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Ph.D. Physics, University of New Mexico, 1993.
M.A. Physics, The Johns Hopkins University, 1989.
B.S. Physics, Idaho State University, 1986.



Research

- Scarcity of chemical elements
- Photoexcitation of two-electron atoms and ions

Other Interests

- Interdisciplinary Education
- Science Education
- Civic Learning
- Energy & Society

Courses taught at Georgia Tech

EAS 2803	The Urban Forest	Fall 2012 (scheduled)
LCC 3823	Harry Potter & the False Dichotomy of Good & Evil	Spring 2012
LCC 3803	Coffee, Tea, & Chocolate	Fall 2011
PHY 4803	The Atomic Age	Spring 2011
PHY 2803	Optical Illusions: Light and Perception	Fall 2009
GT 1000	Intro to Georgia Tech	Fall 2008, Fall 2009
EAS 2803	Energy, Environment & Society (with Kim Cobb)	Spring 2007, Spring 2008

Publications

Books

Monica Halka and Brian Nordstrom. *Lanthanides & Actinides*. New York, N.Y.: Facts on File, 2011.
---. *Metals & Metalloids*. New York, N.Y.: Facts on File, 2011.
---. *Transition Metals*. New York, N.Y.: Facts on File, 2011.
---. *Alkali & Alkaline Earth Metals*. New York, N.Y.: Facts on File, 2010
---. *Halogens & Noble Gases*. New York, N.Y.: Facts on File, 2010.
---. *Nonmetals*. New York, N.Y.: Facts on File, Inc., 2010.

Blog: www.elementintheroom.com

Journal Articles

Narayanan M. Komerath, Vigneshwar Venkat, **Monica Halka**, and Daniel Soloway. "Micro Renewable Energy Systems: Synergizing Technology, Economics and Policy," in the *Proceedings of the Atlanta Conference on Science and Innovation Policy*, October 2009. IEEE publications.

M. Halka, “Effects of Static Electric Fields on the Photoionization Spectra of Two-Electron Atoms and Ions,” *J. Rad. Phys. & Chem.* **75**:12, 2228-2231 (December 2006).

J. Sandström, I. Alvarez, D. Calabrese, C. Cisneros, A. M. Covington, V. T. Davis, M. S. Gulley, **M. Halka**, D. Hanstorp, F. S. Schlachter, J. S. Thompson, and D. J. Pegg, “Triple photodetachment from the Cl⁻ ion,” *Phys. Rev. A* **72**, 034702 (16 September 2005).

V.T. Davis, A. Aguilar, A.M. Covington, J.S. Thompson, D. Calabrese, C. Cisneros, M.S. Gulley, **M. Halka**, D. Hanstorp, J. Sandström, B.M. McLaughlin, G.F. Gribakin and D.J. Pegg, “Photo-double detachment from the F⁻ ion,” *J. Phys. B: At. Mol. Opt. Phys.* **38**, 2579–2589 (6 July 2005).

S. W. J. Scully, A. Aguilar, E. D. Emmons, R. A. Phaneuf, **M. Halka**, D. Leitner, J. C. Levin, M. S. Lubell, R. Püttner, A. S. Schlachter, A. M. Covington, S. Schippers, A. Müller, and B. M. McLaughlin, “K-Shell Photoionization of Be-like Carbon ions: Experiment and Theory for C²⁺,” *J. Phys. B: At. Mol. Opt. Phys.* **38**:12 (28 June 2005).

A. S. Schlachter, S. W. J. Scully, R. A. Phaneuf, E. D. Emmons, A. Aguilar, D. Leitner, M. S. Lubell, A. M. Covington, R. Püttner, A. Müller, **M. Halka**, J. C. Levin, B. M. McLaughlin, “K-shell photoionization of C²⁺ ions: experiment and theory,” *Journal of Electron Spectroscopy and Related Phenomena* **144-147**, 53-54 (8 March 2005).

A. Aguilar, J. S. Thompson, D. Calabrese, A. M. Covington, C. Cisneros, V. T. Davis, M. S. Gulley, **M. Halka**, D. Hanstorp, J. Sandström, B. M. McLaughlin, and D. J. Pegg, “Double photodetachment from the Cl⁻ ion,” *Phys. Rev. A* **69**, 022711 (25 February 2004).

James R. Harries, James P. Sullivan, James B. Sternberg, Satoshi Obara, Tadayuki Suzuki, Peter Hammond, John Bozek, Nora Berrah, **Monica Halka**, and Yoshiro Azuma, “Double photoexcitation of helium in a strong dc electric field,” *Phys. Rev. Lett.* **90**, 133002 (2003).

Dilafruz Williams, Judy Patton, Richard Beyler, Martha Balshem, and **Monica Halka**, in *Service-Learning and The First-Year Experience: Preparing Students for Personal Success and Civic Responsibility*, ed. Edward Zlotkowski, National Resource Center for the First-Year Experience and Students in Transition (2002).

A. M. Covington, A. Aguilar, V. T. Davis, I. Alvarez, H. C. Bryant, C. Cisneros, **M. Halka**, D. Hanstorp, G. Hinojosa, A. S. Schlachter, J. S. Thompson and D. J. Pegg, “Correlated Processes in Inner-Shell Photodetachment of the Na⁻ Ion,” *J. Phys. B: At. Mol. Opt. Phys.* **34** L735-L740 (2001).

Monica Halka, “Review of Electric Field Effects on H⁻ Thresholds and Resonances” and “Sorting Out Multiple-Variable Data in Atomic and Molecular Physics,” in *Conference Proceedings of the Pan American Studies Institute*, University of New Mexico Press, 2000.

Richard Beyler, **Monica Halka**, Yves Labissière, Lisbeth Lipari, Shawn Smallman, and Julie Smith, “The Teaching Fellows Program: Transformations in Identity, Pedagogy, & Academe,” *J. Gen. Ed.* **48**:3, 176 (1999).

Monica Halka, “Making Course Work Count: Students Publishing for the Community,” in *Conference Proceedings of the 23rd International Conference on Improving University Learning and Teaching*, Dublin City Univ. Press (1998).

K.-D. Heber, M. Seng, **M. Halka**, U. Eichmann, W. Sandner, “Long-Range Interactions in Planetary Three-Body Coulomb Systems,” *Phys. Rev. A* **56**, 1255 (1997).

M. Seng, **M. Halka**, K.-D. Heber and W. Sandner, “Fragmentation of Planetary Three-Body Coulomb States,” *Canad. J. Phys.* **74**:11, 970-976 (1996).

H. C. Bryant and **M. Halka**, “H Spectroscopy” in *Coulomb Interactions in Nuclear and Atomic Few-Body Collisions*, eds. F. S. Levin and D. A. Micha, Plenum Press: NY & London (1996).

M. Seng, **M. Halka**, K.-D. Heber and W. Sandner, “Electron Spectroscopy of Planetary Atoms,” *Phys. Rev. Lett.* **74**, 3344 (1995).

M. Halka, P. G. Harris, A. H. Mohagheghi, R. A. Reeder, C. Y. Tang, H. C. Bryant, J. B. Donahue, and C. R. Quick, “Electric Field Effects on H⁺ Photodetachment Partial Cross Sections above 13.4 eV,” *Phys. Rev. A* **48**, 419 (1993).

M. Seng, K.-D. Heber, **M. Halka**, and W. Sandner, “Resonant Multiphoton Laser Excitation of Planetary Atoms: Spectral Structures and Internal Dynamics” in *AIP Conference Proceedings 290*, eds. L. Bloomfield, T. Gallagher, and D. Larson (AIP Press, 1993).

J. Donahue, D. Clark, S. Cohen, D. Fitzgerald, S. Frankle, R. Hutson, R. Macek, E. Mackerrow, O. van Dyck, C. Wilkinson, H. Bryant, M. Gulley, **M. Halka**, P. Keating, and W. Miller, *Proceedings of the Particle Accelerator Conference 369*, Washington, DC (1993).

M. Halka, H. C. Bryant, C. J. Harvey, B. Marchini, E. P. MacKerrow, W. Miller, A. H. Mohagheghi, C. Y. Tang, K. B. Butterfield, D. A. Clark, S. Cohen, J. B. Donahue, P. A. M. Gram, R. W. Hamm, A. Hsu, D. W. MacArthur, C. R. Quick, J. Tiee, and K. Rozsa, “The Branching Ratio of the H⁽ⁿ⁼²⁾ Shape Resonance,” *Phys. Rev. A* **46**, 6942 (1992).

M. Halka, H. C. Bryant, E. P. MacKerrow, W. Miller, A. H. Mohagheghi, C. Y. Tang, S. Cohen, J. B. Donahue, A. Hsu, C. R. Quick, J. Tiee, and K. Rozsa, “Observation of the Partial Decay into H⁰(n' = 2) by excited H⁺ near the n = 3 and 4 Thresholds,” *Phys. Rev. A* **44**, 6127 (1991)

Selected Presentations

- American Association of Physics Teachers, Washington, D.C., February 2010.
- Improving University Teaching, 34th International Conference, Vancouver, British Columbia, July 2009.
- Improving University Teaching, 33rd International Conference, Glasgow, Scotland, July 2008.
- Association of American Colleges & Universities Conference: Civic-Learning at the Intersections, Denver, CO, October 2007.
- European Group for Atomic Systems Conference, Dublin, Ireland, 2005.
- Conference on Vacuum Ultraviolet Radiation Physics, Cairns, Australia, July 2004.
- Indo-U.S. Workshop on Radiation Physics, Darjeeling, India, March, 2004.
- International Conference on Photonic, Electronic and Atomic Collisions, Stockholm, Sweden, July 2003.
- American Physical Society: Division of Atomic, Molecular and Optical Physics Conference, Boulder, CO, May 2003.