

Daniel Stephen Slaughter

CONTACT INFORMATION	Chemical Sciences Division, Lawrence Berkeley National Lab, 1 Cyclotron Rd Mailstop 2R-0100 Berkeley, CA USA 94720	Tel: +1 510 541 0708 Fax: +1 510 486 5494 E-mail: d.slaughter@aip.org.au WWW: http://amo-csd.lbl.gov/DSSlaughter/index.php
CITIZENSHIP	Australia	
RESEARCH INTERESTS	Atomic and molecular interactions with electrons and positrons; Multi-parameter particle detection; charged-particle optics design; many other interests in fundamental physics and physical chemistry.	
EDUCATION	Flinders University, Adelaide, South Australia	
	PhD. Atomic Physics (2002-2007) <i>Superelastic Electron Scattering from Caesium</i> Supervisors: P.J.O. Teubner, M.J. Brunger - thesis available online through the Australian Digital Theses Program http://catalogue.flinders.edu.au/local/adt/public/adt-SFU20071009.100421/	
	BSc. (Hons 1st class), Physics, 2001. <i>Caesium Ultranarrow Bandwidth Excited Atomic Line Optical Filter</i> Supervisors: P.J.O. Teubner, V. Karaganov.	
ACADEMIC EXPERIENCE	ARC Centre for Antimatter-Matter Studies, Australian National University, Canberra, Australia	
	<i>Postdoctoral Research Fellow</i>	Jan 2008 - April 2010
	Design and development of a new apparatus for multi-parameter charged particle detection of reaction products in positron-atom ionising collisions. Detailed measurements of low-energy positron interactions with atoms and molecules, including elastic and total interaction cross sections, positronium formation, direct ionisation cross sections and state-resolved electronic excitation cross sections.	
	Flinders University, Adelaide, Australia.	
	<i>Associate Lecturer</i>	2006
	Teaching of undergraduate course <i>Physics 1</i> . My responsibilities were tutorial preparation and delivery, shared responsibilities for exam writing and assessment tasks.	
	<i>Postgraduate Student</i>	2001 - 2007
	Undergraduate physics tutoring (classes and consulting) and laboratory teaching.	

PEER REVIEWED
PUBLICATIONS

2010

- A. C. L. Jones, P. Caradonna, C. Makochekekanwa, D. S. Slaughter, R. P. McEachran, J. R. Machacek, J. P. Sullivan, and S. J. Buckman (2010). Observation of Threshold Effects in Positron Scattering from the Noble Gases, *Phys. Rev. Lett.* **105** 073201.
<http://dx.doi.org/10.1103/PhysRevLett.105.073201>

2009

- Casten Makochekekanwa, Ana Bankovic, Wade Tattersall, Adric Jones, Peter Caradonna, Daniel Slaughter, Kate Nixon, Michael J Brunger, Zoran Lj Petrovic, James P Sullivan and Stephen J Buckman (2009). Total and positronium formation cross sections for positron scattering from H₂O and HCOOH, *New J. Phys.* **11** 103036.
<http://dx.doi.org/10.1088/1367-2630/11/10/103036>
- Peter Caradonna, James P. Sullivan, Adric Jones, Casten Makochekekanwa, Daniel Slaughter, Dennis W. Mueller and Stephen J. Buckman (2009). Excitation of the n=2 States of Helium by Positron Impact, *Phys. Rev. A* **80** 060701.
<http://link.aps.org/doi/10.1103/PhysRevA.80.060701>
- P Caradonna, A Jones, C Makochekekanwa, D S Slaughter, J P Sullivan, S J Buckman, I Bray and D V Fursa (2009). High Resolution Positron Scattering from Helium: Grand Total and Positronium Formation Cross Sections, *Phys. Rev. A* **80** 032710.
<http://link.aps.org/doi/10.1103/PhysRevA.80.032710>
- A Jones, P Caradonna C Makochekekanwa, D Slaughter, D Mueller, J P Sullivan and S J Buckman (2009). High Resolution Positron Interactions, *J. Phys.: Conf. Proc.* **194**012033.
<http://dx.doi.org/10.1088/1742-6596/194/1/012033>
- J. P. Sullivan, S. J. Buckman, A. Jones, P. Caradonna, C. Makochekekanwa, D. Slaughter, Z. Lj Petrovic, A. Bankovic, S. Dujko, J. P. Marler, R. D. White (2009). Low energy positron interactions - trapping, transport and scattering, *J. Phys.: Conf. Ser.* **162** 012002.
<http://dx.doi.org/10.1088/1742-6596/162/1/012002>

2008

- S.J Buckman, T. Maddern, J. Francis-Staite, L. Hargreaves, M.J. Brunger, G. Garcia, J.C. Lower, S. Mondal, J.P. Sullivan, A. Jones, P. Caradonna, D. Slaughter, C. Makochekekanwa and R.P. McEachran (2008). Low energy lepton scattering: recent results for electron and positron interactions, *J. Phys.: Conf. Ser.* **133** 12001.
<http://dx.doi.org/10.1088/1742-6596/133/1/012001>

2007

- D.S. Slaughter, V. Karaganov, M.J. Brunger, P.J.O. Teubner, I. Bray and K. Bartschat (2007). Superelastic electron scattering from laser-excited cesium atoms, *Phys. Rev. A* **75** (6) 2717.
<http://link.aps.org/doi/10.1103/PhysRevA.75.062717>

RECENT
CONFERENCE
PRESENTATIONS

- Daniel Slaughter, Adric Jones, Peter Caradonna, Casten Makochekekanwa, Leigh Hargreaves, Birgit Lohmann, Dennis Mueller, James Sullivan and Stephen Buckman (2010). Positron-Rare Gas Collisions, *XVI Gaseous Electronics Meeting*.

- Casten Makochekanwa, Ana Bankovic, Wade Tattersall¹, Adric Jones, Peter Caradonna, Daniel Slaughter, Kate Nixon, Michael Brunger, Zoran Petrovic, James Sullivan, Gustavo Garcia, Ronald White, Stephen Buckman (2010). Positron Interactions with Bio-Molecules, *XVI Gaseous Electronics Meeting*.
- D.S. Slaughter, C. Makochekanwa, P. Caradonna, A. Jones, D.W. Mueller, S. Bellm, B. Lohmann, J.P. Sullivan, S.J. Buckman (2009). Preliminary results for near-threshold ionization and excitation of helium by positron impact, *International Symposium on (e,2e), Double Photoionization and Related Topics*.
- D.S. Slaughter, L.R. Hargreaves, M.A. Stevenson, A. Dorn, J.C. Lower, J.P. Sullivan, B. Lohmann and S.J. Buckman (2009). Progress towards measuring differential ionization cross sections for atoms and molecules with a magnetized positron beam, *International Symposium on (e,2e), Double Photoionization and Related Topics*.
- L.R. Hargreaves, D.S. Slaughter, M.A. Stevenson, A. Dorn, J.P. Sullivan, B. Lohmann and S.J. Buckman (2009). A reaction microscope for positron-collision studies, *International Workshop on Low Energy Positron and Positronium Physics*.
- A.C.L. Jones, P. Caradonna, C. Makochekanwa, D.S. Slaughter, J.P. Sullivan, S.J. Buckman and J. Mitroy (2009). Positron Scattering from Noble Gases: Future Prospects, *16th Int. Conf. on Photonic, Electronic and Atomic Collisions*. <https://www.icpeac2009.physics.wmich.edu/webpdffiles/Mo115.pdf>
- C. Makochekanwa, A. Jones, A. Bankovic, P. Caradonna, D. Slaughter, J. Sullivan, Z. Petrovic, J. Marler, G. Malovic, S. Dujko, K. Nixon, M. Brunger and S. Buckman (2009). Positron Interactions and Transport in Biologically Relevant Molecules, *16th Int. Conf. on Photonic, Electronic and Atomic Collisions*. <https://www.icpeac2009.physics.wmich.edu/webpdffiles/Mo113.pdf>
- P. Caradonna, A. C. L. Jones, C. Makochekanwa, D. S. Slaughter, J. P. Sullivan and S. J. Buckman (2009). Low Energy Positron Interactions with Helium, *16th Int. Conf. on Photonic, Electronic and Atomic Collisions*. <https://www.icpeac2009.physics.wmich.edu/webpdffiles/Fr122.pdf>
- D.S. Slaughter, L.R. Hargreaves, M.A. Stevenson, A. Dorn, J.P. Sullivan, J.C. Lower, S.J. Buckman and B. Lohmann (2009). A reaction microscope for positron - atom ionisation studies, *16th Int. Conf. on Photonic, Electronic and Atomic Collisions*. <https://www.icpeac2009.physics.wmich.edu/webpdffiles/Fr119.pdf>

MEMBERSHIP

- Australian Institute of Physics (MAIP 2002-present)

SCHOLARSHIPS AND AWARDS

- Ferry Postgraduate Scholarship (2002)
- Elain Martin Travel Grant (2005)

REFEREES

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