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EDUCATION

1995	Ph.D. (Physics), McGill University, Montréal, Canada. (Dean's Honour List) *"Intensity fluctuation spectroscopy with coherent X-rays."* Supervisor: Professor Mark Sutton.
1990	M.Sc. (Physics), University of Waterloo, Waterloo, Ontario, Canada. *"A study of high purity Cd_xSe_{1-x} vacuum deposited thin films."* Supervisor: Professor D.E. Brodie.
1987	B.Sc. (Physique), Université Laval, Ste-Foy, Canada.

ACADEMIC AWARDS

1996-97	Natural Science and Engineering Research Council of Canada (NSERC) postdoctoral fellowship.
1992-93	Fonds aux Chercheurs et à l'Aide à la Recherche du Québec (FCAR) doctoral fellowship and McGill University Carl Reinhart Fellow.
1990-92	NSERC doctoral scholarship.
1988-90	NSERC master's scholarship and University of Waterloo fellowship.
1987-86	NSERC summer student scholarships, at the University of Toronto.

PROFESSIONAL MEMBERSHIP AND SERVICE

1989-	Member of the Canadian Association of Physicists
1991-	Member of the Canadian Institute for Synchrotron Radiation
1991-	Member of the American Physical Society
1989-	Member of the Materials Research Society
1999-	Member of the American Association for the Advancement of Science
Feb. 2002- Apr. 2006	Co-chair, APS Technical Working Group

2003-2006	Chair, APS General Users Review Panel on Instrumentation
2006-	Argonne Center for Nanomaterials Proposal Review Panel
2007-2014	Ultrafast Special Interest Group, APS, Webmaster and co-organizer
2008	External reviewer, Director Review of LUSI, LCLS, SLAC March 3-5, 2008
2008	Future of X-ray Operation and Research (XOR) Committee
2009	Advanced Photon Source Upgrade Technical Advisory committee
May 2010-2013	Advanced Photon Source User Organization Steering Committee
Aug. 2011-2012	Advanced Photon Source General User Program Advisory Committee
Aug. 2011-2013	External reviewer of the Dynamic Compression Sector Director's Review.
2012	Reviewer of the NE-CAT Microfocusing Optics Upgrade.
Jul. 2014-Jul. 2016	Advanced Photon Source General User Program Review Panel
Jul. 2016-	NE-CAT Technical Advisory Committee member for NIH grant.

WORK AND TEACHING EXPERIENCE

Aug. 2011-	**Physicist, X-ray Science Division, Advanced Photon Source, Argonne National Laboratory** Since 2014, I support users on beamline 8-ID, which specializes on coherent x-ray scattering and x-ray photon correlation spectroscopy. From 2011-2013, I was the Technical Lead for the three Ultrafast beamlines in the short-pulse APS-Upgrade project, and I was a beamline scientist at Sector 7 as stated below.
2004-2011	**Beamline Scientist, X-ray Science Division, Advanced Photon Source, Argonne National Laboratory (Associate Research Scientist level).** My responsibilities as Sector 7 Coordinator included the daily administration of the 7-ID beamline operation, the co-supervision of four PhD scientists and a scientific associate. In 2008-2009, I worked on the completion of the 7-BM beamline which focuses on time-resolved microfocused radiography. I also continued my operation and research role at Sector 7 started in 1998.
1998-2004	**Senior Research Associate in the Physical Sciences II, Department of Physics, University of Michigan.** As a beamline Scientist for the University of Michigan, Howard University, Lucent Technologies-Bell Labs Collaborative Access Team (MHATT-CAT) at the Advanced Photon Source (APS), my task was to support the operation of the MHATT-CAT insertion device beam line, to participate in the scientific and professional activities of the CAT, to help users of this facility to perform their experiments, and to pursue an active research program focused on coherent and incoherent time-resolved X-ray scattering techniques. While stationed at the APS, I became a critical element in the operation of a state of the art synchrotron radiation research facility. In 2001, I became the Sector 7 Coordinator.
1998	**Discussion Instructor at the Department of Physics, University of Michigan.** I taught three sections of Introduction to Electromagnetism. The students teaching evaluation is available upon request.

1996-98	**Postdoctoral Fellow at the Department of Physics of the University of Michigan.**
1991-95	**Teaching Assistant, Department of Physics, McGill University.** I marked assignments for 3rd year Electromagnetism, Biophysics and 2nd year Thermodynamics.
1994	**Assistant System Manager** of the condensed matter physics computer system.
1988-90	**Teaching Assistant, Department of Physics, University of Waterloo.** I marked first year physics, 4th year optics and graduate quantum mechanics.
1988	**Instructor, Extension de l'enseignement, Université Laval, Ste-Foy, Québec.** I taught three first year physics courses: mechanics, electromagnetism and optics.
1987-88	**Substitute teacher, Ecole Polyvalente LaCamaradière, Québec, Québec.**

Grants

2001-2003	*Development of Lithium-based x-ray compound refractive lenses*, Principal Investigator Nino Pereira, Ecopulse Inc, Phase I and II SBIR contract N00178-02-C-3119, from the US Missile Defense Agency.
October 2007-2009	*"Novel Concepts in Streak-Camera Development, and Applications"*, Bernhard W. Adams, K. Attenkofer, Eric M. Dufresne, E.C. Landahl, T. Rajh, L. X. Chen, A. Miceli, J. Lee, S. Ross, Strategic LDRD FY08-09.
October 2007-2010	*"Ultrafast x-ray tracking of laser-controlled molecular motions"*, Linda Young, L. Chen, R. Dunford, Elliot Kanter, B. Kraessig, R. Santra, S. Southworth, D. Tiede, S. Vajda, B. Adams, D. Arms, K. Attenkofer, Eric Dufresne, E. Landahl, D. Walko and J. Wang, Strategic LDRD FY08-10.
October 2014-September 2017	*"Unraveling Mesoscale Spatial-temporal Correlations in Materials Using Coherent X-ray Probes"*, lead PI: Alec Sandy, Strategic LDRD FY15-17.

TALKS and CONFERENCE PRESENTATIONS

March 2018	Invited talk at the APS Small-Angle X-ray Scattering Special Interest Group.
January 2018	Physics Department Colloquium at Truman State University, Kirksville MO.
October 2017	Invited talk at the HPCAT workshop on "Probing Materials under Extreme Conditions Using Synchrotron Radiation"
September 2017	Invited talk at the APS workshop on Planning the First Experiments with the Helical Superconducting Undulator at 7ID.
October 2016	Invited talk at the APS Technical Working Group, Argonne IL.
June 2016	Contributed talk at Coherence 2016, Saint-Malo, France.
May 2015	Two talks, one in the Chemistry & Catalysis Workshop, and one in the Advanced Materials/Mesoscale Engineering Workshop on Early experiments and unique opportunities with the APS MBA Upgrade

February 2015	Invited talk at the APS Technical Working Group, Argonne, IL
January 2014	Invited talk at the Canadian Light Source, Saskatoon, Canada
September 2013	Invited talk at the Ultrafast SIG meeting.
June 2013	One invited talk and one contributed talk at the 17th Panamerican SRI 2013 Conference at NIST, in Gaithersburg, MD.
June 2013	Invited talk, European X-ray Free Electron Laser (XFEL) Gmbh, Hamburg, Germany.
May 2013	Three invited talks during the APS User Meeting, detailing the scope of the Ultrafast beamlines in the APS Upgrade.
September 2012	Invited talk at the Ultrafast SIG meeting.
September 2012	Invited Colloquium at the Northern Illinois University Department of Physics.
October 2011	Invited talk at the Time Resolved X-Ray Science at High Repetition Rate Workshop of the SSRL-LCLS Users Meeting, SLAC National Lab, CA.
June 2011	Invited talk at the Ultrafast SIG meeting.
May 2011	Invited talk at the NSLS CFN joint Users Meeting, Workshop 7: X-ray Diffraction and Spectroscopy to Study Dynamic Phenomena under Extremes.
Apr. 2011	Invited talk at the Mechanical Engineering and Design group luncheon seminar.
Mar. 2011	Invited talk, APS Technical Working Group, Chicago, IL
Feb. 2011	Invited talk, CLASSE seminars, CHESS, Cornell University, Ithaca, NY
Jan. 2011	Invited talk, Dynamic Phenomena Under Extremes, University of Texas, Austin, TX
Dec. 2010	Invited talk, Technical review of the SPX beamlines, Argonne.
Sep. 2010	Contributed talk, Pan-American Synchrotron Radiation Instrumentation Conference 2010, Chicago, IL.
May 2010	Invited talk, Workshop on Options for Ultrafast Science at NSLS-II, Brokkhaven National Lab, Upton NY.
Apr. 2010	Invited talk, XFEL Gmbh, Hamburg, Germany
Nov. 2009	Invited talk, University of Ottawa, Ottawa, Canada.
Oct. 2009	Invited talk, APS Scientific Advisory Committee Meeting, talk on options for time-resolved science in the Upgrade of APS.
Oct. 2009	Contributed talk, Workshop on applications of Coherent X-ray Methods, Melbourne University, Melbourne, Australia.
Sep. 2009	Contributed talk, International SRI 2009 conference Melbourne, Australia
Jun. 2008	Contributed talk, Canadian Association of Physicists, Université Laval, Québec, Canada
Jun. 2007	Contributed talk, Coherence 2007, International Workshop on Phase Retrieval and Coherent Scattering, Monterrey CA

Jun. 2007	Contributed talk, Canadian Association of Physicists, University of Saskatchewan, Saskatoon Saskatchewan
May 2007	APS User Seminar, Chicago IL.
Apr. 2007	Invited talk, SRI 2007, Satellite Workshop on Coherence and Polarization
Apr. 2007	Chair with Joseph Holmes the satellite workshop on Coherence and Polarization at SRI 2007
Apr. 2007	Contributed talk and one poster, SRI 2007, Baton Rouge LA
Jun. 2006	Contributed talk, and one poster, the 2006 International Synchrotron Radiation Instrumentation Conference in Korea.
Jun. 2006	Contributed talk, Canadian Association of Physicists, Brock University, St-Catherines ON.
Feb. 2006	Poster, Gordon 2006 Conference on Ultrafast Phenomena, CA.
Dec. 2005	APS Technical Working Group, Chicago IL.
Oct. 2005	APS Technical Working Group, Chicago IL.
Jun. 2005	APS User Seminar, Chicago IL.
Aug. 2004	Invited talk, 2004 XOR Retreat, Argonne IL.
Jun. 2004	Invited talk, CUOS, Univ. of Michigan, Ann Arbor MI.
Mai. 2004	Poster presented at the Ultrafast 2004 conference, San Diego CA
Apr. 2004	APS Technical Working Group, Chicago IL.
Aug. 2003	Two posters presented at SRI 2003, the Synchrotron Radiation Instrumentation Conference in San Francisco, CA.
Jun. 2003	Invited talk, APS,ESRF,Spring-8 Workshop, ANL, IL
May. 2003	Invited talk, Univ. of Michigan, CUOS, Ann Arbor MI.
Mar. 2003	APS Technical Working Group, Chicago IL.
Dec. 2002	Invited talk, INRS-Energie, Montreal, Canada
Sept. 2002	APS Technical Working Group, Chicago IL.
Aug. 2002	APS Technical Working Group, Chicago IL.
Feb. 2002	APS Technical Working Group, Chicago IL.
Jan. 2002	APS User Seminar, Chicago, IL.
Sep. 2001	APS Technical Working Group, Chicago IL.
Aug. 2001	Two posters presented at SRI 2001, the Synchrotron Radiation Instrumentation Conference in Madison, WI.
Mar. 2001	APS Technical Working Group, Chicago IL.
Oct. 2000	APS Technical Working Group, Chicago IL.
June 2000	Talk at the Canadian Association of Physicist Conference, Toronto, ON, Canada.

Oct. 1999	Poster presented at SRI 99, the Synchrotron Radiation Instrumentation Conference at SSRL, Palo Alto, CA.
Aug. 1999	Poster presented at X99, the 1999 X-ray Absorption and Spectroscopy Conference, Chicago, IL.
June 1998	Talk at the Canadian Association of Physicist Conference, Waterloo, ON, Canada.
May 1997	Invited talk at the NSLS Annual Users' Meeting, Workshop on XPCS, Upton, NY.
Nov. 1996	Invited talk, Department of Physics, Oakland University, Rochester, MI.
Jan. 1996	NSLS lunch time seminar, Brookhaven National Labs, Upton, NY.
June 1995	Canadian Association of Physicist Conference, Québec, PQ, Canada.
May 1995	Department of Physics, University of Michigan, Ann Arbor MI.
May 1995	Department of Physics, Brookhaven National Labs, Upton, NY.
June 1990	Poster presented at the Canadian Association of Physicist Conference, Guelph ON, Canada.

Workshop and conference organization

October 2013	Workshop on new science opportunities provided by a multi-bend achromat lattice at the APS October 21 & 22, Timing and Dynamics breakout session co-organizer.
May 2013	APS User meeting Satellite Workshop 13 Time-resolved X-ray Science at BioCARS: Past, Present, and Future, co-organized with Robert Henning, Vukica Srajer, and Philip Anfinrud.
October 2011	Workshop 1: Time Resolved X-Ray Science at High Repetition Rate of the SSRL-LCLS Users Meeting, SLAC National Lab, CA., co-organized with J. Corbett, C.C. Kao, D. Keavney, A. Lindenberg, A. Mehta, L. Young
June 2011	XDL2011 Workshop 3- Ultra-fast Science with "Tickle and Probe", co-organized with Robert Schoenlein, Brian Stephenson, and Joel Brock.
May 2011	APS User meeting APS Workshop 3 Opportunities in Magnetic, Atomic, and Molecular Dynamics with a Short Pulse Soft X-ray Source, co-organized with David Keavney, and Yuelin Li.

Refereeing work.

Reviewed articles for Journal of Synchrotron Radiation, Review of Scientific Instrument, and Physical Review Letters.

MSc Thesis committee for G. Jackson Williams, DePaul University 2010.

PUBLICATIONS

Refereed Journal Articles

1. *Using Refractive Lenses to Provide a Variable Spot Size for Kirkpatrick-Baez Mirrors*, Steve M. Heald and Eric M. Dufresne, submitted to J. Synchrotron Rad.

2. Dynamics in Hard Condensed Matter Probed by X-ray Photon Correlation Spectroscopy: Present and Beyond, Qingteng Zhang, Eric M. Dufresne, Alec R. Sandy, to appear in Current Opinion in Solid State and Materials Science. (review)

3. *Sub-Microsecond-Resolved Multi-Speckle X-Ray Photon Correlation Spectroscopy with a Pixel Array Detector*, Qingteng Zhang, Eric M. Dufresne, Suresh Narayanan, Piotr Maj, Anna Koziol, Robert Szczygiel, Pawel Grybos, Mark Sutton and Alec R. Sandy, to appear in J. Synchrotron Rad.

4. *Universal Aging Characteristics of Macroscopically and Microscopically Dissimilar Metallic Glasses*, Kaikin Wong, Rithin P. Krishnan, Eric M. Dufresne, Koji Ohara, Alec R. Sandy and Suresh M. Chathoth, Acta Materialia 155 35-42 (15 August 2018) DOI: 10.1016/j.actamat.2018.05.059.

5. *Hard-sphere like dynamics in highly concentrated alpha-crystallin suspensions*, Preeti Vodnala, Nuwan Karunaratne, Laurence Lurio, George M. Thurston, Michael Vega, Elizabeth Gaillard, Suresh Narayanan, Alec Sandy, Qingteng Zhang, Eric M. Dufresne, Giuseppe Foffi, Pawel Grybos, Piotr Kmon, Piotr Maj, and Robert Szczygiel, Phys. Rev. E 97, 020601(R) (Feb. 2) (2018), DOI: 10.1103/PhysRevE.97.020601.

6. *Shear banding leads to accelerated aging dynamics in a metallic glass*, Stefan Küchemann, Chaoyang Liu, Eric M. Dufresne, Jeremy Shin, and Robert Maaß, Phys. Rev. B 97, 014204 (11 January 2018) DOI: 10.1103/PhysRevB.97.014204.

7. *Ultrafast three-dimensional integrated imaging of strain in core/shell semiconductor/metal nanostructures* Mathew J. Cherukara, Kiran Sasikumar, Anthony Di Chiara, Steven J. Leake, Wonsuk Cha, Eric M. Dufresne, Tom Peterka, Ian McNulty, Donald A. Walko, Haidan Wen, Subramanian K.R.S. Sankaranarayanan, and Ross J. Harder, Nano Lett. 17 (12), pp 76967701 (Oct 31, 2017). DOI: 10.1021/acs.nanolett.7b03823.

8. *Dynamic Scaling of Colloidal Gel Formation at Intermediate Concentrations*, Qingteng Zhang, Divya Bahadur, Eric M. Dufresne, Pawel Grybos, Piotr Kmon, Robert L. Leheny, Piotr Maj, Suresh Narayanan, Robert Szczygiel, Subramanian Ramakrishnan, and Alec Sandy, Phys. Rev. Lett. **119** (published October 25) 178006 (2017), DOI: 10.1103/PhysRevLett.119.178006.

9. *Thermal Fluctuations of Ferroelectric Nanodomains in a Ferroelectric/Dielectric $PbTiO_3/SrTiO_3$ Superlattice*, Qingteng Zhang, Eric M. Dufresne, Pice Chen, Joonkyu Park, Margaret P. Cosgriff, Mohammed Yusuf, Yongqi Dong, Dillon D. Fong, Hua Zhou, Zhonghou Cai, Ross Harder, Sara J. Callori, Matthew Dawber, Paul G. Evans, Alec R. Sandy, Phys. Rev. Lett. **118** 097601 (2017), DOI: 10.1103/PhysRevLett.118.097601.

10. *Ultrafast Three-Dimensional X-ray Imaging of Deformation Modes in ZnO Nanocrystals*, Mathew J. Cherukara, Kiran Sasikumar, Wonsuk Cha, Badri Narayanan, Steven J. Leake, Eric M. Dufresne, Tom Peterka, Ian McNulty, Haidan Wen, Subramanian K. R. S. Sankaranarayanan, and Ross J. Harder, Nano Lett. **17**, 1102–1108 (2017), DOI: 10.1021/acs.nanolett.6b04652.

11. *Phase coexistence and pinning of charge density waves by interfaces in chromium*, A. Singer, S. K. K. Patel, V. Uhlir, R. Kukreja, A. Ulvestad, E. M. Dufresne, A. R. Sandy, E. E. Fullerton, and O. G. Shpyrko, Phys. Rev. B **94**, 174110 (2016) DOI: 10.1103/PhysRevB.94.174110.

12. *Experimental study on the effect of nozzle hole-to-hole angle on the near-field spray of diesel injector using fast X-ray phase-contrast imaging*, Xusheng Zhang, Seoksu Moon, Jian Gao, Eric M. Dufresne, Kamel Fezzaa, and Jin Wang, Fuel **185**, 1 December, Pages 142–150 (2016) DOI: 10.1016/j.fuel.2016.07.114.

13. *Pink-beam focusing with a 1D compound refractive lens*, Eric M. Dufresne, Robert W. Dunford, Elliot P. Kanter, Yuan Gao, Seoksu Moon, Donald A. Walko and Xusheng Zhang, J. Synchrotron Rad. **23** September 1082–1086 (2016) DOI: 10.1107/S1600577516009310 (author's copy)..

14. *Submillisecond X-ray Photon Correlation Spectroscopy from Pixel-Array-Detector with Fast Dual Gating and No Readout Deadtime*, Qingteng Zhang, Eric M. Dufresne, Pawel Grybos, Piotr Maj, Suresh Narayanan, Gregory W. Deptuch, Robert Szezygiel and Alec R. Sandy, J. Synchrotron Rad. **23** 679-684 (2016), DOI: 10.1107/S1600577516005166 (author's copy).

15. *Mesoscopic structural phase progression in photo-excited VO2 revealed by time-resolved x-ray diffraction microscopy*, Yi Zhu, Zhonghou Cai, Pice Chen, Qingteng Zhang, Matthew J. Highland, Il Woong Jung, Donald A. Walko, Eric M. Dufresne, Jaewoo Jeong, Mahesh G. Samant, Stuart S. P. Parkin, John W. Freeland, Paul G. Evans, Haidan Wen, Nature Scientific Reports **6**, 21999 (Feb. 2016), DOI: 10.1038/srep21999.

16. *First experimental feasibility study of VIPIC: a custom-made detector for x-ray speckle measurements*, Abdul K. Rumaiz, D. Peter Siddons, Grzegorz Deptuch, Piotr Maj, Anthony N. Kuczewski, Gabriella A. Carini, Suresh Narayanan, Eric M. Dufresne, Alec Sandy, Robert Bradford, Andrei Fluerasu, and Mark Sutton, J. Synchrotron Rad., Mar. **23** 404-409 (2016), DOI: 10.1364/OE.24.000355.

17. *Pushing X-Ray Photon Correlation Spectroscopy beyond the continuous frame rate limit*, Eric M. Dufresne, Suresh Narayanan, Alec R. Sandy, David M. Kline, Qingteng Zhang, Eric C. Landahl, and Steve Ross, Optics Express **24**, no. 1, 355–364 (2016), DOI: 10.1364/OE.24.000355.

18. *Condensation of collective charge ordering in chromium*, A. Singer, M.J. Marsh, S.H. Dietze, V. Uhlir, Y. Li, D.A. Walko, E.M. Dufresne, G. Srajer, M.P. Cosgriff, P.G. Evans, E.E. Fullerton, O.G. Shpyrko, Phys. Rev. B **91**, 115134 (2015), DOI: 10.1103/PhysRevB.91.115134.

19. *Morphological Exploration of Emerging Jet Flows from Multi-Hole Diesel Injectors at Different Needle Lifts*, Seoksu Moon, Xusheng Zhang, Jian Gao, Kamel Fezzaa, Eric M. Dufresne, Jin Wang, Xingbin Xie, Fengkun Wang, Ming-Chia Lai, Atomization Spray **25**, 375 (2015), 10.1615/AtomizSpr.2015011058.

20. *Time delay measurement in the frequency domain*, Stephen M. Durbin, Shih-Chieh Liu, Eric M. Dufresne, Yuelin Li, Haidan Wen, J. Synchrotron Rad. **22**, 1293 (2015), DOI: 10.1107/S1600577515014095.

21. *A short-pulse X-ray beamline for spectroscopy and scattering*, R. Reininger, E. M. Dufresne, M. Borland, M. A. Beno, L. Young and P. G. Evans, J. Synchrotron Rad. **21**, 1194-1199 (2014), DOI: 10.1107/S1600577514012302.

22. *Transient crystalline superlattice generated by a photoacoustic transducer*, A.Loether, Y. Gao, Z. Chen, M.F. DeCamp, E.M. Dufresne, D.A. Walko, and H. Wen, Structural Dynamics **1**, 024301 (2014), DOI: 10.1063/1.4867494.

23. *Self-propagating reactions in Al/Zr multilayers: Anomalous dependence of reaction velocity on bilayer thickness*, S. C. Barron, S. T. Kelly, J. Kirchhoff, R. Knepper, K. Fisher, K. J. T. Livi, E. M. Dufresne, K. Fezzaa, T. W. Barbee, T. C. Hufnagel and T. P. Weihs, J. Appl. Phys. **114**, 223517 (Dec. 14) (2013), DOI: 10.1063/1.4840915.

24. *Structural and electronic recovery pathways of a photoexcited ultrath in VO2 film*, Haidan Wen, Lu Guo, Eftihia Barnes, June Hyuk Lee, Donald A. Walko, Richard D. Schaller, Jarrett A. Moyer, Rajiv Misra, Yuelin Li, Eric M. Dufresne, Darrell G. Schlom, Venkatraman Gopalan, and John W. Freeland, Phys. Rev. B **88**, 165424 (October 25) (2013), DOI: 10.1103/PhysRevB.88.165424.

25. *Optical design of the short pulse x-ray imaging and microscopy time-angle correlated diffraction beamline at the Advanced Photon Source*, R. Reininger, E.M. Dufresne, M. Borland, M.A. Beno, L. Young, K.-J. Kim, P.G. Evans, Rev. Sci. Instrum. **84** (5), 053103-1-053103-7 (2013), DOI: 10.1063/1.4804197.

26. *Optoelectronic measurement of x-ray synchrotron pulses: a proof of concept demonstration*, Stephen M. Durbin, Aamer Mahmood, Marc Caffee, Sergei Savikhin Eric M. Dufresne, Haidan Wen, and Yuelin Li, Appl. Phys. Lett. **102** no. 5 051109 (published online 7 February) (2013), DOI: 10.1063/1.4791559.

27. *Field-Dependent Domain Distortion and Interlayer Polarization Distribution in PbTiO3/SrTiO3 Superlattices*, Pice Chen, Margaret P. Cosgriff, Qingteng Zhang, Sara J. Callori, Bernhard W. Adams, Eric M. Dufresne, Matthew Dawber, and Paul G. Evans, Phys. Rev. Lett. **110**, 047601 (Jan. 24) (5 pages) (2013), DOI: 10.1103/PhysRevLett.110.047601.

28. *Electronic Origin of Ultrafast Photoinduced Strain in BiFeO3*, Haidan Wen, Pice Chen, Margaret P. Cosgriff, Donald A. Walko, June Hyuk Lee, Carolina Adamo, Richard D. Schaller, Jon F. Ihlefeld, Eric M. Dufresne, Darrell G. Schlom, and Paul G. Evans, Phys. Rev. Lett. **110**, 037601 (Jan. 18)(2013), DOI: 10.1103/PhysRevLett.110.037601

29. *Evidence for interatomic Coulombic decay in Xe K-shell-vacancy decay of XeF2*, R. W. Dunford, S. H. Southworth, D. Ray, E. P. Kanter, B. Krig, L. Young, D. A. Arms, E. M. Dufresne, D. A. Walko, O. Vendrell, S.-K. Son, and R. Santra, Phys. Rev. A **86**, 033401 (September 2012), DOI: 10.1103/PhysRevA.86.033401.

30. *Direct observation of dynamics of thermal expansion using pump-probe high-energy-resolution x-ray diffraction*, S. Stoupin, A. M. March, H. Wen, D. A. Walko, Y. Li, E.M. Dufresne, S. A. Stepanov, K.-J. Kim, and Yu. V. Shvyd.ko, Phys. Rev. B **86**, 054301 (August 2012), 10.1103/PhysRevB.86.054301.

31. *The 7BM Beamline at the APS: A Facility for Time-Resolved Fluid Dynamics Measurements*, Alan Kastengren, Christopher F. Powell, Dohn Arms, Eric M. Dufresne, Harold Gibson and Jin Wang, Journal of Synchrotron Radiation, **19** Part 4, 654-657 (July 2012), DOI: 10.1107/S0909049512016883.

32. *Nonlinearity in the high-electric-field piezoelectricity of epitaxial BiFeO3 on SrTiO3*, Pice Chen, Rebecca J. Sichel-Tissot, Ji Young Jo, Ryan T. Smith, Seung-Hyub Baek, Wittawat Saenrang, Chang-Beom Eom, Osami Sakata, Eric M. Dufresne, and Paul G. Evans, Appl. Phys. Lett. **100**, 062906 (Feb. 6) (2012), DOI: 10.1063/1.3683533.

33. *Domain- and symmetry-transition origins of reduced nanosecond piezoelectricity in ferroelectric/dielectric superlattices*, Pice Chen, Ji Young Jo, Ho Nyung Lee, Eric M. Dufresne, Serge M. Nakhmanson, and Paul G. Evans, New Journal of Physics **14** (January 18), 013034-1-013034-13 (2012), DOI: 10.1088/1367-2630/14/1/013034.

34. *Ultrafast polarization dynamics in ferroelectric nanolayers*, Dan Daranciang, Matthew J. Highland, Haidan Wen, Nathaniel Brandt, Harold Y. Hwang, Michael Vattilana, Steve M. Young, John Goodfellow, Tingting Qi, Ilya Grinberg, David M. Fritz, Marco Cammarata, Diling Zhu, Henrik T. Lemke, Donald A. Walko, Eric M. Dufresne, Yuelin Li, Jorgen Larsson, Klaus Sokolowski-Tinten, Andrew M. Rappe, David A. Reis, Keith A. Nelson, Paul H. Fuoss, G. Brian Stephenson and Aaron M. Lindenberg, Phys. Rev. Lett. **108** 087601 (2012), DOI: 10.1103/PhysRevLett.108.087601.

35. *Nanosecond dynamics of ferroelectric/dielectric superlattices*, Ji Young Jo, Pice Chen, Rebecca J. Sichel, Sara J. Callori, John Sinsheimer, Eric M. Dufresne, Matthew Dawber, and Paul G. Evans, Phys. Rev. Lett. **107**, (No.5 July 29) 055501 (2011), DOI: 10.1103/PhysRevLett.107.055501.

36. Alan Kastengren, Christopher Powell, Eric M. Dufresne, Donald A. Walko, *Application of X-Ray Fluorescence to Turbulent Mixing*, J. Synch. Rad. (online 13 July) vol. **18**, part 5 (September) 811.815 (2011), DOI: 10.1107/S0909049511024435.

37. Stephen T. Kelly, Jonathan C. Trenkle, Lucas J. Koerner, Sara C. Barron, Noel Walker, Phillipe O. Pouliquen, Mark W. Tate, Sol M. Gruner, Eric M. Dufresne, Timothy P. Weihs and Todd C. Hufnagel, *Fast x-ray microdiffraction techniques for studying irreversible transformations in materials*, J. Synch. Rad. **18** May 464-474 (2011), DOI: 10.1107/S0909049511002640.

38. Ji Young Jo, Rebecca J. Sichel, Eric M. Dufresne, Ho Nyung Lee, Serge M. Nakhmanson, and Paul G. Evans, *Component-specific electromechanical response in a ferroelectric/dielectric superlattice*, Phys. Rev. B 82, 174116 Nov. (2010), DOI:`http://dx.doi.org/10.1103/PhysRevB.82.174116`.

39. Ji Young Jo, Rebecca J. Sichel, Ho Nyung Lee, Serge M. Nakhmanson, Eric M. Dufresne, and Paul G. Evans, *Piezoelectricity in the dielectric component of nanoscale dielectric/ferroelectric superlattices*, Phys. Rev. Lett. **104**, 207601 (2010) DOI:`http://dx.doi.org/10.1103/PhysRevLett.104.207601`.

40. Robert V. Reeves, Jeremiah D.E. White, Eric M. Dufresne, Kamel Fezzaa, Steven F. Son, Arvind Varma, and Alexander S. Mukasyan, *"Microstructural transformations and kinetics of high-temperature heterogeneous gasless reactions by high-speed x-ray phase contrast imaging"*, Physical Review B **80** 224103-1 224103-8 (2009). It featured as an Editor's choice.
Download at `http://dx.doi.org/10.1103/PhysRevB.80.224103`.

41. Alexei Grigoriev, Rebecca J. Sichel, Ji Young Jo, Samrat Choudhury, Long-Qing Chen, Dane Morgan, Ho Nyung Lee, Eric C. Landahl, Bernhard W. Adams, Eric M. Dufresne, and Paul G. Evans, *"Stability of unswitched ferroelectric polarization in ultrathin epitaxial $Pb(Zr,Ti)O_3$"*, Physical Review B **80** (July 21) 014110-1 to 014110-6 (2009). See `http://dx.doi.org/10.1103/PhysRevB.80.014110`.

42. E.M. Dufresne, S.B. Dierker, L.E. Berman and Z. Yin, *"Development of New Apertures for Coherent X-ray Experiments."*, Journal of Synchrotron Radiation, **16** 358-367 (May) (2009).
See `http://dx.doi.org/10.1107/S0909049509003720`.

43. T. Ejdrup, H. T. Lemke, K. Haldrup, T. N. Nielsen, D. A. Arms, D. A. Walko, A. Miceli, E. C. Landahl, E. M. Dufresne and M. M. Nielsen, *"Picosecond time-resolved laser pump/X-ray probe experiments using a gated singlephoton-counting area detector"*, Journal of Synchrotron Radiation **16** 387-390 (May) (2009), see `http://dx.doi.org/10.1107/S0909049509004658`.

44. E. P. Kanter, R. Santra,1, C. Hohr, E. R. Peterson, J. Rudati, D. A. Arms, E. M. Dufresne, R. W. Dunford, D. L. Ederer, B. Krassig, E. C. Landahl, S. H. Southworth, and L. Young, *"Characterization of the Spatiotemporal Evolution of Laser-generated Plasmas"*, J. Appl. Phys. 104 no 7 (October 9) 073307-1 to 073307-7 (2008). See `http://dx.doi.org/10.1063/1.2991339`.

45. N . Husseini , D . Kumah , J . Yi , C . Torbet , D . Arms , E . Dufresne , T . Pollock , J . Wayne Jones , R . Clarke, *"Mapping single-crystal dendritic microstructure and defects in nickel-base superalloys with synchrotron radiation."*, Acta Materialia , Volume 56 , Issue 17 (October), Pages 4715 - 4723 (2008). See `http://dx.doi.org/10.1016/j.actamat.2008.05.041`.

46. A. Grigoriev, R. Sichel, H. N. Lee, E.C. Landahl, B. Adams, E. M. Dufresne, and P. G. Evans, *"Nonlinear piezoelectricity in epitaxial ferroelectrics at high electric fields"*, Phys. Rev. Lett. **100** 027604 (January 18) (2008). See `http://dx.doi.org/10.1103/PhysRevLett.100.027604`.

47. S. H. Southworth, D. A. Arms, E. M. Dufresne, R. W. Dunford, D. L. Ederer, C. Höhr, E. P. Kanter, B. Kraessig, E. C. Landahl, E. R. Peterson, J. Rudati, R. Santra, D. A. Walko, and L. Young, *"K-edge x-ray-absorption spectroscopy of laser-generated Kr+ and Kr2+"*, Phys. Rev. A **76**, 043421 (2007). See `http://dx.doi.org/10.1103/PhysRevA.76.043421`.

48. *"Real time structural modification of epitaxial FePt thin films under x-ray rapid thermal annealing using undulator radiation"*, J. R. Skuza, R. A. Lukaszew, E. M. Dufresne, D. A. Walko, C. Clavero, A. Cebollada C. N. Cionca and R. Clarke, Appl. Phys. Lett. **90** 251901 (2007).
See `http://dx.doi.org/10.1063/1.2749426`.

49. *"Synchronizing fast electrically driven phenomena with synchrotron x-ray probe"* Alexei Grigoriev, Dal-Hyun Do, Paul G. Evans, Bernhard Adams, Eric Landahl, and Eric M. Dufresne
Rev. Sci. Instrum. **78**, No 2 Feb. 26, 023105 (2007). See `http://dx.doi.org/10.1063/1.2668989`.

50. *"Alignment dynamics in a laser-produced plasma"* C. Hohr, E. R. Peterson, N. Rohringer, J. Rudati, D. A. Arms, E. M. Dufresne, R. W. Dunford, D. L. Ederer, E. P. Kanter, B. Krssig, E. C. Landahl, R. Santra, S. H. Southworth, and L. Young
Phys. Rev. A. Rapid Communications **75**, 011403R (2007).
See `http://dx.doi.org/10.1103/PhysRevA.75.011403`.

51. *"X-Ray Microprobe of Orbital Alignment in Strong-Field Ionized Atoms"* L. Young, D. A. Arms, E.M. Dufresne, R.W. Dunford, D.L. Ederer, C. Hohr, E.P. Kanter, B. Krassig, E.C. Landahl, E.R. Peterson, J. Rudati, R. Santra, and S.H. Southworth, Phys. Rev. Lett. 97, 083601 August 21 (2006).
See `http://dx.doi.org/10.1103/PhysRevLett.97.083601`.

52. *"Nanosecond Domain Wall Dynamics in Ferroelectric PbZrTiO3 Thin Films"* A. Grigoriev, D.-H. Do, D. M. Kim, C.-B. Eom, B. Adams, E. M. Dufresne, and P. G. Evans, Phys. Rev. Lett., 96, 187601 (2006). See `http://dx.doi.org/10.1103/PhysRevLett.96.187601`.

53. *"Subnanosecond piezoelectric x-ray switch"* A. Grigoriev, D.-H. Do, D. M. Kim, C.-B. Eom, B. Adams, E. M. Dufresne, and P. G. Evans, Appl. Phys. Lett., 89, 021109 (2006).
See `http://dx.doi.org/10.1063/1.2219342`.

54. *"Synchrotron X-ray Fluorescence Analysis of Copper and Zinc in Silicate and Oxide Minerals from Granitoid Rocks"* D.P. Core, S.E. Kesler, E.J. Essene, E.M. Dufresne, R. Clarke, D.A. Arms, D. Walko, M.L. Rivers, The Canadian Mineralogist, **43** pages 1781-1796 (2005).
See `http://dx.doi.org/10.2113/gscanmin.43.5.1781`.

55. M.F. DeCamp, D.A. Reis, D.M. Fritz, P.H. Bucksbaum, E.M. Dufresne and R. Clarke, *"X-ray synchrotron studies of ultrafast crystalline dynamics"*, J. Synch. Rad., **12**, Part 2, pages 177-192 (2005).
See `http://dx.doi.org/10.1107/S0909049504033679`.

56. A. Fluerasu, M. Sutton, E.M. Dufresne, *"X-Ray Intensity Fluctuation Spectroscopy Studies on Phase-Ordering Systems"*, Phys. Rev. Lett. **94** 055501 (2005).
See `http://dx.doi.org/10.1103/PhysRevLett.94.055501`.

57. D.-H. Do, P.G. Evans, E.D. Isaacs, D. M. Kim, C.-B. Eom, and E.M Dufresne, *"Structural visualization of two electric field regimes of polarization fatigue in epitaxial ferroelectric oxide devices"*, Nature Materials, **3**, June 6, 365-369 (2004). See `http://dx.doi.org/10.1038/nmat1122`.

58. Z. Zhang, R.A. Lukaszew, C. Cionca, X. Pan, R. Clarke, A. Zambano, D. Walko, E. Dufresne, S. te Velthius, *"Correlated structural and magnetization reversal studies on epitaxial Ni films grown with molecular beam epitaxy and with sputtering"*, J. Vac. Sci. Technol. A 22(4), p1868-1872 (2004).
See `http://dx.doi.org/10.1116/1.1692292`.

59. N.R. Pereira, E.M. Dufresne, R. Clarke, and D.A. Arms, *"Parabolic lithium refractive optics for X-rays"*, Rev. Sci,. Instrum. **75**, 37-41 (2004). See http://dx.doi.org/10.1063/1.1633007.

60. M.F. DeCamp, D.A. Reis, A. Cavalieri, P. H. Bucksbaum, R. Clarke, R. Merlin, E.M. Dufresne, D.A. Arms, A.M. Lindenberg, A.G. Macphee, Z. Chang, B. Lings, J.S. Wark, S. Fahy, *"Supersonic strain front driven by a dense electron-hole plasma."*, Phys. Rev. Lett. **91** 165502-1 (2003). See http://dx.doi.org/10.1103/PhysRevLett.91.165502.

61. S. Yang, Y. Horibe, C.H. Chen, P. Mirau, T. Tatry, P. Evans, J. Grazul, E.M. Dufresne, *"Ordered Hydrophobic Organosilicates Templated by Block Copolymers"*, Chem. Mater. Vol. 14, 5173-5178 (2002). See http://dx.doi.org/10.1021/cm0207503.

62. B.W. Adams, M.F. DeCamp, E.M. Dufresne and D.A. Reis, *Picosecond Laser-Pump, X-ray Probe Spectroscopy of GaAs*, Rev. Sci. Instrum Vol. 73, December, p4150 (2002). See http://dx.doi.org/10.1063/1.1425385.

63. Y. Yacoby, M. Sowwan, E. Stern, J. Cross, D. Brewe, R. Pindak, J. Pitney, E. M. Dufresne and R. Clarke, *"Direct determination of epitaxial interface structure in Gd_2O_3 passivation of GaAs"*, Nature Materials Vol. 1 no. 2, p99-101 (2002). See http://dx.doi.org/10.1038/nmat735.

64. E. Dufresne, T. Nurushev, R. Clarke, and S.B. Dierker. *"SAXS Study of Concentration Fluctuations in the Binary Mixture Hexane-Nitrobenzene"*, Phys. Rev. E., Vol. 65, June 21, 065107 (2002). See http://dx.doi.org/10.1103/PhysRevE.65.061507.

65. E.M.Dufresne, D.A. Arms, R. Clarke, S.B. Dierker, N.R. Pereira, and D. Foster, *"Lithium metal for x-ray refractive optics"*, Appl. Phys. Lett., **79** no 25 p4085-7 (2001). See http://dx.doi.org/10.1063/1.1425068.

66. M.F. DeCamp, D. A. Reis, P. H. Bucksbaum, B. Adams, J.M. Caraher, R. Clarke, C.W.S. Conover, E.M. Dufresne, R. Merlin, V. Stoika, and J.K. Wahlstrand, *"Coherent Control of Pulsed X-ray Beams"*, Nature **413** p825 October 25 2001. See http://dx.doi.org/10.1038/35101560.

67. D. A. Reis, M. DeCamp, P. H. Bucksbaum, R. Clarke, E. Dufresne, M. Hertlein, R. Merlin, R. Falcone, H. Kapteyn, M. Murnane, J. Larsson, Th. Missalla, J. Wark, *"Probing impulsive strain propagation with x-ray pulses"*, Phys. Rev. Lett., **86** 3072 (2001). See http://dx.doi.org/10.1103/PhysRevLett.86.3072.

68. E. Dufresne, R. Brüning, M. Sutton, G.B. Stephenson and B. Rodricks, *"A statistical technique for characterizing X-ray position-sensitive detectors."* Nuclear Instruments and Methods A **364** (1995) 380-393. See http://dx.doi.org/10.1016/0168-9002(95)00335-5.

69. S. Brauer, G.B. Stephenson, M. Sutton, R. Brüning, E. Dufresne, S.G.J. Mochrie, G. Grübel, J. Als-Nielsen and D.L. Abernathy, *"X-ray Intensity Fluctuation Spectroscopy Observations of Critical Dynamics in Fe_3Al."* Physical Review Letters **74** (1995) 2010-2013. See http://dx.doi.org/10.1103/PhysRevLett.74.2010.

70. M. Sutton, R. Brüning and E. Dufresne, *"Longitudinal diffraction scans using a position sensitive detector."* Nuclear Instruments and Methods in Physics Research A **355** (1995) 654-659. See http://dx.doi.org/10.1016/0168-9002(94)01113-3.

71. S.W. Kycia, A.I. Goldman, T.A. Lograsso, D.W. Delaney, D. Black, M. Sutton, E. Dufresne, R. Brüning and B. Rodricks, *"Dynamical x-ray diffraction from an icosahedral quasi-crystal."* Physical Review B **48** (1993) 3544-3547. See http://dx.doi.org/10.1103/PhysRevB.48.3544.

72. E. Dufresne and D.E. Brodie, *"A study of high-purity Cd_xSe_{1-x} vacuum deposited thin films."* Canadian Journal of Physics **69** (1991) 124. Follow this link for pdf file..

Trade journals

73. *"X-ray Capabilities on the Picosecond Timescale at the Advanced Photon Source"*, B. Adams, M. Borland, L. X. Chen, P. Chupas, N. Dashdorj, G. Doumy, E. Dufresne, S. Durbin, H. D. Evans, T. Graber, R. Henning, E. P. Kanter, D. Keavney, C. Kurtz, Y. Li, A. M. March, K. Moffat, A. Nassiri, S. H. Southworth, V. Srajer, D. M. Tiede, D. Walko, J. Wang, H. Wen, L. Young, X. Zhang and A. Zholents, Synchrotron Radiation News Vol. 25, No. 2 (online: March 19) pages 6-11 (2012) DOI:10.1080/08940886.2012.663316.

Book Chapters

74. B. W. Adams, P.H. Bucksbaum, M.F. DeCamp, E.M. Dufresne, M.E. Garcia, H.O. Jeschke, A. Lindenberg, D.A. Reis, P. Sondhauss, J.S. Wark, and P. Zambianchi, *Nonolinear Optics, Quantum Optics, and Ultrafast Phenomena with X-ray*, Kluwer Academics Publisher, ISBN 1-4020-7475-1 (2003).

Refereed Conference Proceedings

75. *"Developments in Time-Resolved X-ray Research at APS Beamline 7ID"*, D.A. Walko, B.W. Adams, G. Doumy, E.M. Dufresne, Yuelin Li, A.M. March, A.R. Sandy, Jin Wang, Haidan Wen, and Yi Zhu, in the Proceedings of the International SRI 2015 Conference, New York, NY, July 2015. AIP Conf. Proc. 1741, 030048 (2016) DOI: 10.1063/1.4952871.

76. "Lensless Imaging of Nano- and Meso-Scale Dynamics with X-rays", Jesse N. Clark, Mariano Trigo, Ross Harder, Brian Abbey, Tetsuo Katayama, Mike Kozina, Eric Dufresne, Haidan Wen, Donald Walko, Yuelin Li, Xiaojing Huang, Ian Robinson and David Reis, Proceedings of Microscopy and Microanalysis M&M 2015, August 2-6, Portland OR, Edited by Robert L. Price, Microsc. Microanal. 21 (Suppl 3) page 2165 (2 pages) August 2015.
Journal site copy

77. "A Sagittally Bent Crystal for the Short Pulse X-ray Beamline at the Advanced Photon Source", Philip Strons, Ali Khounsary, Mikhail Antimonov, Eric M. Dufresne, Ruben Reininger, in the Proceedings of the 17th Pan-American Synchrotron Radiation Instrumentation Conference SRI2013, 19-21 June 2013, Gaithersburg, Maryland, USA, J. Phys.: Conf. Ser. Volume 493 012023 (online March 31) (2014) DOI: 10.1088/1742-6596/493/1/012023.

78. "Photo-modulated dynamic competition between metallic and insulating phases in a layered manganite", Yuelin Li, Donald Walko, Qing'an Li, Yaohua Liu, Stephan Rosenkranz, Hong Zheng, J.F. Mitchell, Haidan Wen, Eric Dufresne, and Bernhard Adams, MRS Proceedings vol. 1636, mrsf13-1636-u6. 09 (2014) DOI: 10.1557/opl.2014.23.

79. "Ultrafast Photostriction in Thin Film Bismuth Ferrite and its Correlation to Electronic Dynamics", Y. Li, H. Wen, P. Chen, M. P. Cosgriff, D. Walko, J. H. Lee, C. Adamo, R. Schaller, C. Rowland, C. Schlepuetz, E. Dufresne, Q. Zhang, C. Giles, D. Schlom, J. Freeland and P. Evans, 2012 MRS Fall Symposium VV-Advanced Materials Exploration with Neutrons and Synchrotron X-Rays, MRS Online Proc. Lib. Volume 1528, January 2013, mrsf12-1528-vv11-09 (2013) DOI: 10.1557/opl.2013.396.

80. "High-heat-load studies of cryogenically internally cooled silicon double crystal monochromator above and away from cooling channels" N.G. Kujala, A.T. Macrander, M. Ramanathan, E.M. Dufresne, G. Navrotski, S. Marathe, L. Assoufid, D.M. Mills and D.C. Mancini, Proceedings of the 11th International Conference on Synchrotron Radiation Instrumentation in Lyon, France, July 9-13 2012, Journal of Physics: Conference Series **425**, part 5, 052006 (2013).

DOI: 10.1088/1742-6596/425/5/052006.

81. "Photoinduced structural dynamics of epitaxial BiFeO3 thin films probed by ultrafast hard x-ray diffraction", Haidan Wen, Pice Chen, Donald A. Walko, June H. Lee, Carolina Adamo, Jon Ihlefeld, Eric M. Dufresne, Darrell Schlom, John W. Freeland, Paul G. Evans, Yuelin Li, in Research in Optical Sciences, OSA Technical Digest (Optical Society of America, 2012), paper JT2A.36. Proceedings of the High Intensity Lasers and High Field Phenomena conference, Berlin, Germany, March 19-21, 2012. (3 pages) 2/2/2012. DOI:http://dx.doi.org/10.1364/HILAS.2012.JT2A.36.

82. "Timing and Synchronization for the APS Short Pulse X-ray Project", F. Lenkszus, N. Arnold, T. Berenc, G. Decker, E. M. Dufresne, R. Farnsworth, Y. Li, R. Lill, H. Ma, J. Byrd, L. Doolittle, G. Huang, and R. Wilcox, Proceedings of IPAC2012, New Orleans, Louisiana, USA, May 20-25, 2012 paper TUOAB01, Session 06 Instrumentation, Controls, Feedback and Operational Aspects, T24 Timing and Synchronization, p1077-1079, ISBN 978-3-95450-115-1 (2012).
http://accelconf.web.cern.ch/AccelConf/IPAC2012/papers/tuoab01.pdf

83. "A technique for high-frequency laser-pump x-ray probe experiments at the APS.", Eric M. Dufresne, Bernhard Adams, Matthieu Chollet, Ross Harder, Yuelin Li, Steven J. Leake, Loren Beitra, Xiaojing Huang, Ian K. Robinson, Proceedings of the 16th Pan-American Synchrotron Radiation Instrumentation Conference, September 21-24, 2010 in Argonne National Laboratory, USA, Nucl. Instrum. and Meth. in Phys. Res. A **649** (September 1) pages 191.193 (2011)
DOI:http://dx.doi.org/10.1016/j.nima.2011.01.050.

84. " Microsecond X-Ray Microdiffraction And X-Ray Phase Contrast Imaging Studies Of Irreversible Phase Transformation During Rapid Heating", Stephen T. Kelly, Sara C. Barron, Eric M. Dufresne, Kamel Fezzaa, Timothy P. Weihs, and Todd C. Hufnagel, Proceedings of the 31st Riso International Symposium on Materials Science: Challenges in materials science and possibilities in 3D and 4D characterization techniques. Conference was held on 6-10 September 2010 at Riso National Laboratory for Sustainable Energy, Roskilde, Denmark. Here is the meeting site.

85. "Structural Response of BaTiO3/CaTiO3 Superlattice to Applied Electric Fields", Ji Young Jo, Rebecca J. Sichel, Ho Nyung Lee, Eric Dufresne, and Paul G. Evans, Proceedings of Symposium F in "Multiferroic and Ferroelectric Materials", edited by A. Gruverman, C.J. Fennie, I. Kunishima, B. Noheda, T.W. Noh (Mater. Res. Soc. Symp. Proc. Volume 1199E, Warrendale, PA, 2010), paper 1199-F01-06 DOI:http://dx.doi.org/10.1557/PROC-1199-F01-06.

86. "Time-Resolved Research at the Advanced Photon Source Beamline 7-ID", Eric M. Dufresne, Bernhard Adams, Dohn A. Arms, Matthieu Chollet, Eric C. Landahl, Yuelin Li, Donald A. Walko and Jin Wang, in the Proceedings of the SRI2009, 10th International Conference on Radiation Instrumentation, Melbourne, Australia, 27 September-2 October 2009, ed. by R. Garrett, I. Gentle, K. Nugent, S. Wilkins, in AIP Volume CP1234 pp. 181-184 (2010) ISBN: 978-0-7354-0782-4, DOI: 10.1063/1.3463168.

87. "Optimal Countrates for Deadtime Corrections", Donald A. Walko, Dohn A. Arms, Eric M. Dufresne and Eric C. Landahl, in the Proceedings of the SRI2009, 10th International Conference on Radiation Instrumentation, Melbourne, Australia, 27 September-2 October 2009, ed. by R. Garrett, I. Gentle, K. Nugent, S. Wilkins, in AIP Volume CP1234 pp. 856-859 (2010) ISBN: 978-0-7354-0782-4, WWW: AIP vol. CP1234 pp. 856-859 (2010).

88. "Ultrafast X-Ray Phase Contrast Imaging Of a Gasless Reactive System Using 3rd Generation Synchrotron Radiation", R.V. Reeves, J.D.E. White, E.M. Dufresne, K. Fezzaa, A.S.Mukasyan, and S.F. Son, Proceedings of the American Physical Society's 16th Topical meeting on Shock Compression of Condensed Matter, "SHOCK COMPRESSION OF CONDENSED MATTER - 2009, PTS 1 AND 2", edited by M. Elert et al. vol. 1195 396–399 (Amer Inst Physics, Nashville, TN, 2009).

89. *"In situ x-ray probes for piezoelectricity in epitaxial ferroelectric capacitors"*, Dal-Hyun Do, Alexei Grigoriev, Dong Min Kim, Chang-Beom Eom, Paul G. Evans, Eric M. Dufresne, Proceedings of the International Symposium on Integrated Ferroelectrics, Integrated Ferroelectrics, 101 no 1 December p174 (2008).

90. *"A study of laser-generated strain fields with X-ray microdiffraction"*, Eric M. Dufresne, B.W. Adams, E.C. Landahl, Proceedings of the 14th National Synchrotron Radiation Instrumentation Conference SRI07, Nuclear Instruments and Methods in Physics Research A 582 Nov. 15 (2007) 205-207, DOI: 10.1016/j.nima.2007.08.138.

91. *"Observation of a tilted Gaussian beam on the 7ID beamline of the advanced photon source"*, Eric M. Dufresne, Ali Khounsary, Proceedings of the 14th National Synchrotron Radiation Instrumentation Conference SRI07, Nuclear Instruments and Methods in Physics Research A 582 Nov 15 (2007) 63-65, DOI: 10.1016/j.nima.2007.08.063.

92. *"Fabrication and evaluation of variable focus X-ray lenses"*, Ali Khounsary, Eric M. Dufresne, Cameron M. Kewish, Jun Qian, Lahsen Assoufid, Ray Conley, Proceedings of the 14th National Synchrotron Radiation Instrumentation Conference SRI07, Nuclear Instruments and Methods in Physics Research A 582 Nov. 15 (2007) 117-119.

93. *"A Design Study for Photon Diagnostics for the APS Storage Ring Short-Pulse X-ray Source"*, B.X. Yang, A.H. Lumpkin, E.C. Landahl, E.M. Dufresne, Proc. of the 22nd Particle Accelerator Conference (PAC07), IEEE, August (2007), 1156 - 1158.

94. *"Studies of Ultrafast fs-laser Generated Strain Fields with Coherent X-rays "* Eric M. Dufresne, Eric C. Landahl and Bernhard Adams, David Fritz, SooHeyong Lee, and David Reis Talk presented by E. Landahl at the SRI2006 conference, May 28, 2006, Proceedings of SRI 06, AIP Volume 879, ISBN 978-0-7354-0373-4, 1210-1213 Jan. 2007 DOI: 10.1063/1.2436281.

95. *"The Impact of Pressure Regulation of Cryogenics Fluids and EPICS PID Feedback on the Monochromatic Beam Position Stability of the 7ID Beamline at the Advanced Photon Source. "* Eric M. Dufresne, Dohn A. Arms, Eric C. Landahl, and Donald A. Walko. Poster presented at the SRI2006 conference, May 28, 2006, Proceedings of SRI 2006, AIP Volume 879, ISBN 978-0-7354-0373-4, 950-953 Jan. 2007.

96. *"Refractive X-ray Lenses from Lithium"* Nino R. Pereira, Eric. M. Dufresne, D. A. Arms. Poster presented at the SRI2006 conference, May 28, 2006, Proceedings of SRI 2006, AIP Volume 879, ISBN 978-0-7354-0373-4, 985-988 Jan. 2007.

97. *"Fabrication and Performance of a Lithium Compound Refractive X-Ray Lens"* Kristina Young, Ali Khounsary, Andrew N. Jansen, Eric M. Dufresne, and Philip Nash Poster presented at the SRI2006 conference, May 28, 2006, Proceedings of SRI 2006, AIP Volume 879, ISBN 978-0-7354-0373-4, 989-993 Jan. 2007.

98. "A Simple Short-range Point-focusing Spatial Filter for Time-resolved X-ray Fluorescence" C. Hhr, E. Peterson, R.W. Dunford, E.P. Kanter, L. Young, E. Landahl, D.A. Walko
Poster winner presented at the SRI2006 conference, May 28, 2006, Proceedings of SRI 2006, AIP Volume 879, ISBN 978-0-7354-0373-4, 1226-1229 Jan. 2007.

99. *"X-ray microprobes of optical strong-field processes"* L. Young, R.W. Dunford, D.L. Ederer, E.P. Kanter, B. Kraessig, J. Rudati, S.H. Southworth, D. Arms, Eric M. Dufresne and E.C. Landahl, Proceedings of the 20th International Conference on X-ray and Inner Shell Processes X05 in 2005, Melbourne, Australia, Radiation Physics and Chemistry **75**, no 11, 1799-1807 (2006).

100. *"Nanosecond structural visualization of the reproducibility of polarization switching in ferroelectrics"* Alexei Grigoriev, Dal-Hyun Do, Dong Min Kim, Chang-Beom Eom, Paul G. Evans, Bernhard W. Adams and Eric M. Dufresne Proceedings of the Eighteenth International Symposium on Integrated Ferroelectrics (ISIF-18) ISIF 2006 April 23-27, 2006, in Honolulu, Hawaii, George W. Taylor, Sandwip Dey, James F. Scott, Tae W. Noh, eds. Integrated Ferroelectrics, 85 p165-173 November (2006).

101. E.M. Dufresne, J.A. Guzman, S.B. Dierker, R. Clarke, D.A. Arms, and D.A. Walko, *"Experience with a Fluorescence-based Beam Position Monitor at the APS"*, presented at the SRI 2003 International Conference in August 2003 in San Francisco, AIP Conference Proceedings vol. 705, April 6, p780-783 (2004).

102. E.M. Dufresne, D.A. Arms, N.R. Pereira, P. Ilinski, and R. Clarke, *"An Imaging System for Focusing Tests of Li Multi-Prism X-ray Refractive Lenses"*, presented at the SRI 2003 International Conference in August 2003 in San Francisco, AIP Conference Proceedings vol. 705, April 6, p679-682 (2004).

103. D.-H. Do, D.M. Kim, C.-H. Eom, E.M. Dufresne, E.D. Isaacs, and P.G. Evans, *Synchrotron X-ray Microdiffraction Images of Polarization Switching in PZT Capacitors with $SrRuO_3$ Top Electrodes*, MRS Proceedings, Fall 2003 meeting Symposium C, Paper C6.4 Vol. 784 (2004).

104. B. Hou, J. Nees, A. Mordovaniki, E. Power, G. Mourou, E.M. Dufresne, R. Clarke, *Coherence of hard x-rays in the relativistic λ^3 regime"*, to be presented at the OSA Topical Meeting on Applications of High Field and Short Wavelength Sources X, Biarritz, France in October 2003. Proceedings to Appear in Applied Physics B.

105. Y.S. Chu, A. Tkachuk, S. Vogt, P. Ilinski, D.A. Walko, D.C, Mancini, E.M. Dufresne, L. He, and F. Tsui, *"Structural Investigation of CoMnGe Combinatorial Epitaxial Thin Films Using Microfocused Synchrotron X-ray"*, Proceedings of the Second US-Japan Workshop on Combinatorial Material Science and Technology, Applied Surface Science Feb. 15, 214-219 (2004).

106. Y. Yacoby, M. Sowwan, E. Stern, J. Cross, D. Brewe, R. Pindak, J. Pitney, E.B. Dufresne, and R. Clarke, *Direct determination of epitaxial film and interface structure:GD_2O_3 on GaAs.*, published in the Proceedings of the Seventh International Conference on Surface X-ray and Neutron Scattering, Sept. 23-27 2002 in Lake Tahoe, Ed. J.F. Ankner and S. Brennan, Physica B **336** 39-45 (2003).

107. W.F. Schlotter, C. Cionca, S.S. Paruchuri, J.B. Cunningham, E. Dufresne, S.B. Dierker, D. Arms, R. Clarke, J.M. Ginder, and M.E. Nichols, *" The Dynamics of Magnetorheological elastomers studied by synchrotron radiation speckle analysis"*, in the Proceedings of the Eight International Conference on Electrorheological Fluids and Magnetorheological Suspensions in Nice, France, Summer of 2001. Published in the International Journal of Modern Physics B, Vol. 16, Nos 17&18 (2002) p2426-2432.

108. D.A. Arms, E.M. Dufresne, R. Clarke, S.B. Dierker, N.R. Pereira, and D. Foster, *"Refractive optics using lithium metal"*, In the Proceedings of the SRI 2001 Conference, Rev. Sci. Instrum. **73**, p1492-1494 (2002).

109. E.M. Dufresne, D.A. Arms, S.B. Dierker, R. Clarke, Y. Yacoby, J. Pitney, B. Macharrie, R. Pindak, *"Design and Performance of a Stable First Crystal Mount for a Cryogenically Cooled Si Monochromator at the APS"*, in the Proceedings of the SRI 2001 Conference, Rev. Sci. Instrum. **73**, p1511-1513 (2002).

110. D.A. Reis, M.F. DeCamp, P.H. Bucksbaum, R. Clarke, E.Dufresne, and R. Merlin *"Picosecond time-resolved x-ray diffraction probe of coherent lattice dynamics (abstract)(invited)"*, in the Proceedings of the SRI 2001 Conference, Rev. Sci. Instrum. **73**, p1361 (2002).

111. E. Dufresne, T. Sanchez, T. Nurushev, R. Clarke and S.B. Dierker, *"A Fixed Angle Double Mirror Filter for Preparing a Pink Undulator Beam at the Advanced Photon Source"*, in Synchrotron Radiation Instrumentation SRI 99: Eleventh US National Conference, Stanford, CA 1999, AIP Conference Proceedings 521, Melville New York, p238-241, 2000.

112. L.E. Berman, Z. Yin, S.B. Dierker, E. Dufresne, S.G.J. Mochrie, O.K.C. Tsui, S.K. Burley, F. Shu, X. Xie, M.S. Capel, and R.M. Sweet, *"Performance of the Double Multilayer Monochromator On the NSLS Wiggler Beam Line X25."* in Synchrotron Radiation Instrumentation: Tenth US National Conference, AIP Conference Proceedings 417, edited by E. Fontes (American Institute of Physics, College Park, Md, 1997), pp. 71-79.

Unrefereed Conference Proceedings

113. "Morphology of Diesel Sprays from Single-Orifice Micronozzles", Jian Gao, Zunping Liu, Seoksu Moon, Xingbin Xie, Eric Dufresne, Kamel Fezzaa, Ming-chia Lai, Jin Wang, and Rolf D. Reitz, Proceedings of ILASS Americas, 22nd Annual Conference on Liquid Atomization and Spray Systems, Cincinnati, OH, May 2010, (8 pages).

114. "Ultrafast X-ray Phase-Contrast Imaging of High-Speed Fuel Sprays from a Two-Hole Diesel Nozzle", S. Moon, Z. Liu, J. Gao, E. Dufresne, K. Fezzaa, J. Wang, X. Xie, and M.C. Lai, Proceedings of ILASS Americas, 22nd Annual Conference on Liquid Atomization and Spray Systems, Cincinnati, OH, May 2010, (8 pages).

115. "Spray Diagnostics at the Advanced Photon Source 7-BM Beamline", Alan L. Kastengren, Christopher F. Powell, Dohn Arms, Eric M. Dufresne, and Jin Wang, Proceedings of ILASS Americas, 22nd Annual Conference on Liquid Atomization and Spray Systems, Cincinnati, OH, May 2010, (8 pages).

116. *"Lithium Compound Refractive X-ray Lenses"* Ali Khounsary, Kristina Young, Eric M. Dufresne, Andrew N. Jansen, Lahsen Assoufid, and Patric Den Hartog Presented by Patric Den Hartog on May 25, 2006 at MEDSI 2006, the International Workshop on Mechanical Engineering Design of Synchrotron Radiation Equipment and Instrumentation. A paper appeared in the Proceedings of the conference.

117. *"Beryllium and lithium x-ray lenses at the APS"* Ali Khounsary, Eric M. Dufresne, Kristina Young, Cameron M. Kewish, and Andrew N. Jansen Presented at the SPIE conference in August 2006, Proceedings of the SPIE vol. 6317, Advances in X-Ray/EUV Optics, Components, and Applications, ISBN 9780819463968, A.M. Khounsary, C. Morawe, ed. p63170Q Aug. (2006).

118. A. Grigoriev, D.H. Do, D.M. Kim, C.-B. Eom, B.W. Adams, E.M. Dufresne, and P.G. Evans *"Time-resolved synchrotron x-ray microdiffraction for studying ferroelectric and multiferroic thin films"* Contributed Conference Talk, published in the Proceedings of the Fifth International Conference on Synchrotron Radiation in Material Science SRMS5 Available online on the web site.

119. E. Dufresne, B. Adams, E.C. Landahl, A.M. Khounsary, D. Fritz, S.H. Lee, D. Reis *"Studies of ultrafast femtosecond-laser-generated strain field with coherent x-rays"* Conference Poster, published in the Proceedings of the Fifth International Conference on Synchrotron Radiation in Material Science SRMS5, to appear in an Available online on the web site.

120. Chian Liu, R. Conley, A.T. Macrander, T. Graber, Ch. Morawe, C. Borel, E.M. Dufresne, *"Small d-spacing WSi2/Si narrow bandpass multilayers."*, Proceedings of the 2004 SPIE Conference, Denver CO Aug/2-6/04 Vol. 5537 p154-160 (2004).

121. N.R. Pereira, E. M. Dufresne, D.A. Arms, and R. Clarke, *"Large aperture x-ray refractive lens from lithium."* Proceedings of the SPIE conference in Denver, CO Aug 2-6, 2004 Vol. 5539 p174-184 (2004).

122. C. Morawe, Jean-Christophe Peffen, E.M. Dufresne, Y.S. Chu, and A.T. Macrander, *Double gradient multilayers for broadband focusing*, Proceedings of the 2003 SPIE Conference in San Diego, SPIE Vol 5195, p1-11 December 2003.

123. E.O. Baronova, L. Ognev, N.R. Pereira, S.B. Dierker, E. Dufresne, and D.A. Arms, *"Refractive and reflective optics for x-rays."*, published in Synchrotron Radiation Source: Perspectives of Research: Proceedings of the Second International Workshop", April 2-6, 2001 in Dubna Russia, Publisher JINR, p111-115 (2002).

124. N.R. Pereira, D.A. Arms, R. Clarke, S.B. Dierker, E.M. Dufresne, and D. Foster, *"Lithium metal for x-ray refractive optics"*, in the Proceedings of the SPIE Conference, San Diego CA, July 2001, Vol **4502** p173-183 December 2001.

125. Z. Yin, L. Berman, S. Dierker, E. Dufresne and D.P. Siddons, *"A Simple X-Ray Focusing Mirror Using Float Glass."* SPIE Proceedings **2856** (1996) 307-313.

High visibility Activity Reports

126. E.M. Dufresne, T. Nurushev, R. Clarke, S.B. Dierker, *"A Study of Concentration Fluctuations in the Binary Alloy Mixture Hexane-Nitrobenzene with X-ray Photon Correlation Spectroscopy"*, APS Forefront 1, ANL/APS/TB-42 p74 (2001).

127. D.A. Reis, M.F. DeCamp, P.H. Bucksbaum, R. Clarke, E. Dufresne, M. Hertlein, R. Merlin, *"Picosecond Dynamics Probed by X-ray Diffraction"*, APS Forefront 1, ANL/APS/TB-42 p134 (2001).

Annual Reports

128. Linda Young, Anne M. March, Andrew B. Stickrath, Bernhard W. Adams, Dohn A. Arms, Klaus Attenkofer, Lin X. Chen, Eric Dufresne, Elliot P. Kanter, Bertold M. Kraessig, Yuelin Li, Stephen H. Southworth, Donald A. Walko, and Jin Wang, "Ultra-fast X-Ray Tracking of Laser-Controlled Molecular Motions", in "LDRD Laboratory Directed Research and Development Program Activities FY2010 ANNUAL Report", p72-73 March (2011) ANL-11/10
See `http://www.anl.gov/LDRD/document/LDRD_2010_Annual_Report_ANL.pdf`.

129. Linda Young, Bernhard W. Adams, Dohn A. Arms, Klaus Attenkofer, Lin X. Chen, Eric M. Dufresne, Elliot P. Kanter, Bertold M. Kraessig, Yuelin Li, Robin Santra, Stephen H. Southworth, Donald Walko, and Jin Wang, "Ultra-fast X-Ray Tracking of Laser-Controlled Molecular Motions", in "LDRD Laboratory Directed Research and Development Program Activities FY2009 ANNUAL Report", p73-74 March (2010) ANL-10/08
See `http://www.anl.gov/LDRD/document/LDRD_2009_Annual_Report_ANL.pdf`.

130. Bernhard W. Adams, Klaus Attenkofer, Lin X. Chen, Eric M. Dufresne, John Lee, Antonio Miceli, Tijana Rajh, and Stephen Ross, "Novel Concepts in Streak-Camera Development and Applications", in "LDRD Laboratory Directed Research and Development Program Activities FY2009 ANNUAL Report", p79 March (2010) ANL-10/08
See `http://www.anl.gov/LDRD/document/LDRD_2009_Annual_Report_ANL.pdf`.

131. Bernhard W. Adams, Klaus Attenkofer, Eric M. Dufresne, Eric C. Landahl, Tijana Rajh, Lin X. Chen, Antonio Miceli, John Lee, and Steve Ross, "Novel Concepts in Streak-Camera Development and Applications", in "LDRD Laboratory Directed Research and Development Program Activities FY2008 ANNUAL Report", p94 March (2009)
See `http://www.anl.gov/LDRD/document/LDRD_2008_Annual_Report.pdf`.

132. Linda Young, Bernhard W. Adams, Dohn A. Arms, Klaus Attenkofer, Lin X. Chen, Eric Dufresne, Robert Dunford, Bertold M. Kraessig, Robin Santra, Stephen H. Southworth, Stefan Vajda, Donald Walko, Eric Landahl, and Jin Wang, "Ultra-fast X-Ray Tracking of Laser-Controlled Molecular Motions", in "LDRD Laboratory Directed Research and Development Program Activities FY2008 ANNUAL Report", p87 March (2009)
See `http://www.anl.gov/LDRD/document/LDRD_2008_Annual_Report.pdf`.

133. B. W. Adams, E.M. Dufresne, *Edge Enhancement in X-ray Parametric Down Convertion*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

134. S. Haldar, E.M. Dufresne, A.E. Mijovilovich, A.J. Torres, J. E. Penner-Hahn, *Sensitivity determinations for Capillary Electrophoresis coupled with X-ray Fluorescence*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

135. R. Clarke, W.F. Schlotter, C. Cionca, J.B. Cunningham, E. Dufresne, D. Arms, J.M. Ginder, and M.E. Nichols, *Nanorheology of MR Elastomer Studied by Dynamic Speckle*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

136. D.A. Reis, D.A. Arms, P.H. Bucksbaum, A. Cavalieri, R. Clarke, M.F. DeCamp, E.M. Dufresne, R. Merlin, A.M. Lindenberg, A.G. MacPhee, Z. Chang, B. Lings, J.S. Wark, and S. Fahy, *Bulk Ambipolar Diffusion Measured by Ultrafast X-ray Diffraction*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

137. L. Young, R.W. Dunford, D.L. Edered, E.P. Kramer, B. Krassig, S.H. Southworth, E.C. Landahl, D. Reis, E. Dufresne, *X-ray Photoionization in the Presence of Strong-Optical Fields*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

138. C. Morawe, J.-C. Peffen, E.M. Dufresne, Y.S. Chu, A.T. Macrander, *Broadband focusing with double gradient multilayers*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

139. N.R. Pereira, E.M. Dufresne, D.A. Arms, R. Clarke, *Multiprism Lithium Refractive Optics for X-rays*, to appear in the Advanced Photon Source Activity Report 2002, ANL-03/21 (2004).

140. B.W. Adams, E.M. Dufresne, D. A. Walko, *The X-ray Diffractive Casimir Effect*, Advanced Photon Source Activity Report 2001, ANL-02/06, December 2002.

141. M.F. DeCamp, D.A. Reis, P.H. Bucksbaum, R. Clarke, R. Merlin, A. Cavalieri, E.M. Dufresne, D.A. Arms, A. Lindenberg, A MacPhee, Z. Chang, *Picosecond Switching of X-rays using the Boorman Effect*, Advanced Photon Source Activity Report 2001, ANL-02/06, December 2002.

142. N.R. Pereira, E.M. Dufresne, D.A. Arms, R. Clarke, S. B. Dierker, *Lithium x-ray Refractive Lenses*, Advanced Photon Source Activity Report 2001, ANL-02/06, December 2002.

143. S. Yang, P.G. Evans, E.M. Dufresne, *Small angle scattering studies of ordered organosilicate composites*, Advanced Photon Source Activity Report 2001, ANL-02/06, December 2002.

144. P.G. Evans, E.D. Isaacs, G.R. Kowach, E.M. Dufresne, A. Pignolet, H.N. Lee, *Resonant microdiffraction imaging of polarization switching in ferroelectric SrBi2Ta2O9*, Advanced Photon Source Activity Report 2001 ANL-02/06, December 2002.

145. E.M. Dufresne, S. B. Dierker, *"A White and Monochromatic X-ray Beam Imaging System"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

146. E.M. Dufresne, S. B. Dierker, N.R. Pereira, *"Li-based Compound X-ray Refractive Lenses"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

147. T. Nurushev, E.M. Dufresne, S. B. Dierker, *"Studies of Dynamic Critical Behavior of Polymer Mixtures Using X-ray Photon Correlation Spectroscopy"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

148. R. Clarke, W.F. Schlotter, C. Cionca, S.S. Paruchuri, J.B. Cunningham, E.M. Dufresne, S.B. Dierker, D.A. Arms, *"Dynamics of Nanomagnetic MR Elastomers"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

149. D.A. Reis, M.F. DeCamp, P.H. Bucksbaum, J.M. Caraher, R. Clarke, E.M. Dufresne, R. Merlin, V.A. Stoica, J. Wahlstrand, C.W.S. Conover, Bernhard Adams, *"Dynamical Diffraction Effects and the Ultrafast Modulation of X-rays"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

150. Y. Yacoby, R. Pindak, J. Pitney, R. MacHarrie, E.M. Dufresne, R. Clarke, E. Stern, J. Cross, *"Bragg-rod Diffraction Studies of the Gd_2O_3-GaAs Interface"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

151. P.G. Evans, E.D. Isaacs, E.M. Dufresne, *"Visualization of Domain Inverted Regions in Periodically Poled Lithium Niobate Using X-ray Microdiffraction"*, in the Advanced Photon Source Activity Report 2000 (ANL-01/03).

152. E. Dufresne, T. Nurushev, R. Clarke, and S.B. Dierker, *"A Study of Concentration Fluctuations in the Binary Mixture Hexane-Nitrobenzene with X-ray Photon Correlation Spectroscopy"*, 1995-1999 APS User Activity Report, Volume 1, ANL-00/5, printed January 2001 page 243.

153. D.A. Reis, P.H. Bucksbaum, R. Clarke, M. DeCamp, E. Dufresne, M. Hertlein, R. Merlin, and E. Williams, *"Picosecond Time-resolved X-ray Diffraction at the APS Sector 7 (MHATT-CAT)"* 1995-1999 APS User Activity Report, Volume 1, ANL-00/5, printed January 2001 page 306.

154. T. Nurushev, E. Dufresne and S.B. Dierker, *"Radiation Damage Effect in Ps/Pbd Polymer Mixtures"* 1995-1999 APS User Activity Report, Volume 1, ANL-00/5, printed January 2001 page 550.

155. E. Dufresne, T.Sanchez, T. Nurushev, and S.B. Dierker, *"A Fixed Angle Double Mirror Filter for Producing a Pink Undulator Beam at the APS"*, 1995-1999 APS User Activity Report, Volume 1, ANL-00/5, January 2001 page 349.

156. W. Schlotter, S. Parachuri, P. Erncarnacion, E. Dufresne, S.B. Dierker and R. Clarke, *"Speckle Analysis of Relaxation Dynamics in Magnetorheological Elastomer"*, 1995-1999 APS User Activity Report, Volume 1, ANL-00/5, January 2001 page 490.

157. E. Dufresne, S.B. Dierker, L.E. Berman and Z. Yin, *"Generation of Coherent Soft X-rays with the Prototype Small Gap Undulator."* National Synchrotron Light Source (NSLS) Activity Report, BNL 52517 (1996) B-125.

158. Z. Yin, L. Berman, S. Dierker, E. Dufresne and D.P. Siddons, *"A Simple X-Ray Focusing Mirror Using Float Glass."* NSLS 1996 Activity Report, BNL 52517 (1996) B-126.

159. E. Dufresne, R. Brüning, M. Sutton, G.B. Stephenson, B. Rodricks, C. Thompson and S.E. Nagler, *"Intensity Fluctuation Spectroscopy using coherent X-rays."* NSLS Annual Report BNL 52371 (1992) 381.

160. M. Sutton, E. Dufresne, S.G.J. Mochrie, L.E. Berman, G.A. Held and G.B. Stephenson, *"Intensity Fluctuation Spectroscopy using coherent X-rays."* NSLS Annual Report BNL 52317 (1991) 293.