

Publikationsliste

1969

Zur Vakuumpolarisation in Myonenatomen
Z. Physik **218**, 495 (1969)

On the chemistry of superheavy elements around Z=164
Phys. Lett. **30B**, 317 (1969)
B. Fricke und W. Greiner

On the screening of muons by electrons in muonic atom
Lett. al Nuovo Cimento **2**, 859 (1969)
B. Fricke

1971

The continuation of the periodic table up to Z = 172. The chemistry of
superheavy elements
Theor. chim. Acta **21**, 235 (1971)
B. Fricke, W. Greiner, J.T. Waber

Physik und Chemie mit schweren Ionen - I. Kernphysik
Kerntechnik **13**, 431 (1971)
B. Fricke und W. Scheid

Physik und Chemie mit schweren Ionen - II. Physik der Schwerionenstreuung
Kerntechnik **13**, 438 (1971)
W. Scheid und B. Fricke

Physik und Chemie mit schweren Ionen - III. Atomphysik und Chemie
Kerntechnik **13**, 443 (1971)
B. Fricke und W. Scheid

Theoretical predictions of the chemistry of superheavy elements
Actinides Reviews **1**, 433 (1971)
B. Fricke und J.T. Waber

A phenomenological calculation of vacuum fluctuation in electronic and muonic atoms
Lett. al Nuovo Cimento **2**, 293 (1971)
B. Fricke

1972

Calculation of isomer shift in Mössbauer spectroscopy
Phys. Rev. **B5**, 3445 (1972)
B. Fricke und J.T. Waber

Atomic and ionic radii of superheavy elements
J. Chem. Phys. **56**, 3246 (1972)
B. Fricke und J.T. Waber

Atomic ground state configurations of the elements E159 and E160
J. Chem. Phys. **56**, 3726 (1972)
B. Fricke und J.T. Waber

Precise calculations of atomic electron binding energies in Fermium
Phys. Rev. Lett. **28**, 714 (1972)
B. Fricke, J.P. Desclaux und J.T. Waber

Model calculations on the influence of quantum electrodynamical effects on the chemistry
of superheavy elements - The chemistry of E184
J. Chem. Phys. **57**, 371 (1972)
B. Fricke und J.T. Waber

What can one learn with muons about atomic physics?
Int. J. Quant. Chem. **6**, 43 (1972)
B. Fricke

Improved calculation of the shielding and vacuum polarization contributions to
the transition energies in heavy muonic atoms
akzeptiert von Phys. Rev. - erschien aber nicht, da das Original in der Post verloren ging.
Northwestern University reprint COO-2127-34
B. Fricke, J.T. Waber und V. Telegdi

1973

Effect of nuclear motion on the energy eigenvalues in muonic atoms
Phys. Rev. Lett. **30**, 119 (1973)
B. Fricke

X-ray spectra of superheavy and quasi-superheavy elements
Phys. Rev. **C8**, 330 (1973)
B. Fricke und J.T. Waber

Predicted properties of the superheavy elements. II. Element 111, Eka-Gold
J. Phys. Chem. **77**, 1806 (1973)
O.L. Keller Jr., C.W. Nestor Jr., T.A. Carlson und B. Fricke

1974

Nuclear charge radii from X-ray transitions in muonic atoms of Carbon, Nitrogen and Oxygen
Nucl. Phys. **A219**, 29 (1974)
T. Dubler, L. Schellenberg, H. Schneuwly, R. Engfer, J.L. Vuilleumier, H.K. Walter, A. Zehnder
und B. Fricke

Electronic configuration in the ground state of atomic Lawrencium
Phys. Rev. **A9**, 2270 (1974)
L.J. Nugent, K.L. Vander Sluis, B. Fricke und J.B. Mann

Two-muonic atoms
Phys. Lett. **B51**, 317 (1974)
B. Fricke und J.P. Desclaux

Predicted properties of the superheavy elements. III. Element 115, Eka-Bismuth
J. Phys. Chem. **78**, 1945 (1974)
O.L. Keller Jr., C.W. Nestor Jr. und B. Fricke

Enge Doppelsternsysteme und ihre Bedeutung in der modernen Astrophysik
Prisma **6**, 21 (1974)
B. Fricke

Recent experimental results from spectroscopy of superheavy quasi atoms
Phys. Scr. **10A**, 175 (1974)
P. Armbruster, G. Kraft, P.H. Mokler, B. Fricke und H.J. Stein

1975

Relativity and screening effects in heavy-ion collisions

Phys. Rev. Lett. **34**, 243 (1975)
B. Fricke, K. Rashid, P. Bertoncini und A.C. Wahl

Superheavy elements

Structure and Bonding **21**, 89 (1975)
B. Fricke

Superheavy quasi molecules

Atomic Physics **4**, 301 (1975)
(Ed.: G. zu Pflitz, E.W. Weber und A. Winnacker) Plenum Press
P.H. Mokler, S. Hagmann, P. Armbruster, G. Kraft, H.J. Stein, K. Rashid und B. Fricke

Auger transitions in Li-like and Be-like ions

Phys. Lett. **A53**, 293 (1975)
R. Bruch, G. Paul, J. Andrä und B. Fricke

Beam-foil-excited Auger transitions in Neon

Z. Physik **A274**, 191 (1975)
K.O. Groeneveld, R. Mann, G. Nolte, S. Schumann, R. Spohr und B. Fricke

Values for the electron screening in muonic atoms for all Z

Z. Naturforsch. **30a**, 1328 (1975)
B. Fricke und V.L. Telegdi

Ions of the superheavy elements in vacuum and solution

Radiochemie (UdSSR) **17**, 643 (1975), in Russisch
J.T. Waber und B. Fricke

1976

Chemical and physical properties of superheavy elements

Naturwiss. **63**, 162 (1976)
B. Fricke und J. McMinn

Auger spectroscopy of foil-excited Beryllium ions

in: Electron and photon interactions with atoms (Ed.: H. Kleinpoppen and M.R.C. McDowell)
Plenum Publ. 1976, S. 621
R. Bruch, G. Paul, J. Andrä und B. Fricke

Note on the quasimolecular M radiation in very heavy collision systems

J. Phys. **B9**, L157 (1976)
H.O. Lutz, W.R. McMurray, R. Pretorius, I.-J. van Heerden, R.J. van Reenen
und B. Fricke

Ions of the superheavy elements in vacuum and in solution

J. Inorg. Nucl. Chem., Suppl. 1976, S. 13
J.T. Waber und B. Fricke

Quantenphysik; Lehrbuch für die Schule, Herausgeber W. Kuhn,
Band III E, 212 Seiten, Georg Westermann Verlag, Braunschweig 1976
W. Kuhn, B. Fricke, K. Schäfer und G. Schwarz

The problem of non-characteristic quasimolecular X-rays in heavy ion collision
Int. J. Quant. Chem. **S10**, 227 (1976)
T. Morovic, B. Fricke, A. Rosen und D. Ellis

Interpretation of non-characteristic M X-rays in heavy colliding systems by
Self-consistent relativistic molecular calculations
Phys. Lett. **A59**, 375 (1976)
B. Fricke, T. Morovic, W.-D. Sepp, A. Rosen und D.E. Ellis

1977

Observation of two-electron-one-photon transitions in Silicon
Phys. Lett. **A60**, 106 (1977)
B. Knaaf, G. Presser, J. Stühler und B. Fricke

The Li-like KLL-Auger spectrum of foil excitation Ne-projectiles
Phys. Lett. **A60**, 289 (1977)
S. Schumann, K.O. Groeneveld, K.D. Sevier und B. Fricke

Dirac-Fock-Slater calculations for the elements Z = 100, Fermium, to Z = 173
Atom. Data Nucl. Data Tab. **19**, 83 (1977)
B. Fricke und G. Soff

Interpretation of quasimolecular L-X-rays in heavy-ion collisions
Phys. Lett. **63A**, 12 (1977)
T. Morovic, B. Fricke, W.-D. Sepp, A. Rosen und D.E. Ellis

Self-energy corrections in heavy muonic atoms
Phys. Rev. **A17**, 489 (1978)
K.T. Cheng, W.D. Sepp, W.R. Johnson und B. Fricke

Self-consistent relativistic molecular calculations of superheavy molecules: $(^{110}X)F_6$
Phys. Rev. Lett. **40**, 856 (1978)
A. Rosen, B. Fricke und T. Morovic

Retardation effects in ion-ion collisions
Z. Phys. **A286**, 169 (1978)
D. Kolb, W.-D. Sepp, B. Fricke und T. Morovic

Threshold behaviour of L X-ray excitation in Xe-Ag collisions
J. Phys. **B11**, 2527 (1978)
O. Lutz, W.R. McMurray, R. Pretorius, T. Morovic, B. Fricke, W.-D. Sepp
und I. van Heerden

Inner shells
in: Progress in Atomic Spectroscopy, Part A, (Ed.: W. Hanle und K. Kleinpoppen), S. 183,
Plenum Press, New York, London, 1978
B. Fricke

An ab-initio calculation of the Coulomb explosion of N₂ after heavy-ion bombardment
Phys. Lett. **A69**, 87 (1978)
H. Hartung, B. Fricke, T. Morovic, W.-D. Sepp und A. Rosen

Kinematic dipole model for the anisotropy of quasimolecular X-rays
Z. Physik **A288**, 345 (1978)
H. Hartung und B. Fricke

Quasimolecular effects in elastic scattering of heavy ions
Jap. J. Appl. Phys. **17**, Suppl. 2, 393 (1978)
T. Morovic, B. Fricke, W.-D. Sepp, A. Rosen und D.E. Ellis

1979

Electronic structure of UF_5
Chem. Phys. Lett. **61**, 75 (1979)
A. Rosen und B. Fricke

Equilibrium K-shell excitation of highly ionized Neon
Z. Physik **A289**, 245 (1979)
S. Schumann, K.O. Groeneveld, G. Nolte und B. Fricke

Relativistic molecular calculations of superheavy molecules
J. de Physique **C4**, 218 (1979)
A. Rosen, B. Fricke, T. Morovic und D.E. Ellis

Prediction of the azimuth angle dependence of the quasi molecular anisotropy
in heavy ion collisions
Phys. Lett. **A71**, 335 (1979)
H. Hartung und B. Fricke

Interpretation of the anisotropy of M-MO radiation in slow I on Au collisions
J. Phys. **B12**, 2193 (1979)
H. Hartung, B. Fricke, T. Morovic, W.-D. Sepp und A. Rosen

1980

Non-relativistic and relativistic molecular calculations for the calcogen hexafluorides:
 SF_6 , SeF_6 , TeF_6 and PoF_6
J. Molec. Str. **60**, 381 (1980)
P. Grundevik, A. Rosen, B. Fricke, T. Morovic und W.-D. Sepp

Relativistic prediction of the ground state of atomic Lawrencium
J. Physique **41**, 943 (1980)
J.P. Desclaux und B. Fricke

An attempt on the calculation of relativistic potential energy curves: noble gas difluorides
Z. Physik **A297**, 101 (1980)
R. Euler, B. Fricke, T. Morovic, W.-D. Sepp und A. Rosen

Contribution of the exact Breit operator plus the electron state-dependent
screening to the multiplet and fine structure of muon-electron atoms
Z. Physik **A297**, 279 (1980)
K. Rashid und B. Fricke

1981

Relativistic many-electron SCF correlation diagram for superheavy quasimolecules: Pb-Pb
Phys. Lett. **A81**, 258 (1981)
W.-D. Sepp, B. Fricke und T. Morovic

Comparison between experiment and theory in heavy electronic systems
in: Present Status and Aims of Quantum Electrodynamics, Lecture Notes in Physics No. **146**
(Ed.: G. Gräff, E. Klempt und G. Werth), S. 267, Springer Verlag 1981
B. Fricke

Kr-Kr correlation diagram and its use in heavy-ion collisions
J.Phys. **B14**, L549 (1981)
B. Fricke und W.-D. Sepp

Relativistic many-electron SCF correlation diagram for Pb-Pb
in: Inner Shell and X-ray Physics of Atoms and Solids,(Ed.: D.J. Fabian, H. Kleinpoppen und
L.M. Watson) Plenum Press, New York 1981, S. 209
B. Fricke, W.-D. Sepp und T. Morovic

1982

2p_π - 2p_σ crossing in heavy symmetric ion-atom collisions - I. level structure
Z. Physik **A304**, 79 (1982)
T. Morovic, W.-D. Sepp und B. Fricke

Shifts of electronic K X-rays in muonic atoms
Z. Physik **A304**, 193 (1982)
K. Rashid und B. Fricke

Influence of the electronic shell structure on the elastic scattering of heavy ions
Phys. Lett. **A91**, 160 (1982)
H. Hartung, B. Fricke, H. Lenz und W.-D. Sepp

Evidence for an additional coupling of the innermost shells in very heavy quasi-molecular
ion-atom collisions
J. Phys. **B15**, 4199 (1982)
M. Mann, P.H. Mokler, B. Fricke, W.-D. Sepp, W.A. Schönfeldt und H. Hartung

1983

Relativistic atomic level calculations with nuclei carrying additional fractional charges
Z. Physik **A311**, 283 (1983)
K. Rashid und B. Fricke

Interatomic potential structures in highly ionized scattering systems
Physica Scripta **T3**, 244 (1983)
H. Hartung und B. Fricke

Relativistic calculations of superheavy quasi-molecules
in: Relativistic Effects in Atoms, Molecules and Solids (Ed.: G.L. Malli)
Plenum Press New York und London, S. 519 (1983)
W.-D. Sepp und B. Fricke

State dependent volume isotope shift analysis of the low-lying states of BaI and BaII
Phys. Lett. **97A**, 183, (1983)
B. Fricke, P. Grundevik, I. Lindgren, G. Olsson, T. Olsson, A. Rosen und G. Torbohm

1984

Collision systems
Int. J. Quant. Chem. **25**, 97 (1984)
B. Fricke und A. Rosen

Volume isotope shifts in low lying transitions of Au
Z. Physik **A316**, 157 (1984)
A. Rosen, B. Fricke und G. Torbohm

Relativistic calculations of atomic structure
Phys. Scrip. **T8**, 29 (1984)
B. Fricke

Relativistic Dirac-Fock-Slater potential energy curve for N₂
Chem. Phys. Lett. **109**, 233 (1984)
W.-D. Sepp, W. Sengler, D. Kolb, H. Hartung und B. Fricke

Ab initio many electron relativistic molecular DFS calculations of inner shell MO transitions
Z. Phys. **A318**, 369 (1984)
B. Fricke, W.-D. Sepp und T. Morovic

1985

State-dependent volume isotope shifts of low-lying states of group IIA- and IIB-elements
Phys. Rev. **A31**, 2038 (1985)
G. Torbohm, B. Fricke und A. Rosen

On the total energy of two-electron atoms
Z. Physik **A321**, 99 (1985)
B. Fricke und K. Rashid

Theoretical evidence for quasi-molecular structure at small internuclear distances in elastic
ion-atom scattering
J. Phys. **B18**, L433 (1985)
H. Hartung, B. Fricke, W.-D. Sepp, W. Sengler und D. Kolb

Spectroscopy of quasi molecular X-rays with H-like decelerated ions
Nucl. Instr. Meth. **B10/11**, 69 (1985)
H. Schmidt-Böcking, R. Schuch, I. Tserruya, R. Hoffmann, B. Johnson, K.W. Jones, E. Justiniano,
M. Meron, P.H. Mokler, H. Ingwersen, W. Schadt, M. Schulz und B. Fricke

On the correlation between electric polarizabilities and the ionization potential of atoms
J. Chem. Phys. **84**, 862 (1985)
B. Fricke

1986

Relativistic Dirac-Fock-Slater program to calculate potential-energy curves
for diatomic molecules
Phys. Rev. **A33**, 3679 (1986)
W.-D. Sepp, D. Kolb, W. Sengler, H. Hartung und B. Fricke

New calculations of P(b) curves for 1s_σ excitation in low Z (Z < 10) ion-atom scattering
J. Phys. **B19**, L617 (1986)
B. Thies, B. Fricke, W.-D. Sepp und H. Hartung

1987

Total differential scattering cross section of Ar⁺ - Ar at 15 to 400 keV
Phys. Lett. **A119**, 457 (1987)
H. Hartung, B. Fricke, W.-D. Sepp, B. Thies, D. Kolb, D. Heinemann und P. Loftager

H_2 solved by the finite element method
Chem. Phys. Lett. **137**, 180 (1987)
D. Heinemann, D. Kolb und B. Fricke

Test for basis-set errors in relativistic Dirac-Fock-Slater calculations with a numerical AO-DFS-basis
Phys. Scrip. **36**, 268 (1987)
W.-D. Sepp und B. Fricke

Estimation of the ground state correlation energy for isoelectronic series of 2 to 20 electrons
Z. Physik **D7**, 139 (1987)
K. Rashid, B. Fricke, D. Heinemann und Z.A. Saadi

1988

Accurate Hartree-Fock-Slater calculations of small diatomic molecules with the finite-element method
Chem. Phys. Lett. **145**, 125 (1988)
D. Heinemann, B. Fricke und D. Kolb

Analysis of the electronic structure, hyperfine structure and volume isotope shifts in the low lying states of Bal and Ball
Phys. Scrip. **37**, 730 (1988)
T. Olsen, A. Rosen, B. Fricke und G. Torbohm

Hyperfine structure and isotopic shift of the $n\ ^2P_J$ levels ($n=7-10$) of $^{203,205}\text{TI}$ measured by doppler-free two-photon spectroscopy
Phys. Rev. **A38**, 1263 (1988)
M. Grexa, G. Hermann, G. Lasnitschka und B. Fricke

Solution of the Hartree-Fock-Slater equations for diatomic molecules by the finite-element method
Phys. Rev. **A38**, 4994 (1988)
D. Heinemann, B. Fricke und D. Kolb

Molecular effects on the cross section for pair production and their importance in the evaluation of the total photo-nuclear cross section of ^{16}O in the D-resonance region
Nucl. Phys. **A490**, 655 (1988)
J. Ahrens, H. Gimm, T. Beuermann, P. Rullhusen, M. Schumacher, B. Fricke und W.-D. Sepp

1989

Many electron coupled channel calculations for the system F^{8+} - Ne
J. de Physique **C1**, 193 (1989)
B. Thies, W.-D. Sepp und B. Fricke

Ground state correlation energy of the Be-sequence for $Z = 4 - 20$ in MCDF approximation
Z. Physik **D11**, 99 (1989)
K. Rashid, B. Fricke, J.H. Blanke und J.-P. Desclaux

Quadrupole moments of Radium isotopes from the $7p\ ^2P_{3/2}$ hyperfine structure in Ra II
Z. Physik **D11**, 105 (1989)
W. Neu, R. Neugart, E.-W. Otten, G. Passler, K. Wendt, B. Fricke, E. Arnold, H.-J. Kluge und G. Ulm

Finite element method for the accurate solution of diatomic molecules
NATO ASI Series Series C, Vol. **271**, 275 (1989)
D. Heinemann, B. Fricke und D. Kolb

Lehrbuch der Theoretischen Physik von Georg Joos; 15. Aufl., 829 Seiten,
Aula-Verlag, Wiesbaden, 1989;
völlig neu bearbeitet von B. Fricke und K. Schäfer

Study of the 3d-4f and 3d-5f quartet and doublet transitions of doubly excited
three-electron ions, Experiment and MCDF theory along the isoelectronic series
Z. Phys. **D13**, 1 (1989)

J.H. Blanke, B. Fricke, D. Heinemann, W.-D. Sepp, B. Thies, T. Göbenli,
P.H. Heckmann, G. Möller und E. Träbert

Computation of relativistic symmetry orbitals for finite double point groups
Comp. Phys. Comm. **54**, 55 (1989)
J. Meyer, W.-D. Sepp, B. Fricke und A. Rosen

Many-electron relativistic calculation and interpretation of atomic processes in
time-dependent heavy-ion scattering
Phys. Lett. **A139**, 161 (1989)
B. Thies, W.-D. Sepp und B. Fricke

Relativistic many electron coupled channel calculations in heavy ion scattering
in: *Spectr. and Coll. of Few-electron Ions*, (Ed.: M.Ivaocu, I. Florescu and V. Zoran)
World Scientific, Singapur S. 304 (1989)
B.Thies, W.-D. Sepp und B. Fricke

1990

Spin-polarized Hartree-Fock-Slater calculations in atoms and diatomic
molecules with the finite element method
Chem. Phys. Lett. **166**, 627 (1990)
D. Heinemann, A. Rosen und B. Fricke

Topics in atomic physics - from spectroscopy to current problems
Universitas **32**, 67 (1990)
B. Fricke, D. Kolb und H. Deuling

Transitions between quintet states of doubly excited four electron ions:
Experiment and MCDF theory along the isoelectronic sequence
Physica Scripta **42**, 522 (1990)
J.H. Blanke, B. Fricke, W.-D. Sepp, P.H. Heckmann, G. Möller und C. Wagner

Solution of the Hartree-Fock equations for atoms and diatomic molecules with
the finite element method
Physica Scripta **42**, 692 (1990)
D. Heinemann, A. Rosen und B.Fricke

Elastic nuclear scattering at intermediate and relativistic energies
Z. Physik **D17**, 233 (1990)
R. Matzdorf, B. Fricke und G. Soff

Ionization potentials and radii of atoms and ions of element 104 (unnilquadium)
and of hafnium (2+) derived from multiconfiguration Dirac-Fock calculations
J. Chem. Phys. **93**, 8041 (1990)
E. Johnson, B. Fricke, O.L. Keller, Jr., C.W. Nestor, Jr. und T.C. Tucker

A clear atomic example for the surface sensitivity of Penning ionization: $\text{He}^*(2^3\text{S}) + \text{Yb}$
Annalen der Physik **47**, 635 (1990)
H. Hotop, M.-W. Ruf, A.J. Yencha und B. Fricke

1991

Multiple vacancy inclusive probabilities for the scattering system 16 MeV S¹⁶⁺ on Ar
J. Phys. **B24**, L139 (1991)
P. Kürpick, B. Thies, W.-D. Sepp und B. Fricke

Inclusive probabilities for the scattering system 16 MeV S¹⁶⁺ on Ar
Z. Physik **D21**, S293 (1991)
P. Kürpick, W.-D. Sepp und B. Fricke

Two-photon decay of the 1s2s 1s₀ state in ³⁶Kr³⁴⁺ produced by resonant transfer and excitation
Z. Physik **D21**, S233 (1991)
Th. Stöhlker, Ch. Kozhuharov, A.E. Livingston, P.H. Mokler, J. Ullrich und B. Fricke

Further investigations on doubly excited four-electron ions: Beam foil experiments
and MCDF theory
Phys. Script. **44**, 436 (1991)
J.H. Blanke, B. Fricke, D. Heinemann, P.H. Heckmann, G. Möller und E. Träbert

Influence of occupation number of single particle levels on K-K charge transfer
in collisions of 90 keV – Ne⁹⁺ on Ne
Z. Physik **D22**, 407 (1991)
P. Kürpick, D. Heinemann, W.-D. Sepp und B. Fricke

Prediction of some thermodynamic properties of selected compounds of element 104
J. Phys. Chem. **95**, 7082 (1991)
E. Johnson und B. Fricke

1992

Electronic structure calculations of small Al_n (n=2-8) clusters
Z. Physik **D22**, 641 (1992)
T. Bastug, W.-D. Sepp, B. Fricke, D. Heinemann und D. Kolb

Reduced L₁ level width and Coster-Kronig yields by relaxation and continuum interactions
in atomic zinc
Phys. Rev. **A45**, 1465 (1992)
S. Fritzsche, B. Fricke und W.-D. Sepp

First results of experimental and theoretical investigations on sextet states of
doubly-excited five-electron ions
Physica Scripta **45**, 430 (1992)
J.H. Blanke, B. Fricke, P.H. Heckmann und E. Träbert

Relativistic effects in physics and chemistry of element 105. I. Periodicities in
properties of group V elements. Electronic structure of the pentachlorides
J. Chem. Phys. **96**, 8367 (1992)
V. Pershina, W.-D. Sepp, B. Fricke und A. Rosen

Interchannel interactions and relaxation in the 2p Auger spectra of Mg-like ions
Physica Scripta **T41**, 45 (1992)
S. Fritzsche und B. Fricke

Relativistic effects in physics and chemistry of element 105. II. Electronic
structure and properties of group 5 elements bromides
J. Chem. Phys. **97**, 1116 (1992)
V. Pershina, W.-D. Sepp, B. Fricke, D. Kolb, M. Schädel und G.V. Ionova

Relativistic effects in physics and chemistry of element 105. III. Electronic structure of hahnium oxyhalides as analogs of group 5 elements oxyhalides
J. Chem. Phys. **97**, 1123 (1992)
V. Pershina, W.-D. Sepp, T. Bastug, B. Fricke und G.V. Ionova

Influence of the interaction potential on simulated sputtering and reflection data
Z. Physik **D24**, 171(1992)
W. Eckstein, S. Hackel, D. Heinemann und B. Fricke

Application of inclusive probability theory to heavy ion-atom collisions
Z. Physik **D25**, 17 (1992)
P. Kürpick, H.J. Lüdde, W.-D. Sepp und B. Fricke

Redox reactions for group 5 elements, including element 105, in aqueous solutions
J. Phys. Chem. **96**, 11096 (1992)
G.V. Ionova, V. Pershina, E. Johnson, B. Fricke und M. Schädel

Inclusive probability calculations for the K-vacancy transfer in collisions of S ¹⁵⁺ on Ar
J. Phys. **B25**, 5431 (1992)
P. Kürpick, W.-D. Sepp und B. Fricke

1993

Valence photoelectron spectrum of OsO₄: evidence for 5p semicore effects?
Inorg. Chem. **32**, 1525 (1993)
P. Pyykkö, Jian Li, T. Bastug, B. Fricke und D. Kolb

Calculation of the hyperfine structure transition energy and lifetime in the one-electron Bi⁸²⁺ ion
Phys. Lett **A176**, 113 (1993)
M. Finkbeiner, B. Fricke und T. Kühl

Calculations of the polycentric linear molecule H₃²⁺ with the finite element method
Chem. Phys. Lett. **206**, 91 (1993)
S. Hackel, D. Heinemann, D. Kolb und B. Fricke

Relativistic ab initio calculations for ion-atom collisions
AIP Conference Proceedings **274** (Ed. P. Richard, M. Stöckli, C.L. Cocke und C.D. Lin)
S. 298 (1993)
P. Kürpick, U. Auer, W.-D. Sepp und B. Fricke

All-electron Dirac-Fock-Slater SCF calculations of the Au₂ molecule
Chem. Phys. Lett. **211**, 119 (1993)
T. Bastug, D. Heinemann, W.-D. Sepp, D. Kolb und B. Fricke

Relativistic effects in physics and chemistry of element 105. IV. Their influence on the electronic structure and related properties
J. Chem. Phys. **99**, 9720 (1993)
V. Pershina und B. Fricke

Ionization potentials and radii of atoms and ions of element 105 (unnilpentium) and ions of tantalum derived from Multiconfiguration Dirac-Fock calculations
Radiochim. Acta **62**, 17 (1993)
B. Fricke, E. Johnson und G.M. Rivera

1994

Thermodynamic functions of element 105 in neutral and ionized states

J. Phys. Chem. **98**, 1482 (1994)

V. Pershina, B. Fricke, G.V. Ionova und E. Johnson

The electronic structure of anionic halide complexes of element 105 in aqueous solutions and anion exchange with aliphatic amines

Radiochim. Acta **64**, 37 (1994)

V. Pershina, B. Fricke, J.V. Kratz und G.V. Ionova

The electronic structure and properties of the group 4, 5, and 6 highest chlorides including elements 104, 105 and 106

J. Phys. Chem. **98**, 6468 (1994)

V. Pershina und B. Fricke

The electronic structure of the group 6 oxyanions $(MO_4)^{2-}$, where M = Cr, Mo W, and element 106

Radiochim. Acta **65**, 13 (1994)

V. Pershina und B. Fricke

Theoretical study of the physicochemical properties of the light transactinides

J. of Alloys and Comp. **213/214**, 33 (1994)

V. Pershina, B. Fricke und G.V. Ionova

Solution of the time-dependent Dirac-Fock-Slater equation for many-electron collision systems using a time window method

Nucl. Inst. Meth. **B94**, 183 (1994)

P. Kürpick, W.-D. Sepp, H.-J. Lüddecke und B. Fricke

Precision laser spectroscopy of the ground state hyperfine-splitting of hydrogen-like $^{209}\text{Bi}^{82+}$

Phys. Rev. Lett. **73**, 2425 (1994)

I. Klaft, S. Borneis, T. Engel, B. Fricke, R. Grieser, G. Huber, T. Kühl, D. Marx,

R. Neumann, S. Schröder, P. Seelig und L. Völker

Isotope shift measurements at the ^{242}Am fission isomer

AIP Conf. **329**, 207 (1994)

H. Backe, B. Fricke, D. Habs, K. Hellmann, M. Hies, Ch. Illgner, H. Kunz, W. Lauth,

W. Theobald, P. Thoerle und N. Trautmann

1995

Hydrogen-like Bismuth

Physica Scripta **T58**, 58 (1995)

G. Huber, I. Klaft, T. Kühl und B. Fricke

Multiple vacancy K-L-transfer in ion-solid target collisions

J.Phys. **B28**, L127 (1995)

P. Kürpick, B. Fricke und W.-D. Sepp

Group 6 oxychlorides $MOCl_4$, where M = Mo, W, and element 106 (Sg):

Electronic structure and thermochemical stability

J. Phys. Chem. **99**, 144 (1995)

V. Pershina und B. Fricke

Berechnung von linearen Molekülen mit der Finite Elemente Methode (FEM)

Z. Angew. Math. Mech. **75**, S487 (1995)

S. Hackel, D. Heinemann und B. Fricke

Relativistic ab initio description of the K-vacancy production in heavy-ion-atom collision systems with solid targets
Phys. Rev. **A51**, 3693 (1995)
P. Kürpick, W.-D. Sepp und B. Fricke

Hyperfine measurements in a storage ring
Physics Scripta **T59**, 211 (1995)
R. Neumann, S. Borneis, T. Engel, B. Fricke, G. Huber, I. Klaft, D. Marx und P. Seelig

All-electron Dirac-Fock-Slater SCF calculations for electronic and geometric structures of the Hg₂ and Hg₃ molecules
J. Phys. **B28**, 2325 (1995)
T. Bastug, W.-D. Sepp, D. Kolb, B. Fricke, E.J. Baerends und G. Te Velde

The periodic nature of metal noble gas adduct ions in glow discharge mass spectroscopy
Appl. Spectr. **49**, 885 (1995)
C.M. Barshick, D.H. Smith, E. Johnson, F.L. King, T. Bastug und B. Fricke

Level energies and lifetimes in the 3p⁴3d configuration of chlorine-like ions
Phys. Scripta **52**, 258 (1995)
S. Fritzsch, M. Finkbeiner, B. Fricke und W.-D. Sepp

Relativistic ab initio interpretation of L-K vacancy sharing in ion-solid-target collisions
Phys. Rev. **A52**, 2132 (1995)
P. Kürpick, T. Bastug, W.-D. Sepp und B. Fricke

All-electron relativistic Dirac-Fock-Slater self-consistent-field calculations of the singly charged diatomic transition-metal- (Fe, Co, Ni, Cu, Zn) argon molecules
Phys. Rev. **A52**, 2734 (1995)
T. Bastug, W.-D. Sepp, B. Fricke, E. Johnson und C.M. Barshick

Full scale relativistic ab initio time dependent calculations for the L-K vacancy transfer in 208 MeV Ni²³⁺ on a Ge solid target
Phys. Lett. **A207**, 199 (1995)
P. Kürpick, T. Bastug, B. Fricke, W.-D. Sepp, A. Warczak, M. Jäger, J. Ullrich, T. Kandler, M. Schulz, A. Demian, M. Damrau, H. Bräuning und H. Schmidt-Böcking

Target-electronic-structure dependence in highly-charged-ion-C₆₀ collisions
Phys. Rev. **A52**, 2955 (1995)
U. Thumm, T. Bastug und B. Fricke

1996

Isotope shift and hyperfine structure measurements at the ²⁴²f Am fission isomer
Hyp. Int. **97/98**, 535 (1996)
H. Backe, R.-R. Baum, B. Fricke, D. Habs, K. Hellmann, M. Hies, Ch. Illgner, Ch. Krameyer, H. Kunz, W. Lauth, R. Martin, P. Schwamb, W. Theobald, P. Thörle und N. Trautmann

Inner shell excitation in heavy-ion solid-target collisions
Phys. Rev. **A53**, R1943 (1996)
P. Kürpick, B. Fricke und C.L. Cocke

Group 6 dioxydichlorides MO₂Cl₂ (M = Cr, Mo, W, and element 106, Sg):
The electronic structure and thermochemical stability
J. Phys. Chem. **100**, 8748 (1996)
V. Pershina und B. Fricke

The magnetic moment of ^{209}Bi - A molecular determination of the diamagnetic shielding
Z. Phys. **D37**, 281 (1996)
T. Bastug, B. Fricke, M. Finkbeiner und W.R. Johnson

A new version of the program TSYM generating relativistic molecular symmetry orbitals
for finite double point groups
Comp. Phys. Comm. **96**, 263 (1996)
J. Meyer, W.-D. Sepp, B. Fricke und A. Rosen

Electronic energies of Americium from multiconfiguration Dirac-Fock calculations
Phys. Rev. **A54**, 4783 (1996)
E. Johnson, M.O. Krause und B. Fricke

1997

Calculation of inner-shell excitation in the collision system Ni-Pb
Hyperf. Int. **108**, 89 (1997)
J. Anton, K. Schulze, P. Kürpick, W.-D. Sepp und B. Fricke

An ab initio calculation of quasimolecular x-rays in slow Cl^{16+} -Ar collisions
J. Phys. **B30**, L67 (1997)
K. Schulze, J. Anton, W.-D. Sepp, P. Kürpick und B. Fricke

Dirac-Fock-Slater calculations on the geometric and electronic structure of neutral and multiply
charged C_{60}
Phys. Rev. **B55**, 5015 (1997)
T. Bastug, P. Kürpick, J. Meyer, W.-D. Sepp, B. Fricke und A. Rosen

All electron X_α self-consistent-field calculations of relativistic effects in the molecular properties
of TI_2 , Pb_2 and Bi_2 molecules
Phys. Rev **A55**, 1760 (1997)
T. Bastug, K. Rashid, W.-D. Sepp, D. Kolb und B. Fricke

Many electron aspect of the time-dependent description of ion-atom and ion-solid collisions
Nucl. Instr. Meth. **B124**, 211 (1997)
B. Fricke, J. Anton, K. Schulze, W.-D. Sepp und P. Kürpick

Electronic structure of transactinides
in: Research with Fission Fragments (Ed.: T. von Egidy, F.J. Hartmann, D. Habs,
K.E.G. Löbner und H. Nifernecker); World Scientific, Singapur-London, S. 267 (1997)
B. Fricke, S. Fritzsche und V. Pershina

Use of the DV- X_α method in the field of superheavy atoms
Adv. Quant. Chem. **29**, 109 (1997)
B. Fricke, W.-D. Sepp, T. Bastug, S. Varga, K. Schulze, J. Anton und V. Pershina

New access to the magnetic moment distribution in the nucleus by laser spectroscopy
of highly charged ions
Nucl. Phys. **A626**, 235C (1997)
T. Kühl, A. Dax, M. Gerlach, D. Marx, H. Winter, M. Tomaselli, T. Engel, M. Wurtz, V.M. Shabaev, P.
Seelig, R. Grieser, G. Huber, P. Merz, B. Fricke und C. Holbrow

1998

Calculated level energies, transition probabilities and lifetimes for Phosphorus-like ions
of the iron group in the $3s3p^4$ and $3s^23p^23d$ configurations
At. Data Nucl. Data Tab. **68**, 149 (1998)
S. Fritzsche, C. Froese-Fischer und B. Fricke

Computer-algebraic derivation of atomic Feynman-Goldstone expansions
in: "Atoms and Molecules in Strong External Fields" Plenum Press 1998,
Seite 101 (Ed.: P. Schmelcher und W. Schweitzer)
S. Fritzsche, B. Fricke und W.-D. Sepp

Isotope shift measurements for superdeformed fission isomeric states
Phys. Rev. Lett. **80**, 920 (1998)
H. Backe, M. Hies, H. Kunz, W. Lauth, O. Curtze, P. Schwamb, M. Sewtz, W. Theobald, R. Zahm,
K. Eberhardt, N. Trautmann, D. Habs, R. Repnow und B. Fricke

Relativistic and dynamic contributions in ion-atom and ion-solid collisions
Adv. Quant. Chem. **30**, 273 (1998)
B. Fricke, J. Anton, K. Schulze, W.-D. Sepp und P. Kürpick

Recent progress in theoretical investigations of the electronic structure of the transactinides
J. All. Comp. N **271-273**, 283 (1998)
V. Pershina, T. Bastug und B. Fricke

Maple procedures for the coupling of angular momenta. II. Sum rule evaluation
Comp. Phys. Comm. **111**, 167 (1998)
S. Fritzsche, S. Varga, D. Geschke und B. Fricke

Energy dependence of the molecular-orbital x-ray interference structure in U⁹²⁺-Pb collisions
Phys. Rev. **A58**, 1578 (1998)
K. Schulze, J. Anton, W.-D. Sepp und B. Fricke

Recent progress in theoretical investigations of the electronic structure of the transactinides
J. of Alloys and Comp. **271**, 283 (1998)
V. Pershina, T. Bastug und B. Fricke

Calculated level energies, transition probabilities and lifetimes of silicon-like ions
At. Data Nucl. Data Tab. **70**, 63 (1998)
C. Kohstall, S. Fritzsche, B. Fricke und W.-D. Sepp

Modelling kinetic electron emission for the impact of slow N⁺ on LiF
Surface Science **417**, 372 (1998)
S. Zamini, G. Betz, W. Werner, F. Aumayr, H. Winter, J. Anton und B. Fricke

Comment on the accuracy of the total energy of atoms
Hyperf. Int. **114**, 197 (1998)
B. Fricke und S. Fritzsche

1999

A generalized description of time-dependent ion-atom collisions
in: Applications of Accelerators in Research and Industry 1999
(Ed. J.L. Duggan and I.L. Morgan), S. 19,
B. Fricke, J. Anton, K. Schulze, D. Geschke, W.-D. Sepp und S. Fritzsche

Systematic study of the Ib diatomic molecules Cu₂, Ag₂ and Au₂ using advanced relativistic
density functionals
Phys. Rev. **A59**, 4288 (1999)
S. Varga, E. Engel, W.-D. Sepp und B. Fricke

An analysis of the MO X-ray spectra in U⁹²⁺ - Pb collisions
Phys. Scr. **T80**, 430 (1999)
K. Schulze, J. Anton, W.-D. Sepp und B. Fricke

Comment on the lifetimes of the $3s3p^6\ ^2S_{1/2}$ level for chlorine-like ions
Phys. Scr. **T80**, 482 (1999)
C. Kohstall, S. Fritzsche, B. Fricke, W.-D. Sepp und E. Träbert

Electronic structure and chemistry of the heaviest elements
in "Heavy Elements and Related New Phenomena", Vol. 1; World Scientific;
S. 194 (Ed. W. Greiner und R.K. Gupta) (1999)
V. Pershina und B. Fricke

Branching ratios and lifetimes for the low-lying levels of Fe X
Mon. Not. R. Astron. Soc. **307**, 809 (1999)
C.Z. Dong, S. Fritzsche, B. Fricke und W.-D. Sepp

Charge exchange in collisions of C^{60+} ions with laser-excited aligned Na atoms
Phys. Lett. **A262**, 66 (1999)
Z. Roller-Lutz, Y. Wang, H.O. Lutz, T. Bastug, T. Mukoyama und B. Fricke

Forbidden transitions in the ground-state configuration of low-Z
phosphorus-like ions
Astrophys. Journ. **518**, 994 (1999)
S. Fritzsche, B. Fricke, D. Geschke, A. Heitmann und J.E. Sienkiewicz

Die Entstehung der Elemente
in "Auf den Spuren der Evolution" (Ed.: M. Fasterding), S. 31
Edition Archaea, Gelsenkirchen 1999
B. Fricke

Die physikalische Zeit, die Zeit in der Speziellen Relativitätstheorie
in "Geburt der Zeit", eine Ausstellung der Staatlichen Museen Kassel
12. Dez. 1999 bis 19. März 2000, S. 575, Edition Minerva 1999
B. Fricke

Ionization potentials of Seaborgium
J. Phys. Chem. **A103**, 8458 (1999)
E. Johnson, V. Pershina und B. Fricke

Theoretical estimates of redox potentials for group 6 elements, including
element 106, Seaborgium, in acid solution
J. Phys. Chem. **A103**, 8463 (1999)
V. Pershina, E. Johnson und B. Fricke

2000

Four-component relativistic density functional calculations of heavy
diatomic molecules
J. Chem. Phys. **112**, 3499 (2000)
S. Varga, B. Fricke, H. Nakamatsu, T. Mukoyama, J. Anton, D. Geschke, A. Heitmann,
E. Engel und T. Bastug

Die Sonne bringt es an den Tag!
Archäologie in Deutschland, Heft **2**, 60 (2000)
J. Fries-Knoblauch und B. Fricke

A unified time-dependent description of ion-atom collisions
Phys. Lett. **A268**, 85 (2000)
J. Anton, K. Schulze, D. Geschke, W.-D. Sepp und B. Fricke

Total energy calculations of RfCl₄ and homologues in the framework of relativistic density functional theory
J. Phys. Chem. **A104**, 6495 (2000)
S. Varga, B. Fricke, M. Hirata, T. Bastug, V. Pershina und S. Fritzsche

Formation of excited states in high-Z helium-like systems
Hypf. Int. **127**, 257 (2000)
S. Fritzsche, Th. Stöhlker, O. Brinzaescu und B. Fricke

Reply to "Comment on 'Four-component relativistic density functional calculations of heavy diatomic molecules'"
J. Chem. Phys. **113**, 2508 (2000)
S. Varga, B. Fricke, H. Nakamatsu, T. Mukoyama, J. Anton, D. Geschke, A. Heitmann, E. Engel und T. Bastug

Manipulation of Cu adatoms on anisotropic Cu surfaces using scanning tunneling microscopy
Surf. Sci. **460**, 1 (2000)
U. Kürpick und B. Fricke

Adsorption energies and bond lengths of adatoms at surfaces simulated by clusters
Phys. Rev. **B62**, 15439 (2000)
D. Geschke, S. Fritzsche, W.-D. Sepp, B. Fricke, S. Varga und J. Anton

Diffusion mechanisms of compact surface clusters: Ir₇ on Ir(111)
Surf. Sci. **470**, L45 (2000)
U. Kürpick, B. Fricke und G. Ehrlich

2001

Quasimolecular x rays in the Cl¹⁶⁺ - Ar collision system
Phys. Rev. **A63**, 1 (2001)
K. Schulze, J. Anton, T. Jacob, W.-D. Sepp und B. Fricke

Molecular-dynamics simulations of gold clusters
Adv. Quant. Chem. **37**, 353 (2001)
T. Bastug, M. Hirata, S. Varga, B. Fricke, S. Erkoc und T. Mukoyama

Analytical energy gradients in four-component relativistic density functional theory
Phys. Rev. **A63**, 22510 (2001)
S. Varga, A. Rosen, W.-D. Sepp und B. Fricke

Theoretical investigations on the 3d⁹4p - 3d¹⁰ spectrum of CuII
J. Electr. Spectr. Relat. Phen. **114**, 157 (2001)
C.Z. Dong, S. Fritzsche und B. Fricke

Maple procedures for the coupling of angular momenta. III. Standard quantities for evaluating many-particle matrix elements
Comp. Phys. Comm. **135**, 219 (2001)
G. Gaigalas, S. Fritzsche und B. Fricke

Ab-initio calculations for forbidden M1 transitions in Ar¹³⁺ and Ar¹⁴⁺ ions
Phys. Scr. **T92**, 294 (2001)
C.Z. Dong, S. Fritzsche, B. Fricke und W.-D. Sepp

The electronic structure and properties of group 8 oxides MO_4 ,
where M = Ru, Os and element 108, Hs
J. Chem. Phys. **115**, 792 (2001)
V. Pershina, T. Bastug, B. Fricke und S. Varga

Adsorption on surfaces simulated by an embedded cluster approach within the relativistic density functional theory
Surf. Sci. **486**, 194 (2001)
T. Jacob, D. Geschke, S. Fritzsche, W.-D. Sepp, B. Fricke, J. Anton und S. Varga

Maple procedures for the coupling of angular momenta. IV. Spherical harmonics
Comp. Phys. Comm. **139**, 297 (2001)
T. Inghoff, S. Fritzsche und B. Fricke

Assessing the validity of theoretical results
Eur. Phys. J. **D16**, 29 (2001)
S. Varga, K. Bolton, H. Grönbeck, A. Snis, A. Rosen und B. Fricke

Cluster-embedding method to simulate large cluster and surface problems
Eur. Phys. J. **D16**, 257 (2001)
T. Jacob, B. Fricke, J. Anton, S. Varga, T. Bastug, S. Fritzsche und W.-D. Sepp

Adsorption of CO on cluster models of Platinum (111) - A four-component relativistic density functional approach
Phys. Rev. **B 64**, 235411 (2001)
D. Geschke, T. Bastug, T. Jacob, S. Fritzsche, W.-D. Sepp, B. Fricke, S. Varga und J. Anton

2002

Atomic and molecular structure calculations for superheavy elements
J. Nucl. Radiochem. Sci. **3**, 109 (2002)
B. Fricke und V. Pershina

Ionization potentials and radii of neutral and ionized species of elements 107 (bohrium) and 108 (hassium) from extended multiconfiguration Dirac-Fock calculations
J. Chem. Phys. **116**, 1862 (2002)
E. Johnson, B. Fricke, T. Jacob, C.Z. Dong, S. Fritzsche und V. Pershina

Cluster-size convergent full relativistic density-functional calculations of single atom adsorption
Phys. Lett. **A300**, 71 (2002)
T. Jacob, S. Fritzsche, W.-D. Sepp, B. Fricke und J. Anton

Fast and reliable techniques for using Racah's algebra in many-particle physics
Comp. Phys. Comm. **147**, 612 (2002)
S. Fritzsche, B. Fricke, G. Gaigalas, T. Jacob und M. Tomaselli

Intermetallic compounds of the heaviest elements: the electronic structure and bonding of dimers of element 112 and its homolog Hg
Chem. Phys. Lett. **365**, 176 (2002)
V. Pershina, T. Bastug, T. Jacob, B. Fricke und S. Varga

Relativistic density functional calculations for Pt_2
Phys. Rev. Lett. **89**, 213001 (2002)
J. Anton, T. Jacob, B. Fricke und E. Engel

Resonant laser-induced desorption of metal atoms: A fully relativistic density-functional theory study
Phys. Rev. **B66**, 233409 (2002)
T. Jacob, D. Martin, F. Stietz, F. Träger und B. Fricke

2003

Relativistic density functional theory
in Relativistic Effects in Heavy-Element Chemistry and Physics
(Ed.: Bernd A. Hess) John Wiley & Sons Ltd.; S. 123-161 (2003)
E. Engel, R.M. Dreizler, S. Varga und B. Fricke

Site-selective, resonant photochemical desorption of metal atoms with laser light: manipulation of metal surfaces on the atomic scale
Surf. Sci. **526**, L151(2003)
D. Martin, T. Jacob, F. Stietz, B. Fricke und F. Träger

Theoretical transition probabilities and lifetimes in nickel-like Se^{6+} , Y^{11+} and Sn^{22+} ions
Europ. Phys. J. **D23**, 5 (2003)
C.Z. Dong, S. Fritzsche und B. Fricke

Embedding method to simulate single atom adsorption: Cu on Cu(100)
Eur. Phys. J **D24**, 61 (2003)
T. Jacob, W.A. Goddard III., J. Anton, C. Sarpe-Tudoran und B. Fricke

Adsorption of superheavy elements on metal surfaces
Eur. Phys. J **D24**, 65 (2003)
C. Sarpe-Tudoran, V. Pershina, B. Fricke, J. Anton, W.-D. Sepp und T. Jacob

Embedded cluster approach to simulate single atom adsorption on surfaces:
Cu on Cu surface
Surf. Sci. **536**, 45 (2003)
T. Jacob, J. Anton, C. Sarpe-Tudoran, W.-D. Sepp, B. Fricke und T. Bastug

Improved density functional calculations including magnetic effects for RfCl_4 and its homologues
Chem. Phys. Lett. **380**, 95 (2003)
J. Anton, M. Hirata, B. Fricke und V. Pershina

The analysis of adsorption energy of Rh, Pd, Ag on MgO surface
Bulletin of the Society for discrete variational X_α , **16**, 253 (2003)
K. Tanaka, R. Sekine, M. Hirata, J. Anton und B. Fricke

2004

Non-collinear and collinear relativistic density-functional program for electric and magnetic properties of molecules
Phys. Rev. **A69**, 012505 (2004)
J. Anton, B. Fricke und E. Engel

An ab-initio study of the magnetic ground states of organic molecules of di- resp. tetramethyl types as examples with a non-collinear density functional method
Chem. Phys. Lett **388**, 248 (2004)
J. Anton, T. Ishii und B. Fricke

Predictions of adsorption behaviour of the superheavy element 112
Nucl. Phys. **A734**, 200 (2004)
V. Pershina, T. Bastug, C. Sarpe-Tudoran, J. Anton und B. Fricke

2005

Non-collinear and collinear four-component relativistic molecular density functional calculations
Chem. Phys. **311**, 97 (2005)
J. Anton, B. Fricke und P. Schwerdtfeger

Relativistic effects on the electronic structure and volatility of group-8 tetroxides MO_4 , where M=Ru, Os, and element 108, Hs
J. Chem. Phys. **122**, 124301 (2005)
V. Pershina, T. Bastug und B. Fricke

Relativistic density functional calculations for open-shell systems in Clusters and Nano-Assemblies, World Scientific (Ed. P. Jena, S.N. Khanna and B.K. Rao), S. 19 (2005)
S. Varga, A. Rosen, J. Anton und B. Fricke

Atomic physics of superheavy elements
Topics in Heavy Ion Physics; Memorial Symposium for Gerhard Soff, 39 (2005)
B. Fricke

2006

Theoretical study of the $5\text{p}^56\text{s} - 5\text{p}^6$ spectra of neutral Xenon
Eur. Phys. J. **D40**, 317 (2006)
C.Z. Dong, S. Fritzsche und B. Fricke

Relativity, electron correlation and QED effects in the $1\text{s}2\text{s}^2 \text{^2S}_{1/2}$ state of highly charged Li-like ions
J. Phys. **B39**, 3121 (2006)
C.Z. Dong, D.H. Zhang, T. Stöhlker, S. Fritzsche und B. Fricke

Stability of H_2^+ molecular ion under Debye plasma
Phys. Lett. **A360**, 287 (2006)
P.K. Mukherjee, S. Fritzsche und B. Fricke

Theoretical chemistry for chemical identification of the heaviest elements
Nucl. Phys. **A787**, 381 (2007)
V. Pershina, T. Bastug, J. Anton und B. Fricke

Deformation change in light iridium nuclei from laser spectroscopy
Eur. Phys. J. **A30**, 489 (2006)
D. Verney, L. Cabaret, J.E. Crawford, H.T. Duong, B. Fricke, J. Genevey, G. Huber, F. Ibrahim, M. Krieg, F. Le Blanc, J.K.P. Lee, G. Le Scornet, D. Lunney, J. Obert, J. Oms, J. Pinard, J.C. Puteaux, K. Rashid, B. Roussiere, J. Sauvage und V. Sebastian

2007

Spectral line shifts of alkali atoms in liquid helium: a relativistic density functional approach
J. Phys. **B40**, 2453 (2007)
J. Anton, P.K. Mukherjee, B. Fricke und S. Fritzsche

Adsorption of superheavy elements on metal surfaces
J. Chem. Phys. **126**, 174702 (2007)
C. Sarpe-Tudoran, B. Fricke, J. Anton und V. Pershina

Intermetallic compounds of the heaviest elements and their homologs:
The electronic structure and bonding of M' where M = Ge, Sn, Pb and
element 114; and M' = Ni, Pd, Pt, Cu, Ag, Au, Sn, Pb, and element 114
J. Chem. Phys. **127**, 134310 (2007)
V. Pershina, J. Anton und B. Fricke

Atomic structure and properties of excited states of the elements
Uub (Z=112) and Hg (Z=80)
Science in China Series G **37**, 472 (2007)
J.G. Li, C.Z. Dong, Y.J. Yu, X.B. Ding, S. Fritzsche und B. Fricke

The excitation energies, ionization potentials and oscillator strengths of neutral
and ionized species of Uub (Z=112) and the homologue elements Zn, Cd and Cd
Eur. Phys. J. **D44**, 51 (2007)
Y.J. Yu, J.G. Li, C.Z. Dong, X.B. Ding, S. Fritzsche und B. Fricke

The many-particle scattering system He^{++} on He: Experiment and a complete
unified description
Phys. Lett. **A369**, 85 (2007)
J. Anton, B. Fricke, X. Ma, X.L. Zhu, B. Li und H.P. Liu

The atomic structure and the properties of Ununbium (Z=112) and Mercury (Z=80)
Science in China Series G-Physics Mechanics and Astronomy **50**, 707 (2007)
J.G. Li, C.Z. Dong, Y.J. Yu, X.B. Ding, S. Fritzsche und B. Fricke

2008

The excitation energies, ionization potentials and oscillator strengths of neutral
and ionized species of Uuu (Z=114) and the homolog elements Ge, Sn and Pb
J. Chem. Phys. **128**, 124316 (2008)
Y.J. Yu, C.Z. Dong, J.G. Li, B. Fricke und S. Fritzsche

X-ray transitions from antiprotonic noble gases
Eur. Phys. J. **D47**, 11 (2008)
D. Gotta, K. Rashid, B. Fricke, P. Indelicato und L.M. Simons

Ab-initio relativistic density functional calculations for spectral line shifts of Rb
atoms in liquid helium
Phys. Lett. **A372**, 4462 (2008)
J. Anton, B. Fricke, P.K. Mukherjee und S. Fritzsche

X-rays identify depletion in antiprotonic atoms
Europhysics News **39**(3), 24 (2008)
D. Gotta, K. Rashid, B. Fricke, P. Indelicato und L.M. Simons

2009

Spectroscopy of atoms in liquid helium environment: A theoretical perspective
in *Advances in the Theory of Atomic and Molecular Systems, Dynamics, Spectroscopy, Clusters and
Nanostructures, Progress in Theoretical Chemistry and Physics*,
Eds. P. Piecuch et al., Springer **20**, 183 (2009)
K. Coutinho, S. Canuto, P.K. Mukherjee und B. Fricke

Scalar relativistic and spin-orbit effects in closed-shell superheavy element monohydrides
Phys. Rev. **A80**, 022501 (2009)
C. Thierfelder, P. Schwerdtfeger, A. Koers, A. Borschevsky und B. Fricke

Spectra of helium-like carbon, aluminium and argon under strongly coupled plasma
Eur. Phys. J. **D55**, 645 (2009)
A.N. Sil, J. Anton, S. Fritzsche, P.K. Mukherjee und B. Fricke

2011

Hyperpolarizability of hydrogen atom under spherically confined Debye plasma
Eur. Phys. J. **D62**, 205 (2011)
J. K. Saha, T.K. Mukherjee, P.K. Mukherjee und B. Fricke

Inner-shell couplings in transiently formed superheavy quasimolecules
Phys. Scr. **T144**, 014032 (2011)
P. Verma, P.H. Mokler, A. Bräuning-Demian, C. Kozuharov, H. Bräuning, J. Anton, B. Fricke, F. Bosch, S. Hagmann, D. Liesen, Z. Stachura und M.A. Wahab

Evaluation of spectral line width of atoms in liquid helium
Phys. Lett. **A375**, 2720 (2011)
B. Fricke, P.K. Mukherjee

2012

Effect of strongly coupled plasma on the doubly excited states of helium-like ions
Eur. Phys. J. **D66**, 43 (2012)
J.K. Saha, T.K. Mukherjee und B. Fricke

2013

Hyperpolarizabilities of one and two electron atoms under strongly coupled plasma
Phys. Plasmas **20**, 013505 (2013)
S. Sen, P. Mandal, P.K. Mukherjee und B. Fricke

Effect of strongly coupled plasma on the magnetic dipolar and quadrupolar transitions of two electron ions
Phys. Plasmas **20**, 042703 (2013)
J.K. Saha, T.K. Mukherjee, P.K. Mukherjee und B. Fricke

Doubly excited states under spherical confinement: A case study
Int. Rev. At. Mol. Phys. **4**, 29 (2013)
S. Sen, P. Mandal, P.K. Mukherjee und B. Fricke

2015

Hyperpolarizability of two electron atoms under exponential cosine screened coulomb potential
Phys. Plasma **22**, 123120 (2015)
S.K. Chaudhuri, P.K. Mukherjee und B. Fricke

2016

A simple model for a theoretical study of the spectral line shifts of alkali atoms attached to helium nanodroplets
Chem. Phys. Lett. **644**, 142 (2016)
S. Canuto, L. Modesto-Costa, P.K. Mukherjee und B. Fricke

K_α X-ray emission in manganese compounds
Spectrochimica Acta Part B Atomic Spectroscopy **121**, 11 (2016)
M. Jabua, D. Gotta, Th. Strauch, Ch. Weidemann, B. Fricke und K. Rashid