

C. WESLEY WALTER

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EDUCATION Ph.D. in Physics, Rice University (1989) – Advisor: Dr. F. Barry Dunning
 M.A. in Physics, Rice University (1986)
 B.S. in Physics, *Summa Cum Laude*, University of Dallas (1983)

EXPERIENCE

3/06 – 7/06 Queen's University, Belfast, UK Distinguished Visiting Fellow

9/96 – Present DENISON UNIVERSITY
 Professor (2007 – Present)
 Associate Professor (2000 – 2007)
 Assistant Professor (1996 – 2000)

9/92 – 8/96 SAINT MARY'S COLLEGE OF CALIFORNIA
 Director, Pre-Engineering Program (1995 – 6)
 Assistant Professor (1992 – 6)

9/89 – 9/97 SRI INTERNATIONAL, Molecular Physics Laboratory
 Visiting Scientist (1993 – 7)
 Postdoctoral Fellow (1989 – 92) – Mentor: Dr. Jim R. Peterson

5/84 – 8/89 RICE UNIVERSITY
 Graduate Research Assistant and Teaching Assistant

PUBLICATIONS Over 35 journal publications in the areas of negative ions, molecular spectroscopy and dissociation, electron attachment, and Rydberg atoms

GRANTS Principal or Co-Principal Investigator on 9 grants, including 6 grants from the National Science Foundation.

HONORS J. Reid Anderson Distinguished Professor of Physics & Astronomy, Denison University (2009 – 14)
 Faculty for the 21st Century, Project Kaleidoscope (1997 – Present)
 Exceptional Achievement Award, SRI International (1989)
 Texaco Philanthropic Society Graduate Fellowship (1986 – 7)
 CRC Press Outstanding Freshman Chemistry Student Award (1979 – 80)

FUNDED GRANTS**Principal Investigator**

7. National Science Foundation (NSF) Grant, \$279,477 (2005 – 8); Co-PI: N.D. Gibson
Title: “*RUI: Structure and Spectroscopy of Negative Ions*”
6. NSF Grant, \$224,527 (2002 – 5); Co-PI: N.D. Gibson
Title: “*RUI: Spectroscopy and Structure of Negative Ions*”
5. NSF Grant, \$224,460 (1999 – 2002); Co-PI: N.D. Gibson
Title: “*RUI: Laser Spectroscopy of Negative Ions*”
4. NSF Major Research Instrumentation Grant, \$200,916 (1998 – 2001); Co-PIs: K.A. Coplin, N.D. Gibson, and M.E. Mickelson
Title: “*Optical and Laser Spectroscopy Instrumentation for Research and Education*”
3. Research Corporation Grant, \$30,720 (1997 – 2001)
Title: “*Experimental Search for Small Doubly-Charged Negative Ions*”
2. Denison University Research Foundation Grant, \$2,175 (1997 – 8)
Title: “*Development of an Ion Beam Mass Spectrometer*”
1. NSF Research Opportunity Award, \$4,500 (1993); Co-PI: J.R. Peterson, SRI International
Title: “*Photodetachment Spectroscopy of He⁻*”

Co-Principal Investigator

2. National Science Foundation (NSF) Grant, \$283,000 (2008 – 11); PI: N.D. Gibson
Title: “*RUI: Valence and Inner-shell Negative Ion Spectroscopy*”
1. NASA Space Physics Educational Outreach Grant - \$9,900 (1993 – 5); PI: R.A. Copeland, SRI International
Title: “*Aurora in a Bottle: An Educational Project*”

SERVICE – Major Activities at Denison University

Chair, Department of Physics & Astronomy (2000-1, Spring 2002-2003, 2006-9)
 President’s Advisory Board (2007 – Present)
 Pre-Engineering Program Director (1997 – 2000, 2008-9)
 Academic Affairs Council (2004 – 7); Chair (2004 – 5), Vice-chair (2006 – 7)
 Denison Representative to the GLCA Academics Committee (2004 – 2006)
 Task Force on Promotion and Tenure Criteria and Procedures (2003 – 4)
 Faculty Representative to the Board of Trustees Academic Affairs Committee (2003 – 5)
 Faculty Representative to the Board of Trustees Honorary Degrees Committee (2003 – 5)
 Co-organizer, Liberal Education Workshops (2008)
 Co-organizer, Oral Communication Workshops (2005)
 First-Year Programs Committee (1997 – 2004)
 Honors Committee (1999 – 2001)
 Homestead Advisory Board (2002-4)
 Environmental Studies Committee (2003 – 4)
 SWOT Committee “Living and Learning at Denison” (2000)

Panelist, New Advisor's Workshop (2003, 2004)
 Internal Member of the External Review Team for the Honors Program (2007)
 June O advisor (2002 – 5), Staff selection committee (2003), August O advisor (2005)
 Workshop leader, Admissions Sciences Overnight (1996, 1997, 2002, 2005)
 Panelist, Fall Faculty Conference "Teaching with Technology" (2000)
 Denison Jewish Fellowship/Hillel, co-advisor (1999 – 2003)
 Search committee, Honors Program Director (2002)
 Search committee, Chaplain (2003)
 Science Outreach, Planetarium and Observatory Shows (over 70 programs at Denison)

Professional Service

Education Committee, American Physical Society – Division of Atomic, Molecular, and Optical Physics (2007 – Present); Chair (2008 – Present)
 Grant Proposal Reviewer: National Science Foundation, the Research Corporation, and the Petroleum Research Fund
 Manuscript reviewer: *Journal of Chemical Physics*, *Surface Science Letters*, *The Physics Teacher*, *Journal of Chemical Education*
 PhD Dissertation Defense "Opponent", University of Gothenburg (2004)
 GRE Subject Test in Physics, Question writer/reviewer (2000, 2002, 2004)
 PRAXIS test for new high school physics teachers, Question writer/reviewer (2003)

Student Research Supervised at Denison

(all projects co-advised with Prof. Dan Gibson, unless marked with *)

Summer

2009: Derrick Carman, Dan Matyas, Yige Li
 2008: Jacob Shapiro, Derrick Carman
 2007: Corey Janczak, Ali Snedden, Richard Field, Jacob Shapiro
 2006: Corey Janczak, Ali Snedden, Richard Field
 2005: Keith Starr, David Richardson, Craig Mosier, Corey Janczak
 2004: Keith Starr, David Richardson, Corey Janczak
 2003: Nate Chandler*
 2002: John Pyles, Nate Chandler
 2001: Jason McClure, Demian Phillips
 2000: Mike Gasda, Kim Moore, David Zawistowski
 1999: Mike Gasda
 1998: David Lim*, Ryan Kalas*
 1997: David Lim*

Honors and Senior Research Projects

2005-6 Keith Starr, Senior Research
 2002 Jason McClure*, Senior Research
 2000-1 Kim Moore*, Honors: "The Effects of Electric Fields on Negative Ion Photodetachment"
 2000-1 Heidi Jackman*, Honors: "Aurora in a Bottle"
 1999 David Lim, Senior Research

PUBLICATIONS

* - Undergraduate student co-author

38. R.C. Bilodeau, I. Dumitriu, D. Rolles, N.D. Gibson, C.W. Walter, and N. Berrah, "Promoting a Core Electron to Fill a d -shell: A Threshold Law and Shape and Feshbach Resonances", *Physical Review A* **80**, 0131403 (Rapid Communications) (2009).
37. J.D. Alexander, C.R. Calvert, R.B. King, O. Kelly, W.A. Bryan, G.R.A.J. Nemeth, W.R. Newell, C.A. Froud, I.C.E. Turcu, E. Springate, P.A. Orr, J. Pedregosa-Gutierrez, C.W. Walter, R.A. Williams, I.D. Williams, and J.B. Greenwood, "Short Pulse Laser-induced Dissociation of Vibrationally Cold, Trapped Molecular Ions", *Journal of Physics B* **42**, 154027 (2009).
36. C.W. Walter, N.D. Gibson, R.L. Field III*, A.P. Snedden*, J.Z. Shapiro*, C. M. Janczak*, and D. Hanstorp, "Electron Affinity of Arsenic and the Fine Structure of As^- Measured using Infrared Photodetachment Threshold Spectroscopy", *Physical Review A* **80**, 014501 (2009).
35. C.W. Walter, N.D. Gibson, C. M. Janczak*, K.A. Starr*, A.P. Snedden*, R.L. Field III*, and P. Andersson, "Infrared Photodetachment of Ce^- : Threshold Spectroscopy and Resonance Structure", *Physical Review A* **76**, 052702 (2007).
34. N. Berrah, R.C. Bilodeau, I. Dumitriu, J.D. Bozek, N.D. Gibson, C.W. Walter, G.D. Ackerman, O. Zatsarinny, and T.W. Gorczyca, "Shape resonances in the absolute K-shell photodetachment of B^- ", *Physical Review A* **76**, 032713 (2007).
33. P.A. Orr, I.D. Williams, J.B. Greenwood, I.C.E. Turcu, W.A. Bryan, J. Pedregosa-Gutierrez, C.W. Walter, "Above threshold dissociation of vibrationally cold HD^+ molecules", *Physical Review Letters* **98**, 163001 (2007).
32. R.C. Bilodeau, C.W. Walter, I. Dumitriu, N.D. Gibson, G.D. Ackerman, J.D. Bozek, B.S. Rude, R. Santra, L.S. Cederbaum, and N. Berrah, "Photo double detachment of CN^- : Electronic decay from an inner-valence hole in molecular anions", *Chemical Physics Letters* **426**, 237 (2006).
31. C.W. Walter, N.D. Gibson, R.C. Bilodeau, N. Berrah, G.D. Ackerman, J.D. Bozek, and A. Aquilar, "Shape resonance in K-shell photodetachment from C^- ", *Physical Review A* **73**, 062702 (2006).
30. R.C. Bilodeau, N.D. Gibson, J.D. Bozek, C.W. Walter, G.D. Ackerman, P. Andersson, M. Perri, and N. Berrah, "High-charge-state formation following inner-shell photodetachment from S^- ", *Physical Review A* **72**, 050701 (Rapid Communications) (2005).
29. R.C. Bilodeau, J.D. Bozek, N.D. Gibson, C.W. Walter, G.D. Ackerman, I. Dumitriu, and N. Berrah, "Inner-shell photodetachment thresholds: Unexpected long-range validity of the Wigner law", *Physical Review Letters* **95**, 083001 (2005).

28. N.D. Gibson, C.W. Walter, O. Zatsarinny, T.W. Gorczyca, G.D. Ackerman, J.D. Bozek, M. Martins, B.M. McLaughlin, and N. Berrah, "K-shell photodetachment from C^- : Experiment and theory", *Physical Review A* **67**, 030703 (Rapid Communications) (2003).
27. N. Berrah, J.D. Bozek, A.A. Wills, G. Turri, H.-L. Zhou, S.T. Manson, G. Ackerman, B. Rude, N.D. Gibson, C.W. Walter, L. VoKy, A. Hibbert, and S.M. Ferguson, "K-shell photodetachment of Li^- : Experiment and theory", *Physical Review Letters* **87**, 253002 (2001).
26. N.D. Gibson, M.D. Gasda*, K. A. Moore,* D.A. Zawistowski*, and C.W. Walter, "s-wave photodetachment from S^- ions in a static electric field", *Physical Review A* **64**, 061403 (Rapid Communications) (2001).
25. C.W. Walter, P.C. Cosby, and H. Helm, "Photoexcitation and predissociation intensities of the $c' \ ^1\Sigma_u^+$ ($v = 3$ and 4), $c \ ^1\Pi_u$ ($v = 3$ and 4), and b' ($v = 10, 12, 13$, and 15) states of N_2 ", *Journal of Chemical Physics* **112**, 4621-4633 (2000).
24. C.W. Walter, P.C. Cosby, and H. Helm, "Predissociation quantum yields of singlet nitrogen", *Physical Review A* **50**, 2930-2936 (1994).
23. C.W. Walter, J.A. Seifert*, and J.R. Peterson, "Reexamination of the $He^- 1s2p^2 \ ^4P^e$ shape resonance: Details of its properties and a precise electron affinity for $He \ 2^3S$ ", *Physical Review A* **50**, 2257-2262 (1994).
22. C.W. Walter, P.C. Cosby, and H. Helm, " $N(^4S^o)$, $N(^4D^o)$, and $N(^4P^o)$ yields in predissociation of excited singlet states of N_2 ", *Journal of Chemical Physics* **99**, 3553-3561 (1993).
21. H. Helm and C.W. Walter, "Observation of electronically excited states of tetraoxygen", *Journal of Chemical Physics* **98**, 5444-5449 (1993).
20. C.W. Walter, P.C. Cosby, and J.R. Peterson, "Rovibrational product distributions of O_2^+ from the reaction of $O^-(^4S)$ with CO_2 ", *Journal of Chemical Physics* **98**, 2860-2871 (1993).
19. C.W. Walter, Y.K. Bae, D.C. Lorents, J.R. Peterson, "Production and stability of multiply charged C_{60} and C_{70} fullerene ions", *Chemical Physics Letters* **195**, 543-550 (1992).
18. C.W. Walter and J.R. Peterson, "A shape resonance in Ca^- photodetachment and the electron affinity of $Ca(^1S)$ ", *Physical Review Letters* **68**, 2281-2284 (1992).
17. C.W. Walter, C.F. Hertzler, P. Devynck, G.P. Smith, J.R. Peterson, "Photodetachment of WO_3^- : The electron affinity of WO_3 ", *Journal of Chemical Physics* **95**, 824-827 (1991).
16. C.W. Walter, C.F. Hertzler, P. Devynck, G.P. Smith, J.R. Peterson, "Photodetachment of high electron affinity molecular negative ions", *Nuclear Instruments and Methods B* **56/57**, 216-218 (1991).

15. A. Kalamarides, R.W. Marawar, X. Ling, C.W. Walter, B.G. Lindsay, K.A. Smith, F.B. Dunning, "Negative ion production in collisions between $K(nd)$ Rydberg atoms and CF_3Br and CF_2Br_2 ", *Journal of Chemical Physics*. **92**, 1672-1676 (1990).
14. A. Kalamarides, C.W. Walter, B.G. Lindsay, K.A. Smith, F.B. Dunning, "Post-attachment interactions in $K(nd)$ -- CF_3I collisions at intermediate n ", *Journal of Chemical Physics* **91**, 4411 (1989).
13. C.W. Walter, B.G. Lindsay, K.A. Smith, F.B. Dunning, "Translational energy release in dissociative electron attachment to CH_3I , CD_3I , CF_3I , and CF_3Br ", *Chemical Physics Letters* **154**, 409 (1989).
12. C.W. Walter, K.A. Smith, F.B. Dunning, "Translational kinetic energy release in dissociative electron attachment to C_2Cl_4 , CCl_4 , $CFCl_3$, and $111-C_2Cl_3F_3$ ", *Journal of Chemical Physics* **90**, 1652 (1989).
11. A. Kalamarides, C.W. Walter, K.A. Smith, F.B. Dunning, "Negative ion formation in $K(nd)$ - CS_2 collisions: Detection of electric-field-induced detachment from CS_2^- ", *Journal of Chemical Physics* **89**, 7226 (1988).
10. R.W. Marawar, C.W. Walter, K.A. Smith, F.B. Dunning, "Study of low-energy electron attachment to C_6F_6 using $K(nd)$ Rydberg atoms", *Journal of Chemical Physics* **88**, 2853 (1988).
9. R.W. Marawar, C.W. Walter, K.A. Smith, F.B. Dunning, "Use of $K(nd)$ Rydberg atoms to investigate low-energy electron attachment to C_2Cl_4 ", *Journal of Chemical Physics* **88**, 176 (1988).
8. A. Kalamarides, C.W. Walter, B.G. Zollars, K.A. Smith, F.B. Dunning, "Associative ionization in collisions of $K(nd)$ Rydberg atoms with molecules", *Journal of Chemical Physics* **87**, 4238 (1987).
7. C.W. Walter, C.B. Johnson, A. Kalamarides, D.F. Gray, K.A. Smith, F.B. Dunning, "Study of low-energy electron attachment to C_7F_{14} using $K(nd)$ Rydberg atoms", *Journal of Physical Chemistry* **91**, 4284 (1987).
6. C.B. Johnson, C.W. Walter, A. Kalamarides, K.A. Smith, F.B. Dunning, "Study of low-energy electron attachment to $111-C_2Cl_3F_3$ using $K(nd)$ Rydberg atoms", *Journal of Chemical Physics* **86**, 4945 (1987).
5. C.W. Walter, B.G. Zollars, C.B. Johnson, K.A. Smith, F.B. Dunning, "Formation of O_2^- ions in $K(nd)$ -- O_2 collisions at intermediate n ", *Physical Review A* **34**, 4431 (1986).
4. B.G. Zollars, C.W. Walter, C.B. Johnson, K.A. Smith, F.B. Dunning, "Associative ionization in $K(nd)$ -- H_2O collisions at intermediate n ", *Journal of Chemical Physics* **85**, 3132 (1986).

3. B.G. Zollars, C.W. Walter, F. Lu, C.B. Johnson, K.A. Smith, F.B. Dunning, "Ionization in $K(nd)$ -- SF_6 and $K(nd)$ -- CCl_4 collisions at intermediate n ", *Journal of Chemical Physics* **84**, 5589 (1986).
2. B.G. Zollars, C. Higgs, F. Lu, C.W. Walter, L.G. Gray, K.A. Smith, F.B. Dunning, "Ionization in Rydberg-atom -- SF_6 collisions at high n ", *Physical Review A* **32**, 3330 (1985).
1. C.W. Walter, G.B. McMillian, K.A. Smith, F.B. Dunning, "Computer-assisted high-voltage waveform measurement", *Reviews of Scientific Instrumentation* **56**, 2171 (1985).

MANUSCRIPTS UNDER REVIEW

CONFERENCE PROCEEDINGS

3. R.C. Bilodeau, J. D. Bozek, G.D. Ackerman, N.D. Gibson, C.W. Walter, A. Aguilar, G. Turri, I. Dumitriu, and N. Berrah, "Multi-Auger decay in negative ion photodetachment", *ICPEAC (e,2e) Workshop Proceedings* (2005).
2. N. Berrah, R.C. Bilodeau, J.D. Bozek, C.W. Walter, N.D. Gibson, and G.D. Ackerman, "Double Auger decay, Feshbach and shape resonances in negative ions", *X05 Conference Proceedings* (2005).
1. H. Helm, I. Hazell, C.W. Walter, and P.C. Cosby, "On the branching in dissociative recombination of O_2^+ ", *Proceedings of the 1995 Workshop on Dissociative Recombination*, ed. D. Zajfman, p. 139-150 (World Scientific, New Jersey, 1996).

PRESENTATIONS

* -- Undergraduate student co-author

73. C.W. Walter, N.D. Gibson, R.L. Field III, J.Z. Shapiro, A.P. Snedden, C.M. Janczak, D. Hanstorp, "Measurement of the Electron Affinity of Arsenic and the Fine Structure of As^- using Infrared Threshold Photodetachment Spectroscopy", *Poster*, ICPEAC XXVI – The International Conference on the Physics of Electronic and Atomic Collisions (2009), Kalamazoo, Michigan.
72. N.D. Gibson, C.W. Walter, R.L. Field III, D.J. Carman, J.Z. Shapiro, R.C. Bilodeau, I. Dumitriu, N. Berrah, A. Aguilar, "Inner-shell Photodetachment from Se^- Negative Ions at the ALS", *Poster*, ICPEAC XXVI – The International Conference on the Physics of Electronic and Atomic Collisions (2009), Kalamazoo, Michigan.
71. R.C. Bilodeau, I. Dumitriu, N.D. Gibson, C.W. Walter, N. Berrah, "Promoting a Core Electron to Fill a d-Shell in Negative Ions: Shape vs. Feshbach Resonances and A Novel Threshold Law and Shape and Feshbach Resonances", *Poster*, ICPEAC XXVI – The

International Conference on the Physics of Electronic and Atomic Collisions (2009), Kalamazoo, Michigan.

70. Ileana Dumitriu, R.C. Bilodeau, T.W. Gorczyca, C.W. Walter, N.D. Gibson, A. Aguilar, Z. Pesic, D. Rolles, N. Berrah, "Shape Resonances in Inner-Shell Photodetachment of Transition Metal Negative Ions", *Poster*, ICPEAC XXVI – The International Conference on the Physics of Electronic and Atomic Collisions (2009), Kalamazoo, Michigan.
69. C.W. Walter, N.D. Gibson, R.L. Field III, J.Z. Shapiro, A.P. Snedden, C.M. Janczak, D. Hanstorp, "Measurement of the Electron Affinity of Arsenic and the Fine Structure of As^{-} ", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2009), Charlottesville, Virginia.
68. N.D. Gibson, C.W. Walter, R.L. Field III, D.J. Carman, J.Z. Shapiro, R.C. Bilodeau, I. Dumitriu, N. Berrah, A. Aguilar, "Inner-shell Photodetachment from Se^{-} ", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2009), Charlottesville, Virginia.
67. Ileana Dumitriu, R.C. Bilodeau, T.W. Gorczyca, C.W. Walter, N.D. Gibson, A. Aguilar, Z. Pesic, D. Rolles, N. Berrah, "Inner-Shell Photodetachment Thresholds of Transition Metal Negative Ions", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2009), Charlottesville, Virginia.
66. R.C. Bilodeau, I. Dumitriu, N.D. Gibson, C.W. Walter, N. Berrah, "Promoting a Core Electron to Fill a d-Shell: A Novel Threshold Law and Shape and Feshbach Resonances", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2009), Charlottesville, Virginia.
65. R. C. Bilodeau, N. Berrah, I. Dumitriu, J. D. Bozek, N. D. Gibson, C. W. Walter, O. Zatsarinny, T. W. Gorczyca, D. Toffoli, R. R. Lucchese, "K-shell photodetachment of small size-selected negative ion clusters: Experiment and theory", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2008), State College, Pennsylvania.
64. N.D. Gibson, C.W. Walter, A.P. Snedden*, R.L. Field III*, J.Z. Shapiro*, C.M. Janczak*, D. Hanstorp, "Infrared Photodetachment of As^{-} ", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2008), State College, Pennsylvania.
63. R.L. Field III*, A.P. Snedden*, J.Z. Shapiro*, C.M. Janczak*, C.W. Walter, N.D. Gibson, "Photodetachment of As^{-} ", *Poster*, Ohio Section of the American Physical Society Fall Meeting (2007), Oxford, Ohio.
62. A.P. Snedden*, R.L. Field III*, C.M. Janczak*, K.A. Starr*, N.D. Gibson, C.W. Walter, P. Andersson, "Photodetachment of Ce^{-} ", *Poster*, Ohio Section of the American Physical Society Fall Meeting (2007), Oxford, Ohio.
61. N.D. Gibson, C.W. Walter, C.M. Janczak*, K.A. Starr*, A.P. Snedden*, R.L. Field III*, P. Andersson, "Tunable Laser Photodetachment Spectroscopy of Ce^{-} ", *Poster*, American

- Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2007), Calgary, Canada.
60. R.C. Bilodeau, I. Dumitriu, N.D. Gibson, C.W. Walter, J.D. Bozek, Z.D. Pesic, D. Rolles, N. Berrah, "Inner-shell Studies in Transition Metal Negative Ions: *d*-shell Photoexcitation and Detachment", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2007), Calgary, Canada.
 59. R.C. Bilodeau, C.W. Walter, I. Dumitriu, N.D. Gibson, G.D. Ackerman, J.D. Bozek, B.S. Rude, R. Santra, L.S. Cederbaum, N. Berrah, "Photo Double Detachment of CN⁻: Electronic Decay from an Inner-valence Hole in Molecular Anions", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2007), Calgary, Canada.
 58. C.W. Walter, "Atomic Negative Ions: Correlation and Dynamics Studied with Lasers and Synchrotrons", *Seminar*, Ohio Northern University (3/2007).
 57. C.W. Walter, "Atomic Negative Ions: Correlation and Dynamics Studied with Lasers and Synchrotrons", *Seminar*, Wesleyan University (11/2006).
 56. N.D. Gibson, C.W. Walter, K.A. Starr*, C.M. Janczak*, P. Andersson, "Photodetachment Spectroscopy of Ce⁻", *Poster*, Gaseous Electronics Conference (2006), Columbus, Ohio.
 55. C.W. Walter, N.D. Gibson, K.A. Starr*, C.M. Janczak*, D.A. Richardson*, P. Andersson, "Photodetachment Spectroscopy of Ce⁻", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2006), Knoxville, Tennessee.
 53. C.W. Walter, "Negative Ions: Correlation and Dynamics in Inner-Shell Photodetachment", *Seminar*, Queen's University Belfast (3/2006).
 52. C.W. Walter, "Negative Ions: Efficacious Effluvia", *Seminar*, Lafayette College (2/2006).
 51. K.A. Starr*, C.M. Janczak*, D.A. Richardson*, N.D. Gibson, C.W. Walter, P. Andersson, "Photodetachment of Ce⁻", *Poster*, Ohio Section of the American Physical Society Fall Meeting (2005), Cleveland, Ohio.
 50. C.M. Janczak*, K.A. Starr*, D.A. Richardson*, C.H. Mosier*, C.W. Walter, N.D. Gibson, P. Andersson, "Development of a Negative Ion Beam Apparatus", *Poster*, Ohio Section of the American Physical Society Fall Meeting (2005), Cleveland, Ohio.
 49. C.W. Walter, N.D. Gibson, R.C. Bilodeau, N. Berrah, J.D. Bozek, G. D. Ackerman, "Inner-shell Photodetachment from Li⁻ and C⁻", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2005), Lincoln, Nebraska.
 48. R.C. Bilodeau, J.D. Bozek, C.W. Walter, N.D. Gibson, G.D. Ackerman, I. Dumitriu, N. Berrah, "Inner Shell Studies of Negative Ions", *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2005), Lincoln, Nebraska.

47. N.D. Gibson and C.W. Walter, “Negative Ions: Quantum Interferometers or Stock Market Indicators?”, Denison University Faculty Friday talk (10/2004).
46. R.C. Bilodeau, N. Berrah, N.D. Gibson, C.W. Walter, J.D. Bozek, and G.D. Ackerman, “Photodetachment of S^- and He^- : Inner-shell Threshold Studies and High Charge State Formation”, *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2004), Tucson, Arizona.
45. N.D. Gibson, C.W. Walter, R.C. Bilodeau, N. Berrah, J.D. Bozek, and G.D. Ackerman, “High-Resolution Spectroscopy and Absolute Cross Section Measurements in Double Photodetachment from Li^- ”, *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2004), Tucson, Arizona.
44. C.W. Walter, “Thinking Like a Scientist: Order-of-Magnitude Calculations in Environmental Science”, *Seminar*, College of Wooster (10/2003).
43. N.D. Gibson, C.W. Walter, R.C. Bilodeau, A. Aguilar, G.D. Ackerman, J.D. Bozek, and N. Berrah, “K-Shell Photodetachment from C^- ”, *Poster*, ICPEAC XXIII – The International Conference on Photonic, Electronic, and Atomic Collisions (2003), Stockholm, Sweden.
42. C.W. Walter, K.A. Moore*, J.M. Pyles*, N.W. Chandler*, N.D. Gibson “Effects of Static Electric Fields on Negative Ion Resonances”, *Poster*, ICPEAC XXIII – The International Conference on the Physics of Electronic and Atomic Collisions (2003), Stockholm, Sweden.
41. N.D. Gibson, C.W. Walter, R.C. Bilodeau, N. Berrah, A. Aguilar, J.D. Bozek, and G.D. Ackerman, “K-Shell Photodetachment of Negative Ions: C^- ”, *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2003), Boulder, Colorado.
40. C.W. Walter, J.M. Pyles*, N.W. Chandler*, K.A. Moore*, N.D. Gibson, “Electric Field Effects on Negative Ion Resonances of He^- , Rb^- , and Cs^- ”, *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2003), Boulder, Colorado.
39. C.W. Walter, “Negative Ions: Efficacious Effluvia”, *Seminar*, Ohio Wesleyan College (4/2003).
38. J.M. Pyles*, N.W. Chandler*, N.D. Gibson, C.W. Walter, “Effects of Electric Fields on Negative Ion Resonances”, *Poster*, Ohio Section of the American Physical Society Fall Meeting (2002), Columbus, Ohio.
37. C.W. Walter, K.A. Moore*, and N.D. Gibson, “Negative Ion Resonances in Electric Fields”, *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2002), Williamsburg, VA.
36. N.D. Gibson, C.W. Walter, J.D. Bozek, G. Ackerman, B. Rude, M. Martins, G. Turri, and N. Berrah “K-Shell Photodetachment of Negative Ions: C^- ”, *Poster*, American Physical

- Society Division of Atomic, Molecular, and Optical Physics Meeting (2002), Williamsburg, VA.
35. C.W. Walter, “Negative Ions: Efficacious Effluvia”, *Departmental Seminar*, Colgate University (11/2001).
 34. C.W. Walter, J.P. McClure*, K.A. Moore*, D.M. Phillips*, and N.D. Gibson, “Negative Ion Resonances in Electric Fields”, *Poster*, Ohio Section of the American Physical Society Fall Meeting (2001), Columbus, Ohio.
 33. N. Berrah, J.D. Bozek, A.A. Wills, G. Turri, H.-L. Zhou, S.T. Manson, G. Ackerman, B. Rude, N.D. Gibson, C.W. Walter, L. VoKy, A. Hibbert, and S.M. Ferguson, “K-Shell Photodetachment of Li^- : Experiment and Theory”, *Poster*, ICPEAC XXII -- The International Conference on Photonic, Electronic, and Atomic Collisions (2001).
 32. N. Berrah, J.D. Bozek, A.A. Wills, G. Turri, H.-L. Zhou, S.T. Manson, G. Ackerman, B. Rude, N.D. Gibson, C.W. Walter, L. VoKy, A. Hibbert, and S.M. Ferguson, “K-Shell Photodetachment of Li^- : Experiment and Theory”, *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting (2001), London, Ontario, Canada.
 31. N.D. Gibson, M.D. Gasda*, K.A. Moore*, D.A. Zawistowski*, and C.W. Walter, “Photodetachment Spectroscopy from Negative Ions in an Electric Field”, *Bulletin of the American Physical Society* **46**, D5.072 (2001). *Poster*, American Physical Society Division of Atomic, Molecular, and Optical Physics Meeting, Storrs, Connecticut.
 30. Kim Moore*, D.A. Zawistowski*, M.D. Gasda*, N.D. Gibson, and C.W. Walter, “Photodetachment Spectroscopy in an Electric Field”, *Poster*, Ohio Section of the American Physical Society Fall Meeting (2000), Toledo, Ohio.
 29. Mike Gasda*, N.D. Gibson, and C.W. Walter, “Photodetachment from Negative Ions”, *Poster*, Ohio Section of the American Physical Society Fall Meeting (1999).
 28. C.W. Walter, “Negative Ions: Elusive Efficacious Effluvia”, *Denison Scientific Association Lecture Series*, Denison University (1998).
 27. C.W. Walter and P.C. Cosby, “Rovibrational Dependence of Quantum Yields in Molecular Nitrogen”, APS-DAMOP Annual Meeting (1998).
 26. C.W. Walter, M.E. Onishi*, and R.A. Copeland, “Aurora in a Bottle”, *Contributed Talk*, Joint APS/AAPT April Meeting (1998).
 25. P.C. Cosby and C.W. Walter, “Quantum Yields of Nitrogen Singlet Electronic States”, *Poster*, American Geophysical Union Fall Meeting (1997).
 24. C.W. Walter and P.C. Cosby, “Photoexcitation and Predissociation Intensities of N_2 Singlet States”, *Poster*, APS-DAMOP Annual Meeting (1997).

23. P.C. Cosby and C.W. Walter, "Rotationally Specific Quantum Yields and Predissociation Products of N₂ Singlet Electronic States", *Poster*, American Geophysical Union Fall Meeting (1996).
22. P.C. Cosby, H. Helm, and C.W. Walter, "Predissociation of N₂ Singlet Electronic States", *Poster*, APS-DAMOP Annual Meeting (1996).
21. P.C. Cosby, H. Helm, and C.W. Walter, "Quantum yields and predissociation products of N₂ Singlet Electronic States", *Poster*, American Geophysical Union Fall Meeting (1995).
20. P.C. Cosby, H. Helm, and C.W. Walter, "Predissociation quantum yields of N₂ singlet electronic states", *Poster*, American Geophysical Union Fall Meeting (1994).
19. C.W. Walter, J. Seifert*, and J.R. Peterson, "The He⁻ 1s2p² 4P^e shape resonance and the electron affinity of He 2³S", *Poster*, APS-DAMOP Annual Meeting (1994).
18. H. Helm, C.W. Walter, P.C. Cosby, and D.L. Huestis "Band profiles, predissociation, and perturbation analysis of N₂ singlet and triplet transitions", *Poster*, American Geophysical Union Fall Meeting (1993).
17. C.W. Walter, P.C. Cosby, and H. Helm, "Photodissociation of molecular nitrogen", *Poster*, APS-DAMOP Annual Meeting (1993).
16. C.W. Walter, P.C. Cosby, and H. Helm, "Predissociation and product state analysis of N₂", *Poster*, American Geophysical Union Fall Meeting (1992).
15. C.W. Walter, "Rydberg atoms: Leviathans of the atomic world", *Brousseau Lecture Series*, Saint Mary's College of California (1992).
14. C.W. Walter, "The elusive properties of Ca⁻", *Department Seminar*, University of Oklahoma (April, 1992).
13. C.W. Walter, "The elusive properties of Ca⁻", *Department Seminar*, University of Toledo (February, 1992).
12. C.W. Walter, P.C. Cosby, H. Helm "Predissociation and product state analysis of N₂", *Poster*, APS-DAMOP Annual Meeting (1992).
11. C.W. Walter, P.C. Cosby, H. Helm, "Predissociation and product state analysis of N₂", *Poster*, International Conf. Lab. Research for Planetary Atmospheres (1991).
10. C.W. Walter and J.R. Peterson, "Photodetachment of Ca⁻ near the Ca(¹P) threshold", *Poster*, Gaseous Electronics Conference (1991).
9. C.W. Walter, "Photodetachment of negative ions", *Department Seminar*, University of Nevada, Las Vegas (September, 1991).

8. C.W. Walter, C.F. Hertzler, J.R. Peterson, "Determination of rovibrational product distributions in ion-molecule reactions", *Poster*, International Conf. Phys. Electronic and Atomic Collisions (1991).
7. C.W. Walter, C.F. Hertzler, J.R. Peterson, "Recent Ca^- photodetachment : Does the metastable ^4P state exist?", *Poster*, International Conf. Phys. Electronic and Atomic Collisions (1991).
6. C.W. Walter, C.F. Hertzler, J.R. Peterson, "Photodetachment of Ca^- ", *Poster*, APS-DAMOP Annual Meeting (1991).
5. C.W. Walter, "Photodetachment of molecular negative ions", *Invited Talk*, International Conf. Applications of Accelerators in Research and Industry (1990).
4. C.W. Walter, C.F. Hertzler, P. Devynck, G.P. Smith, J.R. Peterson, "The electron affinity of tungsten trioxide", *Poster*, APS-DAMOP Annual Meeting (1990).
3. C.W. Walter, K.A. Smith, F.B. Dunning, "Use of Rydberg atoms to explore the energetics of dissociative electron capture", *Poster*, APS-DAMOP Annual Meeting (1988).
2. C.W. Walter, A. Kalamarides, R.W. Marawar, C.B. Johnson, K.A. Smith, F.B. Dunning, "Use of Rydberg atoms to study electron capture at subthermal energies", *Poster*, International Conf. Phys. Electronic and Atomic Collisions (1987), Brighton, England.
1. C.W. Walter, A. Kalamarides, R.W. Marawar, C.B. Johnson, K.A. Smith, F.B. Dunning, "Study of very-low-energy electron molecule interactions using Rydberg atoms", *Poster*, APS-DAMOP Annual Meeting (1987), Eugene, Oregon.