

**C. WESLEY WALTER**

*Department of Physics & Astronomy, Denison University, Granville, Ohio 43023 USA*  
*walter@denison.edu (740)587-5704*

**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** DENISON UNIVERSITY  
 Professor (2007 – ), Assoc. Prof. (2000-07), Assist. Prof (1996-2000)

SAINT MARY’S COLLEGE OF CALIFORNIA  
 Assistant Professor (1992-96)

SRI INTERNATIONAL, Molecular Physics Laboratory  
 Visiting Scientist (1993-7), Postdoc (1989-92) - Mentor: Dr. J. R. Peterson

**HONORS** Henry Chisholm Chair in the Natural Sciences, Denison Univ. (2020 – 25)  
 J. Reid Anderson Distinguished Professor of Physics & Astronomy,  
 Denison University (2009 – 15)  
 Distinguished Visiting Fellow, Queens University, Belfast (2006)  
 Faculty for the 21st Century, Project Kaleidoscope (1997 – Present)  
 Exceptional Achievement Award, SRI International (1989)

**PUBLICATIONS** 54 published journal articles in atomic, molecular, and optical physics  
*(see next page for representative publications)*

**GRANTS** Principal or Co-Principal Investigator on 15 grants  
 Continuous funding from NSF from 1999 - Present (7 three-year grants)  
 Current NSF Grant: “*RUI: Structure and Dynamics of Negative Ions*”  
 \$344,000 (2017 – 21); Co-PI; PI: N.D. Gibson

**SYNERGISTIC ACTIVITIES**

Supervised over 70 undergraduate student research projects at Denison University

ICPEAC General Committee Member: International Conference on Photonic, Electronic, and Atomic Collisions (2011 – 15)

DAMOP Education Committee Member and Chair: American Physical Society – Division of Atomic, Molecular, and Optical Physics (2007 – 2009); Chair (2008 – 9)

Leads extensive science outreach programs, including planetarium shows and astronomical observing events for K-12 school student and community groups with total attendance of over 400 people during the past five years

**PUBLICATIONS** (\* - Undergraduate student co-author)

**Six Most Recent Publications**

- M. S. Safronova, C. Cheung, M. G. Kozlov, S. E. Spielman\*, N. D. Gibson, and C. W. Walter, "Predicting Quasibound States of Negative Ions:  $\text{La}^-$  as Test Case", *Physical Review A* (accepted 1/26/2021).
- C. W. Walter, S. E. Spielman\*, R. Ponce\*, N. D. Gibson, J. Yukich, C. Cheung, and M. S. Safronova, "Observation of an Electric Quadrupole Transition in a Negative Ion: Experiment and Theory", *Physical Review Letters* (accepted 1/15/2021).
- C. W. Walter, N. D. Gibson, N. B. Lyman\*, and J. Wang\*, "Photodetachment Spectroscopy of Quasibound States of the Negative Ion of Lanthanum", *Physical Review A* **102**, 042812 (2020).
- C.W. Walter, N.D. Gibson, and S.E. Spielman\*, "Electron Affinity of Thallium Measured with Threshold Spectroscopy", *Physical Review A* **101**, 052511 (2020).
- N. D. Gibson, C. W. Walter, C. Crocker\*, J. Wang\*, W. Nakayama\*, J. N. Yukich, E. Eliav, and U. Kaldor, "Electron Affinity of Gallium and Fine Structure of  $\text{Ga}^-$ : Experiment and Theory", *Physical Review A* **100**, 052512 (2019).
- I. Dumitriu, R. C. Bilodeau, T. W. Gorczyca, C. W. Walter, N. D. Gibson, D. Rolles, Z. D. Pešić, A. Aguilar, and N. Berrah, "Inner-Shell Photodetachment from  $\text{Ni}^-$ : A Giant Feshbach Resonance", *Physical Review A* **96**, 023405 (2017).

**Other Representative Publications**

- C.W. Walter, N. D. Gibson, D. J. Matyas\*, C. Crocker\*, K.A. Dungan\*, B.R. Matola\*, and J. Rohlén, "Candidate for Laser Cooling of a Negative Ion: Observations of Bound-Bound Transitions in  $\text{La}^-$ ", *Physical Review Letters* **113**, 063001 (2014).
- R.C. Bilodeau, N.D. Gibson, C.W. Walter, D.A. Esteves-Macaluso, S. Schippers, A. Müller, R.A. Phaneuf, A. Aguilar, M. Hoener, J.M. Rost, and N. Berrah, "Single-Photon Multiple-Detachment in Fullerene Negative Ions: Absolute Ionization Cross Sections and the Role of the Extra Electron", *Physical Review Letters* **111**, 043003 (2013).
- A. O. Lindahl, J. Rohlén, H. Hultgren, I. Yu. Kiyani, D. J. Pegg, C. W. Walter, and D. Hanstorp, "Threshold Photodetachment in a Repulsive Potential", *Physical Review Letters* **108**, 033004 (2012).
- P.A. Orr, I.D. Williams, J.B. Greenwood, I.C.E. Turcu, W.A. Bryan, J. Pedregosa-Gutierrez, and C.W. Walter, "Above Threshold Dissociation of Vibrationally Cold  $\text{HD}^+$  Molecules", *Physical Review Letters* **98**, 163001 (2007).
- 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  $\text{Li}^-$ : Experiment and Theory", *Physical Review Letters* **87**, 253002 (2001).
- C.W. Walter and J.R. Peterson, "A Shape Resonance in  $\text{Ca}^-$  Photodetachment and the Electron Affinity of  $\text{Ca}$  ( $^1\text{S}$ )", *Physical Review Letters* **68**, 2281 (1992).