

List of publications by OCIP students

Many of the students of the Institute publish in the scientific literature during their degree or shortly thereafter. The following list reports journal publications from 2006 through to early 2013, proceedings and abstracts 2006-2012, and some other items. The list was compiled for the periodic review of the Institute's programs held in 2013-2014. (it is Appendix 4 of the Self-Study document).

Refereed Chapters in Books:

Haase, K., Tremblay, D. & Pelling, A.E. "Mechanotransduction: Probing its Mechanisms at the Nanoscale using the Atomic Force Microscope", in Takeyasu, K. (ed.), *Atomic Force Microscopy in Nano Biology* (Pan Stanford Publishing, to appear in 2013) In Press.

Al-Rekabi, Z., Tremblay, D., Haase, H., Leask, R.L. & Pelling, A.E. "Computational and Experimental Approaches to Cellular and Sub-Cellular Tracking at the Nanoscale", in Musa, S.M. (ed), *Computational Nanotechnology: Modeling and Applications with MATLAB* (CRC Press-Taylor and Francis Group, 2012) pp.333-361.

Silberberg, Y.R., *Guolla, L. & Pelling, A.E.* "Investigating Mammalian Cell Nanomechanics with Simultaneous Optical and Atomic Force Microscopy", in Dufrene, Y.F. (ed), *Life at the Nanoscale: Atomic Force Microscopy of Live Cells* (Pan Stanford Publishing, 2011) pp375-403.

Daniel Charlebois, Theodore Perkins & Mads Kaern. In: *Information Processing and Biological Systems Series: Intelligent Systems Reference Library*, Vol. 11. Pages XX-YY. S. Niiranen, Samuli & A. Ribeiro (Eds.). Springer Verlag (2011).

L'Heureux, I. and *Bektursunova, R.*, Modeling Liesegang periodic precipitation patterns in geochemical systems, in *Precipitation Patterns in Reaction-Diffusion Systems*, ed. I. Lagzi, Research Signpost, Kerala, India, 2010.

G. W. Slater, F. Tessier, K. Kopecka (2010) The Electro-osmotic Flow. In M. P. Hughes & K. F. Hoettges (eds.), *Microengineering in Biotechnology*. Humana Press, Chapter 5, pp.121-134.
<http://www.springer.com/humana+press/biotechnology/book/978-1-58829-381-7>

Jeffrey Wheeldon and **Henry Schriemer**, "Symmetry and the local field response in photonic crystals", in *Extreme Photonics & Applications*, Ed. Trevor J. Hall, Sergei Gaponenko, and Paul Corkum, 161-192, Springer, Dordrecht, 2010.

R. L. Williams, D. Dalacu, M. E. Reimer, K. Mnaymneh, V. Sazonova, P.J. Poole, G.C. Aers, R. Cheriton, S. Frédérick, D. Kim, J. Lapointe, P. Hawrylak, M. Korkusiński, "Directed Self-Assembly – A controllable route to optical and electronic devices based on single nanostructures", *Future Trends in Microelectronics: Unmapped Roads* (Wiley-IEEE, 2010).

X. Bao, J. Lesson, J. Snoddy, L. Chen, "Dynamic monitoring of structures, water waves, traffic control, submarine and optical ground wire fibers and intrusion using fiber sensors", *Optical Fiber, New Developments* ISBN 978-953-7619-50-3, Chapter 4, pp 45-68 (2009). Published by In-Tech 2009

al-Rekabi, Z., Harden, J.L., and Pelling, A.E., Cellular Nanomechanics in Nanomedicine in "Nanomedicine: Nanomaterials, Nanotechnology and Interfaces", F. Columbus, Ed., Nova Science Publishers, (Hauppauge, NY, 2009).

Papers in refereed Journals of last 7 years (2006 - early 2013):

2013

M.C.H. Wong, A.T. Le, A.F. Alharbi, R.R. Luchesse, A. E. Boguslavskiy, J-P. Brichta, C.D. Lin and V.R. Bhardwaj High harmonic spectroscopy of cooper minimum in molecules, *Phys. Rev. Lett.* 110, 033006 (2013)

J.B Bertrand, H.J. Wörner, P. Salières, D.M. Villeneuve and P.B. Corkum, “Linked attosecond phase interferometry for molecular frame measurements” *Nature Physics Articles* (to be published 2013) [5 pages]

K.T. Kim, C. Zhang, A.D. Shiner, S.E. Kirkwood, E. Frumker, G. Gariépy, A. Naumov, D.M. Villeneuve and P.B. Corkum, “Manipulation of quantum paths for space-time characterization of attosecond pulses”, *Nature Physics Letters Advance Online Publication* (2013) [5 pages]

Bol, K, Marsat, G, Mejias, JF, Maler, L and Longtin, A, Neural periodic stimulus cancellation. *Neural Networks* (in press)

Bukoreshtliev, N.V., Haase, K. & Pelling, A.E. “Mechanical Cues in Cellular Signalling and Communication.” *Cell and Tissue Research*. In Press, 2013.

D. Sean, G. W. Slater (2013) Gel electrophoresis of DNA partially denatured at the ends: what are the dominant conformations? *Electrophoresis* (accepted for publication with minor revisions).

Stadnik Z.M., Wang P., Żukrowski J., Wang H.-D., Dong C.-H., and Fang M.-H., “Phase Separation and Magnetic Order in the $Tl_{0.75}K_{0.25}Fe_{1.86}Se_2$ Superconductor Studied by Mössbauer Spectroscopy”, *J. Alloys. Compd.*, 549: 288-294, 2013.

The ATLAS Collaboration. (<http://atlas.ch>) By spring 2013 the following OCIP graduate students were authors on ATLAS publications dated 2013: *J. Lacey* (24 papers), *T. McCarthy* (24 papers), *R. Ueno* (24 papers), *K. Whalen* (24 papers).

Measurement of the ν_e and Total 8B Solar Neutrino Fluxes with the Sudbury Neutrino Observatory Phase-III Data Set; *B. Aharmim, S. N. Ahmed, J. F. Amsbaugh, J. M. Anaya, A. E. Anthony, J. Banar, N. Barros, E. W. Beier, A. Bellerive, B. Beltran, M. Bergevin, S. D. Biller, K. Boudjemline, M. G. Boulay, T. J. Bowles, M. C. Browne, T. V. Bullard, T. H. Burritt, B. Cai, Y. D. Chan, D. Chauhan, M. Chen, B. T. Cleveland, G. A. Cox, C. A. Currat, X. Dai, H. Deng, J. A. Detwiler, M. DiMarco, P. J. Doe, G. Doucas, M. R. Dragowsky, P.-L. Drouin, C. A. Duba, F. A. Duncan, M. Dunford, E. D. Earle, S. R. Elliott, H. C. Evans, G. T. Ewan, J. Farine, H. Fergani, F. Fleuret, R. J. Ford, J. A. Formaggio, M. M. Fowler, N. Gagnon, J. V. Germani, A. Goldschmidt, J. TM. Goon, K. Graham, E. Guillian, S. Habib, R. L. Hahn, A. L. Hallin, E. D. Hallman, A. A. Hamian, G. C. Harper, P. J. Harvey, R. Hazama, K. M. Heeger, W. J. Heintzelman, J. Heise, R. L. Helmer, R. Henning, A. Hime, C. Howard, M. A. Howe, M. Huang, P. Jagam, B. Jamieson, N. A. Jelley, K. J. Keeter, J. R. Klein, L. L. Kormos, M. Kos, A. Krüger, C. Kraus, C. B. Krauss, T. Kutter, C. C. M. Kyba, R. Lange, J. Law, I. T. Lawson, K. T. Lesko, J. R. Leslie, J. C. Loach, R. MacLellan, S. Majerus, H. B. Mak, J. Maneira, R. Martin, N. McCauley, A. B. McDonald, S. R. McGee, C. Mifflin, G. G. Miller, M. L. Miller, B. Monreal, J. Monroe, B. Morissette, A. W. Myers, B. G. Nickel, A. J. Noble, H. M. O’Keeffe, N. S. Oblath, R. W. Ollerhead, G. D. Orebi Gann, S. M. Oser, R. A. Ott, S. J. M. Peeters, A. W. P. Poon, G. Prior, S. D. Reitzner, K. Rielage, B. C. Robertson, R. G. H. Robertson, E. Rollin, M. H. Schwendener, J. A. Secrest, S. R. Seibert, O. Simard, J. J. Simpson, P. Skensved, M. W. E. Smith, T. J. Sonley, T. D. Steiger, L. C. Stonehill, G. Tešić, P. M. Thornewell, N. Tolich, T. Tsui, C. D. Tunnell, T. Van Wechel, R. Van Berg, B. A. VanDevender, C. J. Virtue, B. L. Wall, D. Waller, H. Wan Chan Tseung, J. Wendland, N. West, J. B. Wilhelmy, J. F. Wilkerson, J. R. Wilson, J. M. Wouters, A. Wright, M. Yeh, F. Zhang, and K. Zuber, *Phys. Rev. C* 87, 015502 (2013).*

Combined Analysis of all Three Phases of Solar Neutrino Data from the Sudbury Neutrino Observatory; B. Aharmim, S. N. Ahmed, J. F. Amsbaugh, J. M. Anaya, A. E. Anthony, J. Banar, N. Barros, E. W. Beier, **A. Bellerive**, B. Beltran, M. Bergevin, S. D. Biller, K. Boudjemline, M. G. Boulay, T. J. Bowles, M. C. Browne, T. V. Bullard, T. H. Burritt, B. Cai, Y. D. Chan, D. Chauhan, M. Chen, B. T. Cleveland, G. A. Cox, C. A. Currat, X. Dai, H. Deng, J. A. Detwiler, M. DiMarco, P. J. Doe, G. Doucas, M. R. Dragowsky, *P.-L. Drouin*, C. A. Duba, F. A. Duncan, M. Dunford, E. D. Earle, S. R. Elliott, H. C. Evans, G. T. Ewan, J. Farine, H. Fergani, F. Fleurot, R. J. Ford, J. A. Formaggio, M. M. Fowler, N. Gagnon, J. V. Germani, A. Goldschmidt, J. T.M. Goon, **K. Graham**, E. Guillian, S. Habib, R. L. Hahn, A. L. Hallin, E. D. Hallman, A. A. Hamian, G. C. Harper, P. J. Harvey, R. Hazama, K. M. Heeger, W. J. Heintzelman, J. Heise, R. L. Helmer, R. Henning, A. Hime, C. Howard, M. A. Howe, M. Huang, P. Jagam, B. Jamieson, N. A. Jelley, K. J. Keeter, J. R. Klein, L. L. Kormos, M. Kos, A. Krüger, C. Kraus, C. B. Krauss, T. Kutter, C. C. M. Kyba, R. Lange, J. Law, I. T. Lawson, K. T. Lesko, J. R. Leslie, J. C. Loach, R. MacLellan, S. Majerus, H. B. Mak, J. Maneira, R. Martin, N. McCauley, A. B. McDonald, S. R. McGee, C. Mifflin, G. G. Miller, M. L. Miller, B. Monreal, J. Monroe, B. Morissette, A. W. Myers, B. G. Nickel, A. J. Noble, H. M. O’Keeffe, N. S. Oblath, R. W. Ollerhead, G. D. Orebi Gann, S. M. Oser, R. A. Ott, S. J. M. Peeters, A. W. P. Poon, G. Prior, S. D. Reitzner, K. Rielage, B. C. Robertson, R. G. H. Robertson, *E. Rollin*, M. H. Schwendener, J. A. Secrest, S. R. Seibert, *O. Simard*, J. J. Simpson, P. Skensved, M. W. E. Smith, T. J. Sonley, T. D. Steiger, L. C. Stonehill, *G. Tešić*, P. M. Thornewell, N. Tolich, T. Tsui, C. D. Tunnell, T. Van Wechel, R. Van Berg, B. A. VanDevender, C. J. Virtue, B. L. Wall, D. Waller, H. Wan Chan Tseung, J. Wendland, N. West, J. B. Wilhelmy, J. F. Wilkerson, J. R. Wilson, J. M. Wouters, A. Wright, M. Yeh, F. Zhang, and K. Zuber, [submitted to PRC].

K. Earl, *K. Hartling*, **H.E. Logan**, and *T. Pilkington*, “Constraining models with a large scalar multiplet,” accepted for publication in Phys. Rev. D on June 11, 2013.

K. Hartling and **H. E. Logan**, “High-energy suppression of the Higgsstrahlung cross-section in the Minimal Composite Higgs Model,” J. High Energy Phys. **1301**, 167 (2013) [arXiv:1208.1018 [hep-ph]]. 51 pages.

A. Pourmoghaddas, R. Klein, **R.A. deKemp**, **R.G. Wells**, “Respiratory phase alignment improves blood-flow quantification in Rb82 PET myocardial perfusion imaging”. [Submitted]

2012

P. Lu, J. Harris, *X. Wang*, G. Lin, **L. Chen**, and **X. Bao**, “A Tapered Fiber Based Refractive Index Sensor at an Air/Solution Interface” Applied Optics, 51 (30), pp. 7368–7373 (2012).

P. Lu, J. Harris, *Y. Xu*, *Y. Lu*, **L. Chen**, and **X. Bao**, Simultaneous refractive index and temperature measurement using a tapered bend-resistant fiber interferometer, Opt Lett., 37 (22), 4567–4569 (2012)

Z Qin, **L. Chen**, and **X. Bao**, Continuous wavelet transform for non-stationary detection with phase-OTDR, Optics Express, 20 (18), pp. 20459–20465 (2012)

P. Lu, G. Lin, *X. Wang*, **L. Chen**, and **X. Bao**, Lateral squeezing tuned tapered fiber Mach-Zehnder interferometer, IEEE PTL, 24(22), 2039–2041 (2012).

Y. Lu, **X. Bao**, **L. Chen**, *S. Xie*, M. Pang, Distributed birefringence with beat period detection of homodyne BOTDR, Opt Lett. 37 (19), 3936–3938 (2012)

M. Pang, *S. Xie*, **X. Bao**, D. Zhou, *Yu. Lu* and **L. Chen**, “Rayleigh-assisted narrow linewidth Brillouin lasing in segmented fibers,” Opt Lett. 37, 3129–3131 (2012)

X Wang, W Li, **L Chen** and **X Bao**, "Thermal and mechanical properties of tapered fiber with OFDR and its application as a high-sensitivity force sensor", *Opt Express*, 20 (14), 14779–14788 (2012)

Da Zhou, Z Qin, W Li, **L Chen**, and **X Bao**, "Distributed vibration sensing with time-resolved optical frequency-domain reflectometry", *Opt Express*, 20 (12), 13138-13145 (2012)

S Xie, **L Chen**, and **X Bao**, "Polarization Averaged Short time Fourier Transform (STFT) for Distributed Fiber Birefringence Characterization using Brillouin Gain", *Applied Opt*, 51 (19), 4359-4369 (2012)

S Xie, M Pang, **X Bao**, and **L Chen**, "Polarization dependence of Brillouin linewidth and peak frequency due to fiber inhomogeneity in single mode fiber and its impact on distributed fiber Brillouin sensing", *Opt Express*, 20 (6), 6385-6399 (2012).

X Wang, W Li, **L Chen** and **X Bao**, "Distributed mode coupling measurement along tapered single-mode fibers with optical frequency-domain reflectometry", *IEEE JLT*, 30 (10), 1499 – 1508 (2012)

Z Qin, **L Chen** and **X Bao**, "Wavelet denoising method for improving detection performance of distributed vibration sensor", *IEEE PTL*, 24 (7), 542-544 (2012)

X Liu, **X Bao**, "Brillouin Spectrum in LEAF and Simultaneous Temperature and Strain Measurement", *IEEE J-LT*, 30 (8), 1053-1059 (2012)

J-M. Guay, A. Villafranca, F. Baset K. Popov, **L. Ramunno** and **V.R. Bhardwaj**, "Polarization dependent femtosecond laser ablation of PMMA", *New. J. Phys.* 14, 085010 (2012)

Leach, E. Bolduc, D. J. Gauthier, and **R.W. Boyd**, "Secure information capacity of photons entangled in high dimensions", *J. Phys. Rev. A* 85, 060304(R) (2012)

E. Frumker, N. Kajumba, *J.B. Bertrand*, H.J. Wörner, C.T. Hebeisen, P. Hockett, M. Spanner, S. Patchkovskii, G.G. Paulus, **D.M. Villeneuve**, A. Naumov, and **P.B. Corkum**, "Probing Polar Molecules with High Harmonic Spectroscopy" *Physical Review Letters* **109**, 233904 (2012) [5 pages]

H. Ruf, C. Handschin, A. Ferré, N. Thieré, *J.B. Bertrand*, L. Bonnet, R. Cireasa, E. Constant, **P.B. Corkum**, D. Descamps, B. Fabre, P. Larragaray, E. Mével, S. Petit, B. Pons, D. Staedter, H.J. Wörner, **D.M. Villeneuve**, Y. Mairesse, P. Halvick, and V. Banchet, "High-harmonic transient grating spectroscopy of NO₂ electronic relaxation", *The Journal of Chemical Physics* **137**, 224303 (2012) [10 pages]

J. Peng, N. Puskas, **P.B. Corkum**, D.M. Rayner, and A.V. Loboda, "High-Pressure Gas Phase Femtosecond Laser Ionization Mass Spectrometry", *Analytical Chemistry* **84** (13), (2012) [8 pages]

P. M. Kraus, Y. Arasaki, *J. B. Bertrand*, S. Patchkovskii, **P. B. Corkum**, **D. M. Villeneuve**, K. Takatsuka, and H. J. Wörner, "Time-resolved high-harmonic spectroscopy of nonadiabatic dynamics in NO₂" *Phys. Rev. A* **85**, 043409 (2012) [5 pages]

Cheng Jin, *Julien B. Bertrand*, R. R. Lucchese, H. J. Wörner, **Paul B. Corkum**, **D. M. Villeneuve**, Anh-Thu Le, and C. D. Lin "Intensity dependence of multiple orbital contributions and shape resonance in high-order harmonic generation of aligned N₂ molecules" *Phys. Rev. A* **85**, 013405 (2012) [7 pages]

E. Frumker, C.T. Hebeisen, N. Kajumba, *J.B. Bertrand*, H.J. Wörner, M. Spanner, **D.M. Villeneuve**, A. Naumov and **P.B. Corkum**, "Oriented Rotational Wave-Packet Dynamics Studies via High Harmonic Generation" *Phys. Rev. Lett.* **109** 113901 (2012) [5pages]

J.B. Bertrand, H.J. Wörner, P. Hockett, **D.M. Villeneuve**, and **P.B. Corkum**, "Revealing the Cooper minimum of N₂ by Molecular Frame High-Harmonic Spectroscopy" *Phys. Rev. Lett.* **109** 143001 (2012) [5 pages]

- J. Smith* and **S. Desgreniers**, "Exploiting area detectors to reduce measured Compton scattering via energy selection". *Nucl. Instrum. Methods A*, 668, 9-13 (2012)
- J. Riordon, N. M.-Cataford* and **M. Godin**, "Using the fringing electric field in microfluidic volume sensors to enhance sensitivity and accuracy", *Applied Physics Letters* 101, 154-105 (2012)
- E. Beamish, H. Kwok, V. T.-Cossa* and **M. Godin**, "Precise control of the size and noise of solid-state nanopores using high electric fields", *Nanotechnology* 23 (2012) 405301 (2012)
- J. Riordon, M. Mirzaei* and **M. Godin**, "Microfluidic impedance flow cytometer with tuneable sensitivity", *Lab on a Chip* 12, 3016-3019 (2012)
- Hickey, O. A., Shendruk, T.N., Holm, C., Harden, J.L, Slater, G. W.*, Simulations of free solution electrophoresis of polyelectrolytes with finite debye length using the debye-huckel approximation, *Physical Review Letters* 109:098302, 2012.
- Hickey, O. A., Holm, C., Harden, J.L, Slater, G. W.*, Computer simulations of time-dependent suppression of EOF by polymer coatings. *Microfluid. Nanofluid.* 13:91-7, 2012.
- Shendruk, T.N., Hickey, O.A., Slater, G.W., Harden, J.L.*, Electrophoresis: When Hydrodynamics Matter, *Curr. Opin. Coll. Int. Sci.* 17: 74-82, 2012.
- Chang-Yu Hsieh, Yun-Pil Shim, and Pawel Hawrylak*, "Theory of electronic properties and quantum spin blockade in a gated linear triple quantum dot with one electron spin each", *Phys. Rev. B* 85, 085309 (2012).
- A. Trojnar, M. Korkusinski, M. Potemski and P. Hawrylak*, "Theory of optical properties of II-VI semiconductor quantum dots containing a single magnetic ion in a strong magnetic field", *Phys.Rev.B*85, 65415 (2012).
- Chang-Yu Hsieh, Alexandre Rene and Pawel Hawrylak*, "Herzberg Circuit and Berry's Phase in Chirality-based Coded Qubit in a Triangular Triple Quantum Dot", *Phys. Rev. B* **86**, 115312 (2012).
- G. Kolhatkar, J. F. Wheeldon, C. E. Valdivia, A. W. Walker, S. Fafard, A. Turala, A. Jaouad, R. Arès, V. Aimez, and K. Hinzer*, "Current-voltage measurements within the negative differential resistance region of AlGaAs/AlGaAs tunnel junctions for high concentration photovoltaic," (5 pages), *Int. J. Nanoscience*, **11**, 1240014 (2012).
- Morris, C.E., Boucher, P-A, Joós, B.* Left-shifted Nav channels in injured bilayer: primary targets for neuroprotective Nav antagonists? *Frontiers in Pharmacology* **3**, 19 (2012). (13 journal pages)
- Boucher P-A, Joós, B., Morris, C.E.* Coupled left-shift of Nav channels: modeling the Na⁺ loading and dysfunctional excitability of damaged neurons. *J. Comput. Neurosci.* **33**, 301-319 (2012).
- Bertrand, M. and Joós, B.* Extrusion of small vesicles through nanochannels: A model for experiments and molecular dynamics simulations, *Phys. Rev. E* **85**, 051910 (1-9) (2012).
- Hutt, A, Lefebvre, J and Longtin, A*, Delay stabilizes stochastic systems near a non-oscillatory instability. *Eur. Phys. Lett.* (in press 2012)
- Yu, N, Hupé, G, Garfinkle, C, Lewis, JE and Longtin, A*, Coding conspecific identity and motion in the electric sense. *PLoS Comp. Biol.* 8(7), e1002564, 2012.
- Jun, JJ, Longtin, A and Maler, L* High precision and reliability real-time EOD pulse detector for free swimming electric fish. *J. Neurophysiol.* 107, 1996-2007, 2012.

Lecavalier, B.S., **G.A. Milne**, B.M. Vinther, D.A. Fisher, A.S. Dyke, M.J.R. Simpson, "The influence of land uplift on the isotopic temperature record from the Agassiz ice cap: Implications for the Holocene thinning of the Greenland ice sheet", *Quaternary Science Reviews*, in press 2012.

Modulevsky, D.J., Tremblay, D., Gullekson, C., Bukoreshtliev, N.V. & **Pelling, A.E.** "The Physical Interaction of Myoblasts with the Microenvironment During Remodeling of the Cytoarchitecture." *PLOS ONE*. 7:e45329, 2012.

Hadjiantoniou, S., Guolla, L. & **Pelling, A.E.** "Mechanically Induced Deformation and Strain Dynamics in Actin Stress Fibres." *Communicative & Integrative Biology*. 5:627-630, 2012.

Guolla, L., Bertrand, M., Haase, K. & **Pelling, A.E.** "Force Transduction and Strain Dynamics in Actin Stress Fibres in Response to Nanonewton Forces." *Journal of Cell Science*. 125:603-613, 2012.

N. Bigaouette, E. Ackad and **L. Ramunno**, "Nonlinear grid mapping applied to an FDTD-based, multi-center 3D Schrödinger equation solver." *Comp. Phys. Commun.* **183**, 38-45 (2012).

T.N. Shendruk, **G.W. Slater** (2012) Can slip walls improve field-flow fractionation or hydrodynamic chromatography? *J. Chromatography A* **1256**, 206-212.

AP Blanchard, GSV McDowell, N Valenzuela, H Xu, S Gelbard, M Bertrand, **GW Slater**, D Figeys, S Fai, SAL Bennett (2012) Visualization and Phospholipid Identification (VaLID): An online integrated search engine capable of identifying and visualizing glycerophospholipids with given mass. *Bioinformatics*, accepted for publication

T.N. Shendruk, **G.W. Slater** (2012) Operational-Modes of Field-Flow Fractionation in Microfluidic Channels. *Journal of Chromatography A* **1233**, 100-108.

D. Sean, **G. W. Slater** (2012) Electrophoretic mobility of partially denatured DNA in a gel: Qualitative and semi-quantitative differences between bubbles and split ends. *Electrophoresis* **33**, 1341-1348 (selected for the Fast Track section).

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A. Rupenyan, J. B. Bertrand, **D. M. Villeneuve**, and H. J. Wörner, *All-Optical Measurement of High-Harmonic Amplitudes and Phases in Aligned Molecules*, *Phys. Rev. Lett.* 108, 033903 (2012)

Bruno E Schmidt, Andrew D Shiner, Mathieu Giguère, Philippe Lassonde, Carlos A Trallero-Herrero, J-C Kieffer, P B Corkum, **D M Villeneuve** and François Légaré, *High harmonic generation with long-wavelength few-cycle laser pulses*, [J. Phys. B 45, 074008 \(2012\)](#)

A D Shiner, B E Schmidt, C Trallero-Herrero, P B Corkum, J-C Kieffer, F Légaré and **D M Villeneuve**, *Observation of Cooper minimum in krypton using high harmonic spectroscopy*, [J. Phys. B 45, 074010 \(2012\)](#)

C. Trallero-Herrero, C. Jin, B. Schmidt, A. Shiner, **D. M. Villeneuve**, P. B. Corkum, C. D. Lin, F. Legare, and A. T. Le, *Generation of broad XUV continuous high harmonic spectra and isolated attosecond pulses with intense mid-infrared lasers*, [J. Phys. B 45, 011001 \(2012\)](#).

S. Hughes, P. Ya, F. Milde, A. Knorr, D. Dalacu, K. Mnaymneh, V. Sazonova, P. J. Poole, G.C. Aers, J. Lapointe, R. Cheriton, **R.L. Williams**, "Influence of electron-acoustic phonon scattering on off-resonant cavity feeding within a strongly coupled quantum-dot cavity system", *Phys. Rev. B* 83, 165313 (2011). 8 pages.

The ATLAS Collaboration. (<http://atlas.ch>) In 2012 the following OCIP graduate students were authors on ATLAS publications: *J.P. Archambault* (12 papers), *C. Cojocaru* (5 papers), *J. Lacey* (28 papers), *T. McCarthy* (128 papers), *R. Ueno* (128 papers), *K. Whalen* (128 papers).

E. S. M. Ali and **D. W. O. Rogers**, Functional forms for photon spectra of clinical linacs, *Phys. Med. Biol.* **55**, 31–50 (2012).

E. S. M. Ali and **D. W. O. Rogers**, An improved physics-based approach for unfolding megavoltage bremsstrahlung spectra using transmission analysis, *Med. Phys.* **39**, 1663–1675 (2012).

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