biasioli, T. Fiegele, C. Mair, Z. Herman, O. Echt, F. Aumayr and T.D. Märk,
J.Chem.Phys. **113** (2000) 5053-7

- 205 *Helium doped hydrogen or deuterium beam as cost effective and simple tool for plasma spectroscopy*
gem. mit H.D. Falter, M. Proschek, S. Menhart, F. Aumayr, D. Ciric, S. Cox,
Dines, D. Godden, N. Hawkes and T.T.C. Jones,
Rev.Sci.Instrum. **71** (2000) 3723-7
- 206 *Electron emission during grazing $H^o - LiF(001)$ collisions*
gem. mit H. Eder, A. Mertens, K. Maas, H. Winter and F. Aumayr
Phys.Rev. A **62** (2000) 52901-1-4
- 207 *Excitation of plasmons by impact of slow ions on clean mono- and polycrystalline aluminum*
gem. mit H. Eder, F. Aumayr, P. Berlinger and H. Störi,
Surface Science **472** (2001) 195-204
- 208 *Interaction of slow HCl with surfaces – what do we know, what should we know ?*
gem. mit F. Aumayr
Physica Scripta T **92** (2001) 15-21
- 209 *Electron emission in grazing HCl - LiF(001) collisions*
Gem. mit J. Stöckl, C. Lemell and F. Aumayr
Physica Scripta T **92** (2001) 135-7
- 210 *STM studies of HCl-induced surface damage on highly oriented pyrolytic graphite*
gem. mit G. Hayderer, S. Cernusca, M. Schmid, P. Varga and F. Aumayr
Physica Scripta T **92** (2001) 156-7
- 211 *Slow-ion induced electron emission from clean metal surfaces: „Subthreshold kinetic emission“ and „potential excitation of plasmons“*
gem. mit H. Eder, F. Aumayr, HP. Winter, J. Lörincik and Z. Sroubek
Nucl. Instrum. Meth. Phys. Res. B **182** (2001) 15-22
- 212 *Studies on electron emission during grazing impact of keV hydrogen atoms from a LiF(001) surface*
gem. mit A. Mertens, S. Lederer, K. Maass, H. Winter, J. Stöckl, H. Eder
and F. Aumayr, Nucl. Instrum. Meth. Phys. Res. B **182** (2001)
- 213 *Sputtering of Au and Al_2O_3 surfaces by slow highly charged ions*
gem. mit G. Hayderer, S. Cernusca, M. Schmid, P. Varga, F. Aumayr,
V. Hoffmann, D. Niemann and N. Stolterfoht
Nucl. Instrum. Meth. Phys. Res. B **182** (2001) 143-7
- 214 *Explorative studies for the development of fast He beam diagnostics*
gem. mit S. Menhart, M. Proschek, H.-D. Falter, H. Anderson, H. Summers,
A. Stäbler, P. Franzen, H. Meister, J. Schweinzer, T.T.C. Jones, S. Cox,
N. Hawkes and F. Aumayr, J. Nucl. Mat. **290-293** (2001) 673-7

- 215 *Extension of the B2 edge code towards the plasma core for a self-consistent simulation of ASDEX upgrade scenarios*
 gem. mit H. Bürbamer, R. Neu, R. Schneider, D. Coster, J. Stober
 and F. Aumayr, J. Nucl. Mat. **290-293** (2001) 571-4
- 216 Kinetically assisted potential sputtering of insulators by highly charged ions
 gem. mit G. Hayderer, S. Cernusca, M. Schmid, P. Varga, F. Aumayr,
 D. Niemann, V. Hoffmann, N. Stolterfoht, C. Lemell, L. Wirtz
 and J. Burgdörfer
 Phys.Rev. Letters **86** (2001) 3530-3
- 217 *Excitation vs. electron emission near their kinetic thresholds for grazing impact of hydrogen atoms on LiF(001)*
 gem. mit A. Mertens, S. Lederer, K. Maass, H. Winter, J. Stöckl and F. Aumayr
 Phys.Rev. B **65** (2002) 132410-1-4
- 218 *Electron emission by Doppler-mediated formation of doubly excited H^{+**} in grazing incidence of protons on clean Al(111)*
 gem. mit J. Lörincik, Z. Srubek and F. Aumayr
 Europhys. Letters **54** (2001) 633-9
- 219 *The Two-Mesh Grid Refinement Method for the B2 Code*
 gem. mit X. Bonnin, H. Bürbamer, R. Schneider, D. Coster und F. Aumayr
 Contrib. Plasma Phys. **42** (2001) 175-80
- 220 *Ion induced kinetic electron emission from highly oriented pyrolytic graphite by impact of H^+ , C^+ , N^+ and O^+*
 gem. mit J. Lörincik, Z. Srubek, S. Cernusca, A. Diem und F. Aumayr
 Surface Science 504 (2002) 59-65
- 221 *Kinetic electron emission from highly oriented pyrolytic graphite surfaces induced by singly charged ions*
 gem. mit S. Cernusca, A. Diem, F. Aumayr, J. Lörincik und Z. Srubek,
 Nucl.Instrum.Meth.Phys.Res. B **193** (2002) 616-20
- 222 *Formation of surface excitons and electron emission during grazing impact of hydrogen atoms on LiF(001)*
 gem. mit J. Stöckl, F. Aumayr, S. Lederer, A. Mertens, K. Maass
 und H. Winter, Nucl.Instrum.Meth.Phys.Res. B **193** (2002) 645-50
- 223 *Edge Plasma relevant ion-surface collision processes*
 gem. mit S. Cernusca, F. Aumayr, A. Qayyum, W. Schustereder, C. Mair,
 P. Scheier und T.D. Märk, Int.J.Mass Spectrom.Ion Proc. **223-224** (2003) 21-36

- 224 *Charge exchange between slow doubly charged ions and simple molecules: Translational energy spectroscopy and data survey*
gem. mit M. Albu, F. Aumayr, J.-P. Klein, L. Mrazek und R. Wörgötter-Plunger,
Nuclear Fusion Supplement:
Atomic and Plasma-Material Interaction Data for Fusion **10** (2002) 55-69
- 225 *Single electron capture in slow collisions of doubly charged ions with dinuclear molecules*, gem. mit M. Albu, L. Mrazek und F. Aumayr,
Int.J.Mol.Sci. **3** (2002) 209-19
- 226 *A close look to subthreshold kinetic electron emission from clean metal surfaces: „Surface-assisted kinetic emission“ and „Potential excitation of plasmons“* gem. mit F. Aumayr J. Lörincik und Z. Sroubek,
Izvestia Acad. Nauk **66** (2002) 548-50
- 227 *Statistics of electron and exciton production for grazing impact of keV hydrogen atoms on a LiF(001) surface*
gem. mit H. Winter, S. Lederer, K. Maass, A. Mertens und F. Aumayr
J.Phys.B:At.Mol.Opt.Phys. **35** (2002) 3315-25
- 228 *Quantitative model for the surface sensitivity in Auger photoelectron coincidence spectroscopy (APECS)*,
gem. mit W.S.M. Werner und H. Störi,
Surface Science **518** (2002) L569-576
- 229 *Slow multicharged ions hitting a solid surface: From hollow atoms to novel applications*,
gem. mit F. Aumayr, Europhys.News Nov./Dec. 2002, 215-17
- 230 *Electron emission and molecular fragmentation during hydrogen and deuterium ion impact on carbon surfaces*,
gem. mit A. Quayyum, W. Schustereder, C. Mair, P. Scheier,
T.D. Märk, S. Cernusca und F. Aumayr, J.Nucl.Mater. **313-316** (2003) 670-4
- 231 *Molecular projectile effects for kinetic electron emission from carbon- and metal surfaces bombarded by slow hydrogen ions*
gem. mit S. Cernusca, F. Aumayr, R. Diez Muino and J.I. Juaristi,
Nucl.Instrum.Meth.Phys.Res. B **203** (2003) 1-7
- 232 UHV-AFM search for nanodefects produced by slow ions on
monocrystalline insulator surfaces, gem. mit I.C. Gebeshuber, S. Cernusca
und F. Aumayr, Nucl.Instrum.Meth.Phys.Res. B **205** (2003) 751-57
- 233 Kinetic electron emission from the selvage of a free-electron gas metal
gem. mit S. Lederer, K. Maas, D. Blauth, H. Winter and F. Aumayr
Phys.Rev. B **67** (2003) 121405-1 – 4 (rapid commun.)

- 234 *Electronic processes near kinematic threshold for grazing scattering of fast hydrogen atoms from a LiF(001) surface*, gem. mit S. Lederer, A. Mertens, H. Winter, F. Aumayr und V. Staemmler, Nucl.Instrum.Meth.Phys.Res. B **203** (2003) 23-28
- 235 *Inelastic interaction of slow ions with clean solid surfaces:
Potential and kinetic electron emission, plasmon excitation, potential sputtering*
gem. mit F. Aumayr
Chapter 1 in "The Physics of Multiply and Highly Charged Ions", vol. 2,
F. Currell edr., Kluwer Academic Publishers, ISBN 1-4020-1582-8 (2003) pp. 3-45
- 236 *Classical model of kinetic electron emission near threshold induced by impact of atomic projectiles on a free-electron gas metal*
gem. mit H. Winter, Europhys. Letters **62** (2003) 739-45
- 237 *Nanoscopic surface modifications by slow ion bombardment*
gem. mit I.C. Gebeshuber, S. Cernusca und F. Aumayr,
Int.J. Mass Spectrom. **229** (2003) 27-34
- 238 *Slow highly-charged ions – a new tool for surface nanostructuring ?*
gem. mit F. Aumayr
e-Journal Surface Science Nanotechnology **1** (2003) 171-4
- 239 *Electronic processes during impact of fast hydrogen atoms on a LiF(100) surface*
gem. mit H. Winter, A. Mertens, S. Lederer, C. Auth und F. Aumayr
Nucl.Instrum.Meth.Phys.Res. B **212** (2003) 45-50
- 240 *Potential Sputtering*
gem. mit F. Aumayr,
Contribution to „Sputtering: Past, Present and Future“
Theme Issue of Phil.Trans.Roy.Soc. (Ser. A), ed. by R. Smith, **362** (2004) 77-102
- 241 *H^+ -He($1s^2$) collisions: CTMC calculations of single ionisation and excitation cross sections*
gem. mit K. Dimitriou, F. Aumayr and K. Katsonis,
Int.J. Mass Spectrom. **233** (2004) 137-44
- 242 *Single electron capture by slow He^{2+} from Ne, H_2 , O_2 and CO*
gem. mit M. Albu und F. Aumayr,
Int.J. Mass Spectrom. **233** (2004) 239-44
- 243 *Kinetic electron emission for planar vs. axial surface channeling of He atoms and ions*
gem. mit H. Winter, K. Maass, S. Lederer und F. Aumayr
Phys.Rev. B **69** (2004) 054110

- 244 *Separation of potential and kinetic emission for grazing impact of multiply charged Ar ions on a LiF(001) surface*
 gem. mit J. Stöckl, T. Suta, F. Ditroi und F. Aumayr,
Phys.Rev. Letters **93** (2004) 263201
- 245 *Emission depth-selective Auger-photoelectron coincidence spectroscopy (APECS)*
 gem. mit W.S.M. Werner, W. Smekal, H. Störi, G. Stefani, A. Ruocco, F. Offi, R. Gotter, A. Morgante und F. Tomasini, *Phys.Rev. Letters* **94** (2005) 038302
- 246 *Inelastic interactions of slow ions and atoms with surfaces*
 gem. mit F. Aumayr, *NIM B* **233** (2005) 111-24
- 247 *Electron emission for grazing impact of keV He atoms on an Al(111) surface*
 gem. mit S. Lederer and H. Winter, *NIM B* **232** (2005) 47-52
- 248 *Studies on kinetic and potential electron emission from surfaces for grazing impact of slow atoms and ions*
 gem. mit S. Lederer, F. Aumayr and H. Winter,
Comm.At.Mol.Opt.Phys. **72** (2005) C12
- 249 *Ion-induced kinetic electron emission from HOPG with different surface orientation*
 gem. mit S. Cernusca, M. Fürsatz und F. Aumayr,
Europhysics Letters **70** (2005) 768-74
- 250 *Kinetic electron emission induced by grazing scattering of slow atoms: Local probe of the Compton profile near the Fermi edge*
 gem. mit S. Lederer , H. Winter, C. Lemell und J. Burgdörfer
Phys.Rev. B **72** (2005) 161402 (R)
- 251 *Atomic data for H^+ -He($1s^2$), He(NLM) collisions: Single ionization, excitation and charge exchange cross sections*
 K. Dimitriou, F. Aumayr, K. Katsonis, HP. Winter, M.I. Chibisov, R.K. Janev, X. Urbain and F. Brouillard
 Atomic and Plasma-Material Interaction Data for Fusion, IAEA Vienna (2006, in print)
- 252 *Charge exchange data for alpha particles interacting with atoms and molecules*
 R. Hoekstra, D. Bodewits, S. Knoop, R. Morgenstern, L. Mendez, L.F. Errea, C. Illescas, A. Macias, B. Pons, A. Riera, F. Aumayr and HP. Winter
 Atomic and Plasma-Material Interaction Data for Fusion, IAEA Vienna (2006, in print)

- 253 *Scanning probe microscopy across dimensions*
I.C. Gebeshuber, R.A.P. Smith, HP. Winter and F. Aumayr
Chapter in Imaging nature across dimensions: From cells to single proteins
(P. Gualtieri et al., eds.), NATO ASI Series (Kluwer, 2005)
- 254 *Scanning probe microscopy: From living cells to the sub-atomic range*
I.C. Gebeshuber, M. Drack, F. Aumayr, HP. Winter and F. Franek
in Applied Scanning Probe Methods III: Characterization (NanoScience and Technology), (B. Bushan and H. Fuchs eds.), Springer-Verlag Heidelberg
pp 27 – 53, ISBN 3-540-26909-6 (2006)
- 255 *Interaction of slow multiply charged ions with insulator surfaces*
W. Meissl, J. Stöckl, M. Fürsatz, HP. Winter and F. Aumayr
In "Photonic, Electronic and Atomic Collisions - XXIV International Conference" eds. R. Rivarola et al., AIP Press (New York 2006)
- 256 *Interaction of slow multiply charged ions with a LiF insulator surface*
F. Aumayr, J. Stöckl, M. Fürsatz, W. Meissl and HP. Winter
e-Journal Surf.Sci.Nanotechn. 4 (2006) 388-93
- 257 *Effect of particle-induced electron emission (PIEE) on the plasma sheath voltage*
N. Schupfer, D.D. Tskhakaya sr., R. Khanal, S. Kuhn, F. Aumayr, S. Figueira da Silva and HP. Winter
Plasma Phys.Control. Fusion 48 (2006) 1093-1103
- 258 *Novel method for unambiguous ion identification in mixed ion beams extracted from an EBIT*
W. Meissl, M.C. Simon, J.R. Crespo Lopez-Urrutia, H. Tawara, J. Ullrich,
HP. Winter and F. Aumayr, Rev.Sci.Instrum. **77**, 093303 (2006)
- 259 *Fermi momentum above metal surface from electrons ejected by impact of He atoms*
H. Winter, S. Lederer and HP. Winter, Europhys. Letters **75** (2006) 964-70
- 260 *Recent advances in slow heavy particle induced electron emission*
HP. Winter, F. Aumayr, H. Winter and S. Lederer
Mat. Fys. Medd. Dan. Vid. Selsk. **52** (2006) 525 - 556
- 261 *Kinetic electron emission by grazing atom scattering from clean flat metal surfaces*
HP. Winter, F. Aumayr, C. Lemell, J. Burgdörfer, S. Lederer and H. Winter
Nuclear Instruments and Methods in Physics Research B **256** (2007) 455 - 463
- 262 *Highly charged ion induced potential electron emission from clean Au(111): Dependence on the projectile angle of incidence*
W. Meissl, M. C. Simon, J. R. Crespo López-Urrutia, H. Tawara, J. Ullrich, HP. Winter, and F. Aumayr
Nuclear Instruments and Methods in Physics Research B **256** (2007) 520 - 523

- 263 *Surface nanostructures induced by slow highly charged ions on CaF₂ single crystals*
A. S. El-Said, W. Meissl, M. C. Simon, J. R. Crespo López-Urrutia, I. C. Gebeshuber, M. Lang, HP. Winter, J. Ullrich, and F. Aumayr
Nuclear Instruments and Methods in Physics Research B **256** (2007) 346 - 349
- 264 *Electronic excitations during grazing scattering of hydrogen atoms on KI(001) and LiF(001) surfaces*
S. Lederer, H. Winter, HP. Winter, and F. Aumayr
European Physical Journal D **41** (2007) 505-511
- 265 *Single and double electron capture by slow He²⁺ from atoms and molecules*
S. Figueira da Silva, G. Kowarik, F. Aumayr and HP. Winter
Journal of Physics: Conference Series **58** (2007) 181 - 184
- 266 *Charging and discharging of nano-capillaries during ion-guiding of multiply charged projectiles*
M. Fürsatz, W. Meissl, S. Pleschko, I. C. Gebeshuber, N. Stolterfoht, HP. Winter, and F. Aumayr
Journal of Physics: Conference Series **58** (2007) 319 - 322
- 267 *Compact 14.5 GHz all-permanent magnet ECRIS for experiments with slow multicharged ions*
E. Galutschek, R. Trassl, E. Salzborn, F. Aumayr and HP. Winter
Journal of Physics: Conference Series **58** (2007) 395 - 398
- 268 *Algal biophysics: Euglena gracilis investigated by atomic force microscopy*
C. Gruenberger, R. Ritter, F. Aumayr, H. Stachelberger, and I. C. Gebeshuber
Materials Science Forum **555** (2007) 411 - 416
- 269 *Potential energy threshold for nanohillock formation by impact of slow highly charged ions on a CaF₂(111) surface*
A. S. El-Said, W. Meissl, M. C. Simon, J. R. Crespo López-Urrutia, C. Lemell, J. Burgdörfer, I. C. Gebeshuber, HP. Winter, J. Ullrich, C. Trautmann, M. Toulemonde, and F. Aumayr
Nuclear Instruments and Methods in Physics Research B **258** (2007) 167 - 171
- 270 *Single and double electron capture cross sections for slow He²⁺ impact on O₂, H₂ and D₂*
S. Figueira da Silva, HP. Winter, and F. Aumayr
Physical Review A **75** (2007) 042706 (1-7)
- 271 *Potential electron emission from metal and insulator surfaces*
F. Aumayr, and HP. Winter
Springer Tracts in Modern Physics **225** (2007) 79 - 112