

Publications

- [1] J. Oreg, W. Goldstein, P. Mandelbaum, D. Mitnik, E. Meroz, J.L. Schwob, A. Bar-Shalom, “Distorted-wave calculations of the electron-impact excitation-autoionization processes from the ground state of highly ionized GaI-like ions through $\Delta n=1$ inner-shell excitations”, *Phys. Rev. A* **44**, 1741–1749 (1991).
- [2] A. Zigler, P. Mandelbaum, J.L. Schwob, and D. Mitnik, “Analysis of the X-Ray spectra emitted by laser-produced plasma of highly ionized Lanthanum and Praseodymium in the 8.4 to 12.0 Å wavelength range”, *Phys. Scr.*, **50**, 61–67 (1994).
- [3] D. Mitnik, P. Mandelbaum, J.L. Schwob, J. Oreg, A. Bar-Shalom, and W. Goldstein, “Excitation-autoionization through $3d-4l$ inner-shell excitations in Cu- to Kr-like ions and the effect on fractional-ion-abundance balance in coronal plasmas”, *Phys. Rev. A* **50**, 4911–4929 (1994).
- [4] P. Mandelbaum, D. Mitnik, E. Behar, R. Doron, and J.L. Schwob, “Excitation-autoionization, dielectronic recombination and line intensities in highly ionized CuI-like ions”, *J. Quant. Spectrosc. Radiat. Transfer*, **54**, 261–269 (1995).
- [5] D. Mitnik, P. Mandelbaum, J.L. Schwob, J. Oreg, A. Bar-Shalom, and W. Goldstein, “Excitation-autoionization cross sections and rate coefficients of Cu-like Ions”, *Phys. Rev. A* **53**, 3178–3188 (1996).
- [6] D. Mitnik, P. Mandelbaum, J.L. Schwob, J. Oreg, and A. Bar-Shalom, “Excitation-autoionization cross sections and rate coefficients of Zn-like Ions”, *Phys. Rev. A* **55**, 307–317 (1996).
- [7] M.S. Pindzola, D.M. Mitnik, J.A. Shaw, D.C. Griffin, N.R. Badnell, H.P. Summers, and D.R. Shultz, “Electron-impact ionization of atomic ions in the Na isoelectronic sequence”, *Phys. Scripta* **57**, 514–518 (1998).
- [8] D.M. Mitnik, M.S. Pindzola, F. Robicheaux, N.R. Badnell, O. Uwira, A. Müller, A. Frank, J. Linkemann, W. Spies, N. Angert, P.H. Mokler, R. Becker, M. Kleinod, S. Ricz, and L. Empacher, “Dielectronic recombination of U^{28+} atomic ions”, *Phys. Rev. A* **57**, 4365–4372 (1998).
- [9] D.C. Griffin, D.M. Mitnik, M.S. Pindzola, and F. Robicheaux, “Intermediate-coupling calculations of the effects of interacting resonances on dielectronic recombination in a static electric field”, *Phys. Rev. A* **58**, 4548–4555 (1998).
- [10] D.M. Mitnik, J.A. Shaw, M.S. Pindzola, D.C. Griffin, and N.R. Badnell, “Electron-impact ionization of Fe^{14+} and other atomic ions in the Mg isoelectronic sequence”, *Comp. Phys. Comm.* **114**, 368–377 (1998).
- [11] D.M. Mitnik, M.S. Pindzola, and N.R. Badnell, “Total and Partial Recombination Cross Sections for F^{6+} ”, *Phys. Rev. A* **59**, 3592–3600 (1999).
- [12] M.S. Pindzola, D.M. Mitnik and F. Robicheaux, “Electron-impact double ionization of a model Helium atom”, *Phys. Rev. A* **59**, 4390–4397 (1999).
- [13] D.M. Mitnik, M.S. Pindzola, D.C. Griffin, and N.R. Badnell, “Electron-impact ionization of C^{3+} using the R -matrix pseudo-state method”, *J. Phys. B* **32**, L479–485 (1999).

- [14] D. Berkovits, O. Heber, J. Klein, D. Mitnik, and M. Paul, “Photodissociation of the free BeC_6^{2-} dianion”, Nucl. Instr. and Meth. in Phys. Res. B **172**, 350–354 (2000).
- [15] D.M. Mitnik, M.S. Pindzola, and N.R. Badnell, “Dielectronic recombination of Pb^{79+} atomic ions at high spectral resolution”, Phys. Rev. A **61**, 022705 (2000).
- [16] M.S. Pindzola, D.M. Mitnik, J. Colgan, and D.C. Griffin, “Electron–impact ionization of Li^+ ”, Phys. Rev. A **61**, 052712 (2000).
- [17] D.M. Mitnik, M.S. Pindzola, and D.C. Griffin, “Influence of atomic radiative and collisional processes on the plasma modeling of Mg^{10+} at low electron densities”, Phys. Rev. A **62**, 062711 (2000).
- [18] M.S. Pindzola, D.M. Mitnik, and F. Robicheaux, “ T –matrix calculations for the electron–impact ionization of hydrogen in the Temkin–Poet model”, Phys. Rev. A **62**, 062718 (2000).
- [19] J. Colgan, D.M. Mitnik, and M.S. Pindzola, “Electron–impact ionization of multiply charged manganese ions”, Phys. Rev. A **63**, 012712 (2001).
- [20] D.C. Griffin, D.M. Mitnik, and M.S. Pindzola, “Effects of LS term dependence in He–like ions”, Phys. Rev. A **63**, 014702 (2001).
- [21] K. Aichele, D. Hathiramani, F. Scheuermann, A. Müller, E. Salzborn, D.M. Mitnik, J. Colgan, and M.S. Pindzola, “Deep–core dielectronic–capture resonances in the electron–impact ionization of heavy atomic ions”, Phys. Rev. Letters **86**, 620–623 (2001).
- [22] J. Colgan, M.S. Pindzola, D.M. Mitnik, and D.C. Griffin, “Total integral and ejected–energy differential cross sections for the electron–impact ionization of lithium”, Phys. Rev. A **63**, 062709 (2001).
- [23] D.C. Griffin, D.M. Mitnik, J. Colgan, and M.S. Pindzola, “Electron–impact excitation of lithium”, Phys. Rev. A **64**, 032718 (2001).
- [24] K. Aichele, W. Arnold, D. Hathiramani, F. Scheuermann, E. Salzborn, D.M. Mitnik, D.C. Griffin, J. Colgan, and M.S. Pindzola, “Experimental and theoretical study of electron–impact ionization of atomic ions in the Sm–isomeric sequence”, Phys. Rev. A **64**, 052706 (2001).
- [25] J. Colgan, and M.S. Pindzola, D.M. Mitnik, D.C. Griffin, and I. Bray, “Benchmark non–perturbative calculations for the electron–impact ionization of $Li(2s)$ and $Li(2p)$ ”, Phys. Rev. Lett. **87**, 213201 (2001).
- [26] D.C. Griffin, D.M. Mitnik, and N.R. Badnell, “Electron–impact excitation of Ne^+ ”, J. Phys. B **34**, 4401–4416 (2001).
- [27] D.M. Mitnik, D.C. Griffin, and N.R. Badnell, “Electron–impact excitation of Ne^{5+} ”, J. Phys. B **34**, 4455–4474 (2001).
- [28] D.M. Mitnik, D.C. Griffin, J. Colgan, M.S. Pindzola, K. Aichele, W. Arnold, D. Hathiramani, F. Scheuermann, and E. Salzborn, “Electron–impact ionization of Sm^{12} ions: Resonances far beyond threshold”, Phys. Rev. A, **64**, 062705 (2001).
- [29] N.R. Badnell, D.C. Griffin, and D.M. Mitnik, “Electron–impact excitation of Fe^{21+} , including $n=4$ levels”, J. Phys. B **34**, 5071–5085 (2001).
- [30] D.M. Mitnik, D.C. Griffin, and M.S. Pindzola, “Time–dependent close–coupling calculations of dielectronic capture in He”, Phys. Rev. Letters **88**, 173004 (2002).

- [31] S. Böhm, S. Schippers, W. Shi, A. Müller, N. Eklöv, R. Schuch, H. Danared, N.R. Badnell, D. Mitnik, and D.C. Griffin, “Measurement of the field induced dielectronic-recombination-rate enhancement of O^{5+} ions differential in the Rydberg quantum number n ”, *Phys. Rev. A* **65**, 052728 (2002).
- [32] S.D. Loch, D.C. Griffin, D.M. Mitnik, M.G. O’Mullane, M.S. Pindzola, H.P. Summers, and A.D. Whiteford, “Electron-impact ionization of all ionization stages of Krypton”, *Phys. Rev. A* **66**, 052708 (2002).
- [33] C.P. Ballance, N.R. Badnell, D.C. Griffin, S.D. Loch, D.M. Mitnik, and M.S. Pindzola, “The effects of coupling to the target continuum on the electron-impact excitation of Li^+ ”, *J. Phys. B* **36**, 235–246 (2003).
- [34] D.M. Mitnik, D.C. Griffin, C.P. Ballance and N.R. Badnell, “An R-matrix with pseudo-states calculation of electron-impact excitation in C^{2+} ”, *J. Phys. B* **36**, 717–730 (2003).
- [35] N.R. Badnell, D.C. Griffin, and D.M. Mitnik, “Electron-impact excitation of B^+ using the R-matrix with pseudo-states method”, *J. Phys. B* **36**, 1337–1350 (2003).
- [36] M. Schnell, M.E. Bannister, S. Böhm, G. Gwinner, S. Kieslich, A. Müller, S. Schnippers, D. Schwalm, W. Shi, A. Wolf, S.G. Zhou, S.D. Loch, N.R. Badnell, J. Colgan, D. Mitnik, and M.S. Pindzola, “Observation of trielectronic recombination in Be-like Cl ions”, *Phys. Rev. Lett.* **91**, 043001 (2003).
- [37] N.R. Badnell, M.G. O’Mullane, H.P. Summers, Z. Altun, M.A. Bautista, J. Colgan, T.W. Gorczyca, D.M. Mitnik, M.S. Pindzola, and O. Zatsarinny, “Dielectronic recombination data for dynamic finite-density plasmas. I. Goals and methodology”, *Astron. and Astroph.* **406**, 1151–1165 (2003).
- [38] D.M. Mitnik and N.R. Badnell, “Dielectronic recombination data for dynamic finite-density plasmas. VIII. The nitrogen isoelectronic sequence”, *Astron. and Astroph.* **425**, 1153–1159 (2004).
- [39] D.M. Mitnik, “Helium atom in a box: I. Doubly-excited levels within the S-wave model”, *Phys. Rev. A* **70**, 022703 (2004).
- [40] N.R. Badnell, D.M. Mitnik, M.S. Pindzola, S.D. Loch, and Sh. A. Abdel-Naby, “Dielectronic recombination of Pb^{79+} via high angular momenta”, *Phys. Rev. A* **70**, 054701 (2004).
- [41] D.M. Mitnik and J.E. Miraglia, “Simple correlated wave functions for the K-shell electrons of neutral atoms”, *J. Phys. B* **38**, 3325–3338 (2005).
- [42] S.D. Loch, J. Colgan, M.C. Witthoef, M.S. Pindzola, C.P. Ballance, D.M. Mitnik, D.C. Griffin, M.G. O’Mullane, N.R. Badnell and H.P. Summers, “Generalised collisional-radiative model for light elements. A: Data for the Li isonuclear sequence”, *Atomic Data and Nuclear Data Tables*, **92**, 813–851 (2006).
- [43] D.M. Mitnik, “Helium atom in a box: a fully quantal solution”, *Nucl. Phys. A* **790**, 784c–787c (2007).
- [44] M.S. Pindzola, F. Robicheaux, S.D. Loch, J.C. Berengut, T. Topcu, J. Colgan, M. Foster, D.C. Griffin, C.P. Ballance, D.R. Schultz, T. Minami, N.R. Badnell, M.C. Witthoef, D.R. Plante, D.M. Mitnik, “The time-dependent close-coupling method for atomic and molecular collision processes”, *J. Phys. B* **40**, R39–R60 (2007).

- [45] M.N. Faraggi, M.S. Gravielle, and D.M. Mitnik, “Interaction of ultrashort laser pulses with metal surfaces: Impulsive jellium-Volkov approximation versus the solution of the time-dependent Schrödinger equation”, *Phys. Rev. A* **76**, 012903 (2007).
Also choosed for publication at *Virtual Journal of Ultrafast Science* **6** Issue 8, Aug (2007)
- [46] A.L. Frapiccini, G. Gasaneo, F. D. Colavecchia, and D. Mitnik, “Sturmian functions in a L^2 basis: critical nuclear charge for N -electron atoms”. *J. El. Spectr. and Rel. Phen.*, **161**, 199–203 (2007).
- [47] K.V. Rodriguez, G. Gasaneo, D.M. Mitnik and J.E. Miraglia, “Hylleraas-like functions with correct cusp conditions: K-shell electrons for neutral atoms”. *J. El. Spectr. and Rel. Phen.*, **161**, 204–206 (2007).
- [48] K.V. Rodriguez, D.M. Mitnik, and G. Gasaneo, “Accurate and simple wavefunctions for the helium isoelectronic sequence with correct cusp conditions”, *J. Phys. B* **40**, 3923–3939 (2007).
- [49] D.C. Griffin, C.P. Ballance, D.M. Mitnik and J.C. Berengut, “Dirac R-matrix calculations of electron-impact excitation of neon-like krypton”, *J. Phys. B* **41** 215201 (2008).
- [50] D.M. Mitnik J. Randazzo, and G. Gasaneo, “Endohedrally confined helium: Study of mirror collapses”, *Phys. Rev. A* **78**, 062501 (2008).
- [51] C.C. Montanari, C.D. Archubi, D.M. Mitnik and J.E. Miraglia, “Energy loss of protons in Au, Pb and Bi using relativistic wave functions”, *Phys. Rev. A* **79**, 032903 (2009).
- [52] C.C. Montanari, D.M. Mitnik, C.D. Archubi, and J.E. Miraglia, “Energy loss of protons in wolframium: mean excitation energy, relativistic binding energies and wave functions”. *Phys. Rev. A* **80**, 012901 (2009).
- [53] K.V. Rodriguez, V.Y. Gonzalez, G. Gasaneo, L.U. Ancarani, and D.M. Mitnik, “Accurate ground state wavefunctions for several three-body systems”. *Hyperf. Interact.* **193**, 147 (2009).
- [54] K.V. Rodriguez, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Ground state for two-electron and electron-muon three-body atomic systems”. *International Journal of Quantum Chemistry* **110**, 1820–1832 (2010).
- [55] G. Gasaneo, D.M. Mitnik, J.M. Randazzo, A.L. Frapiccini, and F.D. Colavecchia, “Theory of Hyperspherical Sturmians for three-body reactions”. *J Phys. Chem. A* **113**, 14573–14582 (2010).
- [56] A. Garriz, A. Sztrajman, and D. Mitnik, “Running into trouble with the time-dependent propagation of a wavepacket”, *Eur. J. Phys.* **31**, 785–799 (2010).
- [57] F.D. Colavecchia, G. Gasaneo, and D. Mitnik, “Double photoionization of endohedrally confined atoms”, *Journal of Atomic, Molecular, and Optical Physics* **2011**, 817034 (2011).
- [58] D. M. Mitnik, F. D. Colavecchia, G. Gasaneo, J. M. Randazzo, “Computational methods for Generalized Sturmians basis”, *Comp. Phys. Comm.* **182**, 1145–1155 (2011).
- [59] C.C. Montanari, D.M. Mitnik, and J.E. Miraglia, “A collective model for inner-shell ionization of very heavy targets”, *Radiation Effects and Defects in Solids*, **166**, 338–345 (2011).

- [60] G. Gasaneo, L.U. Ancarani, and D.M. Mitnik, “On the applicability of the Exterior Complex Scaling method for scattering problems including Coulombic potentials”, *Eur. Phys. J. D*, **66**, 60–73 (2012).
- [61] C. Ríos, M.S. Gravielle, D.M. Mitnik, and V.M. Silkin, “Band structure effects in photoelectron emission spectra from metal surfaces”, *Phys. Rev. A* **85**, 043422 (2012).
- [62] L. U. Ancarani, G. Gasaneo, D. M. Mitnik, “An analytically solvable three–body break–up model problem in hyperspherical coordinates”, *Eur. Phys. J. D* **66**, 270 (2012).
- [63] D.M. Mitnik, G. Gasaneo, and L.U. Ancarani, “Use of generalized hyperspherical Sturmian functions for a three–body break–up model problem”, *J. Phys. B: At. Mol. Opt. Phys.* **46**, 015202 (2013).
- [64] J.C. Aguiar, H.O. Di Rocco, and D. Mitnik, “Experimental Compton profiles of Be, Al and Ti and comparisons with density functional theory calculations”, *J. of Phys. and Chem. of Solids* **74**, 1341 (2013).
- [65] G. Gasaneo, D.M. Mitnik, J.M. Randazzo, L.U. Ancarani, and F.D. Colavecchia, “S–model calculations for high–energy–electron–impact double ionization of helium”, *Phys. Rev. A* **87**, 042707 (2013).
- [66] D.M. Mitnik, G. Gasaneo, L.U. Ancarani, and M.J. Ambrosio, “Collision problems treated with the Generalized Hyperspherical Sturmian method”, *J. of Phys.: Conf. Ser.* **488**, 012049 (2014).
- [67] C.M. Granados–Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Sturmian approach to single photoionization of CH₄”, *Few–Body Syst.* **55**, 1029 (2014).
- [68] S.P. Limandri, R.C. Fadanelli, L.C.C.M. Nagamine, J.M. Fernández–Varea, N.R. Arista, I. Abril, R. García–Molina, C.C. Montanari, J.C. Aguiar, D. Mitnik, J.E. Miraglia, and M. Behar, “Stopping cross sections of TiO₂ for H and He ions”, *Eur. Phys. J. D* **68**, 194 (2014).
- [69] M.J. Ambrosio, L.U. Ancarani, D.M. Mitnik, F.D. Colavecchia, and G. Gasaneo, “A generalized Sturmian treatment of ($e, 3e$) processes described as a Three–body Coulomb problem”, *Few–Body Syst.* **55**, 825 (2014).
- [70] M.J. Ambrosio, F.D. Colavecchia, D.M. Mitnik, and G. Gasaneo, “Discrepancy between theory and experiment in double ionization of helium by fast electrons”, *Phys. Rev. A* **91**, 012704 (2015).
- [71] M.J. Ambrosio, F.D. Colavecchia, G. Gasaneo, D.M. Mitnik, and L.U. Ancarani, “Double ionization of helium by fast electrons with the Generalized Sturmian Functions method”, *J. Phys. B* **48**, 055204 (2015).
- [72] J.C. Aguiar, D. Mitnik, and H.O. Di Rocco, “Electron momentum density and Compton profile by a semi–empirical approach”, *J. of Phys. and Chem. of Sol.* **83**, 64 (2015).
- [73] J.M. Randazzo, D. Mitnik, G. Gasaneo, L.U. Ancarani, and F.D. Colavecchia, “Double photoionization of helium: a Generalized Sturmian approach”, *Eur. Phys. J. D* **69**, 189 (2015).
- [74] M.J. Ambrosio, D.M. Mitnik, L.U. Ancarani, G. Gasaneo, and E.L. Gaggioli, “Double ionization of helium by proton impact: A generalized–Sturmian approach”, *Phys. Rev. A* **92**, 042704 (2015).

- [75] M.J. Ambrosio, D.M. Mitnik, G. Gasaneo, J.M. Randazzo, A.S. Kadyrov, D.V. Fursa, and I. Bray, “Convergent close coupling versus the generalized Sturmian function approach: Wave–function analysis”, *Phys. Rev. A* **92**, 052518 (2015).
- [76] M.J. Ambrosio, D.M. Mitnik, A. Dorn, L.U. Ancarani, and G. Gasaneo, “Double ionization of helium by 2–keV electrons in equal– and unequal–energy configurations”, *Phys. Rev. A* **93**, 032705 (2016).
- [77] R.C. Fadanelli, C.D. Nascimento, C.C. Montanari, J.C. Aguiar, D. Mitnik, A. Turos, E. Guziewicz and M. Behar, “Stopping and straggling of H and He in ZnO”, *Eur. Phys. J. D* **70**, 178 (2016).
- [78] A.M.P. Mendez, D.M. Mitnik, and J.E. Miraglia, “Depurated inversion method for orbital–specific exchange potentials”, *Int. J. Quantum. Chem.* **116**, 1882 (2016).
- [79] A.I. Gómez, G. Gasaneo, D.M. Mitnik, M.J. Ambrosio and L.U. Ancarani, “Benchmark for two–photon ionization of atoms with generalized Sturmian functions”, *Eur. Phys. J. D* **70**, 207 (2016).
- [80] A. Abdouraman, A.L. Frapiccini, A. Hamido, F. Mota–Furtado, P.F. O’Mahony, D. Mitnik, G. Gasaneo, and B. Piraux, “Sturmian bases for two–electron systems in hyperspherical coordinates”, *J. Phys. B* **49**, 235005 (2016).
- [81] A.L. Frapiccini, G. Gasaneo and D.M. Mitnik, “Generalized Sturmians in the time–dependent frame: effect of a fullerene confining potential”, *Eur. Phys. J. D.* **71**, 40 (2017).
- [82] M.J. Ambrosio, L.U. Ancarani, A.I. Gómez, G. Gasaneo and D.M. Mitnik, “Beat structure in the solution of scattering problems with nondecaying sources”, *Eur. Phys. J. D.* **71**, 54 (2017).
- [83] C.A. Ríos Rubiano, R. Della Picca, V.M. Silkin, D.M. Mitnik, and M.S. Gravielle, “Induced–field enhancement of band–structure effects in photoelectron spectra from Al surfaces by ultrashort laser pulses”, *Phys. Rev. A* **95**, 033401 (2017).
- [84] M.J. Ambrosio, L.U. Ancarani, A.I. Gómez, E.L. Gaggioli, D.M. Mitnik, and G. Gasaneo, “Double ionization of helium by proton impact: from intermediate to high momentum transfer”, *Eur. Phys. J. D.* **71**, 127 (2017).
- [85] M. Oswal, Sunil Kumar, Udai Singh, G. Singh, K.P. Singh, D. Mehta, D. Mitnik, C.C. Montanari, T. Nandi, “L x–ray production cross sections in high–Z atoms by 3–5 MeV/u silicon ions”, *Nucl. Inst. and Meth. in Phys. Res. B* **416**, 110 (2018).
- [86] A.M.P. Mendez, C.C. Montanari, and D.M. Mitnik, “Relativistic atomic structure calculations of heavy targets for inelastic collisions”, *Nucl. Inst. and Meth. in Phys. Res. B* **460**, 114 (2019).
- [87] E.L. Gaggioli, O.P. Bruno, and D.M. Mitnik, “Light transport with the equation of radiative transfer: the Fourier Continuation – Discrete Ordinates (FC–DOM) Method”, *J. Quant. Spectrosc. Radiat. Transfer* **236**, 106589 (2019).
- [88] D.M. Mitnik, A.M.P. Mendez, and J.E. Miraglia, “Reply to Comment on “Depurated Inversion Method for Orbital–Specific Exchange Potentials””, *Int. Jour. of Quant. Chem.* **120**, e.26102 (2019).
- [89] M. Oswal, S. Kumar, U. Singh, G. Singh, K.P. Singh, D. Mehta, A. Mendez, D.M. Mitnik, C.C. Montanari, D. Mitra, and T. Nandi, “Experimental and theoretical L–shell ionization cross sections of heavy atoms by impact of Si ions”, *Rad. Phys. and Chem.* **176**, 108809 (2020).

- [90] L. Fernández-Menchero, A.C. Comroy, C.P. Ballance, N.R. Badnell, D.M. Mitnik, T.W. Gorczyca, and M.J. Seaton, “PSTGF: time-independent R-matrix atomic electron-impact code”, *Comp. Phys. Commun.* **256**, 107489 (2020).
- [91] D.M. Mitnik and S.A.H. Mitnik, “Wavefunctions from energies: Applications in simple potentials”, *J. Math. Phys.* **61**, 062101 (2020).
- [92] C.C. Montanari, P.A. Miranda, E. Alves, A.M.P. Mendez, D.M. Mitnik, J.E. Miraglia, R. Correa, J. Wachter, M. Aguilera, N. Catarino, and R.C. da Silva, “Stopping power of hydrogen in hafnium and the importance of relativistic 4f electrons”, *Phys. Rev. A* **101**, 062701 (2020).
- [93] D.M. Mitnik, F.A. López, and L.U. Ancarani, “Generalized Sturmian Functions in prolate spheroidal coordinates”, *Mol. Phys.* e1881179 (2021).
- [94] A.L. Frapiccini and D.M. Mitnik, “Study of hydrogen confined in onion shells”, *Eur. Phys. J. D* **75**, 41 (2021).
- [95] E.L. Gaggioli, D.M. Mitnik, and O.P. Bruno, “Skin effect in neutron transport theory”, *Phys. Rev. E* **104**, L032801 (2021).
- [96] S. Chatterjee, S. Kumar, S. Kumar, M. Oswal, B. Mohanty, D. Mehta, D. Mitra, A.M.P. Mendez, D.M. Mitnik, C.C. Montanari, L. Sarkadi, and T. Nandi, “Understanding the mechanisms of L-shell x-ray emission from Os atoms bombarded by 4–6 MeV/u fluorine ion”, *Phys. Scr.* **97**, 045405 (2022).
- [97] J.I. Peralta, M.C. Vieytes, A.M.P. Mendez, D.M. Mitnik, “Modeling the Mg I from the NUV to MIR. I The solar case”, *Astr. & Astroph.* **657**, A108 (2022).
- [98] F. Bivort Haiek, A.M.P. Mendez, C.C. Montanari, and D.M. Mitnik, “ESPNN: A novel electronic stopping power neural-network code built on the IAEA stopping power database. I. Atomic targets”, *J. Appl. Phys.* **132**, 245103 (2022).
- [99] J.P. Peralta, A.M.P. Mendez, D.M. Mitnik, and C.C. Montanari, “Systematic study of the stopping power of the lanthanides”, *Phys. Rev. A* **107**, 052809 (2023).
- [100] J.I. Peralta, M.C. Vieytes, A.M.P. Mendez, D.M. Mitnik, “Modeling the Mg I from the NUV to MIR. II. Testing stellar models”, *Astr. & Astroph.* **676**, A18 (2023).
- [101] Fengling Zhang, Ling Zhang, Wenming Zhang, Yunxin Cheng, Ailan Hu, Xiaobin Ding, Shigeru Morita, Zhengwei Li, Zhen Zhou, Yiming Cao, Jiuyang Ma, Zhehao Xu, Lang Xu, Chengxi Zhou, Yinxian Jie, and Darío Mitnik, “Line identification of extreme ultraviolet spectra from aluminum ions in EAST Tokamak plasmas”, *Phys. Scr.* **99**, 025615 (2024).
- [102] J. Trincavelli, G. Castellano, S. Segui, Silvina Limandri, M. del Rosario Torres Deluigi, C. Montanari, D. Mitnik, and A. Carreras, “Revisiting M-shell binding energies for elements with $72 \leq Z \leq 83$ ”, *Phys. Rev. A* **109**, 042804 (2024).

Chapters in Books

- [103] J. Oreg, A. Bar-Shalom, W. Goldstein, P. Mandelbaum, D. Mitnik, E. Meroz, J.L. Schwob, and M. Klapisch, “Systematic investigation of electron impact excitation–autoionization from the ground state of highly charged GaI-like ions through $\Delta n=1$ transitions”, in *Proceedings of the 4th International Workshop on Radiative Properties of Hot Dense Matter*, Sarasota (Florida) 1990, edited by W. Goldstein (World Scientific, London 1991), p. 273–278.
- [104] D. Mitnik, P. Mandelbaum, J.L. Schwob, J. Oreg, A. Bar-Shalom, and W.H. Goldstein, “Effect of excitation–autoionization on fractional abundances of highly ionized KrI– to NiI–like heavy elements in coronal plasmas”, in *UV and X-Ray Spectroscopy of Astrophysical and Laboratory Plasmas*, edited by E. H. Silver and S. M. Kahn (Cambridge University Press, Cambridge, England, 1993), p. 146–149.
- [105] J. Shaw, D. Mitnik, M. Pindzola, D. Griffin, N. Badnell, “Electron–impact excitation calculations for astrophysical plasmas”, in *Stellar Evolution, Stellar Explosions and Galactic Chemical Evolution*, edited by A. Mezzacappa (IOP Publishing, Bristol and Philadelphia, 1997), p. 85–87.
- [106] T.W. Gorczyca, N.R. Badnell, D.C. Griffin, D.M. Mitnik, and M.S. Pindzola, “The R-matrix with pseudostate method”, in *Atomic Data Needs for X-Ray Astronomy*, edited by M.A. Bautista, T.R. Kallman and A.K. Pradhan, (NASA Press, Greenbelt, Maryland, USA, 2000), p. 97–102.
- [107] N.R. Badnell, M.A. Bautista, K.A. Berrington, V.M. Burke, K. Butler, M.E. Galavis, M. Graziani, D.C. Griffin, D.J. Lennon, C. Mendoza, D.M. Mitnik, J.C. Pelan, A.K. Pradhan, H.E. Saraph, P.J. Storey, J.A. Tully, C.J. Zeippen, and H.L. Zhang, “Iron Project: atomic data for IR lines”, *Planetary Nebulae in our Galaxy and Beyond*, (Proceedings IAU Symposium No. 234, Vol 2, Hawaii, Cambridge University Press, 2007), p. 211–218.
- [108] G. Gasaneo, L.U. Ancarani, D.M. Mitnik, J.M. Randazzo, A.L. Frapiccini, and F.D. Colavecchia, “Three–Body Coulomb Problems with Generalized Sturmian Functions”, *Molecular Electronic Structure Theory*, (Serial Title: Advances in Quantum Chemistry, Vol. 67), p. 153–216 (2013).
- [109] C.M. Granados–Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “A Sturmian approach to photoionization of molecules”, *Electron Correlation in Molecules - ab initio Beyond Gaussian Quantum Chemistry*, (Serial Title: Advances in Quantum Chemistry, Vol. 73), p. 3–57 (2016).
- [110] Alejandra M.P. Mendez, Dario M. Mitnik, and Jorge E. Miraglia, “Local Effective Hartree-Fock Potentials Obtained by the Depurated Inversion Method”, *Novel Electronic Structure Theory: General Innovations and Strongly Correlated Systems*, (Serial Title: Advances in Quantum Chemistry, Vol. 76), p. 117–131 (2018).
- [111] Alejandra M.P. Mendez, Darío M. Mitnik, and Jorge E. Miraglia, “Collision processes using effective potentials”, in “State of The Art of Molecular Electronic Structure Computations: Correlation Methods, Basis Sets and More”, *State of The Art of Molecular Electronic Structure Computations: Correlation Methods, Basis Sets and More*, (Serial Title: Advances in Quantum Chemistry, Vol. 79), p. 179–200 (2019).

- [112] Darío M. Mitnik, A.L. Frapiccini, and L.U. Ancarani, “Generalized Sturmian Functions in prolate spheroidal coordinates: Continuum states”, in *New Electron Correlation Methods and their Applications, and Use of Atomic Orbitals with Exponential Asymptotes*, (Serial Title: Advances in Quantum Chemistry, Vol. 79), p. 239–253 (2021).
- [113] A.M.P. Mendez, D.M. Mitnik, and C.C. Montanari, “The electronic stopping power of heavy targets”, in *Jack Sabin, Scientist and Friend*, (Serial Title: Advances in Quantum Chemistry, Vol. 85), p. 157–175 (2022).

Presentations at International Conferences

- [1] D. Mitnik, P. Mandelbaum, J.L. Schwob, J. Oreg, A. Bar-Shalom, and W. Goldstein, “Excitation-autoionization processes in CuI, ZnI, GaI and KrI isoelectronic sequences”. Poster paper presented at The 26th European Group for Atomic Spectroscopy Conference, Bellaterra, Spain (July 1994).
- [2] D. Mitnik, P. Mandelbaum, J.L. Schwob, “Calculations of total excitation–autoionization cross sections and rate coefficients in Ni, Cu and Zn isoelectronic sequences”. Poster paper presented at The 10th APS Topical Conference on Atomic Processes in Plasmas, San Francisco, USA (January 1996).
- [3] P. Mandelbaum, R. Doron, D. Mitnik, and J.L. Schwob, “Average radiative branching ratio of autoionizing inner–shell excited configurations in highly ionized heavy atoms”, in *Proceeding of the 5th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas (1995)*, edited by W.U.L. Tchang–Brillet, J.F. Wyart, and C.J. Zeippen, (Publications de l’Observatoire de Paris, Meudon, France, 1996), p. 116–117.
- [4] D. Mitnik, P. Mandelbaum and J.L. Schwob, “Calculations of excitation–autoionization cross sections and rate coefficients in molybdenum Cu– and Zn–like ions”, in *Proceeding of the 5th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas (1995)*, edited by W.U.L. Tchang–Brillet, J.F. Wyart, and C.J. Zeippen, (Publications de l’Observatoire de Paris, Meudon, France, 1996), p. 118–119.
- [5] M. Cohen, P. Mandelbaum, D. Mitnik, and J.L. Schwob, “Extended calculations of excitation–autoionization processes in Ge–like molybdenum”, in *Proceeding of the 5th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas (1995)*, edited by W.U.L. Tchang–Brillet, J.F. Wyart, and C.J. Zeippen, (Publications de l’Observatoire de Paris, Meudon, France, 1996), p. 120–121.
- [6] J. Shaw, D. Mitnik, M.S. Pindzola, D.C. Griffin, N.R. Badnell, H.P. Summers, D.R. Schultz, “Electron–Ion scattering cross sections for the modeling of astrophysical and laboratory plasmas”, Poster paper presented at the 2nd Oak Ridge Symposium on Atomic and Nuclear Astrophysics, Oak Ridge, Tennessee, (December 1997).
- [7] D.M. Mitnik, F. Robicheaux, M.S. Pindzola, D.C. Griffin, and N.R. Badnell, “Theory of dielectronic and radiative recombination for complex atomic ions”. Invited talk presented at the *Ion–Electron Collisions in Storage Rings - Achievements and Perspectives* Workshop, Heidelberg, Germany (December 1997).
- [8] K.B. Fournier, D. Stutman, V. Soukhanovskii, M. Finkenthal, M.J. May, H.W. Moos, W.H. Goldstein and D. Mitnik, “Estimates of Population Inversion for Deep UV Transitions in Kr I-like Y, Zr, Nb and Mo Excited in a High Current Reflex Discharge”. Poster paper presented at VUV XII Conference, San Francisco, CA, (August 1998).
- [9] D. Stutman, K.B. Fournier, V. Soukhanovskii, M. Finkenthal, M. May, H.W. Moos, D.M. Mitnik, and W.H. Goldstein, “Evidence of population inversion for deep UV transitions of Kr–like Y excited in a high current reflex discharge”. Poster paper presented at The 11th APS Topical Conference on Atomic Processes in Plasmas, Auburn, USA (March 1998).

- [10] D.C. Griffin, M.S. Pindzola, J.A. Shaw, D.M. Mitnik, and N.R. Badnell, “Electron–impact excitation rates and collisional–radiative modeling of Si^{4+} ”. Poster paper presented at The 11th APS Topical Conference on Atomic Processes in Plasmas, Auburn, USA (March 1998).
- [11] D.M. Mitnik, F. Robicheaux, M.S. Pindzola, D.C. Griffin, and N.R. Badnell, “Calculations on electron–ion recombination: New Challenges”. Poster paper presented at The 11th APS Topical Conference on Atomic Processes in Plasmas, Auburn, USA (March 1998).
- [12] J. Klein, R. Middleton, D. Berkovits, D. Mitnik, and M. Paul, “Study of the photodisintegration of the ${}^9\text{Be}^{12}\text{C}_6^{2-}$ Dianion”. Poster paper presented at the International Symposium on Structure and Dynamics of Negative Atomic and Molecular Ions, Aarhus, Denmark, (May 1998).
- [13] D.M. Mitnik, M.S. Pindzola, D.C. Griffin, and N.R. Badnell, “Electron–impact single ionization of atomic ions”. Poster paper presented at The American Physical Society Centennial Meeting, Atlanta, USA (March 1999).
- [14] M.S. Pindzola, D.M. Mitnik, and F. Robicheaux, “Electron–impact double ionization of atoms”. Paper presented at The American Physical Society Centennial Meeting, Atlanta, USA (March 1999).
- [15] D.M. Mitnik, M.S. Pindzola, and D.C. Griffin, “Collisional–Radiative modeling of the Mg^{10} atomic ion”. Poster paper presented at The 12th APS Topical Conference on Atomic Processes in Plasmas, Reno, Nevada, USA (March 2000).
- [16] N.R. Badnell, D.M. Mitnik, M.S. Pindzola, T.W. Gorczyca, M. O Mullane, H.P. Summers, M.A. Bautista and D.A. Verner, “Dielectronic recombination data for dynamic finite–density plasmas”. Poster paper presented at The 12th APS Topical Conference on Atomic Processes in Plasmas, Reno, Nevada, USA (March 2000).
- [17] J. Colgan, D.M. Mitnik, and M.S. Pindzola, “Time–dependent close–coupling calculations for the electron–impact ionization of Neon”. Poster paper presented at the 2000 Annual Meeting of DAMOP, Connecticut, USA (May 2000).
- [18] D.M. Mitnik, “Progress in the parallelization of the R –matrix codes”. Invited talk presented at the *Winter Workshop on Computational Atomic Physics*, Rollins College, Florida, USA (January 2001).
- [19] D.M. Mitnik, D.C. Griffin, J. Colgan, M.S. Pindzola, K. Aichele, W. Arnold, D. Hathiramani, A. Müller, F. Scheuermann, and E. Salzborn, “New Features in Electron–Impact Ionization: Resonances far beyond threshold”. Paper presented at the 2001 Annual Meeting of DAMOP, Ontario, Canada (May 2001).
- [20] D.C. Griffin, N.R. Badnell and D.M. Mitnik, “Electron–impact excitation of Ne II”. Poster paper presented at the 2001 Annual Meeting of DAMOP, Ontario, Canada (May 2001).
- [21] J. Colgan, M.S. Pindzola, D.M. Mitnik, and D.C. Griffin, “Fully quantal ($e, 2e$) calculations for hydrogen and alkali metals”. Paper presented at the 2001 Annual Meeting of DAMOP, Ontario, Canada (May 2001).
- [22] K. Aichele, W. Arnold, D. Hathiramani, F. Scheuermann, E. Salzborn, D.M. Mitnik, J. Colgan, and M.S. Pindzola, “Single–ionization of Sm ions by electron impact”. Poster paper presented at the ICPEAC conference, Santa Fe, USA (May 2001).

- [23] K. Aichele, W. Arnold, D. Hathiramani, A. Müller, F. Scheuermann, E. Salzborn, D.M. Mitnik, J. Colgan, and M.S. Pindzola, “Resonant 3d-processes in the electron-impact ionization of Sm ions”. Poster paper presented at the ICPEAC conference, Santa Fe, USA (May 2001).
- [24] D.M. Mitnik, D.C. Griffin, and N.R. Badnell, “Electron-impact excitation of Ne⁵⁺ calculations using new parallel R -matrix codes”. Poster paper presented at the ICPEAC conference, Santa Fe, USA (May 2001).
- [25] M.S. Pindzola, F.J. Robicheaux, J. Colgan, D.M. Mitnik, D.C. Griffin, D.R. Schultz, “Time dependent dynamics of atomic systems”. Invited talk presented at the ICPEAC conference, Santa Fe, USA (May 2001).
- [26] M.S. Pindzola, F.J. Robicheaux, J.P. Colgan, S.D. Loch, D.C. Griffin, D.M. Mitnik, C.P. Ballance, D.R. Schultz, K.R. Bartschat, N.R. Badnell, H.P. Summers, P.G. Burke, C.J. Noble, and K.A. Berrington, “Terascale computational atomic physics for controlled fusion energy”. Poster paper presented at The 13th APS Topical Conference on Atomic Processes in Plasmas, Gatlinburg, Tennessee, USA (April 2002).
- [27] C.P. Ballance, N.R. Badnell, K.A. Berrington, D.C. Griffin, S. Loch, and D.M. Mitnik, “R-matrix advances in large scale electron excitation calculations”. Poster paper presented at The 3rd International Conference on Atomic and Molecular Data and Their Applications, Gatlinburg, Tennessee, USA (April 2002).
- [28] D.M. Mitnik, D.C. Griffin, M.S. Pindzola, and F. Robicheaux, “Dielectronic Capture in electron scattering on a He⁺ ion”. Contributed talk presented at the 2002 Annual Meeting of DAMOP, Williamsburg, VA, USA (May 2002).
- [29] D.M. Mitnik, “Progress in the parallelization of the R -matrix codes”. Invited talk presented at the *Winter Workshop on Computational Atomic Physics*, Rollins College, Florida, USA (January 2003).
- [30] S.D. Loch, N.R. Badnell, Z. Altun, M. Bautista, J. Colgan, M. Fogle, T. W. Gorczyca, D.M. Mitnik, M.G. O’Mullane, M.S. Pindzola, D.W. Savin, R. Schuch, H.P. Summers and O. Zatsarinny, “Dielectronic recombination calculations for dynamic finite density plasmas”. Poster paper presented at The 14th APS Topical Conference on Atomic Processes in Plasmas, Santa Fe, New Mexico, USA (April 2004).
- [31] S.D. Loch, N.R. Badnell, C.P. Ballance, M. Bautista, J. Colgan, D.C. Griffin, D.M. Mitnik, M.G. O’Mullane, M.S. Pindzola, H.P. Summers, A.D. Whiteford and M. Witthoef, “Ionization cross section calculations of both light and heavy species for ITER relevant studies”. Poster paper presented at The 14th APS Topical Conference on Atomic Processes in Plasmas, Santa Fe, New Mexico, USA (April 2004).
- [32] K.V. Rodriguez, D. Mitnik, and G. Gasaneo, “Two-electron systems as a function of the nuclear charge”. Poster paper presented at the XIX APS International Conference on Atomic Physics, Rio de Janeiro, Brasil (July 2004).
- [33] Darío Mitnik, “Helium atom in a box: Doubly excited levels”. Poster paper presented at the ICPEAC conference, Rosario, Argentina (July 2005).
- [34] D.M. Mitnik and J.E. Miraglia, “Simple correlated wave functions for the K-shell electrons of neutral atoms”. Poster paper presented at the ICPEAC conference, Rosario, Argentina (July 2005).
- [35] D.M. Mitnik and J.E. Miraglia, “Cusp conditions and convergences in Close-Coupling wavefunctions, for inner-shell electrons”. Poster paper presented at the Thirteenth International Symposium on Polarization and Correlation in electronic and Atomic Collisions”, Buenos Aires, Argentina (July 2005).

- [36] K.V. Rodriguez, D.M. Mitnik, and G. Gasaneo, “Hylleraas-like functions with correct cusp conditions: the He isoelectronic sequence”. Poster paper presented at the 18th International IUPAP Conference on Few-Body Problems in Physics, Sao Paulo, Brasil, (August 2006).
- [37] A.L. Frapiccini, G. Gasaneo, F.D. Colavecchia, and D. Mitnik, “Positive energy Sturmians in a L^2 basis for scattering problems”. Poster paper presented at the 18th International IUPAP Conference on Few-Body Problems in Physics, Sao Paulo, Brasil, (August 2006).
- [38] A.L. Frapiccini, G. Gasaneo, F. D. Colavecchia, and D. Mitnik, “Sturmian functions in a L^2 basis: critical nuclear charge for n-electron atoms”. Poster paper presented at the International Conference on Many particle spectroscopy of atoms, molecules, clusters and surfaces, Roma, Italy (June 2006).
- [39] K.V. Rodriguez, G. Gasaneo, D.M. Mitnik and J.E. Miraglia, “Hylleraas-like functions with correct cusp conditions: K-shell electrons for neutral atoms”. Poster paper presented at the International Conference on Many particle spectroscopy of atoms, molecules, clusters and surfaces, Roma, Italy (June 2006).
- [40] D. M. Mitnik, “Helium atom in a box: a fully quantal solution”. Contributed talk presented at the 18th International IUPAP Conference on Few-Body Problems in Physics, Santos, Brazil (August 2006).
- [41] D.M. Mitnik, I. Aldazabal, A. Arnau, M.S. Gravielle, J.E. Miraglia, and V.H. Ponce, “Time dependent simulations of electron emission in grazing ion surface collisions”. Poster paper presented at the 16th International Workshop on Inelastic Ion-Surface Collisions (IISC-16), Schloss Hernstein, Austria (September 2006).
- [42] M. Faraggi, M.S. Gravielle, and D.M. Mitnik, “Interacción de pulso laser sobre superficie metálica: aproximación Impulsiva Jellium-Volkov vs. solución exacta”. Poster paper presented at the III Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Buenos Aires, Argentina (October 2006).
- [43] D.M. Mitnik, I. Aldazábal, A. Arnau, and V.H. Ponce, “Simulaciones dinámicas de colisiones rasantes Ion-Superficie”. Contributed talk presented at the III Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Buenos Aires, Argentina (October 2006).
- [44] K.V. Rodriguez, G. Gasaneo, S. Otranto and D.M. Mitnik, “Photo-Ionization processes of two-electron atoms near the critical nuclear charge”. Poster paper presented at the XXV International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Freiburg, Germany (July 2007).
- [45] M.N. Faraggi, M.S. Gravielle and D.M. Mitnik, “Photoelectron emission from metal surfaces: description based on the jellium model”. Poster paper presented at the XXV International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Freiburg, Germany (July 2007).
- [46] D.M. Mitnik and G. Gasaneo, “Electron structure of endohedrally confined He atoms”. Poster paper presented at the XXV International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Freiburg, Germany (July 2007).
- [47] K.V. Rodriguez, G. Gasaneo and D.M. Mitnik, “Simple and accurate variational wavefunctions for two-electron ions”, Poster paper presented at the XXV International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Freiburg, Germany (July 2007).

- [48] D.M. Mitnik, A. Arnau, I. Aldazábal and V.H. Ponce, “Time-dependent simulations: Acceleration and deceleration of convoy electrons in grazing-ion-surface collisions”. Poster paper presented at the XX International Symposium on Ion-Atom collisions (ISIAC) conference, Crete, Greece (August 2007).
- [49] D.M. Mitnik, A. Arnau, I. Aldazábal and V.H. Ponce, “Time-dependent simulations of electron emission in grazing-ion-surface collisions”. Invited talk presented at the XX ISIAC conference, Crete, Greece (August 2007).
- [50] D.M. Mitnik, J.M. Randazzo, A.L. Frapiccini, F.D. Colavecchia, and G. Gasaneo, “Time-dependent method with Sturmian basis functions”. Poster paper presented at the Workshop on Atomic Ions Stage Abundances in Astrophysical Plasmas, Auburn, USA (February 2008).
- [51] K.V. Rodriguez, V.Y. Gonzalez, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Helium $n^{1,3}S$ excited states obtained with an angular correlated configuration interaction method”. Poster paper presented at the 40th European Group for Atomic Systems (EGAS) conference, Graz, Austria (July 2008).
- [52] K.V. Rodriguez, V.Y. Gonzalez, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Ground states wavefunctions for two-electron systems with finite nuclear mass”. Poster paper presented at the 40th European Group for Atomic Systems (EGAS) conference, Graz, Austria (July 2008).
- [53] D.M. Mitnik, J.M. Randazzo and G. Gasaneo, “Mirror collapses in endohedrally confined atoms: entropies, nodal surfaces and transition probabilities”. Poster paper presented at the Many particle spectroscopy of atoms, molecules, clusters and surfaces (MPS08) conference, Paris, France (June 2008).
- [54] K.V. Rodriguez, V.Y. Gonzalez, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Angular correlated configuration-interaction (ACCI) method for Helium S excited states”. Poster paper presented at the Many particle spectroscopy of atoms, molecules, clusters and surfaces (MPS08) conference, Paris, France (June 2008).
- [55] K.V. Rodriguez, V.Y. Gonzalez, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Ground states for two-electron systems with finite nuclear mass”. Poster paper presented at the Many particle spectroscopy of atoms, molecules, clusters and surfaces (MPS08) conference, Paris, France (June 2008).
- [56] C.C. Montanari, C.D. Archubi, D.M. Mitnik and J.E. Miraglia, “Energy loss and straggling of protons in Tungsten”. Invited talk presented at the 23rd International Conference of Atomic Collisions in Solids (ICACS) conference, Limpopo, South Africa (August 2008).
- [57] C.C. Montanari, C.D. Archubi, D.M. Mitnik and J.E. Miraglia, “Total stopping power and its straggling for protons in heavy targets, fully relativistic calculations for Au, Pb and Bi”. Poster paper presented at the 23rd International Conference of Atomic Collisions in Solids (ICACS) conference, Limpopo, South Africa (August 2008).
- [58] Y.V. Gonzalez, K.V. Rodriguez, G. Gasaneo, L.U. Ancarani, and D.M. Mitnik, “Accurate ground state wavefunctions for several three-body systems”. Poster paper presented at the International Conference on exotic atoms and related topics, Viena, Austria (September 2008).
- [59] C.C. Montanari, C.D. Archubi, D.M. Mitnik and J.E. Miraglia, “Pérdida de energía y straggling de protones en W, Au, Pb y Bi”. Invited talk presented at the IV Encontro Sul-Americano de colisões inelásticas na materia, Río de Janeiro, Brasil (October 2008).

- [60] F.D. Colavecchia, J.M. Randazzo, G. Gasaneo, and D.M. Mitnik, “Secciones eficaces triplemente diferenciales para la doble fotoionización de átomos confinados en fullerenos”. Poster paper presented at the IV Encontro Sul-Americano de colisões inelásticas na materia, Río de Janeiro, Brasil (Octubre 2008).
- [61] D.M. Mitnik and M.S. Gravielle, “Ultrashort laser pulses in metal surfaces: origin of spurious oscillations in fully quantal calculations”. Poster paper presented at the XXVI International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Kalamazoo, USA (July 2009).
- [62] G. Gasaneo, D.M. Mitnik, L.U. Ancarani, F.D. Colavecchia, A.L. Frapiccini, and J.M. Randazzo, “Testing the hyperspherical Sturmian approach for break up processes: an analytically solvable model”. Poster paper presented at the 10th European Conference on Atoms, Molecules and Photons, Salamanca, Spain (July 2010).
- [63] C.C. Montanari, D.M. Mitnik, C.D. Archubi and J.E. Miraglia, “Stopping and straggling of ions in solids within the shellwise local plasma approximation”, Oral talk presented at the 21st International Conference in the Application of Accelerators in Research and Industry, Fort Worth, USA, (Aug. 2010).
- [64] J.M. Randazzo, A.L. Frapiccini, G. Gasaneo, D. Mitnik, L.U. Ancarani, and F.D. Colavecchia, “Electron impact ionization in the Temkin–Poet model with Sturmian functions”. Poster paper presented at the 63rd Annual Gaseous Electronics Conference, Paris, France (October 2010).
- [65] C.C. Montanari, D.M. Mitnik, and J.E. Miraglia, “Energy loss and mean excitation energy of ions in solids within the shellwise local plasma approximation”, Invited talk presented at the Third International Meeting on Recent Developments in the Study of Radiation Effects in Matter, Gramado, Brazil (Oct. 2010)
- [66] A.L. Frapiccini, J.M. Randazzo, G. Gasaneo, F.D. Colavecchia, D.M. Mitnik, and L.U. Ancarani, “Ab–Initio Sturmian method for three–body quantum mechanical problems: Scattering states and ionizing collisions”. Poster paper presented at the V Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Valparaíso, Chile (December 2010).
- [67] D.M. Mitnik, J.M. Randazzo, G. Gasaneo and F.D. Colavecchia, “Endohedrally confined atoms in Fullerenes: He (and the time capsule)”. Oral talk presented at the V Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Valparaíso, Chile (December 2010).
- [68] J.M. Randazzo, A.L. Frapiccini, G. Gasaneo, F.D. Colavecchia, D.M. Mitnik, and L.U. Ancarani, “Ab–Initio Sturmian method for three–body quantum mechanical problems: Atomic and molecular bound states”. Oral talk presented at the V Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Valparaíso, Chile (December 2010).
- [69] C.C. Montanari, D.M. Mitnik and J.E. Miraglia, “Inner–shell ionization of very heavy targets”. Poster paper presented at the 20th International Conference on Ion Beam Analysis, Itapema, Brazil (April 2011).
- [70] C.C. Montanari, D.M. Mitnik and J.E. Miraglia, “The shellwise local plasma approximation, a collective model to describe bound electrons”. Poster paper presented at the 20th International Conference on Ion Beam Analysis, Itapema, Brazil (April 2011).
- [71] K.V. Rodriguez, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Correlated $n^{1,3}S$ states for three–body systems in screened potentials”, Poster paper presented at the 43rd Congress of the European Group on Atomic Systems, Fribourg, Switzerland (July 2011).

- [72] L.U. Ancarani, G. Gasaneo, and D. Mitnik, “A break–up model solved in hyperspherical coordinates”, Invited talk presented at the 22nd International Symposium on Ions Atom Collisions (ISIAC), Caen, France (July 2011).
- [73] C.C. Montanari, D.M. Mitnik and J.E. Miraglia, “A collective model for inner shell ionization”. Poster paper presented at the 22nd International Symposium on Ions Atom Collisions (ISIAC), Caen, France (July 2011).
- [74] L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Can the exterior complex scaling method be applied to pure Coulomb potentials?”, Invited talk presented at the International Symposium on ($e, 2e$), Double Photoionization and Related Topics, and 16th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Dublin, Ireland (Aug. 2011).
- [75] C.C. Montanari, D.M. Mitnik and J.E. Miraglia, “L and M–shell ionization of very heavy targets”. Poster paper presented at the XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Belfast, North Irland (July 2011). *Journal of Physics: Conference Series*, **388** 022090 (2012).
- [76] J.M. Randazzo, D.M. Mitnik, L.U. Ancarani, G. Gasaneo, F.D. Colavecchia, and A.L. Frapiccini, “Hyperspherical versus spherical treatment of asymptotic conditions for three–body scattering problems”. Poster paper presented at the XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Belfast, North Irland (July 2011). *Journal of Physics: Conference Series*, **388** 082040 (2012).
- [77] G. Gasaneo, D.M. Mitnik, L.U. Ancarani, F.D. Colavecchia, A.L. Frapiccini, and J.M. Randazzo, “An analytically solvable model to test the hyperspherical Sturmian approach for break up processes”. Poster paper presented at the XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Belfast, North Irland (July 2011). *Journal of Physics: Conference Series*, **388** 042028 (2012).
- [78] F.D. Colavecchia, D.M. Mitnik, and G. Gasaneo, and A.L. Frapiccini, “Wave packet propagation with a generalized Sturmian basis”. Poster paper presented at the XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Belfast, North Irland (July 2011).
- [79] K.V. Rodriguez, L.U. Ancarani, A.L. Frapiccini, D.M. Mitnik, and G. Gasaneo, “Ground state for two–electron atoms in exponential–cosine–screened Coulomb potentials”. Poster paper presented at the XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Belfast, North Irland (July 2011). *Journal of Physics: Conference Series*, **388** 152017 (2012).
- [80] C.A. Rios, M.S. Gravielle, D.M. Mitnik, and V.M. Silkin, “Band–structure based model for photoelectron emission from metal surfaces”. Poster paper presented at the XXVII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Belfast, North Irland (July 2011). *Journal of Physics: Conference Series*, **388** 132019 (2012).
- [81] G. Gasaneo, J.M. Randazzo, D.M. Mitnik, L.U. Ancarani, and F.D. Colavecchia, “Hyperspherical Sturmian approach for break up processes”, Poster paper presented at the International Symposium on ($e, 2e$), Double Photoionization and Related Topics, and 16th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Dublin, Ireland (Aug. 2011).

- [82] G. Gasaneo, F.D. Colavecchia, and D.M. Mitnik “A Sturmian approach to deal with three–body ionization processes”, Invited talk presented at the International Symposium on $(e, 2e)$, Double Photoionization and Related Topics, and 16th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Dublin, Ireland (Aug. 2011).
- [83] D.M. Mitnik, J.M. Randazzo, G. Gasaneo, F.D. Colavecchia, “Endohedrally confined Helium atoms: mirror collapse, effects on structure and double photoionization”, Invited talk presented at the International Symposium on $(e, 2e)$, Double Photoionization and Related Topics, and 16th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Dublin, Ireland (Aug. 2011).
- [84] L.U. Ancarani, G. Gasaneo, and D. Mitnik, “On the applicability of the Exterior Complex Scaling method for scattering problems including Coulombic potentials”, Invited talk presented at the 64th Annual Gaseous Electronics Conference, Austin, Texas, USA (October 2011).
- [85] L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Three–body break–up model problem in hyperspherical coordinates: analytical and numerical solution”, Invited talk presented at the French National Conference PAMO–JSM, Metz, France (July 2012).
- [86] L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Generalized Hyperspherical Sturmian functions applied to three–body ionization problems”, Poster presented at the 65th Annual Gaseous Electronics Conference, Austin, Texas, USA (October 2012).
- [87] L.U. Ancarani, G. Gasaneo, and D.M. Mitnik “Single and double ionization of helium: a Sturmian approach”, Invited talk presented at the 65th Annual Gaseous Electronics Conference, Austin, Texas, USA (October 2012).
- [88] I.A. Gómez, G. Gasaneo, D.G. Arbó, D.M. Mitnik and B. Piraux, “Positive energy Generalized Sturmian functions applied to atomic photoionization”, Poster paper presented at the Molecular Electronic Structure at Troy, Canakkale, Turkey (Sept 2012).
- [89] L.U. Ancarani, G. Gasaneo, J.M. Randazzo, F.D. Colavecchia, and D.M. Mitnik, “Doble ionización de He por impacto de electrones rápidos”, Invited talk presented at the VI Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Rosario, Argentina (November 2012).
- [90] G. Gasaneo, J.M. Randazzo, A.I. Gómez, D.M. Mitnik, D.G. Arbó, and F.D. Colavecchia, “Simple y doble fotoionización de átomos neutros”, Invited talk presented at the VI Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Rosario, Argentina (November 2012).
- [91] M.J. Ambrosio, A.I. Gómez, F.D. Colavecchia, D.M. Mitnik, and G. Gasaneo, “Estudio de los canales presentes en una función de tres cuerpos calculada por el método de Sturmians Generalizados”, Poster paper presented at the VI Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Rosario, Argentina (November 2012).
- [92] D.M. Mitnik, G. Gasaneo, and L.U. Ancarani, “Uso del método de Funciones Sturmianas Generalizadas en un problema modelo de colisiones atómicas”, Poster paper presented at the VI Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Rosario, Argentina (November 2012).
- [93] C.A. Ríos Rubiano, M.S. Gravielle, and D.M. Mitnik, “Emisión foto–electrónica desde una superficie metálica: efectos de la estructura de bandas”, Invited talk presented at the VI Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Rosario, Argentina (November 2012).

- [94] J. Aguiar and D.M. Mitnik, “Estructura electrónica de Be, Al Ti y W mediante espectroscopía Compton y comparaciones con la teoría de la funcional densidad”, Invited talk presented at the VI Encuentro Sudamericano de Colisiones Inelásticas en la Materia, Rosario, Argentina (November 2012).
- [95] J. Del Punta, M. J. Ambrosio, G. Gasaneo, D.M. Mitnik, L.U. Ancarani, and S.A. Zaytsev, “Non homogeneous solution to a Coulomb Schrödinger equation as a basis set for scattering problems”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [96] M. J. Ambrosio, G. Gasaneo, F.D. Colavecchia, and D.M. Mitnik, “Efficiency improvements for the Generalized Sturmian method on scattering problems”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [97] K.V. Rodriguez, D.M. Mitnik, and G. Gasaneo, “Study of two correlated electrons confined by harmonic potentials”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [98] L.U. Ancarani, K.V. Rodriguez, G. Gasaneo, and D.M. Mitnik, “Correlated $n^{1,3}S$ states for two-electron atoms in screened potentials”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [99] C.M. Granados-Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Sturmian approach to single photoionization of CH_4 ”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [100] I.A. Gómez, M.J. Ambrosio, G. Gasaneo, D.M. Mitnik, B. Piraux, and D. Arbó, “A generalized Sturmian approach to photoionization of hydrogen by electromagnetic pulses”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [101] J.M. Randazzo, D.M. Mitnik, L.U. Ancarani, F.D. Colavecchia, and G. Gasaneo, “Double photoionization cross sections of helium using a simple set of outgoing Sturmian Functions”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [102] C.A. Rios Rubiano, M.S. Gravielle, D.M. Mitnik, and V.M. Silkin, “Influence of the surface band structure in photoelectron emission by ultra-short laser pulses”. Poster paper presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [103] D.M. Mitnik, M.J. Ambrosio, L.U. Ancarani, G. Gasaneo, F.D. Colavecchia, A.L. Frapiccini, C.M. Granados-Castro, A.I. Gómez, and J.M. Randazzo, “Collisional problems treated by the Hyperspherical Generalized Sturmian Method”. Invited talk presented at the XXVIII International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Lanzhou, China (Sep 2013).
- [104] L.U. Ancarani, G. Gasaneo, M.J. Ambrosio, F.D. Colavecchia, J.M. Randazzo, and D.M. Mitnik, “Convergence issues in existing numerical methods for describing the double ionization of helium by high energy electron impact”. Invited talk presented at the International Symposium on $(e, 2e)$, Double Photoionization and Related Topics,

- and 17th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Hefei, China (Aug. 2013).
- [105] J.M. Randazzo, L.U. Ancarani, G. Gasaneo, F.D. Colavecchia, and D.M. Mitnik, “Complete treatment of a three-body break-up Coulomb problem with generalised Sturmian functions”. Invited talk presented at the International Symposium on $(e, 2e)$, Double Photoionization and Related Topics, and 17th International Symposium on Polarization and Correlation in Electronic and Atomic Collisions, Hefei, China (Aug. 2013).
- [106] J.A. Del Punta, M.J. Ambrosio, G. Gasaneo, L.U. Ancarani, D.M. Mitnik, S.A. Zaysev, and M.S. Aleshin, “Quasi-Sturmian approach to two- and three-body continuum Coulomb problems”. Poster paper presented at the 66th Annual Gaseous Electronics Conference, Princeton, New Jersey, USA (Oct. 2013).
- [107] C.M. Granados Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Sturmian approach to the study of photoionization of atoms and molecules”. Contributed talk presented at the 66th Annual Gaseous Electronics Conference, Princeton, New Jersey, USA (Oct. 2013).
- [108] J.M. Randazzo, G. Gasaneo, L.U. Ancarani, F.D. Colavecchia, and D.M. Mitnik, “Generalized Sturmian Functions approach for double photoionization of He”. Poster paper presented at the 66th Annual Gaseous Electronics Conference, Princeton, New Jersey, USA (Oct. 2013).
- [109] D.M. Mitnik, M.J. Ambrosio, G. Gasaneo, A.I. Gomez, and L.U. Ancarani, “Electron Impact Single and Double Ionization of Helium calculated with Generalized Sturmian Functions”. Invited talk presented at the 66th Annual Gaseous Electronics Conference, Princeton, New Jersey, USA (Oct. 2013).
- [110] J.M. Randazzo, L.U. Ancarani, D.M. Mitnik, G. Gasaneo, and F.D. Colavecchia, “Single and double photoionization of atoms by n -photon absorption at low intensity laser fields: a Sturmian approach”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules and Surfaces, Metz, France (July 2014).
- [111] C.M. Granados-Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Study of Photoionization of Atoms With Generalized Sturmian Functions”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules and Surfaces, Metz, France (July 2014).
- [112] C.M. Granados-Castro, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Sturmian approach to study the single photoionization of many electron atoms and molecules”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules and Surfaces, Metz, France (July 2014).
- [113] E. Gaggioli, M.J. Ambrosio, S. Otranto, D.M. Mitnik, and G. Gasaneo, “Double ionization of Helium by bare Coulombic projectiles. Generalized Sturmian Functions and Approximate three bdy solutions”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules and Surfaces, Metz, France (July 2014).
- [114] C.M. Granados-Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Sturmian approach to single photoionization of many electron atoms and molecules”. Invited talk presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules and Surfaces, Metz, France (July 2014).

- [115] M.J. Ambrosio, F.D. Colavecchia, G. Gasaneo, D.M. Mitnik, and L.U. Ancarani “Electron impact double ionization of Helium in the fast projectile and small momentum transfer regimes”. Invited talk presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules and Surfaces, Metz, France (July 2014).
- [116] J.M. Randazzo, A.L. Frapiccini, D.M. Mitnik, G. Gasaneo, and F.D. Colavecchia, “Double Photoionization of confined atoms in n -walled fullerenes”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [117] M.J. Ambrosio, D.M. Mitnik, G. Gasaneo, E.L. Gaggioli and F.D. Colavecchia, “Ionization of Helium by electron and proton impact”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [118] A.L. Frapiccini, G. Gasaneo, D.M. Mitnik, and F.D. Colavecchia, “Effect of the fullerene confining potential in the $1s \rightarrow 2p$ resonant transition of H”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [119] M.J. Ambrosio, D.M. Mitnik, G. Gasaneo, and F.D. Colavecchia, “Ionization of Helium by neutronic impact”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [120] J.M. Randazzo, L.U. Ancarani, D.M. Mitnik, C.M. Granados–Castro, G. Gasaneo, and F.D. Colavecchia, “Generalized Sturmian treatment of atomic double photoionization by n -photon absorption at low intensity laser fields”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [121] C.M. Granados–Castro, L.U. Ancarani, X. Assfeld, G. Gasaneo, and D.M. Mitnik, “Sturmian approach to study photoionization of molecules”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [122] A.I. Gómez, G. Gasaneo, and D.M. Mitnik, “Generalized Sturmian approach to extracting transition amplitudes for two-photon ionization of atoms by electromagnetic pulses”. Poster paper presented at the XXIX International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC) conference, Toledo, Spain (Sep 2015).
- [123] A.I. Gómez, G. Gasaneo, D.M. Mitnik, M.J. Ambrosio, and L.U. Ancarani, “Scattering problems with nondecaying sources: Two-Photon ionization as a benchmark”. Poster paper presented at the Colloque commun de la division de Physique Atomique et Moléculaire et Optique de la SFP et des Journées de Spectroscopie Moléculaires PAMO–JSM Bordeaux, France, (July 2016).
- [124] C.M. Granados–Castro, G. Gasaneo, D.M. Mitnik, and L.U. Ancarani, “Photoionization of CH_4 , H_2O and NH_3 within a Sturmian approach”. Poster paper presented at the Colloque commun de la division de Physique Atomique et Moléculaire et Optique de la SFP et des Journées de Spectroscopie Moléculaires PAMO–JSM Bordeaux, France, (July 2016).
- [125] E.L. Gaggioli, M.J. Ambrosio, D.M. Mitnik, L.U. Ancarani, and G. Gasaneo, “Double ionization of helium by 6 MeV protons”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces (MPS 2016) Moscow, Russia, (August 2016).

- [126] A.I. Gómez, G. Gasaneo, D.M. Mitnik, M.J. Ambrosio, and L.U. Ancarani, “Simultaneous ionization–excitation of helium by high energy electron impact”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces (MPS 2016) Moscow, Russia, (August 2016).
- [127] C.M. Granados–Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Photoionization of molecules: a Sturmian approach”. Poster paper presented at the International Conference on Many Particle Spectroscopy of Atoms, Molecules, Clusters and Surfaces (MPS 2016) Moscow, Russia, (August 2016).
- [128] C.M. Granados–Castro, L.U. Ancarani, G. Gasaneo, and D.M. Mitnik, “Photoionization of CH_4 , H_2O and NH_3 : a Sturmian approach”. Poster paper presented at the 12th European Conference on Atoms Molecules and Photons (ECAMP12), Frankfurt, Germany, (September 2016).
- [129] A.I. Gómez, G. Gasaneo, D.M. Mitnik, M.J. Ambrosio and L.U. Ancarani, “Sturmian approach to extract transition amplitudes in scattering problems with nondecaying sources”. Invited talk presented at Molecular Electronic Structure (MESBA2016), Buenos Aires, Argentina (Sept 2016).
- [130] M.P.A. Mendez, D.M. Mitnik, and J.E. Miraglia, “Effective orbital potentials for second row–hydrides (XH_n)”. Invited talk presented at Molecular Electronic Structure (MESBA2016), Buenos Aires, Argentina (Sept 2016).
- [131] L.U. Ancarani, C.M. Granados-Castro, M.J. Ambrosio, A.I. Gómez, E.L. Gaggioli, J.M. Randazzo, D.M. Mitnik and G. Gasaneo, “Generalized Sturmian functions applied to ionization processes of atoms and molecules”. Invited talk presented at Molecular Electronic Structure (MESBA2016), Buenos Aires, Argentina (Sept 2016).
- [132] A.I. Gómez, G. Gasaneo, D.M. Mitnik, M.J. Ambrosio and L.U. Ancarani, “Two-photon ionization with Generalized Sturmians Functions method”. Poster paper presented at Molecular Electronic Structure (MESBA2016), Buenos Aires, Argentina (Sept 2016).
- [133] C.C. Montanari, D.M. Mitnik, J.C. Aguiar, R.C. Fadanelli, C.D. Nascimento, M. Behar, A. Tuross and E. Guziejewicz, “Energy loss in zinc oxide”. Poster paper presented at Molecular Electronic Structure (MESBA2016), Buenos Aires, Argentina (Sept 2016).
- [134] L.U. Ancarani, E.L. Gaggioli, M.J. Ambrosio, D.M. Mitnik, and G. Gasaneo, “Double ionization of helium by impact of fast protons”. Poster paper presented at the 69th Annual Gaseous Electronics Conference Bochum, Germany, (October 2016).
- [135] L.U. Ancarani, A.I. Gómez, G. Gasaneo, D.M. Mitnik, and M.J. Ambrosio, “Electron impact ionization–excitation of Helium”. Poster paper presented at the 69th Annual Gaseous Electronics Conference Bochum, Germany, (October 2016).
- [136] L.U. Ancarani, G. Gasaneo, D.M. Mitnik, J.M. Randazzo, F.D. Colavecchia, M.J. Ambrosio, J.A. DelPunta, and C.M. Granados–Castro, “A Sturmian approach for ionization processes of atoms and molecules”. Invited talk presented at the 69th Annual Gaseous Electronics Conference Bochum, Germany, (October 2016).
- [137] C. Ríos Rubiano, R. Della Picca, D.M. Mitnik, S. Silkin, and M.S. Gravielle, “Crystallographic orientation in photoelectron emission from metal surfaces by ultrashort laser pulses”, Poster paper presented at the Frontiers in Physical Sciences Conference, Buenos Aires, Argentina, (November 2016).

- [138] J.I. Peralta, M.C. Vieytes, J.MI Fontenla, A.M.P Mendez, and D.M. Mitnik, “Mg I atomic model for solar and stellar atmospheres”, Poster paper presented at the 12th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas, Sao Pablo, Brasil, (December 2016).
- [139] M.J. Ambrosio, A.I. Gomez, L.U. Ancarani, D.M. Mitnik, and G. Gasaneo, “Proton impact double ionization of helium: Generalized Sturmian Functions approach”, Poster paper presented at the International Symposium on ion–atom collision, Queensland, Australia (July 2017).
- [140] M.J. Ambrosio, A.I. Gomez, G. Gasaneo, L.U. Ancarani, and D.M. Mitnik, “Beat structure in the solution of scattering problems with nondecaying sources”, Invited Talk presented at the ($e, 2e$), double photo–ionization and related topics Conference, Palm Cove, Australia, (August 2017).
- [141] A.I. Gomez, M.J. Ambrosio, D.M. Mitnik, and L.U. Ancarani, “Helium double ionization by neutronic impact”, Poster paper presented at the XXX International Conference on Photonic, Electronic and Atomic Collisions, Cairns, Australia, (July 2017).
- [142] A.I. Gomez, M.J. Ambrosio, D.M. Mitnik, and G. Gasaneo, “Exploring different momentum–transfer regimes in proton–helium collisions”, Poster paper presented at the XXX International Conference on Photonic, Electronic and Atomic Collisions, Cairns, Australia, (July 2017).
- [143] C.A. Rios Rubiano, R. Della Picca, D.M. Mitnik, and M.S. Gravielle, “Effects due to the induced potential in ultrashort laser interactions with Al(100) and Al(111) surfaces”, “Exploring different momentum–transfer regimes in proton–helium collisions”, Poster paper presented at the XXX International Conference on Photonic, Electronic and Atomic Collisions, Cairns, Australia, (July 2017).
- [144] A.M.P. Mendez, D.M. Mitnik and C.C. Montanari, “Fully relativistic structure calculations of heavy targets for inelastic collisions”, Invited talk presented at the 7th Topical Conference of the Indian Society of Atomic and Molecular Physics, Tirupati, India (January 2018).
- [145] A.M.P. Mendez, D.M. Mitnik and C.C. Montanari, “Inelastic collision calculations of heavy targets”, Invited talk presented at the 9th International Symposium on BioPIXE, Foz do Iguazu, Brasil (February 2018).
- [146] C.C. Montanari, A.M.P. Mendez, D.M. Mitnik, U. Singh, M. Oswal, S. Kumar, G. Singh, D. Mehta, K.P. Singh, and T. Nandi, “L shell ionization cross sections in relativistic atoms by swift heavy ions”, Poster paper presented at the 10th International Symposium on Swift Heavy Ions in Matter and 28th International Conference on Atomic Collisions in Solids, Caen, Francia (July 2018).
- [147] A.M.P. Mendez, C.C. Montanari, and D.M. Mitnik, “Fully relativistic structure calculations of heavy targets for inelastic collisions”, Poster paper presented at the 10th International Symposium on Swift Heavy Ions in Matter and 28th International Conference on Atomic Collisions in Solids, Caen, Francia (July 2018).
- [148] C.C. Montanari, A.M.P. Mendez, J.E. Miraglia, and D.M. Mitnik, “Theoretical developments for the stopping power in an extended energy range”, Poster paper presented at the 10th International Symposium on Swift Heavy Ions in Matter and 28th International Conference on Atomic Collisions in Solids, Caen, Francia (July 2018).
- [149] D.M. Mitnik, A. Mendez, and J.E. Miraglia, “Depurated Inversion Method for Effective Molecular Potentials”, Invited talk presented at the International Conference on Molecular Electronic Structure Metz, Francia, (August 2018).

- [150] A.M.P. Mendez, D.M. Mitnik, and C.C. Montanari, “Ionización de la capa L de blancos sólidos Ta, W, Pt, Au, Pb, Bi, Th y U”, Poster paper presented at the IX Conferencia Sudamericana de Colisiones Inelásticas en la Materia, Viña del Mar, Chile, (November 2018).
- [151] C.C. Montanari, A.M.P. Mendez, D.M. Mitnik, and J.E. Miraglia, “Cálculo de poder de frenado en un rango amplio de energías del proyectil”, Invited talk presented at the IX Conferencia Sudamericana de Colisiones Inelásticas en la Materia, Viña del Mar, Chile, (November 2018).
- [152] A.M.P. Mendez, D.M. Mitnik, and J.E. Miraglia, “Potenciales efectivos atómicos y moleculares”, Invited talk presented at the IX Conferencia Sudamericana de Colisiones Inelásticas en la Materia, Viña del Mar, Chile, (November 2018).
- [153] A.M.P. Mendez, J.I. Di Filippo, S.D. López, and D.M. Mitnik, “Bayesian atomic structure calculations for collisional problems”, Poster paper presented at the XXXI International Conference on Photonic, Electronic and Atomic Collisions, Deauville, France, (August 2019).
- [154] A.M.P. Mendez, J.I. Di Filippo, S.D. López, and D.M. Mitnik, “Gaussian Processes Optimization of atomic structure for collisional problems calculation”, Poster paper presented at the 20th International Symposium on Correlation, Polarization and Ionization in Atomic and Molecular Collisions, Metz, France, (August 2019).
- [155] C. Montanari, A. Mendez, D. Mitnik, M. Oswal, S. Kumar, U. Singh, G. Singh, K.P. Singh, D. Mehta, D. Mitra, T. Nandi, “L-shell ionization cross sections of Ta, Pt, Th, and U by Si ion”, Poster paper presented at the 24th International Conference on Ion Beam Analysis, Antibes, France (October 2019).
- [156] C.C. Montanari, A. Mendez, D. Mitnik, J. Miraglia, “Stopping power of ions in solids: current interest, data needs and new theoretical results”, Invited talk presented at the 24th International Conference on Ion Beam Analysis, Antibes, France (October 2019).
- [157] C.C. Montanari, A. Mendez, D. Mitnik, J. Miraglia, P.A. Miranda, M. Aguilera, J. Wachter, R. Correa, E. Alves, N. Catarino, and R.C. Da Silva, “Experimental and theoretical results for stopping power of protons in Hafnium”, Poster paper presented at the 24th International Conference on Ion Beam Analysis, Antibes, France (October 2019).
- [158] A.M.P. Mendez, J.E. Miraglia, and D.M. Mitnik, “Cálculos de estructura atómica para procesos colisionales”, Invited talk presented at the Reunión Latinoamericana de Espectroscopía Atómica y sus Actuales Aplicaciones, CIOp, La Plata, Argentina (October 2019).
- [159] A.M.P. Mendez, C.C. Montanari, D.M. Mitnik, and J.E. Miraglia, “Stopping power in heavy atoms, the role of 4f electrons”, Poster paper presented at the 11th International Symposium on Swift Heavy Ions in Matter and 29th International Conference on Atomic Collisions in Solids, Helsinki, Finland (June 2020).
- [160] D.M. Mitnik, F.A. López, and L.U. Ancarani, “Generalized Sturmian Functions in prolate spheroidal coordinates”, Invited talk presented at the Warsaw Molecular Electronic Structure Conference, Warsaw, Poland (September 2020).
- [161] A.L. Frapiccini, D.M. Mitnik, A.F. López, and L.U. Ancarani, “Generalized Sturmian functions in prolate spheroidal coordinates for continuum states”, Poster paper presented at the XXXII International Conference on Photonic, Electronic and Atomic Collisions, Canadá (virtual), (July 2021).

- [162] A.L. Frapiccini and D.M. Mitnik, “Photoionization of hydrogen confined in onion shells with Generalized Sturmians in the time–dependent frame”, Poster paper presented at the XXXII International Conference on Photonic, Electronic and Atomic Collisions, Canadá (virtual), (July 2021).
- [163] A.L. Frapiccini, D.M. Mitnik, A.F. López, and L.U. Ancarani, “Generalized Sturmians functions in prolate spheroidal coordinates for continuum states”, Invited poster presented at the 21th International Symposium on Correlation, Polarization and Ionization in Atomic and Molecular Collisions, Illinois, USA (July 2021).
- [164] D.M. Mitnik, A.L. Frapiccini, and L.U. Ancarani, “Generalized Sturmians Functions in prolate spheroidal coordinates for continuum states of diatomic systems”, Invited talk to be presented at the 2021 Gaseous Electronics Conference, Huntsville, Alabama, USA, (October 2021).
- [165] A. Mendez, J. Peralta, D. Mitnik, and C. Montanari, “Stopping power in heavy targets: lanthanides, transition metals and beyond”, Invited talk presented at the 29th International conference on atomic collisions in solids (ICACS 2022), Helsinki, Finland (June 2022).
- [166] D.M. Mitnik, F. Bivort Haiek, A.M.P. Mendez, and C.C. Montanari, “Machine Learning modelling the IAEA stopping power database”, Invited talk presented at the 29th International conference on atomic collisions in solids (ICACS 2022), Helsinki, Finland (June 2022).
- [167] C. Montanari, A. Mendez, J. Peralta, and D. Mitnik, “Stopping power in very heavy targets: from lanthanides to post- transition metals”, Invited talk presented at the 22th International Conference on Ion Beam Modification of Materials (IBMM-2022), Lisbon, Portugal (July 2022).
- [168] C. Montanari, F. Bivort Haiek, A. Mendez, and D. Mitnik, “Machine learning modeling of the stopping power experimental data”, Invited poster presented at the 22th International Conference on Ion Beam Modification of Materials (IBMM-2022), Lisbon, Portugal (July 2022).
- [169] F. Bivort Haiek, A.M.P. Mendez, D.M. Mitnik, and C.C. Montanari, “Aprendizaje automático en Stopping Power: datos y modelos”, Invited talk presented at the X Conferencia Latinoamericana de Colisiones Inelásticas en la Materia (CLACIM 2022), Salta, Argentina (October 2022).
- [170] F. Bivort Haiek, A.M.P. Mendez, C.C. Montanari, and D.M. Mitnik, “Towards a Machine Learning Prediction of Electronic Stopping Power”, Invited talk presented at the 36th Conference on Neural Information Processing Systems (NeurIPS 2022), New Orleans, USA (November 2022).
- [171] Ling Zhang, YunXin Cheng, Wenmin Zhang, Shigeru Morita, Darío Mitnik, Ailan Hu, Fengling Zhang, Xiaobin Ding, Yang Yang, Ke Yao, and Haiqing Liu, “Further requirement of tungsten atomic data for tungsten influx estimation at EAST plasma edge”, Invited talk presented at the 21st meeting on Atomic Processes in Plasma, Vienna, Austria (May 2023).
- [172] S. Segui, S. Limandri, M. Torres Deluigi, C.C. Montanari, D.M. Mitnik, A. Carreras, G. Castellano, and J. Trincavelli, “M photon self-attenuation across the M5 edge for elements with $70 \leq Z \leq 80$ ”, Poster paper presented at the XXXIII International conference on photonic, electronic and atomic collisions (ICPEAC), Ottawa, Canada (July 2023).

- [173] J. Peralta, A.M.P. Mendez, D.G. Arbó, D.M. Mitnik, and C.C. Montanari, “Stopping power in lanthanides, from Ce to Lu”, Poster paper presented at the XXXIII International conference on photonic, electronic and atomic collisions (ICPEAC), Ottawa, Canada (July 2023).
- [174] S. Segui, C.C. Montanari, and D.M. Mitnik, “M-shell and L-shell ionization cross sections of heavy targets”, Poster paper presented at the XXXIII International conference on photonic, electronic and atomic collisions (ICPEAC), Ottawa, Canada (July 2023).
- [175] J. Trincavelli, A. Carreras, M. Torres Deluigi, C. Montanari, D. Mitnik, S. Limandri, S. Segui, and G. Castellano, “Self-absorption of $M\beta$ photons across the M5 edge for elements with $70 \leq Z \leq 80$ ”, Poster paper presented at the 26th International Conference on Ion Beam Analysis and the 18th International Conference on Particle Induced X-ray Emission (IBA-PIXE2023), Toyama, Japan (October 2023).
- [176] C.C. Montanari, A.M.P. Mendez, D.M. Mitnik, S. Segui, J.M. Fernandez-Varea, and M. Dingfelder, “L and M-shell ionization cross sections of heavy atoms”, Poster paper presented at the 26th International Conference on Ion Beam Analysis and the 18th International Conference on Particle Induced X-ray Emission (IBA-PIXE2023), Toyama, Japan (October 2023).
- [177] C. Montanari, J. Peralta, A. Mendez, F. Bivort-Haiek, D. Mitnik, and P. Dimitriou, “Stopping power in matter, from the IAEA database to theoretical and machine learning predictions”, Invited talk presented at the 26th International Conference on Ion Beam Analysis and the 18th International Conference on Particle Induced X-ray Emission (IBA-PIXE2023), Toyama, Japan (October 2023).
- [178] J. Peralta, A.M.P. Mendez, D.M. Mitnik, and C.C. Montanari, “Theoretical study on the stopping power in lanthanides”, Poster paper presented at the 26th International Conference on Ion Beam Analysis and the 18th International Conference on Particle Induced X-ray Emission (IBA-PIXE2023), Toyama, Japan (October 2023).
- [179] Zhang Ling, Zhang Fengling, Mitnik Darío, Zhang Wenmin, Cheng Yunxin, Hu Ailan, Morita Shigeru, Cao Yiming, Ma Jiuyang, Li Zhengwei, Jie Yinxian, and Liu Haiqing, “Tungsten density and influx evaluations based on the latest atomic data in EAST plasma”, Invited talk presented at the 2nd IAEA Technical Meeting on Collisional-Radiative properties of Tungsten and Hydrogen in Edge Plasma of Fusion Devices, Vienna, Austria (November 2023).