

Craig Hogle

For additional contact
information:
hoglec@colorado.edu

EDUCATION

UNIVERSITY OF COLORADO, Boulder, Colorado

Doctor of Philosophy in **Physics** (Anticipated graduation Spring 2014)

Attended August 2007 – Present

Masters of Science in **Physics** (May 2011)

Attended August 2007 – May 2011

CARLETON COLLEGE Northfield, Minnesota GPA: 3.95/4.0

Summa Cum Laude Bachelor of Arts in **Physics** and **Mathematics** (May 2007)

Attended September 2003 – June 2007

EXPERIENCE

JILA – UNIV. OF COLORADO, Murnane/Kapteyn Research Group *Researcher Assistant* (May 2008– Present)

- High power ultrafast coincidence spectroscopy (COLTRIMS)
- Diagnosed and troubleshot complex molecular chemical physics experimental systems (optics, power electronics, digital and analog signals, mechanical construction)
- Ultra-high vacuum (UHV) systems
- High average power (>25W compressed) ultrafast amplifier
- Extreme-ultraviolet (XUV) science and technology including generation, mirror coatings, and detection
- Presented research findings at scientific conferences
- Mentoring multiple undergraduate and high school students
- Proficient in: Mathematica, COBOLD software, Machining, Gnuplot, LaTeX, Optics design, High harmonic generation, Numerical analysis

UCLA, Niemann Research Group *Physics Researcher* (June 2006 – December 2006)

- Designed, built, and tested magnetic field probes for use in a high energy plasma
- Tested high vacuum test chamber and high power Nd:YAG laser

CARLETON COLLEGE, Mathematics Skills Center *Tutor and Course Assistant* (January 2004 – June 2007)

- Tutored students for both introductory and advanced level mathematics courses
- Assisted professors with teaching and grading

RECOGNITIONS AND INTERESTS

- EUV Engineering Research Center Student Leadership Committee 2008-2012
- Honorary Society of Industrial and Applied Mathematics membership 2006-2007
- Honorary Mathematical Association of America membership 2005-2006
- Member of Phi Kappa Beta scholastic honorary society
- Member of Sigma Xi science honorary society
- Carleton College Dean's List 2004-2007
- National Merit Scholar 2003
- National Advanced Placement Scholar 2003
- Treasurer of the Carleton Ultimate Team 2004-2007
- Officer of the Carleton College Social Dance Club 2006-2007

Publications

- C. W. Hogle, P. Ranitovic, X. M. Tong, et al. "Control of bound state interferences in Ar single and double ionization" In preparation. (2014).
 - P. Ranitovic, C.W. Hogle, P. Rivière, et al., "Attosecond vacuum UV coherent control of molecular dynamics", Proceedings of the National Academy of Sciences 111(3), 912-917 (2014).
 - X. Zhou, P. Ranitovic, C. W. Hogle, H.C. Kapteyn and M.M. Murnane, "Probing and Controlling non-Born-Oppenheimer Dynamics in Super-Excited Triatomic Molecules", Nature Physics 8, 232 (2012).
 - Daniel D. Hickstein, et al., "Direct Visualization of Laser-Driven Electron Multiple Scattering and Tunneling Distance in Strong-Field Ionization," Phys. Rev. Lett. 109, 073004 (2012).
 - P. Ranitovic, X. M. Tong, C. W. Hogle, et al., "Controlling the XUV Transparency of Helium Using Two-Pathway Quantum Interference," Physical Review Letters 106(19), 193008 (2011).
 - P. Ranitovic, X. M. Tong, C. W. Hogle, X. Zhou, Y. Liu, N. Tushima, M. M. Murnane, and H. C. Kapteyn, "Laser-Enabled Auger Decay in Rare-Gas Atoms," Physical Review Letters 106(5), 053002 (2011).
 - X. M. Tong, P. Ranitovic, C. W. Hogle, et al., "Theory and experiment on laser-enabled inner-valence Auger decay of rare-gas atoms," Phys. Rev. A 84, 013405 (2011).
 - X. Zhou, P. Ranitovic, C. Hogle, et al., "Ultrafast Control of Fragmentation Pathways of Soft X-Ray Driven Dissociation of Triatomic N₂O Molecules," in Ultrafast Phenomena XVII: Proceedings of the 17th International Conference, July 18-23, 2010, M. Chergui et al, ed. (Oxford University Press, New York, 2011), pp. 98-100.
 - W. Li, A. A. Jaron-Becker, C. W. Hogle, et al., "Visualizing electron rearrangement in space and time during the transition from a molecule to atoms," Proceedings Of The National Academy Of Sciences Of The United States Of America 107(47), 20219-20222 (2010).
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Selected Presentations

- C.W. Hogle, et al., “Ultrafast Dynamics of Ozone Exposed to Ionizing Radiation,” 43rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Orange Country, CA, June 2012.
- C.W. Hogle, et al., “Controlling the XUV Transparency of Helium using Two Pathway Quantum Interference,” 42nd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics (DAMOP), Atlanta, GA, June 2011.
- C.W. Hogle et al., “Radiation Femtochemistry Probed Using Ultrafast X-Rays,” Annual Site Visit, NSF Engineering Research Center in EUV Science and Technology, Ft Collins, CO, May 2009.
- E. Gagnon, R. Santra, A. S. Sandhu, V. Sharma, W. Li, P. Ho, P. Ranitovic, C.L. Cocke, C.W. Hogle, M. Murnane, H. C. Kapteyn, “Electronic Feshbach Resonances created in Soft X-ray–Induced O₂ dissociation,” 40th Annual Meeting of the Division of Atomic, Molecular, and Optical Physics of the American Physical Society (DAMOP), Charlottesville, VA, May 2009. Presented by C.W. Hogle