

Publications

1. **S. Fritzsche**, A. M. M. Mohammedin, G. Musiol, I. Reiche, F. Schubert and G. Zschornack; *Atomic data for accelerator-based X-ray fluorescence spectroscopy*; Nucl. Instr. Meth. **B50**, 353–357 (1990).
2. I. Reiche, **S. Fritzsche**, G. Musiol and G. Zschornack; *Fine structure splitting in the argon K_{α} X-ray emission spectra*; Phys. Lett. **A145**, 441–43 (1990).
3. **S. Fritzsche** and G. Zschornack; *Effects of final-state interactions on the $L - MM$ Auger spectra of krypton*; Z. Physik **D21**, 155–56 (1991).
4. **S. Fritzsche**, G. Zschornack, G. Musiol and G. Soff; *Interchannel interactions in highly-energetic radiationless transitions of neonlike ions*; Phys. Rev. **A44**, 388–92 (1991).
5. **S. Fritzsche** and B. Fricke; *Interchannel interactions and relaxation in the $2p$ Auger spectra of Mg-like ions*; Physica Scripta **T41**, 45–50 (1992).
6. **S. Fritzsche**, B. Fricke and W.-D. Sepp; *Reduced L_1 level-width and Coster-Kronig yields by relaxation and continuum interactions in atomic zinc*; Phys. Rev. **A45**, 1465–70 (1992).
7. **S. Fritzsche**; *Angular distribution parameters in the resonant xenon $4d^{-1}6p$ Auger spectra*; Phys. Lett. **A180**, 262–68 (1993).
8. **S. Fritzsche** and I. P. Grant; *On the ab-initio calculation of the ${}^5S_J^o - {}^3P_J^e$ intercombination transition in P II: Relativity and electron relaxation*; Phys. Lett. **A186**, 152–56 (1994).
9. B. Lohmann and **S. Fritzsche**; *Absolute Auger rates, relative intensities and angular distribution of the KLL spectra of Auger electrons from alkali atoms*; J. Phys. **B: At. Mol. Opt. Phys.** **27**, 2919–41 (1994).
10. **S. Fritzsche** and I. P. Grant; *Ab-initio calculation of the $2s^2 {}^1S_0 - 2s3p {}^3P_1$ intercombination transition in beryllium-like ions*; Phys. Scripta **50**, 473–80 (1994).
11. **S. Fritzsche**; *Angular distribution in the $1s \rightarrow 3p$ coherently excited resonant KLL Auger spectrum in neon*; J. Elec. Spec. Rel. Phenom. **72**, 249–55 (1995).
12. **S. Fritzsche**, M. Finkbeiner, B. Fricke and W.-D. Sepp; *Level energies and lifetimes in the $3p^43d$ configuration of chlorine-like ions*; Phys. Scripta **52**, 258–66 (1995).
13. **S. Fritzsche** and I. P. Grant; *A program for the complete expansion of jj-coupled symmetry functions into Slater determinants*; Comput. Phys. Commun. **92**, 111–26 (1995).
14. J. E. Sienkiewicz, **S. Fritzsche** and I. P. Grant; *Relativistic configuration interaction approach to the elastic low-energy scattering of electrons from atoms*; J. Phys. **B: At. Mol. Opt. Phys.** **28**, L633–636 (1995).

15. B. Lohmann, **S. Fritzsche** and F. P. Larkins; *Absolute Auger rates, relative intensities and angular distribution for the KLL spectra of Auger electrons from laser excited sodium*; J. Phys. **B**: At. Mol. Opt. Phys. **29**, 1191–1206 (1996).
16. B. Lohmann and **S. Fritzsche**; *Energies, absolute Auger rates, relative intensities and angular distribution for the Auger transitions of atomic oxygen*; J. Phys. **B**: At. Mol. Opt. Phys. **29**, 5711–23 (1996).
17. **S. Fritzsche** and C. Froese Fischer; *REOS — A program for relaxed-orbital oscillator strength calculations*; Comput. Phys. Commun. **99**, 323–34 (1997).
18. **S. Fritzsche**; *Maple procedures for the coupling of angular momenta. I. Data structures and numerical evaluation*; Comput. Phys. Commun. **103**, 51–77 (1997).
19. **S. Fritzsche** and I. P. Grant; *CESD97 — A revised version to expand jj-coupled symmetry functions into determinants*; Comput. Phys. Commun. **103**, 277–86 (1997).
20. B. Fricke, **S. Fritzsche** and V. Pershina; *Electronic structure of transactinides*; in Research with Fission Fragments, eds. T. von Egidy, F. J. Hartmann, D. Habs, K. E. G. Löbner, H. Nifenecker (World Scientific, Singapore, New Jersey, London, Hongkong, 1997), p. 267–73.
21. **S. Fritzsche**; *Relativistische Theorie offenschaliger Atome*; Habilitationsschrift (Kassel University Press, Kassel, 1998), 208 Seiten, ISBN 3-933146-02-X.
22. **S. Fritzsche**, C. Froese Fischer and B. Fricke; *Calculated level energies, transition probabilities and lifetimes for phosphorus-like ions of the iron group in the 3s3p⁴ and 3s²3p²3d configurations*; ATOMIC DATA NUCLEAR DATA TABLES **68**, 149–79 (1998).
23. **S. Fritzsche**, B. Fricke, and W.-D. Sepp; *Computer-algebraic derivation of atomic Feynman–Goldstone expansions*; in: Atoms and Molecules in Strong External Fields, eds. P. Schmelcher and W. Schweitzer (Plenum Press, New York and London, 1998) p. 101–108.
24. F. von Busch, J. Doppelfeld, U. Alkemper, U. Kuetgens, and **S. Fritzsche**; *Investigations of the Ar L_{2,3} – MM Auger spectrum emitted after 1s ionization by mean of e-ion and e-e coincidences*; J. Elec. Spec. Rel. Phenom. **93**, 127–34 (1998).
25. **S. Fritzsche**, S. Varga, D. Geschke, and B. Fricke; *Maple procedures for the coupling of angular momenta. II. Sum rule evaluation*; Comput. Phys. Commun. **111**, 167–84 (1998).
26. B. Fricke and **S. Fritzsche**; *Comment on the accuracy of the total energy of atoms*; Hyperfine Interactions **114**, 197–201 (1998).
27. A. Derivianko, W. R. Johnson, and **S. Fritzsche**; *Many-body calculations of the Lennard–Jones potential for alkali–metal atoms*; Phys. Rev. **A57**, 2629–34 (1998).
28. E. Träbert, **S. Fritzsche**, and C. Jupén; *Sextet levels in P-like ions of the iron group elements*; Europ. J. Phys. **D3**, 13–20 (1998).
29. C. Kohstall, **S. Fritzsche**, B. Fricke and W.-D. Sepp; *Calculated level energies, transition probabilities and lifetimes of silicon-like ions*; ATOMIC DATA NUCLEAR DATA TABLES **70**, 63–92 (1998).
30. F. von Busch, J. Doppelfeld, U. Kuetgens, and **S. Fritzsche**; *The 2p⁴3p⁶–2p⁵3p⁴ and 2p⁵3p⁴–2p⁶3p² Auger vacancy satellite spectra of argon*; Phys. Rev. **A59**, 2030–42 (1999).

31. F. von Busch, U. Kuetgens, J. Doppelfeld, **S. Fritzsche**, C. Günther, and E. Hartmann; *From a single 1s hole to a multiply charged ion: The cascade $L_{23} - MM$ spectrum of argon*; Phys. Scr. **T80**, 401–02 (1999).
32. A. Krämer, Th. Stöhlker, **S. Fritzsche**, F. Bosch, D. C. Ionescu, C. Kozuharov, T. Ludziejewski, P. H. Mokler, P. Rymuza, Z. Stachura, P. Świąt and A. Warczak; *Projectile excitation studies for high-Z ions at a storage ring*; Phys. Scr. **T80**, 424–25 (1999).
33. T. Ludziejewski, Th. Stöhlker, H. Beyer, F. Bosch, **S. Fritzsche**, D. C. Ionescu, C. Kozuharov, A. Krämer, D. Liesen, P. H. Mokler, P. Rymuza, Z. Stachura, P. Świąt and A. Warczak; *Two-electron processes in relativistic collisions of He-like uranium with gaseous targets*; Phys. Scr. **T80**, 426–28 (1999).
34. E. Träbert, C. Jupén, and **S. Fritzsche**; *EUV line identifications and lifetime measurements in highly-charged ions of the iron group*; Phys. Scr. **T80**, 463–65 (1999).
35. **S. Fritzsche**, F. Koike, J. E. Sienkiewicz, and N. Vaeck; *Calculation of relativistic atomic transition and ionization properties for highly-charged ions*; Phys. Scr. **T80**, 479–81 (1999).
36. C. Kohstall, **S. Fritzsche**, B. Fricke, W.-D. Sepp, and E. Träbert; *Comment on the lifetimes of the $3s3p^6 \ ^2S_{1/2}$ level for chlorine-like ions*; Phys. Scr. **T80**, 482–84 (1999).
37. **S. Fritzsche**, B. Fricke, D. Geschke, A. Heitmann and J. E. Sienkiewicz; *Radiative transition probabilities in the ground-state configuration for low-Z phosphorus-like ions*; Astrophys. J. **518**, 994–1001 (1999).
38. C. Z. Dong, **S. Fritzsche**, B. Fricke, and W.-D. Sepp, *Branching ratios and lifetimes of the low-lying levels of Fe X*; Mon. Notes R. Astron. Soc. **307**, 809–14 (1999).
39. T. Ludziejewski, Th. Stöhlker, H. Beyer, F. Bosch, **S. Fritzsche**, D. C. Ionescu, C. Kozuharov, A. Krämer, D. Liesen, P. Mokler, P. Rymuza, Z. Stachura, P. Świąt and A. Warczak; *Excitation of high-Z one- and two-electron ions in relativistic collisions with gaseous targets*; Nucl. Instr. Meth. **B154**, 204–208 (1999).
40. E. Träbert and **S. Fritzsche**; *'Verbotene' Übergänge in Ionen*; Phys. Blätter **55**, 29–32 (1999).
41. **S. Fritzsche**, C. Froese Fischer and C. Z. Dong; *REOS99 — A revised program for transition probability calculations including relativistic, correlation, and relaxation effects*; Comput. Phys. Commun. **124**, 340–52 (2000).
42. **S. Fritzsche** and J. Anton; *CESD99 — A new version to represent atomic wave functions in a determinant basis*; Comput. Phys. Commun. **124**, 353–55 (2000).
43. M. Tomaselli, P. Egelhof, S. R. Neumaier, M. Mutterer, T. Kühl, A. Dax, F. Schmitt and **S. Fritzsche**; *Microscopic calculations of matter and charge distributions of exotic nuclei within the dynamic correlation model*; Hyperfine Interactions **127**, 95–99 (2000).
44. **S. Fritzsche**, Th. Stöhlker, O. Brinzaescu, and B. Fricke; *Formation of excited states in high-Z helium-like systems*; Hyperfine Interactions **127**, 257–62 (2000).
45. M. Tomaselli, **S. Fritzsche**, T. Kühl and H. Winter; *Hyperfine structure of Li-like bismuth*; Hyperfine Interactions **127**, 315–18 (2000).

46. S. Varga, B. Fricke, M. Hirata, T. Bastug, V. Pershina and **S. Fritzsche**; *Total energy calculations of $RfCl_4$ and homologues in the framework of relativistic density functional theory*; J. Phys. Chem. **A104**, 6495–98 (2000).
47. M. Tomaselli, M. Hjorth-Jensen, **S. Fritzsche**, P. Egelhof, S. R. Neumaier, M. Mutterer, T. Kühl, A. Dax and H. Wang; *Matter and charge distribution of 6He and ${}^{5,6,7,9}Li$ within the Boson Dynamic Correlation model*; Phys. Rev. **C62**, 067305:1–4 (2000).
48. **S. Fritzsche**, C. Z. Dong and G. Gaigalas; *Theoretical Ni II emission lines from the $3d^9 - 3d^84p$ and $3d^84s - 3d^84p$ configurations*; ATOMIC DATA NUCLEAR DATA TABLES **76**, 155–75 (2000).
49. J. E. Sienkiewicz, **S. Fritzsche** and P. Syty; *Exchange contributions to spin polarization in low-energy electron scattering from Xe and Hg*; Acta Polonica **98**, 41–46 (2000).
50. D. Geschke, **S. Fritzsche**, W.-D. Sepp, B. Fricke, J. Anton and S. Varga; *Adsorption energies and bound lengths of ad-atoms on surfaces simulated by clusters*; Phys. Rev. **B62**, BR15439–42 (2000).
51. G. Gaigalas, **S. Fritzsche** and Z. Rudzikas; *Reduced coefficients of fractional parentage and matrix elements of the tensor $W^{(k_q k_j)}$ in jj-coupling*; ATOMIC DATA NUCLEAR DATA TABLES **76**, 235–69 (2000).
52. **S. Fritzsche**, C. Z. Dong and E. Träbert; *Energy levels, lifetimes, and branch fractions for Fe XI*; Mon. Notes R. Astron. Soc. **318**, 263–72 (2000).
53. L. Nagy and **S. Fritzsche**; *Inner-shell excitation of lithium by fast charged projectiles*; J. Phys. **B: At. Mol. Opt. Phys.** **33**, L495–503 (2000).
54. Y. Shimizu, H. Yoshida, K. Okada, Y. Muramatsu, N. Saito, H. Okashi, Y. Tamenori, **S. Fritzsche**, N. M. Kabachnik, H. Tanaka and K. Ueda; *Ultra-high resolution angle-resolved measurement of Auger emission from the photoexcited $1s^{-1} \rightarrow 3p$ state of Ne*; J. Phys. **B: At. Mol. Opt. Phys.** **33**, L685–89 (2000).
55. G. Gaigalas and **S. Fritzsche**; *Calculation of reduced coefficients and matrix elements for symmetry-adapted functions*; Comput. Phys. Commun. **134**, 86–96 (2001).
56. G. Gaigalas, **S. Fritzsche** and B. Fricke; *Maple procedures for the coupling of angular momenta. III. Standard quantities for evaluating many-particle matrix elements*; Comput. Phys. Commun. **135**, 219–37 (2001).
57. X. Ma, Th. Stöhlker, F. Bosch, O. Brinzaescu, **S. Fritzsche**, C. Kozuharov, T. Ludziejewski, P. H. Mokler, Z. Stachura and A. Warczak; *State-selective electron capture in He-like U^{90+} ions colliding with gaseous targets*; Phys. Rev. **A64**, 012704:1–8 (2001).
58. C. Z. Dong, **S. Fritzsche** and B. Fricke; *Theoretical investigations on the $3d^94p - 3d^{10}$ spectrum of Cu II*; J. Electr. Spec. Rel. Phenom. **114–116**, 157–61 (2001).
59. **S. Fritzsche**; *RATIP — A toolbox for studying the properties of open-shell atoms and ions*; J. Electr. Spec. Rel. Phenom. **114–116**, 1155–64 (2001).
60. K. Ueda, Y. Shimizu, H. Chiba, M. Kitajima, H. Tanaka, **S. Fritzsche** and N. M. Kabachnik; *Experimental and theoretical study of the Auger cascade following the $2p \rightarrow 4s$ photoexcitation in Ar*; J. Phys. **B: At. Mol. Opt. Phys.** **34**, 107–19 (2001).

61. M. Tomaselli, **S. Fritzsche**, A. Dax, P. Egelhof, C. Kozhuharov, T. Kühl, D. Marx, M. Mutterer, S. R. Neumaier, W. Nörterhäuser, H. Wang and H.-J. Kluge; *Microscopic model for charge and matter distributions of nuclei*; Nucl. Phys. **A690**, 298–301 (2001).
62. C. Z. Dong, **S. Fritzsche**, B. Fricke and W.-D. Sepp; *Ab-initio calculations for forbidden M1 transitions in Ar¹³⁺ and Ar¹⁴⁺*; Phys. Scr. **T92**, 294–96 (2001).
63. C. Z. Dong, Z. T. Peng, **S. Fritzsche**, X. X. Zhou and Y. N. Liu; *Effects of configuration interactions on the dielectronic satellite spectra of the K_β lines of He-like argon*; Phys. Scr. **T92**, 297–99 (2001).
64. **S. Fritzsche** and Th. Stöhlker; *High-Z projectile ionization: Studies on the validity of first-order perturbation theory*; Phys. Scr. **T92**, 311–13 (2001).
65. C. Z. Dong, **S. Fritzsche**, G. Gaigalas, T. Jacob and J. E. Sienkiewicz; *Theoretical level structure and decay dynamics of nickel-like ions: Search for laser lines in the soft x-ray domain*; Phys. Scr. **T92**, 314–16 (2001).
66. X. Ma, Th. Stöhlker, F. Bosch, O. Brinzaescu, **S. Fritzsche**, C. Kozhuharov, P. H. Mokler, T. Ludziejewski and A. Warczak; *Subshell differential cross sections for electron transfer in collisions of U⁹⁰⁺ ions with gaseous targets*; Phys. Scr. **T92**, 362–64 (2001).
67. G. Gaigalas, **S. Fritzsche** and I. P. Grant; *Calculation of angular coefficients in jj-coupling*; Comput. Phys. Commun. **139**, 263–78 (2001).
68. T. Inghoff, **S. Fritzsche** and B. Fricke; *Maple procedures for the coupling of angular momenta. IV. Spherical harmonics*; Comput. Phys. Commun. **139**, 297–313 (2001).
69. **S. Fritzsche**, T. Inghoff, T. Bastug and M. Tomaselli; *Maple procedures for the coupling of angular momenta. V. Recoupling coefficients*; Comput. Phys. Commun. **139**, 314–25 (2001).
70. T. Jacob, D. Geschke, **S. Fritzsche**, W.-D. Sepp, B. Fricke, J. Anton and S. Varga; *Adsorption on Surfaces simulated by an embedded cluster approach within the relativistic density functional theory*; Surf. Science **486**, 194–202 (2001).
71. A. Surzhykov, **S. Fritzsche** and T. Stöhlker; *Photon polarization in the radiative recombination of high-Z, hydrogen-like ions*; Phys. Lett. **A289**, 213–18 (2001).
72. T. Jacob, B. Fricke, J. Anton, S. Varga, T. Bastug, **S. Fritzsche** and W.-D. Sepp; *Cluster-embedding method to simulate large cluster and surface problems*; Euro. Phys. J. **D16**, 257–60 (2001).
73. M. Kitajima, M. Okamoto, Y. Shimizu, H. Chiba, **S. Fritzsche**, N. M. Kabachnik, I. P. Sazhina, F. Koike, T. Hayaishi, H. Tanaka, Y. Sato and K. Ueda; *Experimental and theoretical study of the Auger cascade following 3d → 5p photoexcitation in krypton*; J. Phys.: At. Mol. Opt. Phys. **B34**, 3829–42 (2001).
74. **S. Fritzsche**; *Utilities for the RATIP package*; Comput. Phys. Commun. **141**, 163–74 (2001).
75. D. Geschke, T. Bastug, T. Jacob, **S. Fritzsche**, W.-D. Sepp, B. Fricke, S. Varga and J. Anton; *Adsorption of CO on a platinum (111) surface — a study within a four-component relativistic density functional approach*; Phys. Rev. **B64**, 235411:1–9 (2001).

76. N. Vaeck, J. E. Hansen, P. Palmeri, P. Quinet, N. Zitane, M. Godefroid, **S. Fritzsche** and N. Kylstra; *Hollow Atoms: A theoretical challenge*; Phys. Scr. **T95**, 68–75 (2001).
77. C. Froese Fischer and **S. Fritzsche**; *Magnetic-dipole transitions between the lowest $3d^4$ $J = 2$ to $J = 3$ transitions in highly-charged ions*; J. Phys.: At. Mol. Opt. Phys. **B34**, L767–72 (2001).
78. M. Tomaselli, T. Kühl, W. Nörtershäuser, S. Borneis, A. Dax, D. Marx, H. Wang and **S. Fritzsche**; *Hyperfine splitting of hydrogenlike thallium*; Phys. Rev. **A65**, 022502:1–9 (2002).
79. U. Kentsch, G. Zschornack, F. Großmann, V. P. Ovsyannikov, F. Ullmann, **S. Fritzsche** and A. Surzhykov; *Production of bare argon, manganese, iron and nickel nuclei in the Dresden EBIT*; Nucl. Instruments and Methods **B187**, 238–48 (2002).
80. A. Surzhykov, **S. Fritzsche**, A. Gumberidze and Th. Stöhlker; *The Lyman- α_1 decay in hydrogen-like ions: Interference between the E1 and M2 transition amplitudes*; Phys. Rev. Lett. **88**, 153001–4 (2002).
81. J. E. Sienkiewicz, S. Telega, P. Syty and **S. Fritzsche**; *Differential cross section minima in elastic scattering of electrons from zinc*; Phys. Lett. **A293**, 183–87 (2002).
82. E. Johnson, B. Fricke, T. Jacob, C. Z. Dong, **S. Fritzsche** and 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**, 1862–68 (2002).
83. M. Koide, F. Koike, R. Wehlitz, M.–T. Huang, T. Nagata, J. C. Levin, **S. Fritzsche**, B. D. De-Paola, S. Ohtani and Y. Azuma; *New window resonances in the potassium 3s photoabsorption spectrum*; J. Phys. Soc. Jap. **71**, 1676–79 (2002).
84. **S. Fritzsche**; *Large-scale accurate structure calculations for open-shell atoms and ions*; Phys. Scr. **T100**, 37–46 (2002).
85. M. Tomaselli, T. Kühl, P. Egelhof, W. Nörteshäuser, C. Kozhurarov, A. Dax, H. Wang, S. R. Neumaier, D. Marx, H.–J. Kluge, I. Tanihata, **S. Fritzsche** and M. Mutterer; *Matter and charge distribution of lithium and beryllium isotopes*; in: Nuclear Physics at Border Lines, eds. G. Imme and N. Rowley, World Scientific, ISBN 981-02-4778-8, 336–41 (2002).
86. M. Kitajima, M. Okamoto, M. Hoshino, H. Tanaka, **S. Fritzsche**, N. M. Kabachnik, I. P. Sazhina, Y. Shimizu and K. Ueda; *Experimental and theoretical study of the Auger cascade following $4d \rightarrow 6p$ photoexcitation in Xe*; J. Phys. **B**: At. Mol. Opt. Phys. **B35**, 3327–35 (2002).
87. A. Surzhykov, **S. Fritzsche** and T. Stöhlker; *Two-photon angular correlations in the radiative recombination of bare, high-Z ions*; J. Phys. **B**: At. Mol. Opt. Phys. **B35**, 3713–27 (2002).
88. T. Jacob, **S. Fritzsche**, W.–D. Sepp, B. Fricke and J. Anton; *Cluster size convergent full relativistic density functional calculations of single atom adsorption*; Phys. Lett. **A300**, 71–75 (2002).
89. **S. Fritzsche**, B. Fricke, G. Gaigalas, T. Jacob and M. Tomaselli; *Fast and reliable techniques for using Racah's algebra in many-particle physics*; Comput. Phys. Commun. **147**, 612–16 (2002).

90. **S. Fritzsche**, C. Froese Fischer and G. Gaigalas; *RELCI: A program for relativistic configuration interaction calculations*; Comput. Phys. Commun. **148**, 103–23 (2002).
91. G. Gaigalas and **S. Fritzsche**; *Pure spin-angular coefficients for non-scalar one-particle operators in jj-coupling*; Comput. Phys. Commun. **148**, 349–52 (2002).
92. M. Koide, F. Koike, T. Nagata, J. C. Levin, **S. Fritzsche**, R. Wehlitz, M.-T. Huang, B. D. DePaola, S. Ohtani and Y. Azuma; *Common window resonance features in K and heavier alkaline atoms Rb and Cs*; J. Phys. Soc. Jap. **71**, 2681–86 (2002).
93. M. Tomaselli, Th. Kühl, W. Nörtershäuser, G. Ewald, R. Sanchez, **S. Fritzsche** and S. G. Karshenboim; *Systematic model calculations of the hyperfine structure in light and heavy ions*; Can. J. Phys. **80**, 1347–54 (2002).
94. J. Nikkinen, H. Aksela, S. Heimäsmäki, **S. Fritzsche**, E. Kukk, M. Huttula and S. Aksela; *Anomalous $N_{45}P_1P_1$ Auger decay from the 4d photoionization states in atomic barium*; Phys. Rev. **A66**, 064703:1–4 (2002).
95. G. Gaigalas and **S. Fritzsche**; *Maple procedures for the coupling of angular momenta. VI. LS – jj transformations*; Comput. Phys. Commun. **149**, 39–60 (2002).
96. C. Z. Dong, L. Y. Xie and **S. Fritzsche**; *Theoretical study on the lifetime of the metastable $6s[3/2]_2$ level in atomic xenon*; Nucl. Phys. Review **19**, 81–84 (2002) .
97. H. Backe, A. Dretzke, K. Eberhardt, **S. Fritzsche**, C. Grüning, G. Gwinner, R. G. Haire, G. Huber, J. V. Kratz, G. Kube, P. Kunz, J. Lassen, W. Lauth, G. Passler, R. Repnow, D. Schwalm, P. Schwamb, M. Sewtz, P. Thörle, N. Trautmann and A. Waldek; *First determination of the ionization potential of actinium and first observation of optical transitions in fermium*; J. Nucl. Science & Techn. Supplement **3**, 86–89 (2002).
98. M. Tomaselli, T. Kühl, P. Egelhof, W. Nörtershäuser, A. Dax, H. Wang, D. Marx, S. R. Neumaier, H.-J. Kluge, I. Tanihata, **S. Fritzsche** and M. Mutterer; *Two and three neutron halos in helium and lithium isotopes*; in *Dynamical Aspects of Nuclear Fission*, eds. J. Kliman, M. G. Itkis and S. Gmuca (World Scientific, New Jersey a.o., 2002).
99. K. Ueda, M. Kitajima, A. De Fanis, Y. Tamenori, H. Yamaoka, H. Shindo, T. Furuta, T. Tanaka, H. Tanaka, H. Yoshida, R. Sankari, S. Aksela, **S. Fritzsche** and N. M. Kabachnik; *Doppler-free resonant Raman Auger spectroscopy of Ne^+ $2s2p^53p$ excited states*; Phys. Rev. Lett. **90**, 153005:1–4 (2003).
100. M. Sewtz, H. Backe, A. Dretzke, G. Kube, W. Lauth, P. Schwamb, K. Eberhardt, C. Grüning, P. Thörle, N. Trautmann, P. Kunz, J. Lassen, G. Passler, C. Z. Dong, **S. Fritzsche** and R. G. Haire; *First observation of atomic levels for the element fermium ($Z=100$)*; Phys. Rev. Lett. **90**, 163002:1–4 (2003).
101. K. Ueda, Y. Shimizu, H. Chiba, M. Kitajima, M. Okamoto, M. Hoshino, H. Tanaka, T. Hayashi, **S. Fritzsche**, I. P. Sazhina and N. M. Kabachnik; *Angular correlation between Auger electrons successively emitted from photoexcited resonances in Kr and Xe*; J. Phys. **B**: At. Mol. Opt. Phys. **B36**, 319–29 (2003).
102. P. Koval and **S. Fritzsche**; *Relativistic wave and Green's functions for hydrogen-like ions*; Comput. Phys. Commun. **152**, 191–205 (2003).

103. P. Koval, **S. Fritzsche** and A. Surzhykov; *Relativistic and retardation effects in the two-photon ionization of hydrogen-like ions*; J. Phys. **B**: At. Mol. Opt. Phys. **B36**, 873–78 (2003).
104. C. Z. Dong, L. Y. Xie, **S. Fritzsche** and T. Kato; *A theoretical study of the 3d–2p resonance to intercombination line–intensity ratio in midd-Z, Ne-like ions*; Nucl. Instr. Meth. **B205**, 87–92 (2003).
105. **S. Fritzsche**, H. Aksela, C. Z. Dong, S. Heinäsmäki and J. E. Sienkiewicz; *Theoretical Auger and photoionization studies for open-shell atoms and ions*; Nucl. Instr. Meth. **B205**, 93–98 (2003).
106. A. Surzhykov, **S. Fritzsche** and T. Stöhlker; *Two-step radiative recombination of polarized electrons into bare, high-Z ions*; Nucl. Instr. Meth. **B205**, 391–94 (2003).
107. **S. Fritzsche**, A. Surzhykov and T. Stöhlker; *Wave packet approach to the ionization of high-Z, hydrogen-like ions*; Nucl. Instr. Meth. **B205**, 469–73 (2003).
108. Z. Stachura, W. Vollmer, **S. Fritzsche**, T. Stöhlker, W. Meierkord and B. Sulkio-Cleff; *Polarization of the $K_{\alpha}L^1$ x-ray satellite in copper after 2 MeV proton impact*; J. Phys. **B**: At. Mol. Opt. Phys. **B36**, 1297–1308 (2003).
109. C. Z. Dong, **S. Fritzsche** and B. Fricke; *Theoretical transition probabilities and lifetimes in nickel-like Se^{6+} , Y^{11+} and Sn^{22+} ions*; Eur. Phys. J. **D23**, 5–13 (2003).
110. **S. Fritzsche**, T. Inghoff and M. Tomaselli; *Maple procedures for the coupling of angular momenta. VII. Extended and accelerated computations*; Comput. Phys. Commun. **153**, 424–442 (2003).
111. M. Tomaselli, L. C. Liu, T. Kühl, W. Nörtershäuser, D. Ursescu and **S. Fritzsche**; *Cluster transformation coefficients for structure and dynamics calculations in n-particle systems: Atoms, nuclei and quarks*; J. Optics **B**: Quantum Semiclass. Opt. **B5**, S395–S401 (2003).
112. M. Sewitz, H. Backe, C. Z. Dong, A. Dretzke, K. Eberhardt, **S. Fritzsche**, C. Grüning, R. G. Haire, G. Kube, P. Kunz, J. Lassen, W. Lauth, G. Passler, P. Schwamb, P. Thörle and N. Trautmann; *Resonance ionization spectroscopy of fermium (Z=100)*; Spectrochimica Acta **B58**, 1077–82 (2003).
113. C. Z. Dong, **S. Fritzsche** and L. Y. Xie; *Energy levels and transition probabilities for possible X-ray laser lines of highly-charged Ni-like ions*; J. Quant. Spec. Rad. Trans. **76**, 447–65 (2003).
114. A. Surzhykov, **S. Fritzsche** and Th. Stöhlker; *Polarization of the $Ly-\alpha_1$ emission following the radiative recombination of bare, high-Z ions*; Hyperfine Interactions **146/147**, 35–40 (2003).
115. T. Stöhlker, A. Gumberidze, X. Ma, H. F. Beyer, G. Bednarz, F. Bosch, X. Cai, **S. Fritzsche**, S. Hagmann, C. Kozuharov, O. Klepper, D. Liesen, P. H. Mokler, D. Sierkowski, Z. Stachura, M. Steck, A. Surzhykov, S. Toleikis, A. Warczak and Y. Zhou; *Structure and dynamics of high-Z ions studied at the ESR storage ring*; Hyperfine Interactions **146/147**, 97–102 (2003).
116. A. Gumberidze, T. Stöhlker, G. Bednarz, F. Bosch, **S. Fritzsche**, S. Hagmann, D. C. Ionescu, O. Klepper, C. Kozuharov, A. Krämer, D. Liesen, X. Ma, R. Mann, P. H. Mokler, D. Sierkowski, Z. Stachura, M. Steck, S. Toleikis and A. Warczak; *Magnetic sublevel population studied for H- and He-like uranium in relativistic ion-atom collisions*; Hyperfine Interactions **146/147**, 133–137 (2003).

117. M. Tomaselli, T. Kühl, W. Nörtershäuser, G. Ewald, R. Sanchez, A. Gluzicka, **S. Fritzsche** and L. C Liu; *Nuclear and electron polarization contributions to the HFS of hydrogen– and lithium–like ions*; *Hyperfine Interactions* **146/147**, 145–150 (2003).
118. C. Z. Dong, L. Y. Xie, X. X. Zhou, X. W. Ma and **S. Fritzsche**; *Strong relaxation and correlation effects on the $2p^53s - 2p^6$ spectrum of neutral neon*; *Hyperfine Interactions* **146/147**, 161–170 (2003).
119. A. Surzhykov, **S. Fritzsche**, T. Stöhlker and S. Tachenov; *Polarization studies on the radiative recombination of highly charged bare ions*; *Phys. Rev. A* **68**, 022710:1–7 (2003).
120. I. Dragani, J. R. Crespo Lopez-Urrutia, R. DuBois, **S. Fritzsche**, V. M. Shabev, R. Soria Orts, I. I. Tupitsyn, Y. Zou and J. Ullrich; *High precision wavelength measurements of QED-sensitive forbidden transitions in highly charged argon ions*; *Phys. Rev. Lett.* **91**, 183001:1–4 (2003).
121. J. E. Sienkiewicz, S. Telega, P. Syty and **S. Fritzsche**; *Critical minima in elastic scattering of electrons from Ar and Zn*; *Radiation Physics and Chemistry* **68**, 285–89 (2003).
122. P. Syty, J. E. Sienkiewicz and **S. Fritzsche**; *Relativistic multiconfiguration method in low-energy scattering of electrons from xenon atoms*; *Radiation Physics and Chemistry* **68**, 301–05 (2003).
123. **S. Fritzsche**; *Computer-algebraic techniques for many-particle physics*; in: Computer Algebra in Scientific Computing, eds. V. G. Ganzha, E. W. Mayr and E. V. Vorozhtsov (Institut für Informatik, Technische Universität München, 2003, ISBN 3-9808546-1-2, pages 105–120).
124. **S. Fritzsche**, A. Surzhykov and T. Stöhlker; *Polarization and correlation studies on the electron capture into highly-charged ions*; in Correlation and Polarization in Photonic, Electronic, and Atomic Collisions, eds. G. F. Hanne, L. Malegat and H Schmidt-Böcking, AIP Conference Proceedings 697 (2003) 102–108.
125. M. Drescher, T. Khalil, N. Müller, **S. Fritzsche**, N. M. Kabachnik and U. Heinzmann; *Spin polarization transfer in the resonant Auger decay following Kr $3d^{-1}5p$ photoexcitation*; *J. Phys. B: At. Mol. Opt. Phys.* **36**, 3337–47 (2003).
126. P. Koval, **S. Fritzsche** and A. Surzhykov; *Angular distribution studies on the two-photon ionization of hydrogen-like ions: Relativistic description*; *J. Phys. B: At. Mol. Opt. Phys.* **37**, 375–88 (2004).
127. M. Huttula, E. Kukk, S. Heimäsmäki, M. Jurvansuu, **S. Fritzsche**, H. Aksela, and S. Aksela; *Effects of the open-shell electronic structure in 4d photoionization and Auger decay of atomic Sn*; *Phys. Rev. A* **69**, 012702:1–6 (2004).
128. G. Gaigalas, T. Zalandauskas and **S. Fritzsche**; *Spectroscopic LSJ notation for atomic levels as obtained from relativistic calculations*; *Comput. Phys. Commun.* **157**, 239–49 (2004).
129. O. Marschuk, G. Bertschinger, H.-J. Kunze, N. R. Badnell and **S. Fritzsche**; *Cascades between doubly excited levels in helium-like argon*; *J. Phys. B: At. Mol. Opt. Phys.* **37**, 1951–60 (2004).
130. A. Uvarov and **S. Fritzsche**; *Effects of the bead-solvent interaction on the dynamics of macromolecules. I. The dumbbell molecule*; *Macromol. Theory & Simulations* **13**, 241–50 (2004).

131. M. Tomaselli, L. C. Liu, **S. Fritzsche**, T. Kühl and D. Ursescu; *Cluster transformation coefficients in many-body nuclear physics*; Nucl. Phys. **A738(C)**, 216–20 (2004).
132. T. Stöhlker, D. Banas, **S. Fritzsche**, A. Gumberidze, C. Kozuharov, X. Ma, A. Orsic-Muthig, U. Spillmann, D. Sierkowski, A. Surzhykov, S. Tachenov and A. Warczak; *Angular correlation and polarization studies for radiative electron capture into high-Z ions*; Phys. Scr. **T110**, 384–88 (2004).
133. S. Heinämäki, H. Aksela, J. Nikkinen, E. Kukk, A. Kivimäki, S. Aksela and **S. Fritzsche**; *Lifetime and Auger decay of strongly correlated 4p states of xenon*; J. Electr. Spec. Rel. Phenom. **137–40**, 281–285 (2004).
134. J. Bieron, C. Froese Fischer, **S. Fritzsche** and K. Pachucki; *Lifetime and hyperfine structure of the 3D_2 state of radium*; J. Phys. **B: At. Mol. Opt. Phys.** **B37**, L305–11 (2004).
135. P. O’Keeffe, S. Aloise, **S. Fritzsche**, B. Lohmann, U. Kleiman, M. Meyer and A. N. Grum-Grzhimailo,; *Resonant Auger decay of Xe^* $4d_{5/2}^{-1}6p$: A contribution to the complete experiment from fluorescence polarization studies*; Phys. Rev. **A70**, 012705:1–14 (2004).
136. M. Tomaselli, L. C. Liu, **S. Fritzsche** and T. Kühl, *Theory of dressed bosons and nuclear matter distributions*; J. Phys. **G: Nucl. Part. Phys.** **G30**, 999–1020 (2004).
137. K. Ryklinskaya and **S. Fritzsche**; *Use of group theory for the analysis of vibrational spectra*; Comput. Phys. Commun. **162**, 124–142 (2004).
138. X. B. Ding, C. Z. Dong and **S. Fritzsche**; *A theoretical study on the decay processes of the 4d core excited states of Cs IV*; Acta Phys. Sinica **53**, 2490–2496 (2004).
139. A. De Fanis, G. Prümper, U. Hergenhahn, M. Oura, M. Kitajima, T. Tanaka, H. Tanaka, **S. Fritzsche**, N. M. Kabachnik and K. Ueda; *Photoelectron recapture as a tool for the spectroscopy of ionic Rydberg states*; Phys. Rev. **A70**, 040702:1–4(R) (2004).
140. A. Uvarov and **S. Fritzsche**; *Effects of the bead-bead potential on the restricted rotational diffusion of nonrigid macromolecules*; J. Chem. Phys. **121**, 6561–6572 (2004).
141. M. Tomaselli, L. C. Liu, **S. Fritzsche**, T. Kühl, D. Ursescu, P. Neumayer and A. Wojtaszek; *Charge radii of exotic nuclei: Nuclear results vs. isotopic shift calculations*; Nucl. Phys. **A746(C)**, 587–590 (2004).
142. A. Surzhykov, P. Koval and **S. Fritzsche**; *Algebraic tools for dealing with the atomic shell model. I. Wavefunctions and integrals for hydrogen-like ions*; Comput. Phys. Commun. **165**, 139–156 (2005).
143. A. Uvarov and **S. Fritzsche**; *A semi-phenomenological approach to the transport and diffusion of small spherical macromolecules in solution*; Chem. Phys. Lett. **401**, 296–301 (2005).
144. G. Gaigalas, O. Scharf and **S. Fritzsche**; *Maple procedures for the coupling of angular momenta. VIII. Spin-angular coefficients for single-shell configurations*; Comput. Phys. Commun. **166**, 141–169 (2005).
145. A. Surzhykov, P. Koval and **S. Fritzsche**; *Angular correlations in the two-photon decay of hydrogen-like ions: Relativistic Green’s-function approach*; Phys. Rev. **A71**, 022509:1–7 (2005).

146. L. Nagy, F. Járai-Szabó and **S. Fritzsché**; *Ionization-excitation of lithium by fast charged projectiles*; J. Phys. **B**: At. Mol. Opt. Phys. **B38**, 141–50 (2005).
147. H. Yoshida, J. Sasaki, Y. Kawabe, Y. Senba, A. De Fanis, M. Oura, **S. Fritzsché**, I. P. Shazhina, N. M. Kabachnik and K. Ueda; *Study of second-step Auger transitions in Auger cascades following $1s \rightarrow 3p$ photoexcitation in Ne*; J. Phys. **B**: At. Mol. Opt. Phys. **B38**, 465–86 (2005).
148. A. Penttilä, S. Heimäsmäki, M. Harkoma, **S. Fritzsché**, R. Sankari, S. Aksela and H. Aksela; *Effects of electron correlation on the decay process following $3p$ photoionization in atomic manganese*; Phys. Rev. **A71**, 022715:1–5 (2005).
149. B. Saha and **S. Fritzsché**; *M1 and E2 transitions in Ar II*; J. Phys. **B**: At. Mol. Opt. Phys. **B38**, 1161–71 (2005).
150. **S. Fritzsché**, P. Indelicato and T. Stöhlker; *Relativistic quantum dynamics in strong fields: photon emission from heavy, few-electron ions*; J. Phys. **B**: At. Mol. Opt. Phys. **B38**, S707–26 (2005).
151. F. B. Rosmej, R. Stamm, **S. Fritzsché**, H. Capes, M. Koubiti, Y. Marandet, V. S. Lisitsa, N. Ohno, S. Takamura and D. Nishijima; *Neutral helium line emission for edge plasma conditions*; J. Nucl. Mat. **337–39**, 1101–05 (2005).
152. O. Scharf, G. Gaigalas, **S. Fritzsché**, M. Gedvilas, E. Gaidamauskas and G. Kiršanskas; *Applications of the RACAH package for dealing with the expressions from the atomic shell model*; Nucl. Instr. Meth. **B235**, 135–39 (2005).
153. **S. Fritzsché**, A. Surzhykov, W.-D. Sepp and F. Koike; *Algebraic tools for studying the properties and behaviour of hydrogen-like ions*; Nucl. Instr. Meth. **B235**, 140–44 (2005).
154. A. Surzhykov, **S. Fritzsché**, W.-D. Sepp, T. Stöhlker and A. Orsic Muthig; *Polarization and alignment transfer in heavy hydrogen-like ions following radiative electron capture*; Nucl. Instr. Meth. **B235**, 276–79 (2005).
155. **S. Fritzsché**; *On the accuracy of valence-shell computations for heavy and super-heavy elements*; Eur. Phys. J. **D33**, 15–21 (2005).
156. A. De Fanis, G. Prümper, U. Hergenhahn, E. Kukk, T. Tanaka, Y. Tamenori, M. Kitajima, H. Tanaka, **S. Fritzsché**, N. M. Kabachnik and K. Ueda; *Investigations of valence intramultiplet Auger transitions in Ne following $1s$ photoelectron recapture*; J. Phys. **B**: At. Mol. Opt. Phys. **B38**, 2229–43 (2005).
157. F. B. Rosmej, R. Stamm, **S. Fritzsché**, N. Yamamoto, T. Kato, M. Goto, H. Capes, M. Koubiti, V. S. Lisitsa, A. Meigs, N. Ohno, S. Takamura, D. Nishijima, U. I. Safronova and E. Lindroth; *A new class of relevant atomic data for transient and opaque plasmas*; in Atomic and Molecular Data and Their Application, eds. T. Kato, H. Funaba and D. Kato, AIP Conference Proceedings 771, 42–51 (2005).
158. **S. Fritzsché** and F. Koike; *The RATIP program. Recent developments and extensions*; in Atomic and Molecular Data and Their Application, eds. T. Kato, H. Funaba and D. Kato, AIP Conference Proceedings 771, 141–51 (2005).

159. F. Járai-Szabó, L. Nagy and **S. Fritzsch**; *Correlation effects for double K-shell vacancy production in lithium by fast charged projectile impact*; Nucl. Instr. Meth. **B233**, 276–79 (2005).
160. A. Surzhykov, **S. Fritzsch**, T. Stöhlker and S. Tachenov; *Application of radiative electron capture for the diagnostics of spin-polarized ion beams at storage rings*; Phys. Rev. Lett. **94**, 203202:1–4 (2005).
161. A. N. Grum-Grzhimailo, **S. Fritzsch**, P. O’Keeffe and M. Meyer; *Universal scaling of resonances in vector correlation photoionization parameters*; J. Phys. **B: At. Mol. Opt. Phys.** **B38**, 2545–53 (2005).
162. K. Rykhlinskaya and **S. Fritzsch**; *Generation of molecular symmetry orbitals for the point and double groups*; Comput. Phys. Commun. **171**, 119–132 (2005).
163. A. Surzhykov and **S. Fritzsch**; *Electron angular and energy distributions following the ionization of highly charged projectile ions*; J. Phys. **B: At. Mol. Opt. Phys.** **B38**, 2711–21 (2005).
164. C. Z. Dong and **S. Fritzsch**; *Relativistic, relaxation and correlation effects in spectra of Cu II*; Phys. Rev. **A72**, 012507:1–9 (2005).
165. **S. Fritzsch**, A. Surzhykov and T. Stöhlker; *Radiative recombination into high-Z few-electron ions: Cross sections and angular distributions*; Phys. Rev. **A72**, 012704:1–11 (2005).
166. S. Ricz, J. Nikkinen, R. Sankari, T. Ricsóka, Á. Kövér, D. Varga, **S. Fritzsch**, H. Aksela and S. Aksela; *Interference effects in the angular distribution of Ar 3p photoelectrons across the $2p \rightarrow ns/md$ resonances*; Phys. Rev. **A72**, 014701:1–4 (2005).
167. J. Nikkinen, H. Aksela, **S. Fritzsch**, S. Heinäsmäki, R. Sankari, E. Kukk, N. Berrah and S. Aksela; *Photoionization and Auger decay of the 3d vacancy state of atomic strontium: Electron-electron correlations*; Phys. Rev. **A72**, 042706:1–6 (2005).
168. P. Koval and **S. Fritzsch**; *Relativistic central-field Green’s functions for the RATIP package*; Comput. Phys. Commun. **172**, 187–202 (2005).
169. F. Da Pieve, L. Avaldi, R. Camilloni, M. Coreno, G. Turri, A. Ruocco, **S. Fritzsch**, N. M. Kabachnik and G. Stefani; *Study of electronic correlations in the Auger cascade decay from $Ne^* 1s^{-1}3p$* ; J. Phys. **B: At. Mol. Opt. Phys.** **B38**, 3619–30 (2005).
170. T. Radtke and **S. Fritzsch**; *Simulation of n-qubit quantum systems. I. Quantum registers and quantum gates*; Comput. Phys. Commun. **173**, 91–113 (2005).
171. D. Ursescu, M. Tomaselli, T. Kühl and **S. Fritzsch**; *Symbolic algorithms for the computation of Moshinsky brackets and nuclear matrix elements*; Comput. Phys. Commun. **173**, 140–161 (2005).
172. M. K. Inal, A. Surzhykov and **S. Fritzsch**; *Linear polarization of the $2p^53s \rightarrow 2p^6$ lines following the inner-shell photoionization of the sodiumlike ions*; Phys. Rev. **A72**, 042720:1–8 (2005).
173. T. Radtke, **S. Fritzsch** and A. Surzhykov; *Control of entanglement following the photoionization of trapped, hydrogen-like ions*; Phys. Lett. **A347**, 73–80 (2005).

174. H. Backe, A. Dretzke, **S. Fritzsche**, R. G. Haire, P. Kunz, W. Lauth, M. Sewtz and N. Trautmann; *Laser spectroscopic investigation of the element fermium ($Z=100$)*; Hyperfine Interactions **162**, 3–14 (2005).
175. **S. Fritzsche**; *Application of point-group symmetries in chemistry and physics: A computer-algebraic approach*; Int. J. Quant. Chem. **106**, 98–129 (2006).
176. S.-M. Huttula, S. Heinäsmäki, **S. Fritzsche**, H. Aksela, E. Kukk, M. Huttula and S. Aksela; *Relativistic and correlation effects in the anisotropy of near-threshold Kr 3d and Xe 4d photoionization*; J. Elec. Spec. Rel. Phenom **150**, 35–39 (2006).
177. U. Kentsch, G. Zschornack, F. Grossmann, V. P. Ovsyannikov, F. Ullmann and **S. Fritzsche**; *L x-ray transitions in F -like to Na -like xenon ions determined at a room temperature electron beam ions trap*; X-Ray Spectrometry **35**, 71–78 (2006).
178. M. Kitajima, H. Yoshida, A. De Fanis, G. Prümper, U. Hergenhahn, E. Kukk, T. Tanaka, K. Nakagawa, H. Tanaka, **S. Fritzsche**, I. P. Sazhina, N. M. Kabachnik and K. Ueda; *A study of inner-valence Auger transitions in Ne^+ induced by the resonant Auger decay of photoexcited Ne $1s^{-1}np$ states*; J. Phys. B: At. Mol. Opt. Phys. **B39**, 1299–1322 (2006).
179. B. Saha and **S. Fritzsche**; *Be I isoelectronic ions embedded in hot plasma*; Phys. Rev. **E73**, 036405:1–8 (2006).
180. A. Uvarov and **S. Fritzsche**; *Friction of N -bead macromolecules in solution: Effects of the bead-solvent interaction*; Phys. Rev. **E73**, 011111:1–12 (2006); selected also for the February 1, 2006 issue of Virtual Journal of Biological Physics Research.
181. K. Jänkälä, R. Sankari, J. Schulz, M. Huttula, A. Calo, S. Heinäsmäki, **S. Fritzsche**, T. Rander, S. Svensson, S. Aksela and H. Aksela; *Laser excitation combined with 2p photoionization and Auger decay of potassium*; Phys. Rev. **A73**, 022720:1–8 (2006).
182. G. Gaigalas, O. Scharf and **S. Fritzsche**; *Hyperfine structure parametrization in Maple*; Comput. Phys. Commun. **174**, 202–221 (2006).
183. M. Kato, Y. Morishita, F. Koike, **S. Fritzsche**, H. Yamaoka, Y. Tamenori, K. Okada, T. Matsudo, T. Gejo, I. H. Suzuki and N. Saito; *High-resolution absolute photoabsorption cross section for Ne in the 1s2s and 1s2p resonant double excitation*; J. Phys. B: At. Mol. Opt. Phys. **B39**, 2059–2069 (2006).
184. A. Surzhykov, U. D. Jentschura, T. Stöhlker and **S. Fritzsche**; *Radiative electron capture into high- Z , few-electron ions: Alignment of the excited ionic states*; Phys. Rev. **A73**, 032716:1–8 (2006).
185. S. Topcu, J. Nasser, L. M. L. Daku and **S. Fritzsche**; *Ab initio calculations of external-field shifts of the 661-nm quadrupolar clock transition in neutral Ag atoms*; Phys. Rev. **A73**, 042503:1–7 (2006).
186. J. Pagaran, **S. Fritzsche** and G. Gaigalas; *Maple procedures for the coupling of angular momenta. IX. Wigner D-functions and rotation matrices*; Comput. Phys. Commun. **174**, 616–30 (2006).
187. K. Ryklinskaya and **S. Fritzsche**; *Generation of Clebsch-Gordan coefficients for the point and double groups*; Comput. Phys. Commun. **174**, 903–13 (2006).

188. G. Gaigalas, **S. Fritzsche**, E. Gaidamauskas, G. Kirsanskas and T. Zalandauskas; *JAHN – A program for representing atomic and nuclear states within an isospin basis*; Comput. Phys. Commun. **175**, 52–66 (2006).
189. T. Radtke and **S. Fritzsche**; *Simulation of n -qubit quantum systems. II. Separability and entanglement*; Comput. Phys. Commun. **175**, 145–66 (2006).
190. S. Hasegawa, F. Yoshida, L. Matsuoka, F. Koike, **S. Fritzsche**, S. Obara, Y. Azuma and T. Nagata; *Photoexcitation of K-shell and L-shell hollow beryllium*; Phys. Rev. Lett. **97**, 023001:1–4 (2006).
191. C. Z. Dong, T. Kato, **S. Fritzsche** and F. Koike; *Lifetimes and branching fractions of the high angular momentum states of aluminium-like iron group elements*; Mon. Notes R. Astron. Soc. **369**, 1735–40 (2006).
192. C. Z. Dong, D. H. Zhang, T. Stöhlker, **S. Fritzsche** and B. Fricke; *Relativity, electron correlation and QED effects in the $1s2s^2\ ^2S_{1/2}$ state of highly charged Li-like ions*; J. Phys. **B: At. Mol. Opt. Phys.** **B39**, 3121–29 (2006).
193. A. Uvarov and **S. Fritzsche**; *Restricted rotational diffusion of non-rigid dumbbell-type macromolecules on surfaces: Effects of the bead-bead and bead-surface interaction*; Prog. Coll. Polym. Science **133**, 95–99 (2006).
194. J. Nikkinen, **S. Fritzsche** and S. Heinäsmäki; *Revised and extended UTILITIES for the RATIP package*; Comput. Phys. Commun. **175**, 348–58 (2006).
195. N. Müller, T. Khalil, M. Pohl, T. Uphues, M. Polcik, O. Rader, F. Heigl, K. Starke, **S. Fritzsche**, N. M. Kabachnik and U. Heinzmann; *Interference of spin states in resonant photoemission induced by circularly polarized light from magnetized Gd*; Phys. Rev. **B74**, 161401(R):1–4 (2006).
196. F. Koike, **S. Fritzsche**, K. Nishihara, A. Sasaki, T. Kagawa, T. Nishikawa, K. Fujima, T. Kawamura and H. Furukawa; *Precise and accurate calculations of electronic transitions in heavy atomic ions relevant to extreme ultra-violet light sources* J. Plasma Fusion Res. Series, **7**, 253–255 (2006).
197. M. Tomaselli, T. Kühl, D. Ursescu and **S. Fritzsche**; *Correlated EoM and distributions for $A = 6$ nuclei*; Progr. Theo. Phys. **116**, 699–723 (2006).
198. J. Rzadkiewicz, T. Stöhlker, D. Banas, H. F. Beyer, F. Bosch, C. Brandau, C. Z. Dong, **S. Fritzsche**, A. Gojska, A. Gumberidze, S. Hagmann, D. C. Ionescu, C. Kozhuharov, T. Nandi, R. Reuschl, D. Sierkowski, U. Spillmann, A. Surzhykov, S. Tachenov, M. Trassinelli and S. Trotsenko; *Selective population of the $[1s2s]\ ^1S_0$ and $[1s2s]\ ^3S_1$ states of He-like uranium*; Phys. Rev. **A74**, 012511:1–7 (2006).
199. T. Radtke, **S. Fritzsche** and A. Surzhykov; *Density matrix formalism for the photoion-electron entanglement in atomic photoionization*; Phys. Rev. **A74**, 032709:1–10 (2006).
200. S. Tashenov, T. Stöhlker, D. Banas, K. Beckert, P. Beller, H. F. Beyer, F. Bosch, **S. Fritzsche**, A. Gumberidze, S. Hagmann, C. Kozhuharov, T. Krings, D. Liesen, F. Nolden, D. Protic, D. Sierkowski, U. Spillmann, M. Steck and A. Surzhykov; *First measurement of the linear polarization of radiative electron capture transitions*; Phys. Rev. Lett. **97**, 223202:1–4 (2006).

201. A. Surzhykov, U. D. Jentschura, T. Stöhlker and **S. Fritzsche**; *K- α_1 radiation from heavy, heliumlike ions produced in relativistic collisions*; Phys. Rev. **A74**, 052710:1–5 (2006).
202. M. Tomaselli, T. Kühl, D. Ursescu and **S. Fritzsche**; *Microscopic cluster theory for exotic nuclei*; J. Phys. Conf. Series **49**, 208–09 (2006).
203. R. Reuschl, A. Gumberidze, T. Stöhlker, C. Kozuharov, J. Rzadkiewicz, U. Spillmann, S. Tashenov, **S. Fritzsche** and A. Surzhykov; *The Balmer spectrum of H-like uranium produced by radiative recombination at low velocities*; Radiation Physics and Chemistry **75**, 1740–43 (2006).
204. A. Surzhykov, **S. Fritzsche**, T. Stöhlker and S. Tashenov; *Polarization of L-shell REC photons following the capture into highly charged ions*; Radiation Physics and Chemistry **75**, 1767–70 (2006).
205. K. Jäkälä, J. Schulz, M. Huttula, A. Calo, S. Urpelainen, S. Heinäsmäki, **S. Fritzsche**, S. Svensson, S. Aksela and H. Aksela; *Effects of initial-state laser excitation on inner-shell photoionization and Auger decay of Rb*; Phys. Rev. **A74**, 062704:1–10 (2006).
206. P. K. Mukherjee, **S. Fritzsche** and B. Fricke; *Stability of H_2^+ molecular ion under Debye plasma*; Phys. Lett. **A360**, 287–90 (2006).
207. C. Z. Dong, **S. Fritzsche** and B. Fricke; *Theoretical study of the $5p^56s - 5p^6$ spectra of neutral xenon*; Eur. Phys. J. **D40**, 317–23 (2006).
208. L. Borowska, A. Surzhykov, T. Stöhlker and **S. Fritzsche**; *Angular correlations in the two-photon decay of aligned hydrogenlike ions*; Phys. Rev. **A74**, 062516:1–9 (2006).
209. M. Tomaselli, T. Kühl, D. Ursescu and **S. Fritzsche**; *Correlations effects on the charge radii of exotic nuclei*; Hyperfine Interactions **171**, 243–253 (2006).
210. **S. Fritzsche**, J. Nikkinen, S.-M. Huttula, H. Aksela, M. Huttula and S. Aksela; *Interferences in the $3p^4nl$ satellite emission following the excitation of argon across the $2p_{1/2}^54s$ and $2p_{3/2}^53d$ $J = 1$ resonances*; Phys. Rev. **A75**, 012501:1–12 (2007).
211. A. Surzhykov, **S. Fritzsche** and T. Stöhlker; *Effects of the target polarization on the diagnostics of spin-polarized heavy ions*; Radiation Physics and Chemistry **76**, 392–96 (2007).
212. F. Koike and **S. Fritzsche**; *Relativistic calculations for highly-correlated atomic systems including highly-charged ions*; Radiation Physics and Chemistry **76**, 404–411 (2007).
213. **S. Fritzsche**, A. Surzhykov and G. Gaigalas; *Interelectronic effects on the photon angular distribution following the radiative electron capture into lithium-like ions*; Radiation Physics and Chemistry **76**, 612–16 (2007).
214. T. Radtke, **S. Fritzsche** and A. Surzhykov; *Simulation of n-qubit quantum systems: A computer-algebraic approach*; Physics of Particles and Nuclei Letters **4**, 107–11 (2007).
215. B. Saha and **S. Fritzsche**; *Influence of dense plasma on the low-lying transitions in Be-like ions: Relativistic multiconfiguration Dirac-Fock calculation*; J. Phys. **B: At. Mol. Opt. Phys.** **B40**, 259–70 (2007).
216. M. Tomaselli, T. Kühl, D. Ursescu and **S. Fritzsche**; *Correlations in many-electron systems: Theory and applications*; Can. J. Phys. **85**, 573–84 (2007).

217. S. Trotsenko, T. Stöhlker, D. Banas, C. Z. Dong, **S. Fritzsche**, A. Gumberidze, S. Hagmann, S. Hess, P. Indelicato, C. Kozhuharov, M. Nofal, R. Reuschl, J. Rzadkiewicz, U. Spillmann, A. Surzhykov, M. Trasinelli and G. Weber; *Investigation of the decay properties of the $1s(2s)^2$ state in Li-like uranium*; J. Phys. Conf. Ser. **58**, 141–144 (2007).
218. J. Rzadkiewicz, D. Banas, H.-F. Beyer, C. Brandau, C. Z. Dong, **S. Fritzsche**, A. Gojska, A. Gumberidze, S. Hagmann, C. Kozhuharov, R. Reuschl, U. Spillmann, T. Stöhlker, A. Surzhykov, S. Tachenov and S. Trotsenko; *Study of intra-L shell transitions in Be-like uranium*; J. Phys. Conf. Ser. **58**, 145–148 (2007).
219. F. Koike, **S. Fritzsche** and K. Nishihara; *MCDF calculation for EUV emissions of 4d open-shell ions based on the features of nonlocal exchange integrals*; J. Phys. Conf. Ser. **58**, 157–160 (2007).
220. A. Surzhykov, U. D. Jentschura, T. Stöhlker and **S. Fritzsche**; *Effects of configuration interaction on the alignment of beryllium-like ions* J. Phys. Conf. Ser. **58**, 211–214 (2007).
221. G. Weber, T. Stöhlker, D. Banas, **S. Fritzsche**, A. Gumberidze, S. Hagmann, S. Hess, C. Kozhuharov, M. Nofal, U. Popp, R. Reuschl, U. Spillmann, A. Surzhykov and S. Trotsenko; *Radiative processes studied for bare uranium ions in collisions with H_2* ; J. Phys. Conf. Ser. **58**, 243–246 (2007).
222. F. Da Pieve, **S. Fritzsche**, G. Stefani and N. M. Kabachnik; *Linear magnetic and alignment dichroism in Auger-photoelectron coincidence spectroscopy*; J. Phys. **B: At. Mol. Opt. Phys.** **B40**, 329–42 (2007).
223. J. Jiang, C. Z. Dong, L.-Y. Xie, J.-G. Wang, J. Yan and **S. Fritzsche**; *Relativistic distorted-wave calculations of electron impact excitation cross sections of Be-like C^{2+} ions*; Chin. Phys. Lett. **24**, 691–94 (2007).
224. H. Ogawa, H. Geissel, A. Fetthou, **S. Fritzsche**, M. Portillo, C. Scheidenberger, V. P. Shevelko, A. Surzhykov, H. Weick, F. Becker, D. Boutin, B. Kindler, R. Knöbel, J. Kurcewicz, W. Kurcewicz, Y. A. Litvinov, B. Lommel, G. Münzenberg, W. R. Plaß, N. Sakamoto, J. Stadlemann, H. Tsuchida, M. Winkler and N. Yao; *Gas-solid difference in charge-changing cross sections for bare and H-like nickel ions at 200 MeV/u*; Phys. Rev. **A75**, 020703(R):1–4 (2007).
225. T. Radtke and **S. Fritzsche**; *Simulation of n-qubit quantum systems. III. Quantum operations*; Comput. Phys. Commun. **176**, 617–33 (2007).
226. J. Anton, P. K. Mukherjee, B. Fricke and **S. Fritzsche**; *Spectral line shifts of alkali atoms in liquid helium: A relativistic density functional approach*; J. Phys. **B: At. Mol. Opt. Phys.** **B40**, 2453–57 (2007).
227. K. Jänkälä, **S. Fritzsche**, M. Huttula, J. Schulz, S. Urpelainen, S. Heinämäki, S. Aksela and H. Aksela; *Many-electron effects in 2p photoionization and Auger decay of atomic aluminium*; J. Phys. **B: At. Mol. Opt. Phys.** **B40**, 3435–3451 (2007); mentioned as *highligth* also in Europhysics News **22**, volume 38 (2007).
228. A. Sankari, S. Alitalo, **S. Fritzsche**, J. Nikkinen, A. Kivimäki, S. Aksela and H. Aksela; *Excitation-energy dependence of the resonant Auger transitions to the $4p^4(^1D)np$ ($n = 5, 6$) states across the $3d_{3/2}^{-1}5p$ and $3d_{5/2}^{-1}6p$ resonances in Kr*; Phys. Rev. **A76**, 022702:1–8 (2007); Erratum Phys. Rev. **A76**, 069902(E):1–2 (2007).

229. Y. J. Yu, J. G. Li, C. Z. Dong, X. B. Ding, **S. Fritzsche**, and 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 Hg*; Eur. J. Phys. **D44**, 51–56 (2007).
230. A. Uvarov and **S. Fritzsche**; *High-order correlation contributions to the friction of macromolecules in solution: A semi-phenomenological Fokker–Planck approach*; Europhys. Lett. **79**, 68001–5 (2007).
231. L. Borowska, K. Terenetsky, V. Verbitsky and **S. Fritzsche**; *Dynamic polarization of light halo nuclei in strong fields: ${}^6\text{He} + {}^{209}\text{Bi}$ elastic scattering below and close to the Coulomb barrier*; Phys. Rev. **C76**, 034606:1–6 (2007).
232. E. W. Schmidt, D. Bernhardt, A. Müller, S. Schippers, **S. Fritzsche**, J. Hoffmann, A. S. Jaroshevich, C. Krantz, M. Lestinsky, D. A. Orlov, A. Wolf, D. Lukic and D. W. Savin; *Electron–ion recombination of Si IV forming Si III: Storage–ring measurements and multiconfiguration Dirac–Fock calculations*; Phys. Rev. **A76**, 032717 (2007).
233. **S. Fritzsche**, C. Z. Dong, F. Koike and A. Uvarov; *The low-lying level structure of atomic lawrencium ($Z=103$): Energies and absorption rates*; Eur. Phys. J. **D45**, 107–113 (2007).
234. **S. Fritzsche**, A. Surzhykov, U. D. Jentschura and T. Stöhlker; *Angular and polarization analysis of x-rays emitted from highly-charged, few-electron ions*; J. Phys. Conf. Series **88**, 012018:1–8 (2007).
235. N. M. Kabachnik, **S. Fritzsche**, A. N. Grum-Grzhimailo, M. Meyer and K. Ueda; *Coherence and correlations in photoinduced Auger and fluorescence cascades in atoms*; Phys. Reports **451**, 155–233 (2007).
236. A. Uvarov and **S. Fritzsche**; *Anomalous transport of macromolecules in solution. A semi-phenomenological Fokker–Planck approach*; Eur. Phys. J. Spec. Topics **151**, 95–101 (2007).
237. J. G. Li, C. Z. Dong, Y. J. Yu, X. B. Ding, **S. Fritzsche** and B. Fricke; *The atomic structure and properties of ununbium ($Z=112$) and mercury ($Z=80$)*; Science in China **G50**, 707–15 (2007).
238. S. Bhattacharyya, A. N. Sil, **S. Fritzsche** and P. K. Mukherjee; *Effect of strongly coupled plasma on the spectra of hydrogenlike carbon, aluminum and argon*; Eur. Phys. J. **D46**, 1–8 (2008).
239. A. Surzhykov, U. D. Jentschura, T. Stöhlker and **S. Fritzsche**; *Electron capture into few-electron heavy ions: Independent particle model*; Eur. Phys. J. **D46**, 27–36 (2008).
240. **S. Fritzsche**, B. K. Mani and D. Angom; *A computer-algebraic approach to the derivation of Feynman–Goldstone perturbation expansions for open-shell atoms and molecules*; Adv. Quant. Chem. **53**, 177–215 (2008).
241. D. Strohschein, D. Röhrbein, T. Kirchner, **S. Fritzsche**, J. Baran and J. A. Tanis; *Nonstatistical enhancement of the $1s2s2p\ ^4P$ state in electron transfer in $0.5\text{--}1.0\text{ MeV/u}$ $\text{C}^{4,5+} + \text{He}$ and Ne collisions*; Phys. Rev. **A77**, 022706:1–7 (2008).
242. J. Niskanen, J. Nikkinen, S. Heinäsmäki, M. Huttula, K. Jänkälä, **S. Fritzsche**, S. Aksela and H. Aksela; *Interference effects in resonant Auger decay of atomic cesium*; J. Phys. **B: At. Mol. Opt. Phys.** **B41**, 035007:1–6 (2008).

243. T. Radtke, A. Surzhykov and **S. Fritzsche**; *Photon pairs with tailor-made entanglement obtained from the two-photon decay of atomic hydrogen*; Phys. Rev. **A77**, 022507:1–7 (2008).
244. X.-B. Ding, C. Z. Dong, F. Koike, T. Kato and **S. Fritzsche**; *Excitation and decay dynamics of $1s2s$ inner-shell double-vacancy states of neon atoms*; Chin. Phys. **B17**, 1–7 (2008).
245. D. Gonta and **S. Fritzsche**; *On the role of the atom–cavity detuning in bimodal cavity experiments*; J. Phys. **B: At. Mol. Opt. Phys.** **B41**, 095503:1–11 (2008).
246. A. Surzhykov, U. D. Jentschura, T. Stöhlker, A. Gumberidze and **S. Fritzsche**; *Alignment of heavy few-electron ions following excitation by relativistic Coulomb collisions*; Phys. Rev. **A77**, 042722:1–8 (2008).
247. D. Gonta, **S. Fritzsche** and T. Radtke; *Generation of four-partite Greenberger-Horne-Zeilinger and W states by using a high-finesse bimodal cavity*; Phys. Rev. **A**, 062312:1–13 (2008).
248. K. Jänkälä, S. Urpelainen, M. Huttula, **S. Fritzsche**, S. Heinäsmäki, S. Aksela and H. Aksela; *Inner-shell $2p$ photoionization and Auger decay of atomic silicon*; Phys. Rev. **A77**, 062504:1–9 (2008).
249. S. Osmekhin, **S. Fritzsche**, A. N. Grum-Grzhimailo, M. Huttula, H. Aksela and S. Aksela; *Angle-resolved study of the $Ar\ 2p_{1/2}^{-1}3d$ resonant Auger decay*; J. Phys. **B: At. Mol. Opt. Phys.** **B41**, 145003:1–6 (2008).
250. **S. Fritzsche**, A. N. Grum-Grzhimailo, E. V. Gryzlova and N. M. Kabachnik; *Angular distributions and angular correlations in sequential two-photon double ionization of atoms*; J. Phys. **B: At. Mol. Opt. Phys.** **B41**, 165601:1–12 (2008); Corrigendum, *ibid.* **B41**, 199801:1 (2008).
251. J. Anton, B. Fricke, P. K. Mukherjee and **S. Fritzsche**; *Ab-initio relativistic density functional calculations for spectral line shifts of Rb atoms in liquid helium*; Phys. Lett. **A372**, 4462–4464 (2008).
252. X.-B. Ding, C. Z. Dong and **S. Fritzsche**; *Theoretical study on decay of the $4d$ core-excited states of Cs III*; Chin. Phys. **B17**, 2033–39 (2008).
253. T. Radtke, A. Surzhykov and **S. Fritzsche**; *Polarization correlation in the two-photon decay of atomic hydrogen: Nonlocality versus entanglement*; Eur. J. Phys., **D49**, 7–12 (2008).
254. **S. Fritzsche**, K. Jänkälä, M. Huttula, S. Urpelainen and H. Aksela; *Photoelectron satellite structure from the $3d$ and $4d$ inner-shell ionization of rubidium and cesium: Role of atomic relaxation*; Phys. Rev. **A78**, 032514:1–10 (2008).
255. **S. Fritzsche**, N. M. Kabachnik and A. Surzhykov; *Angular distribution of the dielectronic satellite lines from relativistic high- Z ions: Multipole-mixing effects*; Phys. Rev. **A78**, 032703:1–9 (2008).
256. F. I. Allen, C. Biedermann, R. Radtke, G. Fussmann and **S. Fritzsche**; *Energy dependence of angular momentum capture states in charge exchange collisions between slow highly charged argon ions and argon neutrals*; Phys. Rev. **A78**, 032705:1–7 (2008).
257. T. Radtke and **S. Fritzsche**; *Simulation of n -qubit quantum systems. IV. Parametrizations of quantum states, matrices and probability distributions*; Comp. Phys. Commun. **179**, 647–64 (2008).

258. J. K. Saha, T. K. Mukherjee, **S. Fritzsche** and P. K. Muherjee; *The effect of a 2s vacancy on two-electron-one-photon lines: Relativistic approach*; Phys. Lett. **A373**, 252–55 (2009).
259. A. Surzhykov, T. Stöhlker and **S. Fritzsche**; *Fine-structure effects on the polarization of $K\alpha_1$ radiation from heavy, highly-charged ions*; Nucl. Instr. Meth. **B267**, 251–55 (2009).
260. **S. Fritzsche**, N. M. Kabachnik, A. Surzhykov and T. Stöhlker; *Breit interaction effects on the K_α angular distribution following the dielectronic recombination of high-Z ions*; Nucl. Instr. Meth. **B267**, 257–59 (2009).
261. Z. Bedrane, M. K. Inal and **S. Fritzsche**; *Effects of directional energetic electrons on the density diagnostics of hot plasmas*; J. Phys. **B: At. Mol. Opt. Phys.** **B42**, 055701:1–12 (2009).
262. T. Stöhlker, D. Banaś, H. Bräuning, **S. Fritzsche**, S. Geyer, A. Gumberidze, S. Hagmann, S. Hess, C. Kozhuharov, A. Kumar, R. Martin, B. E. O'Rourke, R. Reuschl, U. Spillmann, A. Surzhykov, S. Tashenov, S. Trotsenko, G. Weber and D. F. A. Winters; *Polarization and angular correlation studies of x-rays emitted in relativistic ion-atom collisions*; Eur. J. Phys. Spec. Topics **169**, 5–14 (2009).
263. D. Banas, M. Pajek, T. Stöhlker, H. F. Beyer, S. Böhm, F. Bosch, C. Brandau, M. Czarnota, S. Chatterjee, J.-C. Dousse, **S. Fritzsche**, A. Gumberidze, S. Hagmann, C. Kozhuharov, A. Kumar, D. Liesen, P. H. Mokler, A. Müller, R. Reuschl, E. W. Schmidt, D. Sierkowski, U. Spillmann, A. Surzhykov, J. Szlachetko, S. Tachenov, S. Trotsenko, P. Verna and A. Warczak; *The enhancement effect in K -shell radiative recombination of U^{92+} ions with cooling electrons*; Eur. J. Phys. Spec. Topics **169**, 15–18 (2009).
264. A. Surzhykov, T. Radtke, P. Indelicato and **S. Fritzsche**; *Photon polarization in the two-photon decay of heavy hydrogen-like ions*; Eur. J. Phys. Spec. Topics **169**, 29–34 (2009).
265. L. Borowska, K. Terenetsky, V. Verbitsky and **S. Fritzsche**; *Analytical potential for the elastic scattering of light halo nuclei below and close to the Coulomb barrier*; Phys. Rev. **C79**, 044605:1–7 (2009).
266. J. J. Wan, C. Z. Dong, X. B. Ding, X. W. Ma, J. Rzadkiewicz, T. Stöhlker and S. Fritzsche; *Radiative electron capture and subsequent radiative decay in collisions of U^{89+} ions with N_2* ; Phys. Rev. **A79**, 022707:1–8 (2009).
267. V. I. Matveev, S. V. Ryabchenko, D. U. Matrasulov, K. Y. Rakhimov, **S. Fritzsche** and T. Stöhlker; *Electron loss of fast heavy projectiles in collision with neutral targets*; Phys. Rev. **A79**, 042710:1–8 (2009).
268. A. V. Maiorova, A. Surzhykov, S. Tachenov, V. M. Shabaev, **S. Fritzsche**, G. Plunien and T. Stöhlker; *Polarization studies on the two-step radiative recombination of highly-charged, heavy ions*; J. Phys. **B: At. Mol. Opt. Phys.** **B42**, 125003:1–11 (2009).
269. D. Gonta, T. Radtke and **S. Fritzsche**; *Generation of two-dimensional cluster states by using high-finesse bimodal cavities*; Phys. Rev. **A79**, 062319:1–11 (2009); selected also for the July 2009 issue of Virtual Journal of Atomic Quantum Fluids and for the July 2009 issue of Virtual Journal of Quantum Information.
270. **S. Fritzsche**, A. N. Grum-Grzhimailo, E. V. Gryzlova and N. M. Kabachnik; *Sequential two-photon double ionization of Kr atoms*; J. Phys. **B: At. Mol. Opt. Phys.** **B42**, 145602:1–6 (2009).

271. M. Kurka, A. Rudenko, L. Foucar, K. U. Kühnel, Y. H. Jiang, T. Ergler, T. Havermeier, M. Smolarski, S. Schössler, K. Cole, M. Schöffler, R. Dörner, M. Gensch, S. Düsterer, R. Treusch, **S. Fritzsche**, A. N. Grum–Grzhimajlo, E. V Gryzlova, N. M. Kabachnik, C. D. Schröter, R. Moshammer and J. Ullrich; *Two-photon double ionization of Ne by free-electron laser radiation: a kinematically complete experiment*; *J. Phys. B: At. Mol. Opt. Phys.* **B42** 141002:1–5(FT) (2009).
272. D. Gonta and **S. Fritzsche**; *Control of entanglement and two-qubit quantum gates with atoms crossing a detuned optical cavity*; *J. Phys. B: At. Mol. Opt. Phys.* **B42**, 145508:1–10 (2009).
273. A. Surzhykov, **S. Fritzsche**, N. M. Kabachnik and T. Stöhlker; *Theoretical progress in studying the characteristic x-ray emission from heavy few-electron ions*; *J. Phys. Conf. Series* **163**, 012008:1–6 (2009).
274. A. Kumar, S. Trotsenko, A. V. Volotka, D. Banaś, H. F. Beyer, H. Bräuning, **S. Fritzsche**, A. Gumberidze, S. Hagmann, S. Hess, C. Kozhuharov, G. Plunien, R. Reuschl, U. Spillmann, M. Trassinelli, G. Weber and T. Stöhlker; *Two-photon decay in highly charged heavy ions: Spectral shape of the 2E1 ($2 \ ^1S_0 \rightarrow 1 \ ^1S_0$) in helium-like tin*; *J. Phys. Conf. Series* **163**, 012027:1–4 (2009).
275. J. Bieron, G. Gaigalas, E. Gaidamauskas, **S. Fritzsche**, P. Indelicato and P. Jönsson; *Multi-configuration Dirac–Hartree–Fock calculations of the electric dipole moment of radium induced by the nuclear Schiff moment*; *Phys. Rev. A* **80**, 012513:1–10 (2009).
276. C. Eichhorn, **S. Fritzsche**, S. Löhle, A. Knapp and M. Auweter-Kurtz; *Time-resolved fluorescence spectroscopy of two-photon laser-excited 8p, 9p, 5f and 6f levels in neutral xenon*; *Phys. Rev. E* **80**, 026401:1–6 (2009).
277. D. Cubaynes, S. Guilbaud, F. J. Wuillemier, M. Meyer, E. Heinecke, K. Rieck, P. Zimmermann, M. Yalcinkaya, **S. Fritzsche**, S. I. Strakhova and A. N. Grum–Grzhimailo; *Photoionization from the 2p subshell of laser excited aligned Na^* $2p^63p \ ^2P_{3/2}$ state*; *Phys. Rev. A* **80**, 023410:1–8 (2009).
278. **S. Fritzsche**; *Maple procedures for the coupling of angular momenta. An up-date of the RACAH module*; *Comp. Phys. Commun.* **180**, 2021–23 (2009).
279. M. Y. Şengül, M. C. Güçlü and **S. Fritzsche**; *Bound-free electron-positron pair production in relativistic heavy-ion collisions*; *Phys. Rev. A* **80**, 042711:1–9 (2009).
280. **S. Fritzsche**, A. Surzhykov and T. Stöhlker; *Dominance of the Breit interaction in the x-ray emission of highly charged ions following dielectronic recombination*; *Phys. Rev. Lett.* **103**, 113001:1–4 (2009).
281. A. N. Sil, J. Anton, **S. Fritzsche**, P. K. Mukherjee and B. Fricke; *Spectra of heliumlike carbon, aluminium and argon under strongly coupled plasma*; *Eur. J. Phys.* **D55**, 645–52 (2009).
282. A. N. Grum–Grzhimailo, E. V. Gryzlova, S. I. Strakhova, N. M. Kabachnik and **S. Fritzsche**; *Angular distributions and correlations in sequential two-photon atomic double ionization*; *J. Phys. Conf. Series* **194**, 012004:1–7 (2009).
283. T. Radtke and **S. Fritzsche**; *Simulation of n-qubit quantum systems. V. Quantum measurements*; *Comp. Phys. Commun.* **181**, 440–53 (2010).

284. J. Niskanen, S. Urpelainen, K. Jänkälä, J. Schulz, S. Heinäsmäki, **S. Fritzsche**, N. M. Kabachnik, S. Aksela and H. Aksela; *Photoelectron angular distribution and linear magnetic dichroism in the 4p photoemission from Rb atoms*; Phys. Rev. **A81**, 013406:1–7 (2010).
285. S. Trotsenko, A. Kumar, A. V. Volotka, D. Banas, H. F. Beyer, H. Bräuning, **S. Fritzsche**, A. Gumberidze, S. Hagmann, S. Hess, P. Jagodzinski, C. Kozhuharov, R. Reuschl, S. Salem, A. Simon, U. Spillmann, M. Trasinelli, L. C. Tribedi, G. Weber, D. Winters and T. Stöhlker; *Spectral shape of the two-photon decay of the 2¹S₀ state in He-like tin*; Phys. Rev. Lett. **104**, 033001:1–4 (2010).
286. S. McConnel, **S. Fritzsche** and A. Surzhykov; *DIRAC: A new version of computer algebra tools for studying the properties and behaviour of hydrogen-like ions*; Comp. Phys. Commun. **181**, 711–13 (2010).
287. D. Gonta and **S. Fritzsche**; *Multipartite W states for chains of atoms conveyed through an optical cavity*; Phys. Rev. **A81**, 022326:1–11 (2010).
288. L. Sharma, A. Surzhykov, M. K. Inal and **S. Fritzsche**; *Polarization transfer in the inner-shell photoionization of sodiumlike ions*; Phys. Rev. **A81**, 023419:1–11 (2010).
289. M. Siomau and **S. Fritzsche**; *High-fidelity copies from a symmetric 1 → 2 quantum cloning machine*; Eur. Phys. J. **D57**, 293:1–5 (2010).
290. A. Fischer, C. Canali, U. Warring, A. Kellerbauer and **S. Fritzsche**; *First optical hyperfine structure measurement in an atomic anion*; Phys. Rev. Lett. **104**, 073004:1–4 (2010).
291. D. Röhrbein, T. Kirchner and **S. Fritzsche**; *Role of cascade and Auger effects in the enhanced population of the C³⁺(1s2s2p ⁴P) states following single electron capture in C⁴⁺(1s2s ³S)–He collisions*; Phys. Rev. **A81**, 042701:1–6 (2010).
292. **S. Fritzsche**, C. Z. Dong and F. Koike; *Isotope shift calculations for open-shell atoms and ions: An extension to the RATIP program*; Hyperfine Interactions **196**, 25–34 (2010).
293. C. Brandau, C. Kozhuharov, A. Müller, D. Bernhardt, F. Bosch, D. Boutin, F. J. Currell, C. Dimopoulou, B. Franzke, **S. Fritzsche**, A. Gumberidze, Z. Harman, U. D. Jentschura, C. H. Keitel, Y. S. Kozhedub, R. Krücken, Y. A. Litvinov, F. Nolden, B. O'Rourke, R. Reuschl, S. Schippers, V. M. Shabaev, U. Spillmann, Z. Stachura, M. Steck, T. Stöhlker, I. I. Tupitsyn, D. F. A. Winters and A. Wolf; *Resonant recombination at ion storage rings: a conceptual alternative for isotope shift and hyperfine studies*; Hyperfine Interactions **196**, 115–127 (2010).
294. A. Surzhykov, L. Sharma, T. Stöhlker and **S. Fritzsche**; *Polarization studies on the dielectronic recombination hypersatellite x-ray lines*; J. Phys. Conf. Series **212**, 012032:1–6 (2010).
295. M. Meyer, D. Cubaynes, V. Richardson, J. T. Costello, P. Radcliffe, W. B. Li, S. Düsterer, **S. Fritzsche**, A. Mihelic, K. G. Papamihail and P. Lambropoulos; *Two-photon excitation and relaxation of the 3d – 4d resonance in atomic Kr*; Phys. Rev. Lett. **104**, 213001:1–4 (2010).
296. A. Surzhykov, A. Volotka, F. Fratini, J. P. Santos, P. Indelicato, G. Plunien, T. Stöhlker and **S. Fritzsche**; *Angular correlations in the two-photon decay of heliumlike heavy ions*; Phys. Rev. **A81**, 042510:1–7 (2010).
297. L. Partanen, **S. Fritzsche**, K. Jänkälä, M. Huttula, S. Urpelainen, S. Osmekhin, H. Aksela and S. Aksela; *2s photoionization and subsequent Auger cascade in atomic Si*; Phys. Rev. **A81**, 062513:1–7 (2010).

298. A. N. Artemyev, A. Surzhykov, **S. Fritzsche**, B. Najjari and A. B. Voitkiv; *Target effects on the linear polarization of photons emitted in radiative electron capture by heavy ions*; Phys. Rev. **A82**, 022716:1–6 (2010).
299. E. V. Gryzlova, A. N. Grum-Grzhimailo, **S. Fritzsche** and N. M. Kabachnik; *Angular correlations between two electrons emitted in the sequential two-photon double ionization of atoms*; J. Phys. **B: At. Mol. Opt. Phys.** **B43**, 225602:1–12 (2010).
300. F. C. Charlwood, J. Billowes, P. Campbell, B. Cheal, T. Eronen, D. H. Forest, **S. Fritzsche**, M. Honma, A. Jokinen, I.D. Moore, H. Penttilä, R. Powis, A. Saastamoinen, G. Tungate and J. Äystö; *Ground state properties of manganese isotopes across the $N = 28$ shell closure*; Phys. Lett. **B** **690**, 346–51 (2010).
301. M. Siomau and **S. Fritzsche**; *Entanglement dynamics of three-qubit states in noisy channels*; Eur. Phys. J. **D60**, 397–403 (2010).
302. M. Siomau and **S. Fritzsche**; *Universal quantum Controlled-NOT gate*; Eur. Phys. J. **D60**, 417–421 (2010).
303. E. Andersson, **S. Fritzsche**, P. Linusson, L. Hedin, J. H. D. Eland, J.-E. Rubensson, L. Karlsson and R. Feifel; *Multielectron coincidence study of the double Auger decay of 3d-ionized krypton*; Phys. Rev. **A82**, 043418:1–10 (2010).
304. B. Cheal, J. Billowes, M. L. Bissell, K. Blaum, F. C. Charlwood, K. T. Flanagan, D. H. Forest, **S. Fritzsche**, C. Geppert, A. Jokinen, M. Kowalska, A. Krieger, J. Krämer, E. Mane, I. D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, M. M. Rajabali, M. Schug, H. H. Stroke, P. Vingerhoets, D. T. Yordanov and M. Zakova; *Discovery of a long-lived low-lying isomeric state in ^{80}Ga* ; Phys. Rev. **C82**, 051302(R):1–5 (2010).
305. G. Weber, H. Bräuning, A. Surzhykov, C. Brandau, **S. Fritzsche**, S. Geyer, S. Hagmann, S. Hess, C. Kozuharov, R. Märtin, N. Petridis, R. Reuschl, U. Spillmann, S. Trotsenko, D. F. A. Winters and T. Stöhlker; *Direct determination of the magnetic quadrupole contribution to the Lyman- α_1 transition in a hydrogen-like ion*; Phys. Rev. Lett. **105**, 243002:1–4 (2010).
306. L. Bettadj, M. K. Inal, A. Surzhykov and **S. Fritzsche**; *Effects of the radiative recombination on the intensity and polarization of the Ly- α emission of hydrogen-like ions*; Nucl. Instr. Meth. **B268**, 3509–16 (2010).
307. A. Gumberidze, **S. Fritzsche**, F. Bosch, D. C. Ionescu, A. Krämer, C. Kozuharov, Z. Stachura, A. Surzhykov, A. Warczak and T. Stöhlker; *Shell- and subshell-resolved projectile excitation of hydrogen-like Au^{78+} ions in relativistic ion-atom collisions*; Phys. Rev. **A82**, 052712:1–7 (2010).
308. M. Siomau and **S. Fritzsche**; *Evolution equation for entanglement of multi-qubit systems*; Phys. Rev. **A82**, 062327:1–6 (2010).
309. M. Avgoulea, Yu. P. Gangrsky, K. P. Marinova, S. G. Zemlyanoi, **S. Fritzsche**, D. Iablonskyi, C. Barbieri, E. C. Simpson, P. D. Stevenson, J. Billowes, P. Campbell, B. Cheal, B. Tordoff, M. L. Bissell, D. H. Forst, M. D. Gardner, G. Tungate, J. Huikari, A. Nieminen, H. Penttilä and J. Äystö; *Nuclear charge radii and electromagnetic moments of radioactive scandium isotopes and isomers*; J. Phys. **G: Nucl. Part. Phys.** **G38**, 025104:1–17 (2011); selected also for the ‘2011 Highlights’ collection of this journal.

310. T. E. Cocolios, W. Dexters, M. D. Seliverstov, A. N. Andreyev, S. Antalic, A. E. Barzakh, B. Bastin, J. Büscher, I. G. Darby, D. V. Fedorov, V. N. Fedosseyev, K. T. Flanagan, S. Franchoo, **S. Fritzsche**, G. Huber, M. Huyse, M. Keupers, U. Köster, Yu. Kudryavtsev, E. Mane, B. A. Marsh, P. Molkanov, R. D. Page, A. M. Sjoedin, I. Stefan, J. Van de Walle, P. Van Duppen, M. Venhart, S. Zemlyanoy, M. Bender, P.-H. Heenen; *Early onset of ground state deformation in neutron deficient polonium isotopes*; Phys. Rev. Lett., **106**, 052503:1–4 (2011).
311. P. Linusson, **S. Fritzsche**, J. H. D. Eland, L. Hedin, L. Karlsson and R. Feifel; *Double ionization of atomic cadmium*; Phys. Rev. **A83**, 023424:1–7 (2011).
312. L. Borowska, **S. Fritzsche**, P. G. Kik and A. E. Masunov; *Near-field enhancement of infrared intensities for $f - f$ transitions in Er^{3+} ions close to the surface of silicon nanoparticles*; J. Mol. Modelling **17**, 423–28 (2011).
313. A. Kumar, S. Trotsenko, A. V. Volotka, D. Banas, H. F. Beyer, H. Bräuning, **S. Fritzsche**, A. Gumberidze, S. Hagmann, S. Hess, C. Kozuharov, R. Reuschl, U. Spillmann, M. Trasinelli, G. Weber and T. Stöhlker; *Spectral distribution of the $2S \rightarrow 1S$ two-photon transition in atoms and few-electron ions*; Pramana J. Phys. **2**, 331–37 (2011).
314. F. Fratini, M. C. Tichy, T. Jahrsetz, A. Buchleitner, **S. Fritzsche** and A. Surzhykov; *Quantum correlations in the two-photon decay of few-electron ions*; Phys. Rev. **A83**, 032506:1–9 (2011).
315. **S. Fritzsche**, A. Surzhykov and T. Stöhlker; *X-ray emission from highly-charged ions following dielectronic recombination: Relativistic effects upon angular distributions and polarization*; Phys. Scr. **T144**, 014002:1–7 (2011).
316. L. Sharma, A. Surzhykov, R. Srivastava and **S. Fritzsche**; *Electron-impact excitation of singly charged metal ions*; Phys. Rev. **A83**, 062701:1–9 (2011).
317. M. Siomau and **S. Fritzsche**; *Quantum computing with mixed states*; Eur. Phys. J. **D62**, 449–456 (2011).
318. D. B. Thorn, A. Gumberidze, S. Trotsenko, D. Banas, H. Beyer, C. J. Bostock, I. Bray, W. Chen, R. DuBois, C. J. Fontes, **S. Fritzsche**, D. V. Fursa, R. Gristenti, S. Geyer, S. Hagmann, S. Hess, M. Hegewald, C. Kozuharov, R. Märting, I. Orban, N. Petridis, R. Reuschl, A. Simon, U. Spillmann, A. Surzhykov, M. Trassinelli, G. Weber, D. F. A. Winters, N. Winters, H. L. Zhang and T. Stöhlker; *Polarization and anisotropic emission of K-shell radiation from heavy few electron ions*; Can. J. Phys. **89**, 513–19 (2011).
319. A. J. Verhoef, A. V. Mitrofanov, X. T. Nguyen, M. Krikunova, **S. Fritzsche**, N. M. Kabachnik, M. Drescher and A. Baltuska; *Time-and-energy resolved measurement of the cascaded Auger decay in krypton*; Laser Phys. **21**, 1270–74 (2011).
320. **S. Fritzsche**, A. N. Grum-Grzhimailo, E. V. Gryzlova and N. M. Kabachnik; *Sequential two-photon double ionization of the 4d shell in xenon*; J. Phys. **B: At. Mol. Opt. Phys.** **B44**, 175602:1–10 (2011); selected also for the ‘2011 Highlights’ collection of this journal.
321. A. Surzhykov, P. Indelicato, J. P. Santos, P. Amaro and **S. Fritzsche**; *Two-photon absorption of few-electron heavy ions*; Phys. Rev. **A84**, 022511:1–10 (2011).

322. A. Gumberidze, **S. Fritzsch**, S. Hagmann, C. Kozhuharov, X. Ma, M. Steck, A. Surzhykov, A. Warczak and T. Stöhlker; *Magnetic sublevel population and alignment for the excitation of H- and He-like uranium in relativistic collisions*; Phys. Rev. **A84**, 042710:1–6 (2011).
323. O. Matula, **S. Fritzsch**, F. J. Currell and A. Surzhykov; *Angular correlations in radiative cascades following resonant electron capture by highly charged ions*; Phys. Rev. **A84**, 052723:1–11 (2011).
324. A. Kellerbauer, C. Canali, A. Fischer, U. Warring and **S. Fritzsch**; *Isotope shift of the electric-dipole transition in Os-*; Phys. Rev. **A84**, 062510:1–5 (2011).
325. A. J. Verhoef, A.V. Mitrofanov, X. T. Nguyen, M. Krikunova, **S. Fritzsch**, N. M. Kabachnik, M. Drescher and A. Baltuska; *Time-and-energy resolved measurement of the Auger cascades following Kr 3d excitation by attosecond pulses*; New J. Phys. **13**, 113003:1–19 (2011).
326. E. Andersson, P. Linusson, **S. Fritzsch** L. Hedin, J. H. D. Eland, L. Karlsson, J.-E. Rubensson and R. Feifel; *Formation of Kr³⁺ via core-valence doubly ionized intermediate states*; Phys. Rev. **A85**, 032502:1–8 (2012).
327. L. Safari, P. Amaro, **S. Fritzsch**, J. P. Santos and F. Fratini; *Relativistic total cross section and angular distribution for Rayleigh scattering by hydrogen atom*; Phys. Rev. **A85**, 043406:1–7 (2012).
328. G. Weber, H. Bräuning, **S. Fritzsch**, A. Gumberidze, R. Märtin, R. Reuschl, M. Schwemlein, U. Spillmann, A. Surzhykov, D. F. A. Winters and T. Stöhlker; *Compton polarimeters for the study of hard x-rays arising from energetic collisions of electrons and ions with matter*; in *Atomic Processes in Plasmas*, ed. F. Currel, AIP Conference Proceedings 1438, 73–79 (2012).
329. **S. Fritzsch**, A. Surzhykov, A. Gumberidze and T. Stöhlker; *Electron emission from highly charged ions: signatures of magnetic interactions and retardation in strong fields*; New J. Phys. **14**, 083018:1–13 (2012).
330. **S. Fritzsch**; *The RATIP program for relativistic calculations of atomic transition, ionization and recombination properties*; Comput. Phys. Commun. **183**, 1525–1559 (2012).
331. J. Li, C. Naze, M. Godefroid, **S. Fritzsch**, G. Gaigalas, P. Indelicato and P. Jönsson; *Mass- and field-shift isotope parameters for the 2s – 2p resonance doublet of lithiumlike ions*; Phys. Rev. **A86**, 022518:1–7 (2012).
332. T. J. Procter, J. Billowes, M. L. Bissell, K. Blaum, F. C. Charlwood, B. Cheal, K. T. Flanagan, D. H. Forest, **S. Fritzsch**, C. Geppert, H. Heylen, M. Kowalska, K. Kreim, A. Krieger, J. Krämer, K. M. Lynch, E. Mane, I. D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, M. M. Rajabali, H. H. Stroke, P. Vingerhoets, D. T. Yordanov and M. Zakova; *Nuclear mean-square charge radii of ^{63,64,66,68–82}Ga nuclei: no anomalous behavior at N = 32*; Phys. Rev. **C86**, 034329:1–6 (2012).
333. T. E. Cocolios, A. N. Andreyev, S. Antalic, A. E. Barzakh, B. Bastin, J. Büscher, I. G. Darby, W. Dexters, D. V. Fedorov, V. N. Fedosseev, K. T. Flanagan, S. Franchoo, **S. Fritzsch**, G. Huber, M. Huyse, M. Keupers, U. Köster, Yu. Kudryavtsev, E. Mane, B. A. Marsh, P. L. Molkanov, R. D. Page, M. D. Seliverstov, A. M. Sjödin, I. Stefan, J. Van de Walle, P. Van Duppen, M. Venhart and S. G. Zemlyanoy; *Early onset of deformation in the neutron-deficient polonium isotopes*; J. Phys. Conf. Series **381**, 012072:1–6 (2012).

334. O. Matula, **S. Fritzsche** and A. Surzhykov; *Polarization correlations in radiative cascades following dielectronic recombination of high-Z ions*; J. Phys. **B**: At. Mol. Opt. Phys. **B45**, 215004:1–7 (2012).
335. B. Cheal, T. E. Cocolios and **S. Fritzsche**; *Laser spectroscopy of radioactive isotopes: Role and limitations of accurate isotope-shift calculations*; Phys. Rev. **A86**, 042501:1–12 (2012).
336. C. Eichhorn, S. Löhle, S. Fasoulas, H. Leiter, **S. Fritzsche** and M. Auweter-Kurtz; *Photon laser-induced fluorescence of neutral xenon in a thin xenon plasma*; J. Prop. & Power **28**, 1116–1120 (2012).
337. L. Safari, P. Amaro, **S. Fritzsche**, J. P. Santos, S. Tashenov and F. Fratini; *Relativistic polarization analysis of Rayleigh scattering by atomic hydrogen*; Phys. Rev. **A86**, 043405:1–8 (2012).
338. A. Kellerbauer and **S. Fritzsche**; *High-resolution optical spectroscopy of Os⁻ with a view of laser cooling to atomic anions*; J. Phys. Conf. Series **388**, 012023:1–9 (2012).
339. E. V. Gryzlova, A. N. Grum-Grzhimailo, N. M. Kabachnik and **S. Fritzsche**; *Angular distributions and correlations in sequential three-photon triple atomic ionization*; J. Phys. Conf. Series **388**, 012031:1–7 (2012).
340. P. Amaro, F. Fratini, **S. Fritzsche**, P. Indelicato, J. P. Santos and A. Surzhykov; *Parametrization of the angular correlation and degree of linear polarization in two-photon decays of hydrogenlike ions*; Phys. Rev. **A86**, 042509:1–9 (2012).
341. Q. M. Wang C. Z. Dong and **S. Fritzsche**; *Theoretical calculations of hyperfine structure constants for the metastable state und nuclear moments of Ga isotopes*; Scientia Sinica **10**, 1048–55 (2012) (in Chinese).
342. Y. L. Shi, C. Z. Dong, **S. Fritzsche**, D. H. Zhang and L. Y. Xie; *Theory of x-ray anisotropy and polarization following the dielectronic recombination of initially hydrogen-like ions*; Chin. Phys. Lett. **30**, 023402:1–5 (2013).
343. M. D. Seliverstov, T. E. Cocolios, W. Dexters, A. N. Andreyev, S. Antalic, A. E. Barzakh, B. Bastin, J. Büscher, I. G. Darby, D. V. Fedorov, V. N. Fedoseyev, K. T. Flanagan, S. Franchoo, **S. Fritzsche**, G. Huber, M. Huyse, M. Keupers, U. Köster, Y. Kudryavtsev, B. A. Marsh, P. L. Molkhanov, R. D. Page, A. M. Sjodin, I. Stefan, J. Van de Walle, P. Van Duppen, M. Venhart and S. G. Zemlyanoy; *Charge radii of odd-A ^{191–211}Po isotopes*; Phys. Lett. **B** **719**, 362–366 (2013).
344. D. Iablonskyi, S. Urpelainen, S.-M. Huttula, **S. Fritzsche** and M. Huttula; *High resolution study of the inner-shell 3p – 3d and 3p – 5s resonance regions in calcium*; J. Elec. Spec. Rel. Phenom. **186**, 8–13 (2013).
345. D. T. Yordanov, D. L. Balabanski, J. Bieron, M. L. Bissell, K. Blaum, I. Budincevic, **S. Fritzsche** N. Frömmgen, G. Georgiev, C. Geppert, M. Hammen, M. Kowalska, K. Kreim, A. Krieger, R. Neugart, W. Nörtershäuser, J. Papuga and S. Schmidt; *Spins, Electromagnetic moments and isomers of ^{107–129}Cd*; Phys. Rev. Lett. **110**, 192501:1–5 (2013).
346. P. Linusson, **S. Fritzsche**, J.H.D. Eland, M. Mucke and R. Feifel; *Single-photon multiple ionization forming double vacancies in the 2p subshell of argon*; Phys. Rev. **A87**, 043409:1–6 (2013).

347. A. G. Hayrapetyan, K. K. Grigoryan, R. G. Petrosyan and **S. Fritzsche**; *Propagation of sound waves through a spatially homogeneous but smoothly time-dependent medium*; Ann. Phys. **333**, 47–65 (2013).
348. J. Gunst, A. Surzhykov, A. Artemyev, **S. Fritzsche**, S. Tashenov, A. Maiorova, V. M. Shabaev and T. Stöhlker; *Parity non-conservation effects on the radiative recombination of heavy hydrogenlike ions*; Phys. Rev. **A87**, 032714:1–6 (2013).
349. Y. L. Shi, C. Z. Dong, X. Y. Ma, Z. W. Wu, L. Y. Xie and **S. Fritzsche**; *Polarization of M2 line emitted following electron-impact excitation of beryllium-like ions*; Chin. Phys. Lett. **30**, 063401:1–5 (2013).
350. S. Rothe, A. N. Andreyev, S. Antalic, A. Borschevsky, L. Capponi, T. E. Cocolios, H. De Witte, E. Eliav, D. V. Fedorov, V. N. Fedossev, D. A. Fink, **S. Fritzsche**, L. Ghys, M. Huyse, N. Imai, U. Kaldor, Y. Kudryavtsev, U. Köster, J. F. W. Lane, J. Lassen, V. Liberati, K. M. Lynch, B. A. Marsh, K. Nishio, D. Pauwels, V. Pershina, L. Popescu, T. J. Procter, D. Radulov, S. Raeder, M. M. Rajabali, E. Rapisarda, R. E. Rossel, K. Sandhu, M. D. Seliverstov, A. M. Sjödin, P. Van den Bergh, P. Van Duppen, M. Venhart, Y. Wakabayashi and K. D. A. Wendt; *Measurement of the first ionization potential of astatine by laser ionization spectroscopy*; Nature Communications **4**, 1835:1–6 (2013).
351. A. Gumberidze, D. B. Thorn, C. J. Fontes, B. Najjari, H. L. Zhang, A. Surzhykov, A. Voitkiv, **S. Fritzsche**, D. Banas, H. Beyer, W. Chen, R. D. DuBois, S. Geyer, R. E. Grisenti, S. Hagmann, M. Hegewald, S. Hess, C. Kozuharov, R. Martin, I. Orban, N. Petridis, R. Reuschl, A. Simon, U. Spillmann, M. Trassinelli, S. Trotsenko, G. Weber, D. F. A. Winters, N. Winters, D. Yu and T. Stöhlker; *Electron- and proton-impact excitation of hydrogenlike uranium in relativistic collisions*; Phys. Rev. Lett., **110**, 213201:1–5 (2013).
352. A. Surzhykov, Y. Litvinov, T. Stöhlker and **S. Fritzsche**; *Hyperfine-induced effects on the linear polarization of K_{α_1} emission from heliumlike ions*; Phys. Rev. **A87**, 052507:1–7 (2013).
353. D. Banas, A. Gumberidze, S. Trotsenko, A. V. Volotka, A. Surzhykov, H. F. Beyer, F. Bosch, A. Bräuning-Demian, **S. Fritzsche**, S. Hagmann, C. Kozuharov, A. Kumar, X. Ma, R. Mann, P. H. Mokler, D. Sierkowski, U. Spillmann, S. Tashenov, Z. Stachura, A. Warczak and T. Stöhlker; *Two-photon energy distribution from the decay of the 2S_0 state in He-like uranium*; Phys. Rev. **A87**, 062510:1–7 (2013).
354. A. G. Hayrapetyan, O. Matula, A. Surzhykov and **S. Fritzsche**; *Bessel beams of two-level atoms driven by a linearly polarized laser field*; Eur. Phys. J. **D67**, 167:1–13 (2013); also selected as EPJ D Highlight 2013.
355. S. Mondal, R. Ma, K. Motomura, H. Fukuzawa, A. Yamada, K. Nagaya, S. Yase, Y. Mizoguchi, M. Yao, A. Rouzee, A. Hundertmark, M. J. J. Vrakking, P. Johnsson, M. Nagasono, K. Tono, T. Togashi, Y. Senba, H. Ohashi, M. Yabashi, T. Ishikawa, I. P. Sazhina, **S. Fritzsche**, N. M. Kabachnik and K. Ueda; *Photoelectron angular distributions for the two-photon sequential double ionization of xenon by ultrashort extreme ultraviolet free electron laser pulses*; J. Phys. **B: At. Mol. Opt. Phys.** **B46**, 164022:1–6 (2013).
356. A. Surzhykov, A. V. Maiorova, V. M. Shabaev, T. Stöhlker and **S. Fritzsche**; *Parity violation in beryllium-like heavy ions*; Phys. Scripta, **T156**, 014027:1–3 (2013).

357. O. Matula, **S. Fritzsche** and A. Surzhykov; *Polarization correlations between photons emitted in dielectronic recombination of high-Z ions*; Phys. Scripta, **T156**, 014051:1–3 (2013).
358. A. G. Hayrapetyan and **S. Fritzsche**; *Bessel beams of laser-driven two-level atoms*; Phys. Scripta, **T156**, 014067:1–4 (2013).
359. A. N. Artemyev, V. M. Shabaev, I. I. Tupitsyn, G. Plunien, A. Surzhykov and **S. Fritzsche**; *Ab initio calculations of the $2p_{3/2} - 2p_{1/2}$ fine-structure slitting in boron-like ions*; Phys. Rev. **A88**, 032518:1–12 (2013).
360. O. Matula, A. G. Hayrapetyan, V. G. Serbo, A. Surzhykov and **S. Fritzsche**; *Atomic ionization of hydrogen-like ions by twisted photons: angular distribution of emitted electrons*; J. Phys. **B: At. Mol. Opt. Phys.** **B46**, 205002:1–12 (2013); also selected by the IOP editors for its ‘novelty, significance and potential impact on future research’ (IOPselect).
361. A. Surzhykov, R. H. Pratt and **S. Fritzsche**; *Two-photon decay of inner-shell vacancies in heavy atoms*; Phys. Rev. **A88**, 042512:1–7 (2013).
362. A. Surzhykov, V. A. Yerokhin, T. Jahrsetz, P. Amaro, T. Stöhlker and **S. Fritzsche**; *Polarization correlations in the elastic Rayleigh scattering of photons by hydrogen-like ions*; Phys. Rev. **A88**, 062515:1–9 (2013).
363. M. Huttula, S.-M. Huttula, **S. Fritzsche**, P. Lablanquie, F. Penent, J. Palaudoux, and L. Andric; *Core-valence double photoionization of atomic mercury*; Phys. Rev. **A89**, 013411:1–6 (2014).
364. Z. W. Wu, A. Surzhykov and **S. Fritzsche**; *Hyperfine-induced modifications to the angular distribution of the $K\alpha_1$ x-ray emission*; Phys. Rev. **A89**, 022513:1–7 (2014).
365. A. G. Hayrapetyan, O. Matula, A. Aiello, A. Surzhykov and **S. Fritzsche**; *Interaction of relativistic electron-vortex beams with few-cycle laser pulses*; Phys. Rev. Lett. **112**, 134801:1–5 (2014).
366. T. Jahrsetz, **S. Fritzsche** and A. Surzhykov; *Inelastic Raman scattering of light by hydrogenlike ions*; Phys. Rev. **A89**, 042501:1–7 (2014).
367. H. Dachraoui, G. van der Laan, N. Müller, T. Milde, M. Porer, R. Manzke, R. Huber, **S. Fritzsche** and U. Heinzmamn; *Mapping spin-orbit activated interchannel coupling*; Eur. Phys. Lett. **106**, 13001:1–5 (2014).
368. O. Matula, A. G. Hayrapetyan, V. G. Serbo, A. Surzhykov and **S. Fritzsche**; *Radiative capture of twisted electrons by bare ions*; New J. Phys. **16**, 053024:1–11 (2014).
369. J. Rothhardt, S. Hädrich, S. Demmler, M. Krebs, **S. Fritzsche**, J. Limpert and A. Tünnermann; *Enhancing the macroscopic yield of narrow-band high-order harmonic generation by Fano resonances*; Phys. Rev. Lett. **112**, 233002:1–5 (2014).
370. **S. Fritzsche**; *The FEYNMAN tools for quantum information processing: Design and implementation*; Comput. Phys. Commun. **185**, 1697–1718 (2014).
371. D. Seipt, A. Surzhykov and **S. Fritzsche**; *Structured x-ray beams from twisted electrons by inverse Compton scattering of laser light*; Phys. Rev. **A90**, 012118:1–7 (2014).

372. H. M. Scholz-Marggraf, **S. Fritzsche**, V. G. Serbo, A. Afanasev and A. Surzhykov; *Absorption of twisted light by hydrogenlike atoms*; Phys. Rev. **A90**, 013425:1–7 (2014).
373. V. Yerokhin, A. Surzhykov and **S. Fritzsche**; *Relativistic configuration-interaction calculation of $K\alpha$ transition energies in berylliumlike iron*; Phys. Rev. **A90**, 022509:1–6 (2014).
374. Z. W. Wu, N. M. Kabachnik, A. Surzhykov, C. Z. Dong and **S. Fritzsche**; *Determination of small level splittings in highly charged ions via angle-resolved measurements of characteristic x rays*; Phys. Rev. **A90**, 052515:1–9 (2014).
375. S. Tashenov, D. Banas, H. Beyer, C. Brandau, **S. Fritzsche**, A. Gumberidze, S. Hagmann, P.-M. Hillenbrand, H. Jörg, I. Kojouharov, C. Kozuharov, M. Lestinsky, Y.A. Litvinov, A.V. Maiorova, H. Schaffner, V.M. Shabaev, U. Spillmann, T. Stöhlker, A. Surzhykov and S. Trotsenko; *Observation of coherence in the time-reversed relativistic photoelectric effect*; Phys. Rev. Lett. **113**, 113001:1–5 (2014).
376. V. A. Yerokhin, A. Surzhykov and **S. Fritzsche**; *Relativistic calculations of the double K -shell-photoionization cross sections for neutral medium- Z atoms*; Phys. Rev. **A90**, 063422:1–7 (2014).
377. A. Surzhykov, D. Seipt, V. G. Serbo and **S. Fritzsche**; *Interaction of twisted light with many-electron atoms and ions*; Phys. Rev. **A91**, 013403:1–8 (2015).
378. D. Bernhardt, C. Brandau, Z. Harman, C. Kozuharov, S. Böhm, F. Bosch, **S. Fritzsche**, J. Jacobi, S. Kieslich, H. Knopp, F. Nolden, W. Shi, Z. Stachura, M. Steck, T. Stöhlker, S. Schippers and A. Müller; *Electron-ion collision spectroscopy: Lithium-like xenon ions*; Phys. Rev. **A91**, 012710:1–15 (2015).
379. G. Weber, K.-H. Blumenhagen, H. Bräuning, H. Ding, **S. Fritzsche**, S. Hess, R. Martin, U. Spillmann, A. Surzhykov, S. Trotsenko, D. F. A. Winters, V. A. Yerokhin and T. Stöhlker; *Compton polarimetry using double-sided segmented x-ray detectors*; J. Phys. Conf. Series **583**, 012041:1–7 (2015).
380. D. Seipt, S. G. Rykovanov, A. Surzhykov and **S. Fritzsche**; *Narrowband inverse Compton scattering x-ray sources at high laser intensities*; Phys. Rev. **A91**, 033402:1–12 (2015).
381. H. Jörg, Z. Hu, H. Bekker, M. A. Blessenohl, D. Hollain, **S. Fritzsche**, A. Surzhykov, J. R. C. Lopez-Urrutia and S. Tashenov; *Linear polarization of x-ray transitions due to dielectronic recombination in highly charged ions*; Phys. Rev. **A91**, 042705:1–7 (2015).
382. V. A. Yerokhin, A. Surzhykov and **S. Fritzsche**; *Relativistic configuration-interaction calculation of $K\alpha$ transition energies in beryllium-like argon*; Phys. Scr. **90**, 054003:1–4 (2015).
383. J. Bieron, C. Froese Fischer, **S. Fritzsche**, G. Gaigalas, I. P. Grant, P. Indelicato, P. Jönsson and P. Pyykkö; *Ab initio MCDHF calculations of electron-nucleus interactions*; Phys. Scr. **90**, 054011:1–13 (2015).
384. Z. W. Wu, A. Surzhykov and **S. Fritzsche**; *Reply to "Comment on 'Hyperfine-induced modifications to the angular distribution of the $K\alpha_1$ x-ray emission"*; Phys. Rev. **A91**, 056502:1–2 (2015).
385. Z. W. Wu, Y. Zhang, Y. B. Fu, A. Surzhykov, **S. Fritzsche** and C. Z. Dong; *Dielectronic recombination rate coefficients of initially rubidium-like tungsten*; Eur. Phys. J. **D69**, 140:1–6 (2015).

386. S. Schippers, A. Borovik Jr., T. Buhr, J. Hellhund, K. Holste, A. L. D. Kilcoyne, S. Klumpp, M. Martins, A. Müller, S. Ricz and **S. Fritzsche**; *Stepwise contraction of the nf Rydberg shells in the 3d photoionization of multiply-charged xenon ions*; *J. Phys.* **B48**, 144003:1–6 (2015).
387. A. Gumberidze, D. B. Thorn, C. J. Fontes, B. Najjari, H. L. Zhang, A. Surzhykov, A. Voitkiv, **S. Fritzsche**, D. Banas, H. Beyer, W. Chen, R. D. DuBois, S. Geyer, R. E. Grisenti, S. Hagmann, M. Hegewald, S. Hess, C. Kozhuharov, R. Märtin, N. Petridis, R. Reuschl, A. Simon , U. Spillmann, M. Trassinelli, S. Trotsenko, G. Weber, D. F. A. Winters, N. Winters, D. Yu and T. Stöhlker; *Ground-state excitation of heavy highly-charged ions*; *J. Phys.* **B48**, 144006:1–5 (2015).
388. D. Bernhardt, C. Brandau, Z. Harman, C. Kozhuharov, S. Böhm, F. Bosch, S. Fritzsche, J. Jacobi, S. Kieslich, H. Knopp, F. Nolden, W. Shi, Z. Stachura, M. Steck, T. Stöhlker, S. Schippers and A. Müller; *Spectroscopy of berylliumlike xenon ions using dielectronic recombination*; *J. Phys.* **B48**, 144008:1–9 (2015).
389. A. Surzhykov, V. A. Yerokhin, T. Stöhlker and **S. Fritzsche**; *Rayleigh x-ray scattering from many-electron atoms and ions*; *J. Phys.* **B48**, 144015:1–7 (2015).
390. G. Weber, H. Bräuning, A. Surzhykov, C. Brandau, **S. Fritzsche**, S. Geyer, R. E. Grisenti, S. Hagmann, C. Hahn, R. Hess, S. Hess, C. Kozhuharov, M. Kühnel, R. Märtin, N. Petridis, U. Spillmann, S. Trotsenko, D. F. A. Winters and T. Stöhlker; *Combined linear polarization and angular distribution measurements of x-rays for precise determination of multipole-mixing in characteristic transitions of high-Z systems*; *J. Phys.* **B48**, 144031:1–13 (2015).
391. N. Frömmgen, D. L. Balabanski, M. L. Bissell, J. Bieron, K. Blaum, B. Cheal, K. Flanagan, **S. Fritzsche**, C. Geppert, M. Hammen, M. Kowalska, K. Kreim, A. Krieger, R. Neugart, G. Neyens, M. M. Rajabali, W. Nörtershäuser, J. Papuga and D. T. Yordanov; *Collinear laser spectroscopy of atomic cadmium: Extraction of nuclear magnetic dipole and electric quadrupole moments*; *Eur. Phys. J.* **D69**, 164:1–12 (2015); selected also for the ‘2015 Highlights’ collection of this journal.
392. S. Stock, A. Surzhykov, **S. Fritzsche** and D. Seipt; *Compton scattering of twisted light: Angular distribution and polarization of scattered photons*; *Phys. Rev.* **A92**, 013401:1–12 (2015).
393. V. Serbo, I. P. Ivanov, **S. Fritzsche**, D. Seipt and A. Surzhykov; *Scattering of twisted relativistic electrons by atoms*; *Phys. Rev.* **A92**, 012705:1–12 (2015).
394. J. Andersson, R. Beerwerth, P. Linusson, J. H. D. Eland, V. Zhaunerchyk, **S. Fritzsche** and R. Feifel; *Triple ionization of atomic Cd involving 4p⁻¹ and 4s⁻¹ inner-shell holes*; *Phys. Rev.* **A92**, 023414:1–7 (2015).
395. E. Jordan, G. Cerchiari, **S. Fritzsche** and A. Kellerbauer; *High-resolution spectroscopy on the laser-cooling candidate La⁻*; *Phys. Rev. Lett.* **115**, 113001:1–5 (2015).
396. D. Banas, M. Pajek, A. Surzhykov, T. Stöhlker, C. Brandau, A. Gumberidze, C. Kozhuharov, H. F. Beyer, S. Böhm, F. Bosch, M. Czarnota, S. Chatterjee, J.-C. Dousse, **S. Fritzsche**, S. Hagmann, D. Liesen, P. H. Mokler, A. Müller, A. Kumar, R. Reuschl, D. Sierpowksi, U. Spillmann, J. Szlachetko, S. Tashenov, S. Trotsenko, P. Verma, A. Warczak; *Subshell-selective x-ray studies of radiative recombination of U⁹²⁺ ions with electrons for very low relative energies*; *Phys. Rev.* **A92**, 032710:1–11 (2015).

397. C. Shah, H. Jörg, S. Bernitt, S. Dobrodey, R. Steinbrügge, C. Beilmann, P. Amaro, Z. Hu, S. Weber, **S. Fritzsche**, A. Surzhykov, J. R. Crespo Lopez-Urrutia and S. Tashenov; *Polarization measurement of dielectronic recombination transitions in highly charged krypton ions*; Phys. Rev. **A92**, 042702:1–10 (2015).
398. A. Peshkov, **S. Fritzsche** and A. Surzhykov; *Ionization of H_2^+ molecular ions by twisted Bessel light*; Phys. Rev. **A92**, 043415:1–7 (2015).
399. V. A. Yerokhin, A. N. Artemyev, V. M. Shabaev, T. Stöhlker, A. Surzhykov and **S. Fritzsche**; *Target effects in negative-continuum-assisted dielectronic recombination*; Phys. Rev. **A92**, 042708:1–7 (2015).
400. **S. Fritzsche**, A. Surzhykov and A. Volotka; *Relativistically prolonged lifetime of the $2s2p\ ^3P_0$ level of zero nuclear-spin beryllium-like ions*; New J. Phys. **17**, 103009:1–9 (2015).
401. S. Trotsenko, A. Gumberidze, Y. Gao, C. Kozhuharov, **S. Fritzsche**, H. F. Beyer, S. Hagmann, P.-M. Hillenbrand, N. Petridis, U. Spillmann, A. Surzhykov, D. B. Thorn, G. Weber and T. Stöhlker; *Experimental study of the dielectronic recombination into Li-like uranium*; Phys. Scr. **T166**, 014024:1–3 (2015).
402. S. Tashenov, D. Banas, H. Beier, C. Brandau, **S. Fritzsche**, A. Gumberidze, S. Hagmann, P.-M. Hillenbrand, H. Jörg, I. Kojouharov, C. Kozhuharov, M. Lestinsky, Y. A. Litvinov, A. V. Maiorova, H Schaffner, V. Shabaev, U. Spillmann, T. Stöhlker, A. Surzhykov and S. Trotsenko; *Coherent population of magnetic sublevels of $2p_{3/2}$ state in hydrogenlike uranium by radiative recombination*; Phys. Scr. **T166**, 014027:1–5 (2015).
403. Z. W. Wu, **S. Fritzsche** and A. Surzhykov; *Nuclear magnetic dipole moment effect on the angular distribution of the K_α lines*; Phys. Scr. **T166**, 014029:1–5 (2015).
404. R. A. Müller, D. Seipt, **S. Fritzsche** and A. Surzhykov; *Effect of bound-state dressing in laser-assisted radiative recombination*; Phys. Rev. **A92**, 053426:1–8 (2015).
405. E. Eliav, **S. Fritzsche** and U. Kaldor; *Electronic structure theory of the superheavy elements*; Nucl. Phys. **A944**, 518–550 (2015).
406. Z. W. Wu, A. Surzhykov, N. M. Kabachnik, C. Z. Dong and **S. Fritzsche**; *Linear polarization of x-rays emitted in the decay of highly-charged ions via overlapping resonances*; J. Phys. Conf. Series **635**, 012020:1–8 (2015).
407. A. N. Grum-Grzhimailo, E. V. Gryzlova, **S. Fritzsche** and N. M. Kabachnik; *Photoelectron angular distributions and correlations in sequential double and triple atomic ionization by free electron lasers*; J. Mod. Optics. **63**, 334–357 (2016).
408. A. V. Volotka, V. A. Yerokhin, A. Surzhykov, T. Stöhlker and **S. Fritzsche**; *Many-electron effects on x-ray Rayleigh scattering by highly charged He-like ions*; Phys. Rev. **A93**, 023418:1–13 (2016).
409. D. Seipt, A. Surzhykov, **S. Fritzsche** and B. Kämpfer; *Caustic structures in x-ray Compton scattering off electrons driven by a short intense laser pulse*; New J. Phys. **textbf{18}**, 023044:1–14 (2016).
410. T. Kämpfer, I. Uschmann, Z. W. Wu, A. Surzhykov, **S. Fritzsche**, E. Förster and G. G. Paulus; *Linear polarization of the characteristic x-ray lines following inner-shell photoionization of tungsten*; Phys. Rev. **A93**, 033409:1–6 (2016).

411. A. G. Hayrapetyan, J. B. Götte, K. K. Grigoryan, **S. Fritzsche** and R. G. Petrosyan; *Electromagnetic wave propagation in spatially homogeneous yet smoothly time-varying dielectric media*; *J. Quant. Spec. & Rad. Transf.* **187**, 158–168 (2016).
412. A. A. Peshkov, V. G. Serbo, **S. Fritzsche** and A Surzhykov; *Absorption of twisted light by a mesoscopic atomic target*; *Phys. Scr.* **91**, 064001:1–10 (2016).
413. D. Seipt, V. Kharin, S. Rykovanov, A. Surzhykov and **S. Fritzsche**; *Analytical results for nonlinear Compton scattering in short intense laser pulses*; *J. Plasma Phys.* **82**, 665820203:1–6 (2016).
414. C. Shah, P. Amaro, R. Steinbrügge, C. Beilmann, S. Bernitt, **S. Fritzsche**, A. Surzhykov, J. R. Crespo Lopez-Urrutia and S. Tashenov; *Strong higher-order resonant contributions to x-ray line polarization in hot plasmas*; *Phys. Rev.* **E93**, 061201(R):1–7 (2016).
415. Z. W. Wu, A. V. Volotka, A. Surzhykov, C. Z. Dong and **S. Fritzsche**; *Level sequence and splitting identification of closely spaced energy levels by angle-resolved analysis of fluorescence light*; *Phys. Rev.* **A93**, 063413:1–8 (2016).
416. M. L. Bissell, T. Carette, K. T. Flanagan, P. Vingerhoets, J. Billowes, K. Blaum, B. Cheal, **S. Fritzsche**, M. Godefroid, M. Kowalska, J. Krämer, R. Neugart, G. Neyens, W. Nörtershäuser and D. T. Yordanov; *Cu charge radii reveal a weak sub-shell effect at $N = 40$* ; *Phys. Rev.* **C93**, 064318:1–7 (2016).
417. T. Scholtes, S. Pustelny, **S. Fritzsche**, V. Schultze, R. Stoltz and H.-G. Meyer; *Suppression of spin-exchange relaxation in tilted magnetic fields within the geophysical range*; *Phys. Rev.* **A94**, 013403:1–12 (2016).
418. B. Bergmann, T. Michel, A. Surzhykov and **S. Fritzsche**; *Angular correlation function of the hypersatellite-satellite x-ray cascade following K -shell electron capture of ^{55}Fe* ; *Phys. Rev.* **C94**, 014611:1–10 (2016).
419. V. A. Yerokhin, S. Y. Buhmann, **S. Fritzsche** and A. Surzhykov; *Electric dipole polarizabilities of Rydberg states of alkali atoms*; *Phys. Rev.* **A94**, 032503:1–10 (2016).
420. I. P. Ivanov, D. Seipt, A. Surzhykov and **S. Fritzsche**; *Double-slit experiment in momentum space*; *Eur. Phys. Lett.* **115**, 41001:1–6 (2016).
421. M. Lestinsky, V. Andrianov, B. Aurand, V. Bagnoud, D. Bernhardt, H. Beyer, S. Bishop, K. Blaum, A. Bleile, A. Borovik Jr., F. Bosch, C. J. Bostock, C. Brandau, A. Bräuning-Demian, I. Bray, T. Davinson, B. Ebinger, A. Echler, P. Egelhof, A. Ehresmann, B. Engström, C. Enss, N. Ferreira, D. Fischer, A. Fleischmann, E. Förster, **S. Fritzsche**, R. Geithner, S. Geyer, J. Glorius, K. Göbel, O. Gorda, J. Gouillon, P. Grabitz, R. Grisenti, A. Gumberidze, S. Hagmann, M. Heil, A. Heinz, F. Herfurth, R. Heß, P.-M. Hillenbrand, R. Hubele, P. Indelicato, A. Källberg, O. Kester, O. Kiselev, A. Knie, C. Kozhuharov, S. Kraft-Bermuth, T. Kühl, G. Lane, Y. A. Litvinov, D. Liesen, X. W. Ma, R. Märting, R. Moshammer, A. Müller, S. Namba, P. Neumeyer, T. Nilsson, W. Nörtershäuser, G. Paulus, N. Petridis, M. Reed, R. Reifarth, P. Reiß, J. Rothhardt, R. Sanchez, M. S. Sanjari, S. Schippers, H. T. Schmidt, D. Schneider, P. Scholz, R. Schuch, M. Schulz, V. Shabaev, A. Simonsson, J. Sjöholm, Ö. Skeppstedt, K. Sonnabend, U. Spillmann, K. Stiebing, M. Steck, T. Stöhlker, A. Surzhykov, S. Torilov, E. Träbert, M. Trassinelli, S. Trotsenko, X. L. Tu, I. Uschmann, P. M. Walker, G. Weber, D. F. A.

- Winters, P. J. Woods, H. Y. Zhao, Y. H. Zhang; *Physics book: CRYRING@ESR*; Eur. Phys. J. Special Topics **225**, 797–882 (2016).
422. A. Surzhykov, D. Seipt and **S. Fritzsch**; *Probing the energy flow in Bessel light beams using atomic photo-ionization*; Phys. Rev. **A94**, 033420:1–6 (2016).
423. S. Schippers, R. Beerwerth, L. Abrok, S. Bari, T. Buhr, M. Martins, S. Ricz, J. Viefhaus, **S. Fritzsch** and A. Müller; *Prominent role of multielectron processes in K-shell double and triple photodetachment of oxygen anions*; Phys. Rev. **A94**, 041401(R):1–5 (2016).
424. R. A. Müller, D. Seipt, R. Beerwerth, M. Ornigotti, A. Szameit, **S. Fritzsch** and A. Surzhykov; *Photoionization of neutral atoms by X waves carrying orbital angular momentum*; Phys. Rev. **A94**, 041402(R):1–5 (2016).
425. I. P. Ivanov, D. Seipt, A. Surzhykov and **S. Fritzsch**; *Elastic scattering of vortex electrons provides direct access to the Coulomb phase*; Phys. Rev. **D94**, 076001:1–15 (2016).
426. K.-H. Blumenhagen, **S. Fritzsch**, T. Gassner, A. Gumberidze, R. Märtin, N. Schell, D. Seipt, U. Spillmann, A. Surzhykov, S. Trotsenko, G. Weber, V. A. Yerokhin and T. Stöhlker; *Polarization transfer in Rayleigh scattering of hard x-rays*; New J. Phys. **18**, 103034:1–9 (2016).
427. D. Seipt, R. A. Müller, A. Surzhykov and **S. Fritzsch**; *Two-color above threshold ionization of atoms and ions in XUV Bessel beams and intense laser light*; Phys. Rev. **A94**, 053420:1–12 (2016).
428. H. Heylen, C. Babcock, R. Beerwerth, J. Billowes, M. L. Bissell, K. Blaum, J. Bonnard, P. Campbell, B. Cheal, T. Day Goodacre, D. Fedorov, **S. Fritzsch**, R. F. Garcia Ruiz, W. Geithner, C. Geppert, W. Gins, L. K. Grob, M. Kowalska, K. Kreim, S. M. Lenzi, I. D. Moore, B. Maass, S. Malbrunot-Ettenauer, B. Marsh, R. Neugart, G. Neyens, W. Nörtershäuser, T. Otsuma, J. Papuga, R. Rossel, S. Rothe, R. Sanchez, Y. Tsunoda, C. Wraith, L. Xie, X. F. Yang, and D. T. Yordanov; *Nuclear structure of the Mn isotopes studied via charge radii systematics*; Phys. Rev. **C94**, 054321:1–11 (2016).
429. A. V. Volotka, A. Surzhykov, S. Trotsenko, G. Plunien, T. Stöhlker and **S. Fritzsch**; *Nuclear excitation by two-photon electron transition*; Phys. Rev. Lett. **117**, 243001:1–5 (2016).
430. K. Minamisono, D. M. Rossi, R. Beerwerth, **S. Fritzsch**, D. Garand, A. Klose, Y. Liu, B. Maaß, P. F. Mantica, A. J. Miller, P. Müller, W. Nazarewicz, W. Nörtershäuser, E. Olsen, M. R. Pearson, P.-G. Reinhard, E. E. Saperstein, C. Sumithrarachchi and S. V. Tolokonnikov; *Charge radii of neutron-deficient $^{52,53}\text{Fe}$ produced by projectile fragmentation*; Phys. Rev. Lett. **117**, 252501:1–6 (2016).
431. J. Hofbrucker, A. V. Volotka and **S. Fritzsch**; *Relativistic calculations of the nonresonant two-photon ionization of neutral atoms*; Phys. Rev. **A94**, 063412:1–9 (2016).
432. L. Filippin, R. Beerwerth, J. Ekman, **S. Fritzsch**, M. Godefroid and P. Jönsson; *Multiconfiguration calculations of electronic isotope shift factors in Al I*; Phys. Rev. **A94**, 062508:1–9 (2016).
433. **S. Fritzsch** and R. Beerwerth; *Selten schwerer Nachweis*; Phys. Journal **16**, 20–21 (2017).
434. D. Wu, X. T. He, W. Yu and **S. Fritzsch**; *Monte-Carlo approach to calculate proton stopping in warm dense matter within particle-in-cell simulations*; Phys. Rev. **E95**, 023207:1–7 (2017).

435. D. Wu, X. T. He, W. Yu and **S. Fritzsche**; *Monte-Carlo approach to calculate ionization dynamics of hot solid-density plasma within particle-in-cell simulations*; Phys. Rev. **E95**, 023208:1–7 (2017).
436. J. Deprince, **S. Fritzsche**, T. Kallman, P. Palmeri and P. Quinet; *Plasma effects on atomic data for the K-vacancy states of highly charged iron ions*; in: Atomic Processes in Plasmas APIP 2016, AIP Conference Proceedings **1811**, 040002:1–6 (2017).
437. D. Zille, D. Seipt, M. Möller, **S. Fritzsche**, S. Gräfe, C. Müller and G. G. Paulus; *Spin-dependent rescattering in strong-field ionization of helium*; J. Phys. **B: At. Mol. Opt. Phys.** **B50**, 065001:1–9 (2017).
438. S. Stock, R. Beerwerth and **S. Fritzsche**; *Auger cascades in resonantly excited neon*; Phys. Rev. **A95**, 053407:1–14 (2017).
439. D. Zille, D. Seipt, M. Möller, **S. Fritzsche**, G. G. Paulus and D. B. Milosevic; *Spin-dependent quantum theory of high-order above-threshold ionization*; Phys. Rev. **A95**, 063408:1–6 (2017).
440. R. Ferrer, A. Barzakh, B. Bastin, R. Beerwerth, M. Block, P. Creemers, H. Grawe, R. de Groote, P. Delahaye, X. Flechard, S. Franchoo, **S. Fritzsche**, L. P. Gaffney, L. Ghys, W. Gins, C. Granados, R. Heinke, L. Hijazi, M. Huyse, T. Kron, Y. Kudryavtsev, M. Laatiaoui, N. Lebesne, M. Loiselet, F. Lutton, I. D. Moore, Y. Martinez, E. Mogilevskiy, P. Naubereit, J. Piot, S. Raeder, S. Rothe, H. Savajols, S. Sels, V. Sonnenschein, J.-C. Thomas, E. Traykov, C. Van Beveren, P. Van den Bergh, P. Van Duppen, K. Wendt and A. Zadvornaya; *Towards high-resolution laser ionization spectroscopy of the heaviest elements in supersonic gas jet expansion*; Nature communications **8**, 14520:1–9 (2017).
441. B. Goswami, B. Antony and **S. Fritzsche**; *Electron impact scattering and calculated ionization cross sections for SF_x (x=1–5) radicals*; Int. J. Mass Spec., **417**, 8–15 (2017).
442. M. Bilal, R. Beerwerth, A. V. Volotka and **S. Fritzsche**; *Ab initio calculations of energy levels, transition rates and lifetimes in Ni XII*; Mon. Notes R. Astron. Soc., **469**, 4620–4629 (2017).
443. Z. W. Wu, A. V. Volotka, A. Surzhykov and **S. Fritzsche**; *Angle-resolved x-ray spectroscopic scheme to determine overlapping hyperfine splittings in highly charged heliumlike ions*; Phys. Rev. **A96**, 012503:1–5 (2017).
444. J. Hofbrucker, A. V. Volotka and **S. Fritzsche**; *Photoelectron distribution of non-resonant two-photon ionization of neutral atoms*; Phys. Rev. **A96**, 013409:1–8 (2017).
445. J. Andersson, R. Beerwerth, A. H. Roos, R. J. Squibb, R. Singh, S. Zagorodskikh, O. Talaee, D. Koulentianos, J. H. D. Eland, **S. Fritzsche** and R. Feifel; *Auger decay of 4d inner-shell holes in atomic Hg leading to triple ionization*; Phys. Rev. **A96**, 012505:1–8 (2017).
446. R. A. Müller, A. V. Volotka, **S. Fritzsche** and A. Surzhykov; *Theoretical analysis of the electron bridge process in ²²⁹Th³⁺*; Nucl. Instr.. Meth. **B408**, 84–88 (2017).
447. V. A. Zaytsev, **S. Fritzsche**, A. Surzhykov and V. M. Shabaev; *Hyperfine induced effects on the angular distribution of the dielectronic hypersatellite line*; Nucl. Instr.. Meth. **B408**, 93–96 (2017).
448. J. Hofbrucker, A. V. Volotka and **S. Fritzsche**; *Relativistic effects in the non-resonant two-photon K-shell ionization of neutral atoms*; Nucl. Instr.. Meth. **B408**, 125–129 (2017).

449. Z. W. Wu, A. V. Volotka, C. Z. Dong and **S. Fritzsche**; *Dielectronic recombination of highly charged ions with spin-polarized electrons*; Nucl. Instr.. Meth. **B408**, 130–134 (2017).
450. F. Siek, S. Neb, P. Bartz, M. Hensen, C. Strüber, S. Fiechter, M. Torrent-Sucarrat, V. M. Silkin, E. E. Krasovskii, N. M. Kabachnik, **S. Fritzsche**, R. Diez Muino, P. M. Echenique, A. K. Kazansky, N. Müller, W. Pfeiffer, U. Heinzmann; *Angular momentum-induced delays in solid-state photoemission enhanced by intra-atomic interactions*; Science **357**, 1274–1277 (2017).
451. J. Deprince, **S. Fritzsche**, T. R. Kallman, P. Palmeri and P. Quinet; *Influence of plasma environment on K-line emission in highly ionized iron atoms evaluated using a Debye-Hückel model*; Can. J. Phys. **95**, 858–861 (2017).
452. R. Beerwerth and **S. Fritzsche**; *MCDF calculations of Auger cascade processes*; Eur. Phys. J. **D71**, 253:1—5 (2017).
453. S. Schippers, M. Martins, R. Beerwerth, S. Bari, K. Holste, K. Schubert, J. Viehaus, D. W. Savin, **S. Fritzsche** and A. Müller; *Near L-edge single and multiple photoionization of singly charged iron ions*; Astrophys. J. **849**, 5:1–13 (2017).
454. B. Böning, W. Paufler and **S. Fritzsche**; *Attosecond streaking with twisted X waves and intense infrared pulses*; Phys. Rev. **A96** 043423:1–9 (2017).
455. A. A. Peshkov, D. Seipt, A. Surzhykov and **S. Fritzsche**; *Photoexcitation of atoms by Laguerre-Gaussian beams*; Phys. Rev. **A96** 023407:1–9 (2017).
456. A. J. Miller, K. Minamisono, D. M. Rossi, R. Beerwerth, B. A. Brown, **S. Fritzsche**, D. Garand, A. Klose, Y. Liu, B. Maaß, P. F. Mantica, P. Müller, W. Nörtershäuser, M. R. Pearson and C. Sumithrarachchi; *First determination of ground-state electromagnetic moments of ^{53}Fe* ; Phys. Rev. **C96** 054314:1–9 (2017).
457. C. Granados, P. Creemers, R. Ferrer, L. P. Gaffney, W. Gins, R. de Groote, M. Huyse, Y. Kudryavtsev, Y. Martínez, S. Raeder, S. Sels, C. Van Beveren, P. Van den Bergh, P. Van Duppen, K. Wrzosek-Lipska, A. Zadvornaya, A. E. Barzakh, R. Beerwerth, **S. Fritzsche**, M. Block, X. Flechard, S. Franchoo, L. Ghys, H. Grawe, R. Heinke, T. Kron, P. Naubereit, K. Wendt, M. Laatiaoui, I. Moore, V. Sonnenschein, M. Loiselet, E. Mogilevskiy, S. Rothe; *In-gas laser ionization and spectroscopy of actinium isotopes near the $N=126$ closed shell*; Phys. Rev. **C96** 054331:1–13 (2017).
458. J. S. M. Ginges, A. V. Volotka and **S. Fritzsche**; *Ground-state hyperfine splitting for Rb, Cs, Fr, Ba^+ , and Ra^+* ; Phys. Rev. **A96** 062502:1–8 (2017).
459. D. Würzler, N. Eicke, M. Möller, D. Seipt, A. M. Sayler, S. Fritzsche, M. Lein and G. G. Paulus; *Velocity map imaging of scattering dynamics in orthogonal two-color fields*; J. Phys. **B: At. Mol. Opt. Phys.** **B51**, 015001:1–13 (2018).
460. R. Obaid, C. Buth, G. Dakovski, R. Beerwerth, M. Holmes, J. Aldrich, M.-F. Lin, M. Minitti, T. Osipov, W. Schlotter, L. S. Cederbaum, **S. Fritzsche** and N. Berrah; *LCLS in – photon out: fluorescence measurement of neon using soft x-rays*; J. Phys. **B: At. Mol. Opt. Phys.** **B51**, 034003:1–6 (2018).
461. C. Buth, R. Beerwerth, R. Obaid, N. Berrah, L. S. Cederbaum and **S. Fritzsche**; *Neon in ultrashort and intense x rays*; J. Phys. **B: At. Mol. Opt. Phys.** **B51**, 055602:1–16 (2018).

462. A. A. Peshkov, A. V. Volotka, A. Surzhykov and **S. Fritzsche**; *Rayleigh scattering of twisted light by hydrogenlike ions*; Phys. Rev. **A97** 002380:1–8 (2018).
463. L. J. Vormawah, R. Beerwerth, P. Campbell, B. Cheal, A. Dicker, T. Eronen, **S. Fritzsche**, S. Geldhof, S. Kelly, I. D. Moore, I. Pohjalainen, M. Reponen, S. Rinta-Antila and A. Voss; *Isotope shifts from collinear laser spectroscopy of doubly-charged yttrium isotopes*; Phys. Rev. **A97**, 042504:1–8 (2018).
464. W. Paufler, B. Böning and **S. Fritzsche**; *Strong-field ionization with twisted laser pulses*; Phys. Rev. **A97**, 043418:1–7 (2018).
465. K. Hütten, M. Mittermair, S. Stock, R. Beerwerth, V. Shirvanyan, J. Riemensberger, A. Dünsig, R. Heider, M. Wagner, A. Guggenmos, **S. Fritzsche**, N. M. Kabachnik, R. Kienberger and B. Bernhardt; *Ultrafast quantum control of ionization dynamics in krypton*; Nature Communications **9** 719:1–5 (2018).
466. M. Bilal, A. V. Volotka, R. Beerwerth and sf; *Line strengths of QED-sensitive forbidden transitions in B-, Al-, F- and Cl-like ions*; Phys. Rev. **A97**, 052506:1–7 (2018).
467. J. G. Cubiss, A. E. Barzakh, M. D. Seliverstov, A. N. Andreyev, B. Andel, S. Antalic, D. Beck, J. Bieron, K. Blaum, C. Borgmann, M. Breitenfeldt, L. Capponi, T. E. Cocolios, T. Day Goodacre, X. Derkx, H. De Witte, J. Elseviers, D. V. Fedorov, V. N. Fedossev, **S. Fritzsche**, L. P. Gaffney, S. George, L. Ghys, F. Herfurth, F. P. Heßberger, M. Huyse, N. Imai, Z. Kalaninov, D. Kisler, U. Köster, M. Kowalska, S. Kreim, J. F. W. Lane, V. Liberati, D. Lunney, K. M. Lynch, V. Manea, B. A. Marsh, S. Mitsuoka, P. L. Molkanov, Y. Nagame, D. Neidherr, K. Nishio, S. Ota, D. Pauwels, L. Popescu, D. Radulov, E. Rapisarda, J. P. Revill, M. Rosenbusch, R. E. Rossel, S. Rothe, K. Sandhu, L. Schweikhard, S. Sels, V. L. Truesdale, C. Van Beveren, P. Van den Bergh, Y. Wakabayashi, P. Van Duppen, K. D. A. Wendt, F. Wienholtz, B. W. Whitmore, G. L. Wilson, R. N. Wolf and K. Zuber; *Charge radii and electromagnetic moments of $^{195-211}\text{At}$ isotopes*; Phys. Rev. **C97**, 054327:1–19 (2018).
468. B. Goswami, A. V. Volotka and **S. Fritzsche**; *Beyond the dipole-dipole interaction on spin-dynamics in di-atomic systems*; J. Phys. Commun. **2**, 055025:1–7 (2018).
469. M. M. Günther, A. V. Volotka, M. Jentschel, **S. Fritzsche**, T. Stöhlker, P. G. Thierolf and M. Zepf; *Dispersive refraction of different light-to-heavy materials at MeV γ -ray energies*; Phys. Rev. **A97**, 063843:1–9 (2018).
470. S. Raeder, D. Ackermann, H. Backe, M. Block, B. Cheal, P. Chhetri, C. E. Düllmann, P. Van Duppen,7 J. Even, R. Ferrer, F. Giacoppo, S. Götz, F. P. Heßberger, M. Huyse, O. Kaleja, J. Khuyagbaatar, P. Kunz, M. Laatiaoui, F. Lautenschläger, W. Lauth, A. K. Mishty, E. M. Ramirez, T. Walther, C. Wraith, A. Yakushev, R. Beerwerth, J. Berengut, A. Borschevsky, V. A. Dzuba, E. Eliav, V.V. Flambaum, **S. Fritzsche**, U. Kaldor, S. G. Porsev, M. S. Safronova; *Nuclear properties of nobelium isotopes from laser spectroscopy*; Phys. Rev. Lett. **120**, 232503:1–6 (2018).
471. W. Paufler, B. Böning and **S. Fritzsche**; *Tailored orbital angular momentum by high-harmonic generation from counterrotating bi-circular Laguerre-Gaussian beams*; Phys. Rev. **A98**, 011401 (R):1–5 (2018).
472. J. Hofbrucker, A. V. Volotka and S. Fritzsche; *Maximum elliptical dichroism in atomic two-photon ionization*; Phys. Rev. Lett., **121**, 053401:1–6 (2018).

473. B. Böning, W. Paufler and **S. Fritzsche**; *Above threshold ionization by few-cycle Bessel pulses carrying orbital angular momentum*; Phys. Rev. **A98**, 023407:1–9 (2018).
474. R. A. Müller, M. G. Kozlov, A. Maiorova, **S. Fritzsche**, A. V. Volotka, R. Beerwerth, P. Glowacki, J. Thielking, D.-M. Meier, M. Okhapkin, E. Peik and A. Surzhykov; *Hyperfine interaction with the ^{229}Th nucleus and its low-lying isomeric state*; Phys. Rev. **A98**, 020503(R):1–5 (2018).
475. S. Panahiyan and **S. Fritzsche**; *Controlling quantum random walk with a step-dependent coin*; New J. Phys. **20**, 083028:1–16 (2018).
476. D. Wu, X. T. He, W. Yu and **S. Fritzsche**; *Particle-in-cell simulations of laser-plasme interactions at solid-state densities and relativistic intensities: The role of atomic processes.*; High Power Laser Sc. & Eng. **6**, e50:1–10 (2018).
477. A. V. Maiorova, **S. Fritzsche**, R. A. Müller and A. Surzhykov; *Elastic scattering of twisted electrons by diatomic molecules*; Phys. Rev. **A98**, 042701:1–8 (2018).
478. J. Palaudoux, T. Kaneyasu, L. Andric, S. Carniato, G. Gamblin, F. Penent, Y. Hikosaka, E. Shigemasa, K. Ito, **S. Fritzsche**, E. Kukk, S. Sheinerman, R. F. Fink, P. Lablanquie and R. Püttner; *Selectivity of the $\text{Br} 3d^{-1}$ Auger decays in HBr* ; Phys. Rev. **A98**, 043406:1–15 (2018).
479. A. Surzhykov, V. A. Yerokhin, **S. Fritzsche** and A. V. Volotka; *Diagnostics of polarization purity of x rays by means of Rayleigh scattering*; Phys. Rev. **A98**, 053403:1–6 (2018).
480. T. K. Sato, M. Asai, K. Tsukada, Y. Kaneya, A. Toyoshima, A. Mitsukai, A. Osa, H. Makii, Y. Nagame, M. Schädel, J. Grund, C. E. Düllmann, E. Kraus, J. V. Kratz, P. Thörle-Pospiech, N. Trautmann, S. Takeda, M. Sakama, K. Ooe, D. Sato, Y. Shigekawa, S. Ichikawa, T. Stora, A. Borschevsky, E. Eliav, U. Kaldor, **S. Fritzsche**, R. Beerwerth, J. Berengut, E. Kahl; *First ionization potentials of Fm , Md , No , and Lr : Verification of filling-up of $5f$ electrons and confirmation of the actinide series*; J. Amer. Chem. Soc. **140**, 14609–613 (2018).
481. D. Wu, W. Yu, Y. T. Zhao, **S. Fritzsche** and X. T. He; *Characteristics of X/γ -ray radiations by intense laser interactions with high-Z solids: The role of bremsstrahlung and radiation reactions*; J. Matter & Radiat. Extremes **3**, 293–99 (2018).
482. B. Bagdasaryan, B. Böning, W. Paufler and **S. Fritzsche**; *Dichroism in two-color above-threshold ionization with twisted XUV beams and intense infrared laser fields*; Phys. Rev. **A99**, 023403:1–9 (2019).
483. A. Gumberidze, D. B. Thorn, A. Surzhykov, C. J. Fontes, H. L. Zhang, B. Najjari, A. Voitkiv, S. Fritzsche, D. Banas, H. F. Beyer, W. Chen, R. E. Grisenti, S. Hagmann, R. Hess, P.-M. Hillenbrand, P. Indelicato, C. Kozuharov, M. Lestinsky, R. Märtin, N. Petridis, R. Popov, R. Schuch, U. Spillmann, S. Tashenov, S. Trotsenko, A. Warczak, G. Weber, W. Wen, D. F. A. Winters, N. Winters, Z. Yin and T. Stoöhler; *Electron- and proton-impact excitation of heliumlike uranium in relativistic collisions*; Phys. Rev. **A99**, 032706:1–7 (2019).
484. J. Deprince, M. A. Bautista, **S. Fritzsche**, J. Garcia, T. R. Kallman, C. Mendoza, P. Palmeri and P. Quinet; *Plasma environment effects on K lines of astrophysical interest. I. Atomic structure, radiative rates, and Auger widths of oxygen ions*; Astronomy & Astrophysics **624**, A74:1–8 (2019).

485. B. Böning, W. Paufler and **S. Fritzsche**; *Nondipole strong-field approximation for spatially structured laser fields*; Phys. Rev. **A99**, 053404:1–11 (2019).
486. M. Vockert, G. Weber, H. Bräuning, A. Surzhykov, C. Brandau, S. Fritzsche, S. Geyer, S. Hagmann, S. Hess, C. Kozhuharov, R. Martin, N. Petridis, R. Hess, S. Trotsenko, Y. A. Litvinov, J. Glorius, A. Gumberidze, M. Steck, S. Litvinov, T. Gaßner, P.-M. Hillenbrand, M. Lestinsky, F. Nolden, M. S. Sanjari, U. Popp, C. Trageser, D. F. A. Winters, U. Spillmann, T. Krings and T. Stöhlker; *Radiative electron capture as a tunable source of highly linearly polarized x rays*; Phys. Rev. **A99** 052702:1–6 (2019).
487. A. E. Barzakh, J. G. Cubiss, A. N. Andreyev, M. D. Seliverstov, B. Andel, S. Antalic, P. Ascher, D. Atanasov, D. Beck, J. Bieron, K. Blaum, C. Borgmann, M. Breitenfeldt, L. Capponi, T. E. Cocolios, T. Day Goodacre, X. Derkx, H. De Witte, J. Elseviers, D. V. Fedorov, V. N. Fedosseev, **S. Fritzsche**, L. P. Gaffney, S. George, L. Ghys, F. P. Heßberger, M. Huyse, N. Imai, Z. Kalaninova, D. Kisler, U. Köster, M. Kowalska, S. Kreim, J. F. W. Lane, V. Liberati, D. Lunney, K. M. Lynch, V. Manea, B. A. Marsh, S. Mitsuoka, P. L. Molkanov, Y. Nagame, D. Neidherr, K. Nishio, S. Ota, D. Pauwels, L. Popescu, D. Radulov, E. Rapisarda, J. P. Revill, M. Rosenbusch, R. E. Rossel, S. Rothe, K. Sandhu, L. Schweikhard, S. Sels, V. L. Truesdale, C. Van Beveren, P. Van den Bergh, P. Van Duppen,¹⁰ Y. Wakabayashi, K. D. A. Wendt, F. Wienholtz, B. W. Whitmore, G. L. Wilson, R. N. Wolf and K. Zuber; *Inverse odd-even staggering in nuclear charge radii and possible octupole collectivity in $^{217, 218, 219}\text{At}$ revealed by in-source laser spectroscopy*; Phys. Rev. **C99**, 054317:1–9 (2019).
488. D. A. Glazov, A. V. Volotka, O. V. Andreev, V. P. Kosheleva, **S. Fritzsche**, V. M. Shabaev, G. Plunien and T. Stöhlker; *Ground-state hyperfine splitting of B-like ions in the high-Z region*; Phys. Rev. **A99**, 062503:1–6 (2019).
489. M. Bilal, A. V. Volotka, R. Beerwerth, J. Rothhardt, V. Hilbert, and **S. Fritzsche**; *High precision calculations of the $1s^2 2s2p \ ^1P_1 \rightarrow 1s^2 2s^2 \ ^1S_0$ spin allowed E1 transition in C III*; Phys. Rev. **A99**, 062511:1–10 (2019).
490. J. Hofbrucker, A. V. Volotka and S. Fritzsche; *Fluorescence polarization as a precise tool for understanding nonsequential many-photon ionization*; Phys. Rev. **A100**, 011401(R):1–6 (2019).
491. A. A. Peshkov, **S. Fritzsche** and A Surzhykov; *Scattering of twisted light from a crystal*; Phys. Scr. **94**, 105402:1–4 (2019).
492. A. V. Volotka, M. Bilal,, R. Beerwerth, X. Ma, T. Stöhlker and **S. Fritzsche**; *QED radiative corrections to the fine-structure transition energy $^2P_{1/2} - ^2P_{3/2}$ in fluorinelike ions*; Phys. Rev. **A100**, 010502(R):1–5 (2019).
493. D. Wu, W. Yu, **S. Fritzsche** and X. T. He; *High-order implicit particle-in-cell method for plasma simulations at solid densities*; Phys. Rev. **E100**, 013207:1–12 (2019).
494. D. Wu, W. Yu, Y. T. Zhao, D. H. H. Hoffmann, **S. Fritzsche** and X. T. He *Particle-in-cell simulation of transport and energy deposition of intense proton beams in solid-state materials*; Phys. Rev. **E100**, 013208:1–6 (2019).
495. D. Wu, W. Yu, **S. Fritzsche**, C. Y. Zheng and X. T. He; *Formation of relativistic electromagnetic solitons in over-dense plasmas*; Phys. Plasmas **26**, 063107:1–5 (2019).

496. W. Paufler, B. Böning and **S. Fritzsche**; *Coherence control in high-order harmonic generation with Laguerre-Gaussian beams*; Phys. Rev. **A100**, 013422:1–9 (2019).
497. W. Paufler, B. Böning and **S. Fritzsche**; *High harmonic generation with Laguerre-Gaussian beams*; J. Optics. **21**, 094001:1–10 (2019).
498. F. Aumayr, K.Ueda, E. Sokell, S. Schippers, H. Sadeghpour, F. Merkt, T. F. Gallagher, F. B. Dunning, P. Scheier O. Echt, T. Kirchner, S. Fritzsche, A. Surzhykov, X. Ma, R. Rivarola, O. Fojon, L. Tribedi, E. Lamour, J. R. C. Lopez-Urrutia, Y. A. Litvinov, V. Shabaev, H. Cederquist, H. Zettergren, M. Schleberger, R. A. Wilhelm, T. Azuma, P. Boduch, H. T. Schmidt and T. Stöhlker; *Roadmap on photonic, electronic and atomic collision physics: III. Heavy particles: with zero to relativistic speeds*; J. Phys. **B52**, 171003:1–51 (2019).
499. V. A. Zaytsev, A. V. Volotka, D. Yu, S. Fritzsche, X. Ma, H. Hu and V. M. Shabaev; *Ab initio QED treatment of the two-photon annihilation of positrons with bound electrons*; Phys. Rev. Lett. **123**, 093401:1–5 (2019).
500. **S. Fritzsche**; *A fresh computational approach to atomic structures, processes and cascades*; Comp. Phys. Commun. **240**, 1–14 (2019).
501. W. Paufler, B. Böning and **S. Fritzsche**; *Strong-field ionization with few-cycle Bessel pulses: Interplay between orbital angular momentum and carrier envelope phase*; Springer Proceedings in Physics **230**, 274–84 (2019).
502. S. A.-L. Schulz, **S. Fritzsche**, R. A. Müller and A. Surzhykov; *Modification of multipole transitions by twisted light*; Phys. Rev. **A100**, 043416:1–8 (2019).
503. J. Deprince, M. A. Bautista, **S. Fritzsche**, J. Garcia, T. R. Kallman, C. Mendoza, P. Palmeri and P. Quinet; *Plasma environment effects on K lines of astrophysical interest. II. Ionization potentials, K thresholds, radiative rates, and Auger widths in Ne- through He-like iron ions (Fe xvii – Fe xxv)*; Astronomy & Astrophysics **626**, A83:1–8 (2019).
504. S. Panahiyan and **S. Fritzsche**; *Simulation of the multiphase configuration and phase transitions with quantum walks utilizing a step-dependent-coin*; Phys. Rev. **A100**, 062115:1–8 (2019).
505. R. Beerwerth, T. Buhr, A. Perry-Sassmannshausen, S. O. Stock, S. Bari, K. Holste, A. L. D. Kilcoyne, S. Reinhardt, S. Ricz, D. W. Savin, K. Schubert, M. Martins, A. Müller, **S. Fritzsche** and S. Schippers; *Near L-edge single and multiple photoionization of triply charged iron ions*; Astrophys. J. **887**, 189:1–11 (2019).
506. S. Schippers, T. Buhr, A. Borovik, Jr., K. Holste, A. Perry-Sassmannshausen K. Mertens, S. Reinhardt, M. Martins, S. Klumpp, K. Schubert, S. Bari, R. Beerwerth, **S. Fritzsche**, S. Ricz, J. Hellhund, A. Müller; *The photon-ion merged-beams experiment PIPE at PETRA III — The first five years*; X-Ray Spectroscopy **49**, 11–20, doi: 10.1002/xrs.3035 (2020).
507. J. Deprince, M. A. Bautista, **S. Fritzsche**, J. Garcia, T. R. Kallman, C. Mendoza, P. Palmeri, P. Quinet; *K-line X-ray fluorescence from highly charged iron ions under dense astrophysical plasma conditions*; X-Ray Spectroscopy **49**, 29–32, doi.org/10.1002/xrs.3079 (2020).
508. J. Rothhardt, M. Bilal, R. Beerwerth, A. V. Volotka, V. Hilbert, T. Stöhlker, **S. Fritzsche** and J. Limpert; *Lifetime measurements of ultrashort-lived excited states in Be-like ions*; X-Ray Spectroscopy **49**, 165–68, doi.org/10.1002/xrs.3040 (2020).

509. B. Böning, W. Paufler and **S. Fritzsche**; *Polarization-dependent high-intensity Kapitza-Dirac effect in strong laser fields*; Phys. Rev. **A101**, 031401(R):1–6 (2020).
510. A. Perry-Sassmannshausen, T. Buhr, A. Borovik Jr., M. Martins, S. Reinwardt, S. Ricz, S. O. Stock, F. Trinter, A. Müller, **S. Fritzsche** and S. Schippers; *Multiple photodetachment of carbon anions via single and double core-hole creation*; Phys. Rev. Lett. **124** 083203:1–6, editors suggestion (2020).
511. J. Deprince, M. A. Bautista, **S. Fritzsche**, J. Garcia, T. R. Kallman, C. Mendoza, P. Palmeri and P. Quinet; *Plasma-environment effects on K lines of astrophysical interest. III. IPs, K thresholds, radiative rates, and Auger widths in Fe ix – Fe xvi* ; Astronomy & Astrophysics **635**, A70:1–6 (2020).
512. J. Hofbrucker, A. V. Volotka and **S. Fritzsche**; *Breakdown of the electric dipole approximation at Cooper minima in direct two-photon ionisation*; Sci. Rep. **10**, 3617:1–10 (2020).
513. V. P. Kosheleva, A. V. Volotka, D. A. Glazov and **S. Fritzsche**; *Interelectronic-interaction corrections to the hyperfine splitting of lithiumlike ions*; Phys. Rev. Research **R2**, 013364:1–12 (2020).
514. B. Baghdasaryan, F. Steinlechner and **S. Fritzsche**; *Characterization of opening angle correlations of a biphoton state decomposed in Bessel modes*; Phys. Rev. **A101**, 043844:1–8 (2020).
515. S. Kosugi, F. Koike, T. Nagayasu, F. Hosseini, J. Martins, T. Marchenko, O. Travnikova, M. Oura, T. Gejo, J. Harries, J. D. Bozek, K. Ito, E. Sokell, **S. Fritzsche**, M. N. Piancastelli, M. Simon and Y. Azuma; *Strong configuration interaction in the 3p photoelectron spectrum of Kr*; Phys. Rev. **A101**, 042505:1–6 (2020).
516. D. Samoilenco, A. V. Volotka and **S. Fritzsche**; *Elastic photon scattering on hydrogenic atoms near resonances*; atoms **8** 12:1–13 (2020).
517. N. S. Scott, A. Hibbert, J. Ballantyne, **S. Fritzsche**, A. L. Hazel, D. P. Landau, D. W. Walker and Z. Was; *CPC's 50th Anniversary: Celebrating 50 years of open-source software in computational physics*; Comput. Phys. Commun. **252**, 107269:1–12 (2020).
518. D. Wu, W. Yu, Z. M. Sheng, **S. Fritzsche** and X. T. He; *Uniform warm dense matter formed by direct laser heating in the presence of external magnetic fields*; Phys. Rev. **E101**, 051202(R):1–6 (2020).
519. S. Panahiyan and **S. Fritzsche**; *One-dimensional quantum walks driven by two-entangled-qubit coins* Phys. Lett. **A384**, 126673:1–12 (2020).
520. S. Schippers, A. Perry-Sassmannshausen, T. Buhr, M. Martins, **S. Fritzsche** and A. Müller; *Multiple photodetachment of atomic anions via single and double core-hole creation*; J. Phys. **B53**, 192001:1–8 (2020).
521. J. Hofbrucker, L. Eiri, A. V. Volotka and **S. Fritzsche**; *Photoelectron angular distributions of nonresonant two-photon atomic ionization near nonlinear Cooper minima*; atoms **8** 54:1–10 (2020).
522. S. Panahiyan and **S. Fritzsche**; *Simulation of novel cell-like topological structures with quantum walk* Eur. Phys. J. Plus **135**, 626:1–10 (2020).

523. T. Kron, R. Beerwerth, S. Raeder, **S. Fritzsche**, R. Heinke, P. Schönberg, M. Truümper and K. Wendt; *Hyperfine structure study of $^{97-99}\text{Tc}$ in a new laser ion source for high-resolution laser spectroscopy*; Phys. Rev. **C102**, 034307:1–9 (2020).
524. S. Panahiyan and **S. Fritzsche**; *Controllable simulation of topological phases and edge states with quantum walk* Phys. Lett. **A384**, 126828:1–13 (2020).
525. D. Wanisch and **S. Fritzsche**; *Driven spin-chains as high-quality quantum routers*; Phys. Rev. **A102**, 032624:1–7 (2020).
526. Z. W. Wu, Z. Q. Tian, J. Jiang, C. Z. Dong and **S. Fritzsche**; *Hyperfine-induced effects on angular emission of the magnetic-quadrupole line $1s2p_{3/2}^{}{}^3P_2 \rightarrow 1s^2 {}^1S_0$ following electron-impact excitation of Ti^{79+} ions*; Phys. Rev. **A102**, 042813:1–8 (2020).
527. D. Wu , W. Yu, **S. Fritzsche** and X. T. He; *Particle-in-cell simulation method for macroscopic degenerate plasmas*; Phys. Rev. **E102**, 033312:1–11 (2020).
528. J. Hofbrucker, A. V. Volotka, J. Szlachetko and **S. Fritzsche**; *Enhanced polarization transfer to the characteristic L_α x-ray lines near the nonlinear Cooper minimum of two-photon ionization*; Phys. Rev. **A102**, 042807:1–9 (2020).
529. J. Sommerfeldt, R. A. Müller, A. V. Volotka, **S. Fritzsche** and A. Surzhykov; *Vacuum polarization and finite-nuclear-size effects in the two-photon decay of hydrogen-like ions*; Phys. Rev. **A102**, 042811:1–9 (2020).
530. A. V. Volotka, A. Surzhykov and **S. Fritzsche**; *Rayleigh scattering of linearly polarized light: Scenario of the complete experiment*; Phys. Rev. **A102** 042814, 1–8 (2020).
531. B. Baghdasaryan and **S. Fritzsche**; *Enhanced entanglement from Ince-Gaussian pump beams in spontaneous parametric down-conversion*; Phys. Rev. **A102** 052412:1–10 (2020).
532. B. Böning and **S. Fritzsche**; *Partial-wave representation of the strong-field approximation*; Phys. Rev. **A102** 053108:1–15 (2020).
533. S. Panahiyan, W. Chen and **S. Fritzsche**; *Fidelity susceptibility near topological phase transitions in quantum walks*; Phys. Rev. **B102** 134111:1–11 (2020).
534. Y. X. Geng, D. Wu, W. Yu, Z. M. Sheng, **S. Fritzsche**, Q. Liao, M. J. Wu, X. H. Xu, D. Y. Li, W. J. Ma, H. Y. Lu, Y. Y. Zhao, X. T. He, J. E. Chen, C. Lin and X. Q. Yan; *Proton beams from intense laser-solid interaction: Effects of the target materials*; Matter and Radiation at Extremes **5** , 064402:1–6 (2020).
535. J. Deprince, M. A. Bautista, **S. Fritzsche**, J. A. Garcia, T. R. Kallman, C. Mendoza, P. Palmeri and P. Quinet; *Plasma environment effects on K lines of astrophysical interest IV. IPs, K thresholds, radiative rates, and Auger widths in Fe II – Fe VIII*; Astronomy & Astrophysics **643** A57 (2020).
536. Z. Wang, H. Hu, L. von Szentpály, H. Stoll, **S. Fritzsche**, P. Pyykkö, W. H. E. Schwarz and J. Li; *Understanding the uniqueness of the 2p elements in the Periodic Table*; Chem. Eur. J. **26**, 15558–64 (2020).
537. V. P. Kosheleva, V. A. Zaytsev, R. A. Müller, A. Surzhykov and **S. Fritzsche**; *Resonant sequential two-photon ionization of atoms by twisted and plane-wave light*; Phys. Rev. **A102**, 063115:1–8 (2020).

538. B. Böning, P. Abele, W. Paufler and **S. Fritzsche**; *Above-threshold ionization of Ba⁺ with realistic initial states in the strong-field approximation*; J. Phys. **B54**, 025602:1–10 (2021).
539. S. Strnat, V. A. Yerokhin, A. V. Volotka, G. Weber, **S. Fritzsche**, R. A. Müller and A. Surzhykov; *Polarization studies on Rayleigh scattering of hard x-rays by closed-shell atoms*; Phys. Rev. **A103**, 012801:1–7 (2021).
540. S. Schippers, R. Beerwerth, S. Bari, T. Buhr, K. Holste, A. L. D Kilcoyne, A. Perry-Saßmannshausen, R. A. Phaneuf, S. Reinhardt, W. Savin, K. Schubert, **S. Fritzsche**, M. Martins and A. Müüller; *Near L-edge single and multiple photoionization of doubly charged iron ions*; Astrophys. J. **908**, 52:1–8 (2021).
541. S. Panahiyan and **S. Fritzsche**; *Toward simulation of topological phases with one-, two- and three-dimensional quantum walks*; Phys. Rev. **A103**, 012201:1–18 (2021).
542. **S. Fritzsche**, P. Palmeri and S. Schippers; *Atomic cascade computations*; Symmetry **13**, 520:1–18 (2021).
543. **S. Fritzsche** and A. Surzhykov; *Approximate atomic Green functions*; submitted to Molecules **26**, 2660:1–18 (2021).
544. R. N. Soguel, A. V. Volotka, E. V. Tryapitsyna, D. A. Glazov, V. P. Kosheleva and **S. Fritzsche**; *Redefined vacuum approach and gauge-invariant subsets in two-photon-exchange diagrams for closed-shells system with a valence electron*; Phys. Rev. **A103**, 042818:1–16 (2020).
545. B. Baghdasaryan, F. Steinlechner and **S. Fritzsche**; *Justifying the thin-crystal approximation in spontaneous parametric down-conversion for collinear phase matching*; Phys. Rev. **A103**, 063508:1–5 (2021).
546. R. N. Soguel, A. V. Volotka, D. A. Glazov and **S. Fritzsche**; *Many-electron QED with redefined vacuum approach*; Symmetry **13**, 1014:1–24 (2021).
547. D. Wu, Z. M. Sheng, W. Yu, **S. Fritzsche** and X. T. He; *A pairwise nuclear fusion algorithm for particle-in-cell simulations: Weighted particles at relativistic energies*; AIP Advances **11**, 075003 (2021); <https://doi.org/10.1063/5.0051178>.
548. J. Hofbrucker, B. Böning, A. V. Volotka and **S. Fritzsche**; *Elliptical dichroism in biharmonic ionization of atoms*; Phys. Rev. **A104**, 013102:1–9 (2021).
549. F. Liu, Z. Chen, T. Morishita, K. Bartschat, B. Böning and **S. Fritzsche**; *Single-cycle versus multicycle nonsequential double ionization of argon*; Phys. Rev. **A104**, 013105:1–10 (2021).
550. Á.Koszorus, L. J. Vormawah, R. Beerwerth, M. L. Bissel, P. Campbell, B. Cheal, C. S.Devlin, T. Eronen, **S. Fritzsche**, S. Geldhof, H. Heylen, J. D. Holt, A. Jokinen, S. Kelly, I. D. Moore, T. Miyagi, S. Rinta-Antila, A. Voss and C. Wrait; *Proton-neutron pairing correlations in the self-conjugate nucleus ⁴²Sc*; Phys. Lett. **B819**, 136439:1–6 (2021).
551. G. Gaigalas and **S. Fritzsche**; *Angular coefficients for symmetry-adapted configuration states in jj-coupling*; Comp. Phys. Commun. **267**, 108086:1–11 (2021).
552. **S. Fritzsche**; *Symbolic evaluation of expressions from Racah's algebra*; Symmetry **13**, 1558:1–14 (2021).

553. B. Böning and **S. Fritzsche**; *Above-threshold ionization driven by Gaussian laser beams: beyond the electric dipole approximation*; J. Phys. **B54**, 144002:1–9 (2021).
554. A. V. Volotka, J. Hofbrucker and **S. Fritzsche**; *Steering of circular dichroism in biharmonic ionization of atoms*; Phys. Rev. **A104**, L031103:1–6 (2020).
555. A. Müller, M. Martins, A. Borovik Jr., T. Buhr, A. Perry-Sassmannshausen, S. Reinwardt, S. Ricz, F. Trinter, S. Schippers, **S. Fritzsche** and A. S. Kheifets; *The role of L-shell single and double core-hole production and decay in m-fold ($m = 1, 2, \dots, 6$) photoionization of the Ar+ ion*; Phys. Rev. **A104**, 033105:1–21 (2021).
556. D. Wanisch and **S. Fritzsche**; *Delocalization of quantum information in long-range interacting systems*; Phys. Rev. **A104**, 042409:1–7 (2021).
557. A. Perry-Sassmannshausen, K. Bagschik, T. Buhr, M. Martins, A. Müller, S. Reinwardt, F. Trinter, **S. Fritzsche** and S. Schippers; *Multiple photodetachment of silicon anions via K-shell excitation and ionization*; Phys. Rev. **A104**, 053107 (2021).
558. B. Minneker, B. Böning, A. Weber and **S. Fritzsche**; *Torus-knot angular momentum in twisted attosecond pulses from high-order harmonic generation*; Phys. Rev. **A104**, 053116 (2021).
559. A. Weber, B. Böning, Björn Minneker and **S. Fritzsche**; *Generation of elliptically polarized high-harmonic radiation with bi-elliptical two-color laser beams*; Phys. Rev. **A104**, 063118:1–12 (2021).
560. **S. Fritzsche**; *Dielectronic recombination strengths and plasma rate coefficients of multiply-charged ions*; Astronomy & Astrophys. **656**, A 163:1–10 (2021).
561. Z. W. Wu, Z. Q. Tian, J. Jiang, C. Z. Dong and **S. Fritzsche**; *Hyperfine-induced effects on the K_{α_1} angular distribution following electron-impact excitation of heliumlike spin-1/2 Tl^{79+} ions*; Phys. Rev. **A104**, 062814:1–8 (2021).
562. J. Deprince, M. A. Bautista, **S. Fritzsche**, J. A. Garcia, T. R. Kallman, C. Mendoza, P. Palmeri and P. Quinet; *Plasma environment effects on K lines of astrophysical interest. V. Universal formulae for ionization potential and K-threshold shifts*; Astronomy & Astrophys. **657**, A61:1–11 (2022).
563. A. V. Volotka, D. Samoilenko, **S. Fritzsche**, V. G. Serbo and A. Surzhykov; *Polarization of photons scattered by ultra-relativistic ion beams*; Ann. Phys. (Berlin) **2100252**:1–11 (2022).
564. S. Ramakrishna, J. Hofbrucker and **S. Fritzsche**; *Photoexcitation of atoms by cylindrically polarized Laguerre-Gaussian beams*; Phys. Rev. **A105**, 033103:1–8 (2022).
565. V. P. Kosheleva, A. V. Volotka, D. A. Glazov, D. V. Zinenko and **S. Fritzsche**; *g factor of lithiumlike silicon and calcium: Resolving the disagreement between theory and experiment*; Phys. Rev. Lett. **128**, 103001:1–7 (2022).
566. **S. Fritzsche**; *Level structure and properties of open f-shell elements*; Atoms (Basel) **10**, 7:1–16 (2022).
567. **S. Fritzsche**; *Photon emission from hollow ions near surfaces*; Atoms (Basel) **10**, 37:1–13 (2022).

568. Z. W. Wu, Z. M. He, Z. Q. Tian, C. Z. Dong and **S. Fritzsche**; *Angular and polarization properties of the Lyman- α_1 line $2p_{3/2} \rightarrow 1s_{1/2}$ following electron-impact excitation of hydrogenlike ions*; submitted to Phys. Rev. **A105** 062813:1–7 (2022).
569. J. Fan, J. Hofbrucker, A. V. Volotka and **S. Fritzsche**; *Relativistic calculations of two-color two-photon K-shell ionization*; Eur. Phys. J. **D76**, 18:1–8 (2022).
570. **S. Fritzsche** and B. Böning; *Lorentz-force shifts in strong-field ionization with mid-infrared laser fields*; Phys. Rev. Research **4**, 033031:1–17 (2022).
571. S. Schippers, S. Stock, T. Buhr, A. Perry-Sassmannshausen, S. Reinwardt, M. Martins, A. Müller and **S. Fritzsche**; *Near K-edge photoionization and photoabsorption of singly, doubly, and triply charged silicon ions*; Astrophys. J. **931**, 100:1–10 (2022).
572. **S. Fritzsche** and B. Böning; *Strong-field ionization amplitudes for atomic many-electron targets*; Atoms (Basel) **10**, 70:1–15 (2022).
573. R. N. Soguel, A. V. Volotka and **S. Fritzsche**; *QED approach to valence-hole excitation in closed-shell systems*; Phys. Rev. **A106** 012802:1–10 (2022).
574. S. Schippers, A. Hamann, A. Perry-Sassmannshausen, T. Buhr, A. Müller, M. Martins, S. Reinwardt, F. Trinter and **S. Fritzsche**; *Multiple photodetachment of oxygen anions via K-shell excitation and ionization: Direct double-detachment processes and subsequent deexcitation cascades*; Phys. Rev. **A106** 013114:1–9 (2022).
575. Y. Hikosaka and **S. Fritzsche**; *Coster-Kronig and super Coster-Kronig transitions from the Xe 4s core-hole state*; Phys. Chem. Chem. Phys. **24**, 17535–41 (2022).
576. J. Hofbrucker, S. Ramakrishna, A. V. Volotka and **S. Fritzsche**; *Polarization effects in the total rate of biharmonic $\omega + 3\omega$ ionization of atoms*; Phys. Rev. **A106** 013118:1–8 (2022).
577. B. Böning and **S. Fritzsche**; *Steering the longitudinal photoelectron momentum in the above-threshold ionization with two not-quite-collinear laser beams*; Phys. Rev. **A106** 043102:1–7 (2022).
578. F. Liu, S. Li, Z. Chen, B. Böning and **S. Fritzsche**; *Nonsequential double ionization of Ne with elliptically polarized laser pulses*; Phys. Rev. **A106** 043120:1–8 (2022).
579. B. Minneker, B. Böning and **S. Fritzsche**; *Nnon-dipole strong-field approximation of high-order harmonic generation*; Phys. Rev. **A106** 053109:1–11 (2022).
580. **S. Fritzsche** and J. Hofbrucker; *Biharmonic ($\omega, 2\omega$) ionization of atoms by elliptically-polarized light. Carving the photoelectron angular distributions*; submitted to New J. Phys., **24**, 103031:1–17 (2022).
581. **S. Fritzsche**; *Application of symmetry-adapted atomic amplitudes*; Atoms (Basel) **10**, 127:1–17 (2022).
582. B. Baghdasaryan, C. Sevilla-Gutierrez, F. Steinlechner and **S. Fritzsche**; *Generalized description of the spatio-temporal biphoton state in spontaneous parametric down-conversion*; Phys. Rev. **A106**, 063711:1–8 (2022).

583. B. Baghdasaryan, F. Steinlechner and **S. Fritzsch**; *Maximizing the validity of the gaussian approximation for the biphoton state from parametric downconversion*; Phys. Rev. **A106**, 063714:1–6 (2022).
584. B. Minneker , R. Klas , J. Rothhardt and **S. Fritzsch**; *Critical laser intensity of phase-matched high-order harmonic generation in noble gases*; Photonics (Basel) **10**, 24:1–14 (2022).
585. **S. Fritzsch**, A. V. Maiorova and Z. W. Wu; *Radiative recombination plasma rate coefficients of multiply-charged ions*; Atoms (Basel) **11**, 50:1–15 (2023).
586. M. O. Herdrich, D. Hengstler, A. Fleischmann, C. Enss, T. Gassner, A. Gumberidze, P.-M. Hillenbrand, P. Indelicato, **S. Fritzsch** and T. Stöhlker; *X-ray spectroscopy based on microcalorimeters at internal targets of storage rings*; Atoms (Basel) **11**, 13:1–8 (2023).
587. S. Kosugi, F. Koike, M. Iizawa, F. Hosseini, J. Martins, T. Marchenko, O. Travnikova, J. D. Bozek, K. Ito, **S. Fritzsch**, M. N. Piancastelli, M. Simon and Y. Azuma; *Strong configuration-interaction contributions to the angle-resolved 4p photoelectron spectra of atomic xenon*; Phys. Rev. **A107**, 022814:1–7 (2023).
588. B. Böning and **S. Fritzsch**; *Partial-wave representation of the strong-field approximation. II. Coulomb asymmetry in the photoelectron angular distribution of many-electron atoms*; Phys. Rev. **A107**, 023108:1–11 (2023).
589. D. V. Zinenko, D. A. Glazov, V. P. Kosheleva, A. V. Volotka and **S. Fritzsch**; *Electron correlation effects on the g factor of lithiumlike ions*; Phys. Rev. **A107**, 032815:1–14 (2023).
590. B. Yang, Z. W. Wu, D. Y. Yu, C. Shao, Y. Xue, W. Wang, Z. Y. Song, M. Zhang, J. L. Liu, R. Lu, Y. Wu, F. F. Ruan, Y. Zhang, **S. Fritzsch** and X. H. Cai; *Nearly isotropic Lyman- α_1 radiation $2p_{3/2} \rightarrow 1s_{1/2}$ following nonradiative electron capture in $Xe^{54+} + Kr$ collisions at 197 MeV u^{-1}* ; J. Phys. **B: At. Mol. Opt. Phys.** **56**, 055203:1–6 (2023).
591. R. Y. Zheng, L. G. Jiao, A. Liu, J. Ma, H. E. Montgomery Jr, Y. K. Ho and **S. Fritzsch**; *Stability of the $2p^2\ 3P^e$ state of two-electron atoms near to critical nuclear charge*; J. Phys. **B: At. Mol. Opt. Phys.** **56**, 095002:1–9 (2023).
592. **S. Fritzsch**, L. G. Jiao, Y. C. Wang and J. E. Sienkiewicz; *Collision strengths of astrophysical interest for multiply charged ions*; Atoms (Basel) **11**, xx:1–xx (2023).
593. A. V. Maiorova, **S. Fritzsch**, A. Surzhykov and T. Stöhlker; *Radiative recombination of highly charged ions with polarized electrons*; Phys. Rev. **A107**, 042814:1–8 (2023).
594. D. F. Dar, B. Minneker and **S. Fritzsch**; *Nondipole strong-field approximation for above threshold ionization in few-cycle pulse*; Phys. Rev. **A107**, 053102:1–10 (2023).
595. D. F. Dar and **S. Fritzsch**; *Pulse cycle dependent nondipole effects in above-threshold ionization*; Atoms (Basel) **11**, 97:1–11 (2023).
596. Z. L. Zhou, L. G. Jiao, A. Liu, Y. C. Wang, H. E. Montgomery Jr., Y. K. Ho and **S. Fritzsch**; *Effective pressures on the outer-, inner-, and shell-confined hydrogenic atoms*; Euro. Phys. J. **D77**, 78:1–12 (2023).

597. Z. W. Wu, Z. Q. Tian and **S. Fritzsche**; *Angular distribution of the characteristic line $1s2p^3P_2 \rightarrow 1s^21S_0$ of thallium ions: Hyperfine-induced multipole interference*; Euro. Phys. J. **D77**, 95:1–7 (2023).
598. X. N. Li, Y. Z. Zhang, L. G. Jiao, Y. C. Wang, H. E. Montgomery Jr., Y. K. Ho and **S. Fritzsche**; *Geometric properties of the ground state of H- and He in dense quantum plasmas*; Euro. Phys. J. **D77**, 96:1–15 (2023).
599. A. I. Bondarev, J. H. Gillanders, C. Cheung, M. S. Safronova and **S. Fritzsche**; *Calculations of multipole transitions in Sn II for kilonova analysis*; Eur. Phys. J. **D77**, 126:1–10 (2023).
600. K. König, **S. Fritzsche**, G. Hagen, J. D. Holt, A. Klose, J. Lantis, Y. Liu, K. Minamisono, T. Miyagi, W. Nazarewicz, T Papenbrock, S. Pineda, R. Powel and P.-G. Reinhard; *Surprising charge-radius kink in the Sc isotopes at $N = 20$* ; Phys. Rev. Lett. **131**, 102501:1–6 (2023).
601. D. Wanisch, J. D. A. Espinoza and **S. Fritzsche**; *Information scrambling and the correspondence of entanglement dynamics and operator dynamics in systems with nonlocal interactions*; Phys. Rev. **B107**, 205127:1–10 (2023).
602. B. Baghdasaryan, F. Steinlechner and **S. Fritzsche**; *Enhancing the purity of single photons in parametric down-conversion through simultaneous pump-beam and crystal-domain engineering*; Phys. Rev. **A108**, 023718:1–8 (2023).
603. L. Xu, L. G. Jiao, A. Liu, H. E. Montgomery Jr., Y. K. Ho and **S. Fritzsche**; *Energy spectra and asymptotic laws of the radial screened Coulomb potential*; Phys. Lett. **A483**, 129064:1–5 (2023).
604. L. Xu, L. G. Jiao, A. Liu, Y. C. Wang, H. E. Montgomery Jr., Y. K. Ho and **S. Fritzsche**; *Critical screening parameters of one-electron systems with screened Coulomb potentials: circular Rydberg states*; J. Phys. **B56**, 175002:1–13 (2023).
605. R. Bernecker, B. Baghdasaryan and **S. Fritzsche**; *Spatial and temporal characteristics of spontaneous parametric down-conversion with varying focal planes of interacting beams*; Eur. Phys. J. **D77**, 172:1–13 (2023).
606. Z. W. Wu, Z. Q. Tian, C. Z. Dong, A. Surzhykov and **S. Fritzsche**; *Hyperfine-induced effects on $K_{\alpha 1}$ linear polarization following electron-impact excitation of heliumlike Tl^{79+} ions with nuclear spin $I = 1/2$* ; New J. Phys. **25**, 093039:1–12 (2023).
607. W. H. Xia, Z. L. Zhou, L. G. Jiao, A. Liu, H. E. Montgomery Jr., Y. K. Ho and **S. Fritzsche**; *Variational perturbation theory for dynamic polarizabilities and dispersion coefficients*; Phys. Rev. **E108**, 035305:1–13 (2023).
608. G. Visentin, S. E. Schippers and **S. Fritzsche**; *Dielectronic recombination plasma rate coefficients of Na-, Mg-, and Al-like iron ions: The role of the $2(s+p) \rightarrow 4l, nl'$ and $3(s+p) \rightarrow 5l, nl'$ resonances*; Astronomy & Astrophysics **679**, A13:1–9 (2023), <https://doi.org/10.1051/0004-6361/202347456>.
609. R. N. Soguel and **S. Fritzsche**; *Insight into the prospective evaluation of third-order interelectronic corrections on Li-like ions*; Phys. Rev. **A108**, 042807:1–20 (2023).
610. Z. W. Wu, W. Liu and **S. Fritzsche**; *Angular and polarization properties of characteristic x-ray radiation following inner-shell $2p_{3/2}$ photoionization of high-Z atoms*; Phys. Rev. **A108**, 053115:1–8 (2023).

611. Z. X. Hu, L. G. Jiao, A. Liu, Y. C. Wang, H. E. Montgomery, Jr., Y. K. Ho and **S. Fritzsche**; *Resonances in the Hulthén potential: benchmark calculations, critical behaviors, and interference effects*; *J. Phys.* **A56**, 445301:1–21 (2023), <https://doi.org/10.1088/1751-8121/acfe65>.
612. A. I. Bondarev, M. Tamanis, R. Ferber, G. Başar, S. Kröger, M. G. Kozlov and **S. Fritzsche**; *Comparison of theory and experiment for radiative characteristics in neutral thulium*; *Phys. Rev.* **A109**, 012815:1–11 (2024).
613. Y.-C. Wang, G. Visentin, L.-G. Jiao and **S. Fritzsche**; *Acceleration correction to the binary-encounter Bethe model for the electron impact ionization of molecules*; *Phys. Rev.* **A109**, 022804:1–9 (2024).
614. C. Sevilla-Gutierrez, V. R. Kaipalath, B. Baghdasaryan, M. Gräfe, **S. Fritzsche** and F. Steinlechner; *Spectral properties of transverse Laguerre-Gauss modes in parametric down-conversion*; *Phys. Rev.* **A109**, 023534:1–11 (2024).
615. Y.-C. Wang, L.-G. Jiao and **S. Fritzsche**; *Generalized binary-encounter-Bethe model for electron impact ionization of atoms*; *J. Phys.* **B57**, 045202:1–11 (2024).
616. R. P. Schmidt, S. Ramakrishna, A. A. Peshkov, N. Huntemann, E. Peik, **S. Fritzsche** and A. Surzhykov; *Atomic photoexcitation as a tool for probing purity of twisted light modes*; *Phys. Rev.* **A109**, 033103:1–11 (2024).
617. T. Yan, L. G. Jiao, A. Liu, Y. C. Wang, H. E. Montgomery, Jr., Y. K. Ho and **S. Fritzsche**; *Bound state energies and critical bound region in the semiclassical dense hydrogen plasmas*; *Phys. Plasma* **31**, 042110:1–15 (2024).
618. S. Ramakrishna, Z. W. Wu, A. V. Maiorova and **S. Fritzsche**; *Interaction of Hermite–Gaussian beams with a macroscopic atomic target*; *Ann. Phys. (Berlin)*, 2400048:1–8 (2024).
619. Z. W. Wu, Y. Li and **S. Fritzsche**; *Competition of the Breit interaction in angular anisotropy of Auger electrons*; *Phys. Rev.* **A109**, 032817:1–6 (2024).
620. D. F. Dar and **S. Fritzsche**; *Nonlinear interference and electron dynamics: Probing photo-electron momentum distributions in strong-field ionization*; *Phys. Rev.* **A109**, L041101:1–6 (2024).
621. Z. W. Wu, J. Q. Wang, Y. Li, Y. H. An and **S. Fritzsche**; *Relativistic R-matrix calculations for the photoionization of W^{61+} ions*; *Phys. Plasma* **31**, 043301:1–9 (2024).
622. Z. W. Wu, W. Liu and **S. Fritzsche**; *Angle-resolved linear polarization of characteristic lines following innershell $2p_{3/2}$ photoionization of atoms*; *Eur. J. Phys.* **D78**, 69:1–8 (2024).
623. **S. Fritzsche**, A. K. Sahoo, L. Sharma4, Z. W. Wu and S. Schippers; *Merits of atomic cascade computations*; *Eur. J. Phys.* **D78**, 75:1–17 (2024).
624. Y.-C. Wang, L. G. Jiao, A. Liu, Y.-K. Ho and **S. Fritzsche**; *pp-wave resonances in the exponential cosine screened Coulomb potential*; *Commun. Theo. Phys.* **76**, 075501:1–9 (2024).
625. Y.-C. Wang, J. Ma, L. G. Jiao and **S. Fritzsche**; *Inner-shell ionization cross sections of atoms by positron impact*; *Commun. Theo. Phys.* **76**, 065502:1–6 (2024).

626. G. Visentin, H. Ramanantoanina, A. Borschevsky, L. A. Viehland, B. Jana, A. Arya, **S. Fritzsché** and M. Laatiaoui; *Transport-property predictions for laser resonance chromatography on Rf^+ ($Z = 104$)*; Phys. Rev. **A110**, 012805:1–8 (2024).
627. F. Liu, S. Skruszewicz, J. Späthe, Y. Zhang, S. Hell, B. Ying, G. G. Paulus, B. Kiss, K. Murari, M. Khalil, E. Cormier, L. G. Jiao, **S. Fritzsché** and M. Kübel; *Exploring valence-electron dynamics of xenon through laser-induced electron diffraction*; Phys. Rev. **A110**, 013118:1–7 (2024).
628. G. Visentin, A. Borschevsky, L. A. Viehland, **S. Fritzsché** and M. Laatiaoui; *Laser resonance chromatography of $^{229}Th^{3+}$ in He: An ab initio investigation*; Phys. Rev. **A110**, 023105:1–8 (2024).
629. **S. Fritzsché**, L. G. Jiao and G. Visentin ; *Rapid access to empirical impact ionization cross sections for atoms and ions across the periodic table*; Plasma (Basel) **7**, 106:1–15 (2024).
630. A. V. Maiorova, D. Karlovets, **S. Fritzsché**, A. Surzhykov and T. Stöhlker; *Coulomb excitation of hydrogen atoms by vortex ion beams*; New J. Phys. **26**, 093010:1–10 (2024).
631. L. Xu, F. M Fernandez, L. G.Jiao, H. E. Montgomery Jr, H. K. Ho and **S. Fritzsché**, ; *Revisiting the energy spectrum of the radial screened Coulomb potential*; Phys. Scr. **99**, 065404:1–11 (2024).
632. A. K. Sahoo, **S. Fritzsché** and L. Sharma; *Computation of effective collision strengths for plasma applications using JAC*; Eur. Phys. J. Plus **139**, 986:1–10 (2024).
633. S.-X. Wang, C. Brandau, **S. Fritzsché**, S. Fuchs, Z Harman, C. Kozhuharov, A. Müller, M. Steck and S. Schippers; *Breit interaction in dielectronic recombination of hydrogenlike xenon ions: storage-ring experiment and theory*; Eur. Phys. J. D **78**, 122:1–16 (2024).
634. T. Mazza, T. M. Baumann, R. Boll, A. De Fanis, S. Dold, M. Ilchen, T. Mullins, Y. Ovcharenko, D. E. Rivas, B. Senftleben, S. Usenko1, I. Ismail, J. D. Bozek, M. Simon, **S. Fritzsché** and M. Meyer; *Resonant Raman Auger spectroscopy on transient core-excited Ne ions*; J. Phys. **B57**, 225001:1–8 (2024).
635. R. Bernecker, B. Baghdasaryan and **S. Fritzsché**; *High-dimensional maximally entangled photon pairs in parametric down-conversion*; Phys. Rev. **A110**, 033718:1–12 (2024).
636. S. Ramakrishna, R. P. Schmidt, A. A. Peshkov, S. Franke-Arnold, A. Surzhykov and **S. Fritzsché**; *Interaction of vector light beams with atoms exposed to a time-dependent magnetic field*; Phys. Rev. **A110**, 043101:1–10 (2024).
637. J. Gilles, **S. Fritzsché**, L. J. Spieß, P. O. Schmidt and A. Surzhykov; *Quadratic Zeeman and electric quadrupole shifts in highly charged ions*; Phys. Rev. **A110**, 052812:1–12 (2024).
638. M. Togawa, J. Richter, C. Shah, M. Botz, J. Nenninger, J. Danisch, J. Goes, S. Kühn, P. Amaro, A. Mohamed, Y. Amano, S. Orlando, R. Totani, M. de Simone, **S. Fritzsché**, T. Pfeifer, M. Coreno, A. Surzhykov and J. R. C. Lopez-Urrutia; *Hanle effect for lifetime determinations in the soft x-ray regime*; Phys. Rev. Lett. **133** 163202:1–7 (2024).
639. R. Chakma, **S. Fritzsché**, K. Hauschild and A. Lopez-Martens; *Geant4 atomic relaxation data for fermium nuclei ($Z = 101$ – 104)*; Nucl. Instrum. Meth. **A1072**, 170144:1–9 (2024).

640. W. Wang, F. Zou, **S. Fritzsch** and Y. Li; *Isomeric population transfer of the ^{229}Th nucleus via hyperfine electronic bridge*; Phys. Rev. Lett. **133** 223001:1–6 (2024).