

Bibliography

Barry I. Schneider

December 28, 2016

Articles

- Schneider, Barry I (2015). “The Impact of Heterogeneous Computer Architectures on Computational Physics”. In: *Computing in Science & Engineering* 17.2, pp. 9–13.
- Browne, James C et al. (2014). “Comprehensive, open-source resource usage measurement and analysis for HPC systems”. In: *Concurrency and Computation: Practice and Experience* 26.13, pp. 2191–2209.
- Feist, Johannes, Oleg Zatsarinny, et al. (2014). “Time delays for attosecond streaking in photoionization of neon”. In: *Physical Review A* 89.3, p. 033417.
- Guan, Xiaoxu et al. (2014a). “Alignment and pulse-duration effects in two-photon double ionization of H_2 by femtosecond XUV laser pulses”. In: *Physical Review A* 90.4, p. 043416.
- (2013). “Resonance effects in two-photon double ionization of H_2 by femtosecond XUV laser pulses”. In: *Physical Review A* 88.4, p. 043402.
- Guan, Xiaoxu et al. (2012). “Double-slit interference effect in electron emission from H_2^+ exposed to x-ray radiation”. In: *Physical Review A* 85.4, p. 043419.
- Březinová, Iva, Lee A Collins, et al. (2011). “Wave chaos in the nonequilibrium dynamics of the Gross-Pitaevskii equation”. In: *Physical Review A* 83.4, p. 043611.
- Feist, J, S Nagele, C Ticknor, et al. (2011). “Attosecond two-photon interferometry for doubly excited states of helium”. In: *Physical review letters* 107.9, p. 093005.

- Guan, Xiaoxu, Klaus Bartschat, and Barry I Schneider (2011a). “Alignment effects in two-photon double ionization of H_2 in femtosecond xuv laser pulses”. In: *Physical Review A* 84.3, p. 033403.
- (2011b). “Breakup of the aligned H_2 molecule by xuv laser pulses: A time-dependent treatment in prolate spheroidal coordinates”. In: *Physical Review A* 83.4, p. 043403.
- Guan, Xiaoxu et al. (2011). “Multiphoton ionization of H_2^+ in xuv laser pulses”. In: *Physical Review A* 84.3, p. 033420.
- Pazourek, R et al. (2011). “Universal features in sequential and nonsequential two-photon double ionization of helium”. In: *Physical Review A* 83.5, p. 053418.
- Guan, Xiaoxu, Klaus Bartschat, and Barry I Schneider (2010). “Two-photon double ionization of H_2 in intense femtosecond laser pulses”. In: *Physical Review A* 82.4, p. 041404.
- Schneider, Barry I, Javier Segura, et al. (2010). “A new Fortran 90 program to compute regular and irregular associated Legendre functions”. In: *Computer Physics Communications* 181.12, pp. 2091–2097.
- Feist, Johannes, Renate Pazourek, et al. (2009). “Electron correlation in two-photon double ionization of helium from attosecond to XFEL pulses”. In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 42.13, p. 134014.
- Feist, J et al. (2009). “Probing electron correlation via attosecond xuv pulses in the two-photon double ionization of helium”. In: *Physical review letters* 103.6, p. 063002.
- Guan, Xiaoxu, CJ Noble, O Zatsarinny, Klaus Bartschat, et al. (2009). “ALTDSE: An Arnoldi–Lanczos program to solve the time-dependent Schrödinger equation”. In: *Computer Physics Communications* 180.12, pp. 2401–2409.
- Guan, Xiaoxu, Oleg Zatsarinny, et al. (2009). “A time-dependent B-spline R-matrix approach to double ionization of atoms by XUV laser pulses”. In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 42.13, p. 134015.
- Pazourek, Renate et al. (2009). “Probing shake-up states in He by laser controlled rescattering of XUV photoelectrons”. In: *Verhandlungen der Deutschen Physikalischen Gesellschaft*.
- Feist, J et al. (2008). “Nonsequential two-photon double ionization of helium”. In: *Physical Review A* 77.4, p. 043420.

- Guan, Xiaoxu, Klaus Bartschat, and BI Schneider (2008). “Dynamics of two-photon double ionization of helium in short intense xuv laser pulses”. In: *Physical Review A* 77.4, p. 043421.
- Guan, Xiaoxu, CJ Noble, O Zatsarinny, K Bartschat, et al. (2008). “Time-dependent R-matrix calculations for multiphoton ionization of argon atoms in strong laser pulses”. In: *Physical Review A* 78.5, p. 053402.
- Nygaard, Nicolai, Barry I Schneider, and Paul S Julienne (2006). “Two-channel R-matrix analysis of magnetic-field-induced Feshbach resonances”. In: *Physical Review A* 73.4, p. 042705.
- Schneider, Barry I, Lee A Collins, and SX Hu (2006). “Parallel solver for the time-dependent linear and nonlinear Schrödinger equation”. In: *Physical Review E* 73.3, p. 036708.
- Schneider, Barry I and Lee A Collins (2005). “The discrete variable method for the solution of the time-dependent Schrödinger equation”. In: *Journal of non-crystalline solids* 351.18, pp. 1551–1558.
- Collins, Lee A et al. (2004). “Time-dependent simulations of large-scale quantum dynamics”. In: *Physica Scripta* 2004.T110, p. 408.
- Nygaard, Nicolai, Georg Morten Bruun, et al. (2004). “Vortex line in a neutral finite-temperature superfluid Fermi gas”. In: *Physical Review A* 69.5, p. 053622.
- Schneider, Barry I and Nicolai Nygaard (2004). “Discrete variable representation for singular Hamiltonians”. In: *Physical Review E* 70.5, p. 056706.
- Schneider, BI and Nicolai Nygaard (2002). “Orthogonal functions, discrete variable representation, and generalized gauss quadratures”. In: *The Journal of Physical Chemistry A* 106.45, pp. 10773–10776.
- Bergeman, T et al. (2000). “Bose condensates in a harmonic trap near the critical temperature”. In: *Physical Review A* 61.6, p. 063605.
- Denschlag, J et al. (2000). “Generating solitons by phase engineering of a Bose-Einstein condensate”. In: *Science* 287.5450, pp. 97–101.
- Feder, DL et al. (2000). “Dark-soliton states of Bose-Einstein condensates in anisotropic traps”. In: *Physical Review A* 62.5, p. 053606.
- Feder, David L, Charles W Clark, and Barry I Schneider (1999a). “Nucleation of vortex arrays in rotating anisotropic Bose-Einstein condensates”. In: *Physical Review A* 61.1, p. 011601.
- (1999b). “Vortex stability of interacting Bose-Einstein condensates confined in anisotropic harmonic traps”. In: *Physical review letters* 82.25, p. 4956.

- Schneider, Barry I and David L Feder (1999). “Numerical approach to the ground and excited states of a Bose-Einstein condensed gas confined in a completely anisotropic trap”. In: *Physical Review A* 59.3, p. 2232.
- Collins, LA, BI Schneider, DL Lynch, et al. (1995). “Electron scattering from H_2^+ : Resonances in the Σ and Π symmetries”. In: *Physical Review A* 52.2, p. 1310.
- Schneider, Barry I (1994). “The role of theory in the evaluation and interpretation of cross-section data”. In: *Advances in Atomic, Molecular and Optical Physics Vol 33*, pp. 183–214.
- Walker, RB and BI Schneider (1994). “L2RMAT, L^2 Method of R Matrix Propagation”. In:
- Lynch, DL and BI Schneider (1992). “Molecular photoionization using the complex Kohn variational method”. In: *Physical Review A* 45.7, p. 4494.
- Rescigno, TN and BI Schneider (1992). “Electron-impact excitation of the T and V states of ethylene: An ab initio study”. In: *Physical Review A* 45.5, p. 2894.
- Schneider, BI, TN Rescigno, BH Lengsfeld III, et al. (1991). “Accurate ab initio treatment of low-energy electron collisions with ethylene”. In: *Physical review letters* 66.21, p. 2728.
- Schneider, BI, TN Rescigno, and CW McCurdy (1990). “Resonant vibrational excitation of H_2CO by low-energy electron impact”. In: *Physical Review A* 42.5, p. 3132.
- Kushner, Mark J, David E Hanson, and Barry I Schneider (1989). “Reassessment of the rate constant for electron collision quenching of KrF (B)”. In: *Applied physics letters* 55.24, pp. 2482–2484.
- Rescigno, TN, C William McCurdy, and BI Schneider (1989). “Accurate ab initio treatment of low-energy electron collisions with polyatomic molecules: Resonant electron-formaldehyde scattering”. In: *Physical review letters* 63.3, p. 248.
- Schneider, BI and LA Collins (1989a). “A direct iterative-variational method for solving large sets of linear algebraic equations”. In: *Computer Physics Communications* 53.1-3, pp. 381–392.
- (1989b). “The linear algebraic method for the scattering of electrons from atoms and molecules: Computational techniques”. In: *Computer Physics Reports* 10.2, pp. 49–75.
- Lynch, DL, BI Schneider, and LA Collins (1988). “Studies of Rydberg-valence mixed autoionizing states in NO”. In: *Physical Review A* 38.9, p. 4927.

- Lynch, DL, BI Schneider, LA Collins, et al. (1988). “Vibrationally resolved studies of the $^2\Pi$ photoionization of NO”. In: *Chemical physics letters* 147.6, pp. 529–534.
- Rescigno, TN and BI Schneider (1988a). “Disappearance of continuum exchange integrals from algebraic variational calculations of electron scattering”. In: *Physical Review A* 37.3, p. 1044.
- (1988b). “Electron-impact excitation of the $^3\Sigma_u$ state of H_2 using the complex Kohn method: R dependence of the cross section”. In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 21.22, p. L691.
- Schneider, BI, DL Lynch, and TL Gibson (1988). “Comparison of model and ab initio polarization potentials in e-H scattering”. In: *Physical Review A* 37.9, p. 3590.
- Schneider, BI and TN Rescigno (1988). “Complex Kohn variational method: Application to low-energy electron-molecule collisions”. In: *Physical Review A* 37.10, p. 3749.
- McCurdy, C William, Thomas N Rescigno, and Barry I Schneider (1987). “Interrelation between variational principles for scattering amplitudes and generalized R-matrix theory”. In: *Physical Review A* 36.5, p. 2061.
- Collins, LA and BI Schneider (1986). “Tests of separable expansions of the exchange kernel in inelastic electron collisions”. In: *Physical Review A* 34.2, p. 1564.
- Collins, LA, BI Schneider, CJ Noble, et al. (1986). “Interfering resonances: Avoided crossings of autoionizing states in molecules”. In: *Physical review letters* 57.8, p. 980.
- Schneider, Barry I and Lee A Collins (1986). “Direct iteration-variation method for scattering problems”. In: *Physical Review A* 33.5, p. 2970.
- Padial, NT, LA Collins, and BI Schneider (1985). “Photoionization of ground-state molecular carbon C_2 ”. In: *The Astrophysical Journal* 298, pp. 369–374.
- Schneider, BI (1985). “Application of projection methods to scattering calculations”. In: *Physical Review A* 31.4, p. 2188.
- Schneider, BI and LA Collins (1985). “Electronic excitation of the b $^3\Sigma_u$ state of H_2 by electron impact in the linear algebraic approach”. In: *Journal of Physics B: Atomic and Molecular Physics* 18.24, p. L857.
- Collins, LA and BI Schneider (1984a). “Electronic excitation of atoms and molecules by electron impact in a linear algebraic, separable potential approach”. In: *Journal of Physics B: Atomic and Molecular Physics* 17.7, p. L235.

- Collins, LA and BI Schneider (1984b). “Molecular photoionization in the linear algebraic approach: H₂, N₂, NO, and CO₂”. In: *Physical Review A* 29.4, p. 1695.
- Schneider, Barry I and Lee A Collins (1984). “Comparative study of low-energy $^2\Sigma_g^+$ and $^2\Pi_g$ scattering in molecular nitrogen”. In: *Physical Review A* 30.1, p. 95.
- Collins, LA and BI Schneider (1983). “Linear algebraic approach to electronic excitation of atoms and molecules by electron impact”. In: *Physical Review A* 27.1, p. 101.
- Schneider, BI and LA Collins (1983a). “Ab initio optical potentials applied to low-energy e- H₂ and e- N₂ collisions in the linear-algebraic approach”. In: *Physical Review A* 27.6, p. 2847.
- (1983b). “Examination of the $^1\Sigma_g$ resonances in low-energy e-H₂⁺ collisions”. In: *Physical Review A* 28.1, p. 166.
- Sheppard, Maurice G, Barry I Schneider, and Richard L Martin (1983). “Multireference many-body perturbation theory: Application to O₂ potential energy surfaces”. In: *The Journal of chemical physics* 79.3, pp. 1364–1368.
- Schneider, BI and CA Brau (1982). “Two-and three-body electron attachment in air”. In: *Journal of Physics B: Atomic and Molecular Physics* 15.10, p. 1601.
- Collins, LA and BI Schneider (1981). “Linear-algebraic approach to electron-molecule collisions: General formulation”. In: *Physical Review A* 24.5, p. 2387.
- Schneider, Barry I (1981). “Direct calculation of resonance energies and widths using an R-matrix approach”. In: *Physical Review A* 24.1, p. 1.
- Schneider, Barry I and Lee A Collins (1981). “Linear-algebraic approach to electron-molecule collisions: Separable exchange approximations”. In: *Physical Review A* 24.3, p. 1264.
- LeDourneuf, M, BI Schneider, and PG Burke (1979). “Theory of vibrational excitation and dissociative attachment: an R-matrix approach”. In: *Journal of Physics B: Atomic and Molecular Physics* 12.12, p. L365.
- Schneider, Barry I and Robert B Walker (1979). “The coupled channel R-matrix propagation method”. In: *The Journal of Chemical Physics* 70.5, pp. 2466–2470.
- Schneider, BI, M Le Dourneuf, and Vo Ky Lan (1979). “Resonant vibrational excitation of N₂ by low-energy electrons: an ab initio R-matrix calculation”. In: *Physical Review Letters* 43.26, p. 1926.

- Morrison, Michael A and Barry I Schneider (1977). “Electron-molecule scattering theory: An R-matrix study of low-energy elastic e-N₂ collisions in the static-exchange approximation”. In: *Physical Review A* 16.3, p. 1003.
- Schneider, Barry I (1977). “Pseudostates and low-energy electron-molecule collisions: applications to H₂ and N₂”. In: *Chemical Physics Letters* 51.3, pp. 578–581.
- (1976). “Role of the Born-Oppenheimer approximation in the vibrational excitation of molecules by electrons”. In: *Physical Review A* 14.5, p. 1923.
- Schneider, Barry I and P Jeffrey Hay (1976). “Elastic scattering of electrons from F₂”. In: *Journal of Physics B: Atomic and Molecular Physics* 9.6, p. L165.
- Cohen, James S and Barry Schneider (1975). “Collisions of Ne*(3s) and Ne⁺ with Ne: Excitation and charge transfer, elastic scattering, and diffusion”. In: *Physical Review A* 11.3, p. 884.
- Schneider, Barry (1975). “R-matrix theory for electron-atom and electron-molecule collisions using analytic basis set expansions”. In: *Chemical Physics Letters* 31.2, pp. 237–241.
- Schneider, Barry I (1975a). “R-matrix theory for electron-molecule collisions using analytic basis set expansions. II. Electron-H₂ scattering in the static-exchange model”. In: *Physical Review A* 11.6, p. 1957.
- Cohen, James S and Barry Schneider (1974). “Ground and excited states of Ne₂ and Ne₂⁺. I. Potential curves with and without spin-orbit coupling”. In: *The Journal of Chemical Physics* 61.8, pp. 3230–3239.
- Schneider, Barry (1974). “The use of gaussian basis functions in fredholm calculations of electron-atom and electron-molecule collisions”. In: *Chemical Physics Letters* 25.1, pp. 140–142.
- Schneider, Barry I and James S Cohen (1974). “Potential Curves, Radiative Properties, and Resonant Energy Transfer Cross Sections in Neon”. In: *Radiation research* 59.2, pp. 363–366.
- Schneider, Barry, AM Boring, and James S Cohen (1974). “Interaction potentials for UF₆ with itself and with rare-gas atoms”. In: *Chemical Physics Letters* 27.4, pp. 577–579.
- Schneider, Barry and James S Cohen (1974). “Ground and excited states of Ne₂ and Ne₂⁺. II. Spectroscopic properties and radiative lifetimes”. In: *The Journal of Chemical Physics* 61.8, pp. 3240–3243.
- Schneider, Barry (1973a). “Green’s-Function Theory of Photoionization”. In: *Physical Review A* 7.2, p. 557.

- Schneider, Barry (1973b). “Study of the potential curves of xenon with other rare gas atoms”. In: *Journal of Chemical Physics* 58, pp. 4447–4451.
- Schneider, Barry, Bhagat S Yarlagadda, et al. (1973). “AB-initio effective potentials derived from many-body green’s function theory: Application to Li”. In: *Chemical Physics Letters* 22.2, pp. 381–383.
- Yarlagadda, Bhagat S et al. (1973). “Application of many-body Green’s functions to the scattering and bound-state properties of helium”. In: *Physical Review A* 7.1, p. 146.
- Schneider, Barry and Joel I Krugler (1971). “Low-Energy Electron Scattering in the Random-Phase Approximation”. In: *Physical Review A* 4.3, p. 1008.
- Schneider, Barry (1970). “Inelastic scattering of high-energy electrons from atoms: The helium atom”. In: *Physical Review A* 2.5, p. 1873.
- Schneider, Barry, Howard S Taylor, and Robert Yaris (1970). “Many-body theory of the elastic scattering of electrons from atoms and molecules”. In: *Physical Review A* 1.3, p. 855.
- Schneider, Barry and R Stephen Berry (1969). “Pseudopotential Method for Inelastic Processes in Atoms and Molecules. II. Photoionization of N_2 ”. In: *Physical Review* 182.1, p. 141.
- Schneider, Barry, Michael Weinberg, et al. (1969). “Pseudopotential Method for Inelastic Processes in Atoms and Molecules. I. General Method and Photodetachment of O^- ”. In: *Physical Review* 182.1, p. 133.

In Books

- Schneider, Barry I, Xiaoxu Guan, and Klaus Bartschat (2016). “Chapter Five-Time Propagation of Partial Differential Equations Using the Short Iterative Lanczos Method and Finite-Element Discrete Variable Representation”. In: vol. 72. Academic Press, pp. 95–127.
- Feist, Johannes, Stefan Nagele, et al. (2012). “Attosecond pump-probe of doubly excited states of helium through two-photon interferometry”. In: *Multiphoton Processes and Attosecond Physics*. Springer Berlin Heidelberg, pp. 187–191.
- Schneider, Barry I, Johannes Feist, et al. (2011). “Recent Advances in Computational Methods for the Solution of the Time-Dependent Schrödinger Equation for the Interaction of Short, Intense Radiation with One and Two Electron Systems”. In: *Quantum Dynamic Imaging*. Springer New York, pp. 149–208.

- Schneider, Barry I (1995). “An R-matrix approach to electron-molecule collisions”. In: *Computational Methods for Electron Molecule Collisions*. Springer US, pp. 213–226.
- Schneider, BI and LA Collins (1984a). “Polarization and Correlation Effects in Low Energy Electron Molecule Collisions”. In: *Wavefunctions and Mechanisms from Electron Scattering Processes*. Springer Berlin Heidelberg, pp. 55–60.
- Le Dourneuf, M, Vo Ky Lan, and BI Schneider (1983). “Recent Developments of the Frame Transformation Theory of Electron Molecule Processes”. In: *Electron-Atom and Electron-Molecule Collisions*. Springer US, pp. 135–160.
- Schneider, Barry I (1983). “The R-Matrix Theory of Electron-Molecule Scattering”. In: *Electron-Atom and Electron-Molecule Collisions*. Springer US, pp. 121–133.
- Schneider, Barry (1979). “Discussion on Electron-Molecule Scattering”. In: *Electron-Molecule and Photon-Molecule Collisions*. Springer US, pp. 141–149.
- Schneider, Barry I (1979a). “The R-Matrix Method for Electron-Molecule Scattering”. In: p. 77.
- Temkin, Aaron (1979). “Roundtable on Numerical Methods”. In: *Electron-Molecule and Photon-Molecule Collisions*. Springer US, pp. 53–57.
- Schneider, BI and JS Cohen (1973). “Scattering and Radiative Processes in the Low Lying States of Ne_2 and Ne_2^+ ”. In: *Physics of Electronic and Atomic Collisions: ICPEAC VIII*. Vol. 1, p. 49.

Books

- Rescigno, Thomas, Vincent McKoy, and Barry Schneider (1979a). *Electron-molecule and Photon-molecule Collisions*. Plenum Press New York.
- Schneider, Barry I (1979b). *The R-Matrix Method for Electron-Molecule Scattering: Theory and Computation*. Springer US, pp. 77–86.

Conferences

- Schneider, Barry I (2016). “How Novel Algorithms and Access to High Performance Computing Platforms are Enabling Scientific Progress in Atomic

- and Molecular Physics”. In: *Journal of Physics: Conference Series*. Vol. 759. 1. IOP Publishing, p. 012002.
- Schneider, Barry I, Klaus Bartschat, and Xiaoxu Guan (2016). “Time Propagation of Partial Differential Equations Using the Short Iterative Lanczos Method and Finite-Element Discrete Variable Representation: An Experiment Using the Intel Phi Coprocessors”. In: *Proceedings of the XSEDE16 Conference on Diversity, Big Data, and Science at Scale*. ACM, p. 4.
- Schneider, Barry (2015). “Solving the Time Dependent Schroedinger Equation using the FEDVR/SIL Method”. In: *APS Meeting Abstracts*. Vol. 1, p. 23006.
- Březinová, Iva, Joachim Burgdörfer, et al. (2014). “Elastic scattering of a Bose-Einstein condensate at a potential landscape”. In: *Journal of Physics: Conference Series*. Vol. 488. 1. IOP Publishing, p. 012032.
- Guan, Xiaoxu, Klaus Bartschat, Barry Schneider, et al. (2014). “Two-photon double-ionization of the H₂ molecule in light perpendicular to the internuclear axis: effects of pulse duration”. In: *APS Division of Atomic, Molecular and Optical Physics Meeting Abstracts*. Vol. 1, p. 1141.
- Guan, Xiaoxu et al. (2014b). “Effects of autoionizing states on two-photon double ionization of the H₂ molecule”. In: *Journal of Physics: Conference Series*. Vol. 488. 1. IOP Publishing, p. 012024.
- Schneider, Barry I, Klaus R Bartschat, et al. (2014). “Time-Dependent Computational Methods for Matter Under Extreme Conditions”. In: *Advances in Chemical Physics, Volume 157: Proceedings of the 240 Conference: Science’s Great Challenges*. John Wiley & Sons, p. 195.
- Furlani, Thomas R, Barry L Schneider, et al. (2013). “Using XDMoD to facilitate XSEDE operations, planning and analysis”. In: *Proceedings of the Conference on Extreme Science and Engineering Discovery Environment: Gateway to Discovery*. ACM, p. 46.
- Guan, Xiaoxu, Klaus Bartschat, Lars Koesterke, et al. (2013). “Two-photon double-ionization of the H₂ molecule: effects of pulse duration”. In: *APS Division of Atomic, Molecular and Optical Physics Meeting Abstracts*. Vol. 1, p. 6006.
- Furlani, Thomas R, Barry I Schneider, et al. (2012). “Data analytics driven cyberinfrastructure operations, planning and analysis using XDMoD”. In: *submitted SC12 Conference, Salt Lake City, Utah*.
- Guan, Xiaoxu, Klaus Bartschat, and Barry I Schneider (2012a). “Alignment dependence in the breakup of the H₂ molecule by an xuv laser pulse”.

- In: *Journal of Physics: Conference Series*. Vol. 388. 3. IOP Publishing, p. 032032.
- Guan, Xiaoxu, Klaus Bartschat, and Barry I Schneider (2012b). “Benchmark calculations for multi-photon ionization of the hydrogen molecule and the hydrogen molecular ion by short-pulse intense laser radiation”. In: *Proceedings of the 1st Conference of the Extreme Science and Engineering Discovery Environment: Bridging from the eXtreme to the campus and beyond*. ACM, p. 17.
- (2012c). “Breakup of the H₂ molecule by xuv laser pulses: A time-dependent treatment in prolate spheroidal coordinates”. In: *Journal of Physics: Conference Series*. Vol. 388. 3. IOP Publishing, p. 032033.
- (2012d). “Effect of moving nuclei in multiphoton ionization of the H₂⁺ ion”. In: *APS Division of Atomic, Molecular and Optical Physics Meeting Abstracts*.
- Mercurio, Michael et al. (2012). “A hierarchical tree code based approach for efficient conjunction analysis”. In: *AIAA/AAS Astrodynamics Specialist Conference, Minneapolis, Minnesota*.
- Secor, Ethan et al. (2012a). “Double-slit interference in H₂⁺ subjected to ultrashort x-ray radiation”. In: *APS Division of Atomic, Molecular and Optical Physics Meeting Abstracts*.
- (2012b). “Multi-photon ionization of the H₂ molecule by an xuv laser pulse”. In: *Journal of Physics: Conference Series*. Vol. 388. 3. IOP Publishing, p. 032076.
- Simsarian, John E et al. (2000). “Non-linear atom optics: solitons and four-wave-mixing in a Bose-Einstein condensate”. In: *Nonlinear Optics: Materials, Fundamentals and Applications*. Optical Society of America, WC2.
- Collins, LA and BI Schneider (1988). “Electronic and Atomic Collisions, HB Gilbody, WJt. Newell, FM. Read. A CM. Smith eds.)© Elsevier Science Publishers BV, 1988”. In: *Electronic and atomic collisions: invited papers of the XV International Conference on the Physics of Electronic and Atomic Collisions, Brighton, United Kingdom, 22-28 July 1987*. North Holland, p. 57.
- Schneider, BI and LA Collins (1984b). “Resonances in Electron-Scattering and Photoionization”. In: *Abstracts of Papers of the American Chemical Society*. Vol. 187. APR. Amer Chemical Soc 1155 16th St, NW, Washington, DC 20036, 1-PHYS.
- (1980). “A Linear Algebraic Approach to Low-Energy Electron-Molecule Collisions”. In: *Bulletin of the American Physical Society*. Vol. 25. 9. Amer

- Inst Physics Circulation Fulfillment Div, 500 Sunnyside Blvd, Woodbury, NY 11797-2999, pp. 1113–1113.
- Brau, CA et al. (1979). “Dissociative Attachment of Electrons to F_2 ”. In: *Bulletin of the American Physical Society*. Vol. 24. 2. Amer Inst Physics Circulation Fulfillment Div, 500 Sunnyside Blvd, Woodbury, NY 11797-2999, pp. 134–134.
- Schneider, Barry I (1978). “The R-matrix method: Applications to electron-molecule collisions”. In: *Proceedings of the 10th international conference on the physics of electronic and atomic collisions*.
- Morrison, MA and BI Schneider (1976). “Static-Exchange Calculations of $e-N_2$ Scattering in R-Matrix Method”. In: *Bulletin of the American Physical Society*. Vol. 21. 10. Amer Inst Physics Circulation Fulfillment Div, 500 Sunnyside Blvd, Woodbury, NY 11797-2999, pp. 1258–1258.
- KHARE, SP et al. (1975). “Photoelectron Angular Distributions”. In: *Electronic and atomic collisions: abstracts of papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions, Seattle, 24-30 July, 1975*. Vol. 9. University of Washington Press.
- Schneider, B and PJ Hay (1975). “Elastic-Scattering of Electrons from F_2 in Static-Exchange Approximation-R-Matrix Calculation”. In: *Bulletin of the American Physical Society*. Vol. 20. 12. Amer Inst Physics Circulation Fulfillment Div, 500 Sunnyside Blvd, Woodbury, NY 11797-2999, pp. 1510–1511.
- Schneider, BI (1975b). “R-Matrix Approach to Electron-Molecule Scattering”. In: *Physics of Electronic and Atomic Collisions: ICPEAC IX*. Vol. 1, p. 559.

Technical Reports

- Walker, RB and BI Schneider. *L2RMAT; coupled channel inelastic scattering.*[CDC7600, CYBER175; FORTRAN IV]. Tech. rep. Argonne National Lab., IL (USA).
- Schneider, BI, TN Rescigno, C William McCurdy, et al. (1989). *New developments in the ab initio treatment of low energy electron collisions with molecules*. Tech. rep. Los Alamos National Lab., NM (USA).
- Collins, LA and BI Schneider (1982). *A linear algebraic approach to electron-molecule collisions*. Tech. rep.

Rescigno, Thomas, Vincent McKoy, and Barry Schneider (1979b). *Proceedings of the Asilomar Conference on Electron-Molecule and Photon-Molecule Collisions (1st) Held on 1-4 August 1978 at Pacific Grove, California*. Tech. rep. DTIC Document.

Miscellaneous

Walker, Robert B and Barry I Schneider (1975). *An L^2 Approach to R-Matrix Propagation*.

Cohen, JS and Barry Schneider (1973). *Low-Lying States of Ne_2 and Ne_2^+* .

Schneider, Barry L (1968). *A Pseudopotential Approach to the Theory of Inelastic Processes in Molecular Gases*.