

2/26/08

WALTER R. JOHNSON

**FRANK M. FREIMANN
CHAIR OF PHYSICS**

TENURED

**AT NOTRE DAME
SINCE 1958**

BORN: February 25, 1929
Richmond, Virginia

University of Michigan; 1952; B.S.E.
University of Michigan; 1953; M.B.
University of Michigan; 1957; Ph.D.

Instructor, University of Michigan, 1957-1958.
Assistant Professor, University of Notre Dame, 1958-1963.
Associate Professor, University of Notre Dame, 1963-1967.
Professor, University of Notre Dame, 1967-present.
Frank M. Freimann Chair of Physics, University of Notre Dame, 1992-present.

Summer Visitor, Brookhaven National Laboratory, 1973-1974.
Associate, Harvard College Observatory, 1975-1976.
Astronome, Observatoire de Paris, Meudon, France, 1979.
Faculty Research Participant, Argonne National Laboratory, 1978-1980.
Guest Research Scientist, Argonne National Laboratory, September-January, 1980-1981.
Acting Chairman, Department of Physics, University of Notre Dame, 1981-1982.
Chairman, Department of Physics, University of Notre Dame, 1982-1985.
Alexander von Humboldt Senior U.S. Scientist Award, University of Frankfurt, Frankfurt, Germany, on leave, 1982-1983.
Member, Subcommittee for Review of the National Science Foundation Theoretical Physics Program, 1984.
Member, Executive Committee, Division of Electron and Atomic Physics, American Physical Society, 1984-1985.
Principal Investigator, National Science Foundation Grants in Theoretical Physics, "Applications of Quantum Electrodynamics to Processes of Current Interest in Atomic and Nuclear Physics," 1971-1985.
Principal Investigator, National Science Foundation Grants in Theoretical Physics, "Weak Interactions in Atomic Physics," 1985-present.
Member, National Science Foundation Panel to Recommend the Presidential Young Investigators Award in Physics, October, 1986.
Vice-Chairperson, Division of Atomic, Molecular and Optical Physics, American Physical Society, 1987-1988.
Chairman, Program Committee, Division of Atomic, Molecular and Optical Physics, American Physical Society, 1987.
Member, Committee to Select the Recipient of the Davison-Germer Prize in Physics, 1988.

Coordinator, Atomic Physics Program, Institute for Theoretical Physics, University of California, Santa Barbara, on leave, January-July, 1988.

Chairperson, Division of Atomic, Molecular and Optical Physics, American Physical Society, 1988-1989.

Member, Advisory Board, Institute for Theoretical Atomic and Molecular Physics, Harvard University, 1989-1992.

Research Scientist, Centre d'Etudes Nucleaires de Grenoble, Grenoble, France, on leave, June-December, 1989.

Organizer, Workshop on "Relativistic Many-Body Theory" Grenoble, France, October, 1989.

Member, DOE Advisory Committee on Frontiers in Atomic Physics, March-May, 1990.

Member, DOE Panel to Review Atomic Physics Program, Oak Ridge National Laboratory, April, 1990.

Guest Scientist, ITAMP, Harvard University, June, 1990.

Research Scientist, Lawrence Livermore National Laboratory, July-August, 1990.

Guest Scientist, Centre d'Etudes Nucleaires de Grenoble, Grenoble, France, May-June, 1991.

Invited Guest, Institute for Atomic Theory, Taipei, Taiwan, July, 1991.

Member, Review Panel for Institute for Theoretical Atomic and Molecular Physics, Harvard University, October, 1991.

Consultant, Lawrence Livermore National Laboratory, February, 1992.

Participant, Program on "Fundamental Symmetries in Nuclei," Institute for Nuclear Theory, University of Washington, Seattle, April-May, 1992.

Advisory Committee, Nobel Symposium No. 85, Saltsjöbaden, Sweden, June-July, 1992.

Consultant, Lawrence Livermore National Laboratory, July-August, 1992.

Visiting Professor, University of New South Wales, Sydney, Australia, March, 1993.

Participant, Program on "Nuclear Physics in Atoms and Molecules," Institute for Nuclear Theory, University of Washington, Seattle, April-May, 1993.

Guest Scientist, Centre d'Etudes Nucleaires de Grenoble, Grenoble, France, May-June, 1993.

Consultant, Lawrence Livermore National Laboratory, June-August, 1993.

International Advisory Committee for Second International Conference on Computational Physics (ICCP-2) Beijing, September, 1993.

Member of NSF Review Board for Institute for Theoretical Atomic and Molecular Physics, Harvard University, October, 1993.

Consultant, Lawrence Livermore National Laboratory, June-July 1994.

Member of DOE Computational Science Research Review and Assessment Committee, June, 1994.

Consultant, Lawrence Livermore National Laboratory, May-June, 1994.

Participant, Program on "Physics with Multiply Charged Ions," NATO Advanced Studies Institute, Cargèse, Corsica, July, 1994.

Alexander von Humboldt Senior Scientist Award (reinvitation), Technical University of Dresden, Dresden, Germany, October-December, 1994.

Consultant, Lawrence Livermore National Laboratory, May-June, 1995.

2/26/08

Participant, Program on "Physics Beyond the Standard Model," Institute for Nuclear Theory, University of Washington, Seattle, June- July, 1995.

Member of Editorial Board, Physical Review A, 1996.

Participant in "Topical Group on Weak Interactions" ITAMP, Harvard University, February-March, 1996.

Participant in U.S.-India Workshop on Radiation Physics, West Bengal, India, March 15-28, 1996

Participant in Research Workshop on "Electron Interactions in Atoms and Molecules" Canberra, June 10-30, 1996

Consultant, Lawrence Livermore National Laboratory, July, 1996.

Participant in Third UNAM-Cray Supercomputing Conference, Mexico City, August 12-17, 1996

Participant in Workshop on "New Developments in Electron-Atom Scattering" Harvard University, October 24-26, 1996.

Member of Editorial Board, Physical Review A, 1997.

Consultant, Lawrence Livermore National Laboratory, July, 1997.

Participant in "Third All-Asia Conference in Atomic Physics" Taipei, Taiwan, August 9-15, 1997.

Participant in Sanibel Conference, February, 1998.

Participant in Conference on "Atomic Processes in Plasmas" Auburn University, April, 1998.

Session Chairman, "International Conference on Atomic Physics" Windsor, Canada, July, 1998.

Participant in Conference on "Frontier Tests of QED and Physics of the Vacuum" Sandanski, Bulgaria, July, 1998.

Consultant, Lawrence Livermore National Laboratory, August, 1998.

Member of Editorial Board, Physical Review A, 1998.

Participant in Conference on "Highly-Charged Ions" Monterrey, August, 1998.

Participant in "Symposium in Honor of Maryvonne Ledourneuf" Paris, October, 1998.

Participant in "Workshop on the Role of Atomic Theory," Harvard, February 26-27, 1999.

Participant in 39th Sanibel Symposium, St. Augustine, February 27-March 5, 1999.

Member of Chemical Sciences Review Committee, Lawrence Berkeley National Laboratory, Berkeley, April 6, 1999.

Participant in "Workshop on Tests of Fundamental Symmetries," Seattle, July 6-10, 1999.

Gordon Research Conference on "Dynamics of Simple Systems," Newport RI, July 11-16, 1999.

Participant in "International Symposium on Atomic Physics (ISAP'99)," Hanoi, August 3-5, 1999.

Participant in Alexander von Humboldt Colloquium," Chicago, October 1-3, 1999.

Consultant, Lawrence Livermore National Laboratory, August, 1999.

Member of Editorial Board, Physical Review A, 1999.

2/26/08

- Participant in “12th APS Topical Conference on Atomic Processes in Plasmas,” University of Nevada, Reno, March 19-23, 2000.
- Participant in “Workshop on Computational Challenges in Atomic and Molecular Physics,” ITAMP, Harvard, May 4-6, 2000.
- Participant in “Alexander von Humboldt Association of America,” 3rd National Meeting, Atlanta, June 2-4, 2000.
- Participant in “Workshop on Wave Functions and QED Effects in Few Electron Atoms,” ITAMP, Harvard, July 17-21, 2000.
- Consultant, Lawrence Livermore National Laboratory, August, 2000.
- Participant in “International Workshop on Photoionization (IWP2000),” Carry le Rouet, France, October 8-12, 2000.
- Participant in “The Fourth Asian International Seminar on Atomic and Molecular Physics,” Nankang, Taipei, Taiwan, October 13-18, 2000.
- Gordon Godfrey Fellowship, University of New South Wales, Sydney, Australia, November 1-30, 2000.
- Alexander von Humboldt Senior Scientist Award (reinvitation), Technical University of Dresden, Dresden, Germany, April 15-June 15, 2001.
- Consultant Lawrence Livermore National Laboratory, 1988-present.
- Member of Editorial Board, Physical Review A, 1992-2004.
- Participant in “11th International Conference on Radiative Properties of Hot Dense Matter,” Santa Barbara, CA, 1-5 November 2004.
- Gordon Godfrey Fellowship, University of New South Wales, Sydney, March 10 – April 10, 2005.
- Scientific Consultant to CEA/DAM, Île de France, Bruyères-le-Châtel, France, June 15 – August 1, 2005.
- Participant in “Workshop on Computational Atomic Physics,” Santa Fe, NM, June 28-30, 2006.
- Participant in conference “20 Years of Spectroscopy with the Electron Beam Ion Trap,” Berkeley, CA, November 12-16, 2006.
- Participant in the conference “Cross-talks in the physics of many-body systems,” Institute Henri Poincaré, Paris, December 6-8, 2006.

Invited Addresses

American Physical Society, San Francisco, January, 1978.

Workshop on New Directions in Atomic Spectroscopy, National Bureau of Standards,
Gaithersburg, MD, April, 1978.

Workshop on Inner Shell Photoionization, University of Paris, Orsay, France, May-June, 1978.

Keynote Address, Nobel Symposium on Many-Body Effects in Atoms, Aspensgarten, Sweden,
June, 1979.

GSI, Darmstadt, Germany, July, 1979.

CENG, Grenoble, France, July, 1979.

Daresbury Laboratory, Daresbury, England, July, 1979.

6th International Conference on Electronic and Atomic Collisions, Kyoto, Japan, August, 1979.

Sanibal Symposium, Palm Coast, FL, March, 1980.

American Physical Society, Washington, D.C., April, 1980.

Symposium on Molecular Spectroscopy, Ohio State University, June, 1980.

Optical Society of America, Chicago, IL, August, 1980.

Physics Colloquium, University of Chicago, December, 1980.

Physics Colloquium, Louisiana State University, March, 1981.

Workshop on Photoionization from Excited States, Boulder, CO, April, 1981.

Physics Colloquium, Michigan Technological University, May, 1981.

NATO Summer School on Quantum-Electrodynamics of Strong Fields, Lahnstein, Germany,
June, 1981.

Gordon Research Conference on Atomic Physics, Wolfsborough, NH, July, 1981.

National Bureau of Standards, Gaithersburg, MD, January, 1982.

Lithuanian Academy of Sciences, Vilnius, Lithuania, U.S.S.R., May, 1982.

Ioffe Institute, Leningrad, U.S.S.R., June, 1982.

Institute of Spectroscopy, Moscow, U.S.S.R., June, 1982.

4th International Conference on Quantum Chemistry, Uppsala, Sweden, June, 1982.

Symposium on Relativistic Effects in Quantum Chemistry-82, Abo, Finland, June, 1982.

Albert-Ludwigs University, Freiburg, Germany, July, 1982.

Fritz Haber Institute, Berlin, Germany, July, 1982.

8th International Conference on Atomic Physics, Göteborg, Sweden, August, 1982.

Physics Colloquium, University of Frankfurt, Frankfurt, Germany, October, 1982.

Physics Colloquium, University of Kassel, Kassel, Germany, October, 1982.

Physics Colloquium, Zeeman Institute, University of Amsterdam, Amsterdam, Holland,
November, 1982.

Physics Colloquium, Gesellschaft für Schwerionenforschung (GSI), Darmstadt, Germany,
December, 1982.

Physics Colloquium, Max Planck Institute, University of Heidelberg, Heidelberg, Germany,
March, 1983.

Physics Colloquium, University of Kaiserslauten, Kaiserslauten, Germany, May, 1983.
Physics Colloquium, University of Innsbruck, Innsbruck, Austria, May, 1983.
Physics Colloquium, University of Münster, Münster, Germany, May, 1983.
Physics Colloquium, Technical University of Munich, Munich, Germany, June, 1983.
Physics Colloquium, University of Giessen, Giessen, Germany, July, 1983.
Physics Colloquium, University of Hanover, Hanover, Germany, July, 1983.
International Conference on Electronic and Atomic Collisions, Berlin, Germany, July, 1983.
Physics Colloquium, Los Alamos National Laboratory, Los Alamos, NM, February, 1984.
Workshop on New Directions in Soft X-Ray Photoionization, Asilomar, CA, April, 1984.
Keynote Address, Workshop on Theoretical Atomic Physics, Taipei, Taiwan, June, 1984.
Workshop on Autoionization Resonances, Argonne National Laboratory, Argonne, IL, May, 1985.
Workshop on Relativistic Atomic Theory, National Bureau of Standards, Gaithersburg, MD, May, 1985.
Annual Meeting, Division of Electron and Atomic Physics, American Physical Society, Norman, OK, May, 1985.
Physics Colloquium, University of Innsbruck, Innsbruck, Austria, June, 1985.
Physics Colloquium, l'Ecole Normale Supérieure, Paris, France, June, 1985.
Several Lectures, Workshop on Relativistic Atomic Physics, Aspen, CO, August, 1985.
Adriatico Research Conference on Relativistic Many-Body Theory, Trieste, Italy, July, 1986.
International Conference on Supercomputer Applications, Amsterdam, Holland, October, 1986.
Physics Colloquium, Auburn University, Auburn, AL, November, 1986.
Physics Colloquium, University of Colorado, Boulder, CO, January, 1987.
Conference on "Supercomputer Applications to Atomic-Molecular and Optical Physics," Argonne National Laboratory, Argonne, IL, March, 1987.
Three Lectures, International Summer School on Physics, Nathiagali, Pakistan, June-July, 1987.
Gordon Research Conference on Atomic Physics, Wolfsborough, NH, July, 1987.
Institute for Theoretical Physics, University of California, Santa Barbara, CA, February, 1988.
Physics Colloquium, University of Southern California, Los Angeles, CA, April, 1988.
Physics Colloquium, University of Oregon, Eugene, OR, May, 1988.
Symposium to Celebrate 60th Birthday of Alexander Delgarno, Harvard University, Cambridge, MA, June, 1988.
11th International Conference on Atomic Physics, Paris, France, July, 1988.
Institute for Spectroscopy, Moscow, U.S.S.R., September, 1988.
Lebedev Institute, Moscow, U.S.S.R., September, 1988.
Ioffe Physical Technical Institute, Leningrad, U.S.S.R., September, 1988.
Institute of Physics, Novosibirsk, U.S.S.R., September, 1988.
Principal Address, 1st Asian Conference on Atomic and Molecular Physics, Taipei, Taiwan, November, 1988.
Four Lectures, Summer School for Computational Physics, Sewanee, TN, July, 1989.
Third Atomic Data Workshop, Mendon, France, September, 1989.

2/26/08

Zeeman Laboratory, University of Amsterdam, Amsterdam, Holland, September, 1989.

Clarendon Laboratory, Oxford University, Oxford, England, November, 1989.

Institute for Theoretical Physics, University of Innsbruck, Innsbruck, Austria, November, 1989.

Invited Lecture, Annual Meeting of Division of Atomic, Molecular and Optical Physics,
Monterey, CA, May, 1990.

Invited Lecture, Symposium to Celebrate Joseph Sucher's 60th Birthday, University of
Maryland,

Invited Lecture, Workshop on Synchrotron Radiation, Taipei, Taiwan, July, 1991.

Invited Lecture, First International Conference on Atomic and Molecular Dynamics, Taipei,
Taiwan, July, 1991.

International Conference on Electronic and Atomic Collisions, Brisbane, Australia, July, 1991.

Invited Lecture, Workshop on "Emission and Absorption of Radiation by Structured Particles,"
Harvard, October, 1991.

Sanibel Symposium, St. Augustine, Florida, March, 1992.

Seminar, Institute for Nuclear Theory, Seattle, April, 1992.

DAMOP Annual Meeting, Chicago, May, 1992.

Invited Principal Address, Nobel Symposium No. 85, Saltsjöbaden, Sweden, June, 1992.

Panel on Future Challenges for Atomic Structure Theory, Saltsjöbaden, Sweden, June, 1992.

Invited Lecture, Physics Division, Lawrence Livermore National Laboratory, Livermore, CA,
July, 1992.

Colloquium, Department of Physics, University of Nevada at Las Vegas, Las Vegas, NV,
September, 1992.

Colloquium, Department of Physics, University of Western Ontario, London, Canada,
October, 1992.

Colloquium, Department of Physics, University of New South Wales, Sydney, Australia,
March, 1993.

Invited Address, Workshop on "The Application of Many-body Theory to Atomic Physics," in
memory of Professor Hugh P. Kelly, Harvard, April, 1993.

Invited Lecture, Gordon Research Conference on "On Dynamics of Simple Systems in
Chemistry and Physics," Proctor Academy, Andover, NH, August, 1993.

Invited Lecture on "B-Splines in Atomic Structure Calculations," at Atomic Collisions: A
Symposium in Honor of Christopher Bottcher (1945-1993), Oak Ridge, March 3-4, 1994.

Three Lectures on "Correlation and QED Effects" at NATO Advanced Studies Institute,
Cargèse, Corsica, July 18-30, 1994.

Colloquium on "Weak Interactions in Atoms," Technical University of Dresden, Dresden,
Germany, November 24, 1994.

Colloquium on "Weak Interactions in Atoms," Illinois Institute of Technology, Chicago,
February 22, 1995.

Seminar "Calculation of Parity Violation in Thallium" ITAMP, Harvard University,
March 6, 1996.

Invited Lecture on , "Correlation Effects in Low-Energy Photoexcitation, Photoionization and
Elastic Scattering" North Bengal University, Siliguri, India, Mar 17, 1996.

- Two Invited Lectures on , “Gauge Invariance” and “Many-Body Effects in Scattering” at Indo-US Workshop on Radiation Physics, Darjeeling, India, Mar, 1996.
- Three invited lectures on “Relativistic Effects in Electron-Atom Scattering” Australian National University, Canberra, June 10-30, 1996.
- Invited lecture on “Relativistic many-body calculations of atomic energy levels and transition probabilities” at Third UNAM-Cray Supercomputing Conference, Mexico City, Aug 13, 1996.
- Invited lecture on “Correlation Effects in Photoionization and Elastic Scattering “ at Workshop on New Developments in Electron-Atom Scattering ITAMP, Harvard University, Oct 25, 1996.
- Seminar on “Relativistic Calculations of Energies and Transition Rates in Heliumlike Ions ,” JILA, University of Colorado, Mar. 6, 1997.
- Seminar on “All-Order Many-Body Methods in Atomic Physics,” Physics Division, Lawrence Livermore National Laboratory, July 15, 1997.
- Invited lecture on “Atomic Tests of Fundamental Symmetries” at Third All-Asia Conference in Atomic Physics, Taipei, Taiwan, Aug 10, 1997.
- Invited lecture on “All-order methods in Relativistic Atomic Structure Calculations” at Conference on Atomic Processes in Plasmas, Auburn University, April, 1998.
- Invited lecture on “QED Effects on Inner Shells of Heavy Atoms” at Conference on Frontier Tests of QED and Physics of the Vacuum, Sandansky, Bulgaria, July, 1998.
- Invited lecture on “Applications of RPA to Photoionization of Ne” at Symposium in honor of Maryvonne Ledourneuf, Paris, October, 1998.
- Invited talk on "The Role of Atomic Theory in Weak-Interaction Physics" at the Workshop on the Role of Atomic Theory, Harvard, Feb 26-27, 1999.
- Invited talk on "All-Order Methods in Relativistic Atomic Structure Theory" at the Gordon Research Conference on Dynamics of Simple Systems, Newport RI, Jul 11-16, 1999.
- Invited talk on "All-Order Methods in Relativistic Atomic Structure Theory" at the International Symposium on Atomic Physics (ISAP'99), Hanoi, Aug 3-5, 1999.
- Colloquium, "Atomic-Physics Tests of QED and the Standard Model," Department of Physics, University of Tennessee, Nov 8, 1999.
- Invited Lecture “Computational Issues in Relativistic MBPT Studies of Atomic Structures,” at Workshop on Computational Challenges in Atomic and Molecular Physics, ITAMP, Harvard, May 4-6, 2000.
- Invited Lecture “Relativistic CI Studies for Heliumlike Ions,” at Workshop on Wave Functions and QED Effects in Few Electron Atoms, ITAMP, Harvard, July 17-21, 2000.
- Invited Lecture “Relativistic CI Studies for Heliumlike Ions,” at The Fourth Asian International Seminar on Atomic and Molecular Physics, Relativistic CI Studies for Heliumlike Ions, Nankang, Taipei, Taiwan, October 13-18, 2000.
- Colloquium, “Atomic-Physics Tests of Quantum Electrodynamics & the Standard Model,” Department of Theoretical Physics, University of New South Wales, Sydney, Australia, November 16, 2000.

- Colloquium, “Parity Nonconservation in Cesium: Is the Standard Model in Trouble?”
Department of Theoretical Physics, Technical University of Dresden, Dresden, Germany, May 11, 2001.
- Invited talk, “An Average-Atom Model,” Joint US-France Workshop on Warm Dense Matter, Paris, France, April 10, 2002.
- Invited talk, “Status Report on Atomic PNC Experiments and Theory,” at the Symposium on Fundamental Symmetries at the joint meeting of the Division of Particles and Fields and the Division of Atomic, Molecular, and Optical Physics, American Physical Society, Williamsburg, CA, May 28, 2002.
- Seminar “Precise Relativistic Many Body Perturbation Theory Calculations for Alkali Atoms (Singles-Doubles Equations with Applications),” at Petersburg Nuclear Physics Institute, Gatchina, Russia, June 28, 2002.
- Invited Talk, “Weak Charge of ^{133}Cs ,” at the International Conference on Precision Physics of Simple Atomic Systems, St. Petersburg, Russia, July 1, 2002.
- Plenary Talk, “Status of Atomic PNC: Experiment/Theory,” at the International Conference on Atomic Physics, Massachusetts Institute of Technology, Cambridge, MA, 28 July – 2 August, 2002.
- Colloquium, “Atomic Parity Nonconservation: Status of Experiment/Theory,” Department of Physics, University of Nevada at Reno, September 6, 2002.
- Seminar, “PNC in Atoms and the Electron EDM,” Physics Division, Lawrence Livermore National Laboratory, Livermore, California, September 10, 2002.
- Seminar, “Nuclear spin-dependent contributions to atomic PNC: combined effect of coherent Z exchange and the hyperfine interaction,” Institute for Nuclear Theory, University of Washington, Seattle, November 20, 2002.
- Seminar, “Nuclear spin-dependent contributions to atomic PNC,” Los Alamos National Laboratory, Los Alamos, New Mexico, February 27, 2003.
- Invited Talk, “Optical Properties of Plasmas Based on an Average-Atom Model,” at the 11th International Conference on Radiative Properties of Hot Dense Matter, Santa Barbara, California, November 1-5, 2004.
- Short Course on Relativistic Many-Body Methods, “One Electron Dirac Equation and the Brown-Ravenhall Many-Electron Hamiltonian,” “Relativistic Many-Body Perturbation Theory,” and “Relativistic Coupled-Cluster Theory,” CEA/DAM, Île de France, Bruyères-le-Châtel, France, July 1, July 7, July 8, 2005.
- Seminar entitled “Optical Properties of Plasmas Based on an Average-Atom Model,” Department of Theoretical Physics, University of New South Wales, Sydney, March 30, 2005.
- Invited talk entitled “B-Spline Basis Sets in Relativistic Many-Body Calculations,” at the “Workshop on Computational Atomic Physics,” Santa Fe, NM, June 28-30, 2006.

2/26/08

Two lectures at the conference Cross-talks in the physics of many-body systems entitled
“Many-Body Methods Applied to Parity Nonconserving Transitions in Atoms: The
Weak Charge and Anapole Moment of ^{133}Cs .”

(a) Atomic Theory Considerations,

(b) Weak Interaction Considerations.”

Institute Henri Poincaré, Paris, December 6-8, 2006.

List of Scientific Publications

- “Interaction of Cylindrical Sound Waves with a Stationary Shock Wave,” W.R. Johnson and Otto Laporte, Phys. Fluids 1, 82 (1958).
- “Approximate Relativistic Coulomb Scattering Wave Function,” W.R. Johnson and C.J. Mullin, Phys. Rev. 119, 1270 (1960).
- “Coulomb Scattering of Polarized Electrons,” W.R. Johnson, T.A. Weber, and C.J. Mullin, Phys. Rev. 121, 933 (1961).
- “Decay of Bound Polarized Muons,” W.R. Johnson, R.C. O’Connell, and C.J. Mullin, Phys. Rev. 124, 904 (1961).
- “Continuum Coulomb Wave Function,” W.R. Johnson and R.T. Deck, J. Math. Phys. 3, 319 (1962).
- “Radiative Correction to Coulomb Scattering Asymmetry Function,” W.R. Johnson, C.O. Carroll, and C.J. Mullin, Phys. Rev. 126, 352 (1962).
- “Brensstrahlung from Polarized Electrons,” W.R. Johnson and J.D. Rozics, Phys. Rev. 128, 192 (1962).
- “An Exact Calculation of Brensstrahlung from Polarized Electrons,” J.D. Rozics and W.R. Johnson, Phys. Rev. 135, B56 (1964).
- “Single Quantum Annihilation of Positrons,” W.R. Johnson, D.J. Buss, and C.O. Carroll, Phys. Rev. 135, A1232 (1964).
- “Optical Analysis of the 900 MeV π^- - p Resonance,” W.R. Johnson, F.C. Smith, and P.D. DeCelles, Phys. Rev. 138, B938-942 (1965).
- “Exact Calculation of K-Shell and L-Shell Photoeffect,” W.R. Alling and W.R. Johnson, Phys. Rev. 139, A1050 (1965).
- “The Influence of Screening on the Atomic Photoeffect,” J.J. Matese and W.R. Johnson, Phys. Rev. 140, A1 (1965).
- “Screening Corrections to the Fermi Function for Allowed Beta Decay,” J.J. Matese and W.R. Johnson, Phys. Rev. 150, 846 (1966).
- “Angular Distribution of Single-Quantum Annihilation Radiation,” W.R. Johnson, Phys. Rev. 159, 61 (1967).
- “Relativistic Self-Consistent Fields with Exchange,” F.C. Smith and W.R. Johnson, Phys. Rev. 160, 136 (1967).

“Rayleigh Scattering and the Electromagnetic Susceptibility of Atoms,” W.R. Johnson and F.D. Feiock, Phys. Rev. 168, 22 (1968).

“The Ω as a Ξ K Bound State,” W.R. Johnson and J. Kahane, Nuovo Cimento 52A, 746 (1967).

“Hexadecapole Moment Effects in Multiple Coulomb Excitation,” A.M. Desiderio and W.R. Johnson, Nucl. Phys. A116, 577 (1968).

“Relativistic Evaluation of Internal Diamagnetic Fields for Atoms and Ions,” F.D. Feiock and W.R. Johnson, Phys. Rev. Letts. 21, 785 (1968).

“Atomic Susceptibilities and Shielding Factors,” F.D. Feiock and W.R. Johnson, Phys. Rev. 187, 1 (1969).

“Relativistic One-Electron Calculations of Shielded Atomic Hyperfine Constants,” M.J. Amoroso and W.R. Johnson, Phys. Rev. A3, 6 (1971).

“Lamb Shift and Binding Energies of K Electrons in Heavy Atoms,” A.M. Desiderio and W.R. Johnson, Phys. Rev. A3, 1267 (1971).

“Breit Interaction in Multielectron Atoms,” J.B. Mann and W.R. Johnson, Phys. Rev. A4, 44 (1971).

“Radiative Decay Rates of Metastable One-Electron Atoms,” W.R. Johnson, Phys. Rev. Letts. 29, 1123 (1972).

“Single-quantum Annihilation of Positrons by Screened K- and L-Shell Electrons,” K.W. Broda and W.R. Johnson, Phys. Rev. A6, 1693 (1972).

“Dirac-Hartree-Fock Calculation of the $2^3S_1 \rightarrow 1^1S_0$ Transition Rates for Isoelectronic Sequence,” W.R. Johnson and Chien-ping Lin, Phys. Rev. A9, 1486-1493 (1974).

“Decay of $^4P_{5/2}$ Autoionizing States of Ions in the Li Isoelectronic Sequence,” K.T. Cheng, C.P. Lin, and W.R. Johnson, Phys. Letts. 48A, 437 (1974).

“Rayleigh Scattering of Photons by Helium,” Chien-ping Lin, Kwok-tsang Cheng, and W.R. Johnson, Phys. Rev. A11, 1946 (1975).

“Elastic Scattering of 0.1-1 MeV Photons,” W.R. Johnson and Kwok-tsang Cheng, Phys. Rev. A13, 692-698 (1976).

“Relativistic Random Phase Approximation Applied to Atoms of the He Isoelectronic Sequence,” W.R. Johnson and C.D. Lin, Phys. Rev. A14, 565-575 (1976).

“Allowed and Forbidden Transitions of Helium-like Ions,” W.R. Johnson, C.D. Lin and A. Dalgarno, J. Phys. B9, L303-L305 (1976).

- “Self-energy Corrections to the K-electron Binding in Heavy and Superheavy Atoms,” K.T. Cheng and W.R. Johnson, Phys. Rev. A14, 1943-1948 (1976).
- “Radiative Decays of the $n = 2$ States of He-like Ions,” C.D. Lin, W.R. Johnson and A. Dalgarno, Phys. Rev. A15, 154-161 (1977).
- “Comment on Relativistic Transition-Probability Calculations for the Be Isoelectronic Sequence,” K.T. Cheng and W.R. Johnson, Phys. Rev. A15, 1326-1329 (1977).
- “Oscillator Strengths for the Beryllium Isoelectronic Sequence,” C.D. Lin and W.R. Johnson, Phys. Rev. A15, 1046-1052 (1977).
- “Excitation Energies and Line Strengths in the Mg Isoelectronic Sequence,” K.T. Cheng and W.R. Johnson, Phys. Rev. A16, 263-272 (1977).
- “Application of the Relativistic Random-Phase Approximation to the Photoionisation of Atoms,” W.R. Johnson and C.D. Lin, J. Phys. B10, 331-334 (1977).
- “Oscillator Strengths for the Magnesium Isoelectronic Sequence,” P. Shorer, C.D. Lin and W.R. Johnson, Phys. Rev. A16, 1109-1116 (1977).
- “Oscillator Strengths of Transitions between Low-lying S and P States of Helium-like Ions,” C.D. Lin, W.R. Johnson, and A. Dalgarno, The Astrophysical Journal, 217, 1011-1015 (1977).
- “Self-energy corrections in heavy muonic atoms,” K.T. Cheng, W.-D Sepp, W.R. Johnson, and B. Fricke, Phys. Rev. A17, 489-492 (1978).
- “Relativistic Effects on Low Energy $5s \rightarrow \epsilon p$ Photoionization for Xenon,” W.R. Johnson, and K.T. Cheng, Phys. Rev. Letts. 40, 1167-1170 (1978).
- “Two-channel relativistic random-phase approximation applied to the photoionisation of helium- and beryllium-like ions,” C.D. Lin and W.R. Johnson, J. Phys. B12, 1677-1685 (1979).
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