

A. Articles in fully peer-reviewed journalsSubmitted, under review

- S. Vidovic, P. Medihala, J.J. Dynes, P. Daida, V. Vujanovic, J.R. Lawrence, A.P. Hitchcock, D.R. Brown and D.R. Korber, *Importance of the RpoE regulon in maintaining the lipid bilayer and reducing porin-mediated permeability during antimicrobial treatment with the polycationic agent, chlorhexidine*, Journal of Antimicrobial Chemotherapy (submitted Jan 2016)
- F. Ahrend, U. Glebe, L. Árnadóttir, J.E. Baio, D.A. Fischer, C. Jaye, B.O. Leung, A.P. Hitchcock, T. Weidner, U. Siemeling and A. Ehresmann, *Magnetic field landscapes guiding the chemisorption of diamagnetic molecules*, Advanced Functional Materials, (submitted Jan 2016; adfm.201600201)
- D. Erbahar, T. Susi, X. Rocquefelte, C. Bittencourt, M. Scardamaglia, P. Guttman, G. Rotas, N. Tagmatarchis, X. Zhu, A.P. Hitchcock and C.P. Ewels, *Spectromicroscopy of C<sub>60</sub> and azafullerene C<sub>59</sub>N: Identifying surface absorbed water*, Scientific Reports (submitted to Nature Comm. Mar **2015**, transferred to SR April 2015; review returned June 2015)
- N. D. Telling, J. Everett, J. F. Collingwood, J. Dobson, G. van der Laan, J. Gallagher, J. Wang and A. Hitchcock, *Nanoscale correlation of iron with amyloid plaque morphology in Alzheimer's disease transgenic mouse cortex*, Chemistry and Biology (submitted Jun 2015)

In press or published (BOLD # – have pdf & may be available from <http://unicorn.mcmaster.ca>) (common CV)

- 302 J.R. Lawrence, M. J. Waiser, G.D.W. Swerhone, J. Roy, V. Tumber, A. Paule, A.P. Hitchcock, J.J. Dynes and D.R. Korber, *Effects of Fullerene (C<sub>60</sub>), Multi-Wall Carbon Nanotubes (MWCNT), Single Wall Carbon Nanotubes (SWCNT) and hydroxyl and carboxyl modified Single Wall Carbon Nanotubes on riverine microbial communities*. Environmental Science and Pollution Research (accepted Feb **2016**) 10.1007/s11356-016-6244-x
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- 299** D. Carta, A.P. Hitchcock, P. Guttman, A. Regoutz, A. Khiat, A. Serb, I. Gupta and T. Prodromakis, *Spatially resolved TiO<sub>x</sub> phases in RRAM conductive nanofilaments using soft-X-ray spectromicroscopy*, Scientific Reports **6** (2016) 21525: (1-10) doi: 10.1038/srep21525
- 298** **A.F.G. Leontowich**, A.P. Hitchcock and R.F. Egerton, *Radiation damage in organic solids across the carbon 1s ionization edge*, Journal of Electron Spectroscopy and Related Phenomena **206** (2016) 58–64. DOI: 10.1016/j.elspec.2015.11.010
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- 295** **K.L. Harding**, **S. Kalirai**, **R. Hayes**, **V. Ju**, G. Cooper, A. P. Hitchcock and M.R. Thompson, *Inner-shell spectroscopy of peroxides*, Chemical Physics **461** (2015) 117-124. doi: 10.1016/j.chemphys.2015.09.004
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- 1986-03** David C. Newbury (M.Sc.) (1983-1986)  
*Inner-shell Electron Energy Loss Spectroscopy of Cyclic Organic Molecules*
- 1990-xx** Frank Esposito (M.Sc.) (1988-1990)  
*EXAFS of Pd<sub>40</sub>Ni<sub>40</sub>P<sub>20</sub> Metallic Glass and Boron Doped Silicon*
- 1992-xx** Alex T. Wen (Ph.D) (1988-1992)

- Core Excitation of Some Organometallic and Organosilicon Molecules*  
**1995-xx** James T. Francis (Ph.D.) (1990-1995)
- Dipole and Non-dipole Core Electronic Excitation Spectroscopy*  
**1997-xx** Stephen G. Urquhart (Ph.D.) (1992-1997)
- Core Excitation Spectroscopy of Molecules and Polymers*  
**1996-09** Cassia Cúran Turci (Ph.D. **Inorganic Chemistry**; joint with UFRJ) (1994-1996)
- Molecular Inner-shell Excitation by Electron Energy Loss Spectroscopy*  
**1996-10** Jeff Aubry (**M. Eng., Mat. Sci.**) (1994-1996)
- X-ray Absorption Fine Structure Spectroscopy of Thin Film SiGe Alloys*  
**2000-xx** I.Gabriella Eustatiu (Ph.D.**Chemical Physics**) (1995-2000)
- Spectroscopy and Oscillator Strengths at High Momentum Transfer*  
**2004-12** Cynthia Morin (Ph.D.) (1999-2004)
- Soft X-Ray Spectromicroscopy of Proteins on Patterned Polymer Films*  
**2005-09** Hua Jiang (M.Sc) (2002-2004)
- Inner Shell Excitation Spectroscopy of Amino Acids and Small Peptides*  
**2006-10** Li Li (PhD) (2004-2006)
- X-ray Spectromicroscopy Study of Protein Adsorption onto a chemically patterned surfaces*  
**2008-02** Jian Wang (PhD) (2002-2008)
- Radiation chemistry studied by Soft X-ray microscopy*  
**2010-04** Karen Lam (M.Sc.) (2007-2010)
- X-Ray Magnetic Circular Dichroism of Individual Magnetosomes in Magnetotactic Bacteria by Scanning Transmission X-Ray Microscopy*  
**2010-05** Bonnie O. Leung (Ph.D., **Chemical Biology**) (2006-2010)
- Protein Adsorption to Polymer Blend Films*  
**2010-12** Jian (Jeffrey) Li (co-supervised with H. Stöver) (PhD) (2005-2010)
- Synthesis, Characterization and Modification of Microcapsules*  
**2011-05** Ebrahim Najafi (PhD, Chemistry & Chemical Biology) (2006-2011)
- X-Ray and Electron Spectromicroscopy of Carbon Nanotube Systems*  
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D. Presentations at MeetingsD.1 Invited

- 132 A. P. Hitchcock, J. Wu, V. Lee, N. Appathurai, T. Tylliszczak, H.-W. Shiu, D. Shapiro, V. Berejnov, D. Susac and J. Stumper, *Progress in soft X-ray Microscopy Characterization of PEM Fuel Cell Catalyst Layers*, Microscopy and Microanalysis, Columbus, OH, July 24-28, **2016**
- 131 A.P. Hitchcock, X.H. Zhu, D.A. Shapiro and T. Tylliszczak, *Nanoscale chemical imaging by soft X-ray spectro-microscopy and spectro-ptychography*, symposium on Novel trends in synchrotron & FEL-based Analysis, AVS 2015 (San Jose, October 18-23, **2015**)
- 130 A.P. Hitchcock, J.Wu, L.G.A. Melo, N. Appathurai, Z. Yan, G. Goward, V. Berejnov, D. Susac and J. Stumper, *Spectroscopy and spectromicroscopy studies of polymer-electrolyte membrane fuel cell materials and devices*, 2015 International Conference on Electronic Spectroscopy and Structure (ICES15), Stony Brook, Sep 27-Oct 02, **2015**.
- 129 A.P. Hitchcock, S.M. Rosendahl, Z. Qin, V. Lee and V. Berejnov, *In situ studies with soft x-ray scanning transmission x-ray microscopy*, Microscopical Society of Canada Annual Meeting, Hamilton, Canada, May 26-29, **2015**.
- 128 A.P. Hitchcock, *Present capabilities and future opportunities for materials science by soft x-ray spectro-microscopy and spectro-ptychography*, Workshop on Materials Science with Synchrotron Radiation, CLS Annual Users Meeting, Saskatoon, May **2015**
- 127 A.P. Hitchcock, *Imaging and quantitative chemical mapping of PEM-FC catalyst layers by Scanning Transmission X-Ray Microscopy*, 227<sup>th</sup> Electrochemical Society meeting, Chicago, Apr **2015**.
- 126 A.P. Hitchcock, *Nanoscale characterization of polymers by soft X-ray spectromicroscopy*, 29<sup>th</sup> APS Spring meeting, Denver, Co, Mar **2015**.
- 125 A.P. Hitchcock, V. Lee, V. Berejnov, D. Susac and J. Stumper, *Characterizing Automotive Fuel Cell Materials By Soft X-Ray Scanning Transmission X-Ray Microscopy*, International Conference on X-ray Microscopy (XRM2014), Melbourne, Australia, Oct, **2014**
- 124 A.P. Hitchcock, *Chemically selective spectromicroscopy by soft x-ray scanning transmission x-ray microscopy*, International Microscopy Congress 2014, Prague, Czech Republic, Sep 7-12 **2014**
- 123 A. P. Hitchcock, V. Berejnov, V. Lee, D. Susac and J. Stumper, *In situ methods for analysis of polymer electrolyte membrane fuel cell materials by soft X-ray scanning transmission x-ray microscopy*, Microscopy & Microanalysis 2014, Hartford, CT, Aug **2014**.
- 122 A.P. Hitchcock, V. Lee, V. Berejnov, D. Susac and J. Stumper, *Characterizing fuel cell materials by soft x-ray Scanning Transmission X-ray Microscopy*, Chemical Society of Canada, Vancouver, 1-5 Jun **2014**
- 121 A.P. Hitchcock, *Soft x-ray spectromicroscopy at the CLS*, Louis Delbaere Plenary Lecture, CLS Annual Users' Meeting, Saskatoon, SK, 2 May **2014**.
- 120 A.P. Hitchcock, *Soft x-ray S(T)XM – present capabilities and future trends*, Max-4, Lund, Sweden, 13 Dec **2013**
- 119 A.P. Hitchcock, *A comprehensive overview of STXM*, Workshop on STXM, Umea, Sweden, 10,11 Dec 2013.
- 118 A.P. Hitchcock, *Materials analysis by soft x-ray scanning transmission x-ray microscopy*, "Optical and X-ray Imaging Techniques for Material Characterization" symposium, Materials Science & Technology Conference (MST2013), Montreal, 27-31 Oct 2013.
117. A.P. Hitchcock, M.Obst, T. Tylliszczak, S. Kalirai and D. Bazylinski, *Chemically selective imaging and spectroscopy with Scanning Transmission X-ray Microscopy*, Microscopy and Microanalysis, Indianapolis, Aug 3-7, 2013

116. A.P. Hitchcock, V. Lee, V. Berejnov, D. Susac and J. Stumper, *Nanoscale characterization of water distributions in fuel cell membrane electrode assemblies measured by soft x-ray Scanning Transmission X-ray Microscopy*, In-situ electrochemistry & Soft X-ray spectroscopy for renewable energy technologies, EMPA, Dübendorf, Switzerland, 3-5 June, 2013
115. A.P. Hitchcock, V. Berejnov, V. Lee and S. Wessel, *Analysis of polymer electrolyte membrane fuel cells by soft X-ray Scanning Transmission X-ray Microscopy*, Materials and Devices for Energy Storage and Production: Many Means to the Same End, CLS Users' Meeting workshop, Saskatoon 2 May **2013**
114. A.P. Hitchcock, *Soft x-ray scanning x-ray microscopy: current capabilities and future trends*, Australian Synchrotron Radiation User Organization, Melbourne, Australia 29, 30 Nov **2012**
113. A.P. Hitchcock, *Chemically sensitive imaging and nanoscale spectroscopy using STXM*, Soft X-Ray Spectroscopy Satellite Workshop, Australian Synchrotron, Melbourne, Australia 26, 27 Nov **2012**
112. A.P. Hitchcock, *Soft x-ray scanning x-ray microscopy: current capabilities and future trends*, 8th Joint-Symposium of Synchrotron Radiation Surface Science Research Division and Microscopic&Nano material science group, Keio University, 16 Nov **2012**
111. A.P. Hitchcock, *Soft x-ray scanning x-ray microscopy: current capabilities and future trends*, Finnish Synchrotron Radiation User Organization, Turku Finland, 22-23 Oct **2012**
110. A.P. Hitchcock, *Soft X-ray spectromicroscopy of biologically relevant interfaces*, Surface Science of Biologically Important Interfaces (SSBII), Manchester, Oct 19, **2012**
109. A.P. Hitchcock, S. Kalirai, S. Berejnov, M. Obst and T. Tyliczszak, *Recent advances in Scanning Transmission X-ray Microscopy*, Microscopy and Microanalysis, Phoenix, 29-Jul – 4 Aug **2012**
108. A.P. Hitchcock, *Chemically sensitive imaging of environmental samples with synchrotron radiation*, Synchrotron Radiation International, Lyon, France (keynote) 9-13 July, **2012**
107. A.P. Hitchcock, *Chemically sensitive imaging with soft X-rays*, Gordon Conference on Multiphoton Processes, South Hadley, MA, 3-8 June, **2012**
106. A.P. Hitchcock, *Materials analysis by Scanning Transmission X-ray Microscopy (STXM) and PhotoEmission Electron Microscopy (PEEM)*, Workshop on Materials Applications of Synchrotron Radiation, University of Ottawa, April 20, **2012**
105. A.P. Hitchcock, *Applications of scanning soft X-ray microscopy to environmental sciences*, Workshop on Synchrotron Environmental Studies, Pacific Northwestern National Lab, Richland, WA, 20 Sep, **2011**
104. A.P. Hitchcock, Need for chemically sensitive imaging with ultra-high resolution: current STXM capabilities and opportunities for resonant ptychography, COSMIC workshop, ALS, LBNL, 2-3 Aug **2011**
103. A.P. Hitchcock, Scanning Transmission X-ray Microscopy at CLS 10ID1, CLS Annual Users Meeting, 25 June **2011**
102. A.P. Hitchcock, *Scanning transmission X-ray microscopy of soft materials*, Plenary invited lecture at the Annual Users' Meeting of LNLS, Campinas, Brazil, 22 Feb **2011**.
101. A.P. Hitchcock, K.P. Lam, S. Kalirai, K. Harding, V. Svytlik, Y. Mozharivskyj and J. Wang, *Nanoscale magnetism studied by x-ray magnetic circular dichroism in a scanning transmission X-ray microscope*, PacifiChem 2010, Honolulu, HI, Dec 15-20, **2010**
100. A.P. Hitchcock, T. Tyliczszak, M. Obst, Y.S. Lu and J. Wang, *Low energy X-ray fluorescence as a detection channel in soft X-ray STXM*, Workshop on 'Fluorescence detection in Scanning X-ray Microscopy', workshop at ALS Users Meeting, Oct 16 **2010**
99. B.O. Leung, A.P. Hitchcock, J.L. Brash, A. Scholl and A. Doran, *Applications of PEEM to biomaterials research*, workshop on "X-Ray Spectromicroscopy and Photoemission Electron Microscopy (PEEM)" at ALS Users Meeting, Oct 14 **2010**
98. A.P. Hitchcock, J. Wang and M. Obst, *3-d chemical imaging with STXM spectro-tomography*, Microscopy & Microanalysis 2010, Portland, OR, July 31 – Aug 6, **2010**

97. A.P. Hitchcock, *Chemical imaging at 30 nm spatial resolution in 2-d and 3-d with Scanning Transmission X-ray Microscopy*, Canadian Association of Physicists, Toronto, Jun 7-11, **2010**
96. A.P. Hitchcock and D. Bessarabov, *Chemical mapping of fuel cell membrane electrode assemblies by soft X-ray spectromicroscopy*, Symposium: Diagnostics and Characterization of Energy Materials with Synchrotron and Neutron Radiation, MRS Spring meeting. San Francisco, April 5-9, **2010**
95. A.P. Hitchcock, *Synchrotron Soft X-ray spectromicroscopy – performance and application*, McMaster Imaging Workshop, 26 March **2010**
94. A.P. Hitchcock and E. Najafi, *Chemical characterization of nanomaterials with scanning transmission X-ray microscopy*, 4<sup>th</sup> Trinational Workshop on Standards for Nanotechnology, Ottawa, ON, Canada 3,4 Feb **2010**
93. A.P. Hitchcock and D. Bessarabov, *Chemical mapping of fuel cell membrane electrode assemblies with 30 nm spatial resolution by soft X-ray spectromicroscopy*, Canada - US MEA Fuel Cell Modeling and Characterization Workshop, NRC-IFCI, Vancouver, BC Nov. 12 & 13 **2009**
92. A.P. Hitchcock and D. Bessarabov, *Studies of fuel cell membrane electrode assemblies by soft X-ray scanning transmission microscopy (STXM)*, Workshop on Soft X-Ray Spectroscopy in Renewable Energy Generation and Storage Materials, ALS Users' Meeting, 16-18 Oct **2009**
91. A.P. Hitchcock, *Chemical analysis of polymers using soft X-ray spectromicroscopy*, Chemical Society of Canada Annual Meeting, May 30 - 3 Jun **2009**, Hamilton, Canada
90. A.P. Hitchcock, M. Obst, J. Wang, J. Li, K. Lam and E. Najafi, *NEXAFS microscopy of soft materials – comparison to TEM-EELS EDGE* 2009, Banff, Canada, 18-22 May **2009**
89. A.P. Hitchcock, *Chemical analysis of polymers using Soft X-ray spectromicroscopy – comparisons to analytical TEM*, CCEM Workshop, McMaster, 27 March **2009**.
88. A.P. Hitchcock, *Soft X-ray spectromicroscopy of biomolecules at polymer surfaces*, 36th Conference on the Physics and Chemistry of Surfaces and Interfaces, Santa Barbara, CA 11-15 Jan **2009**.
87. A.P. Hitchcock, *Scanning Transmission X-ray Microscopy of multi-walled carbon nanotubes*, Workshop on Analysis of Nanomaterials, in conjunction with Annual Molecular Foundry and ALS Users Meetings, Berkeley, CA, 13,14 Oct **2008**
86. A.P. Hitchcock, B.O. Leung, J.L. Brash, R. Cornelius, A. Scholl and A. Doran, *Soft X-ray spectromicroscopy of protein and peptide interactions with polymer surfaces*, AVS-55 Boston October 19-24, **2008**
85. A.P. Hitchcock, G.A. Johansson, D. Hernández Cruz, E. Najafi, J. Li and H. Stöver, *Quantitative chemistry and orientation of polymers in 2-d and 3-d by scanning transmission X-ray microscopy*, European Microscopy Congress, Aachen, Sep 1-5, **2008**
84. A.P. Hitchcock, *Chemical imaging with scanning transmission X-ray microscopy (STXM)*, Chemical Imaging Symposium at the American Chemical Sciences national meeting, Philadelphia Aug 17-21, **2008**
83. A.P. Hitchcock, J.J. Dynes, M. Obst, J.R. Lawrence and G.G. Leppard, *Geomicrobiology with soft X-ray scanning transmission microscopy*, Goldschmidt 2008, Vancouver, July 13-18, **2008**.
82. A.P. Hitchcock, T. Tylliszczak, D. Hernández Cruz, G.A. Johannson, J. Stewart-Ornstein, M. Obst, D. Bertwistle, Ch. Karunakaran and K.V. Kaznatcheev, *Soft X-ray scanning transmission X-ray microscopy: reaching beyond the state-of-the-art*, Synchrotron Radiation Instrumentation, Mechanical Design for Synchrotron Radiation Instrumentation, and CLS Annual Users' Meeting, Saskatoon, Jun 10-14, **2008**
81. James J. Dynes and Adam P. Hitchcock, *Soft X-ray Spectromicroscopy – Correlations with Laser Scanning and Transmission Electron Microscopies*, Workshop on correlative techniques, Synchrotron Radiation Instrumentation, Mechanical Design for Synchrotron Radiation Instrumentation, and CLS Annual Users' Meeting, Saskatoon, Jun 10-14, **2008**
80. A.P. Hitchcock, *Radiation Chemistry and Chemically Selective Patterning by Scanning*



- Transmission X-ray Microscopy*, 12<sup>th</sup> Hiroshima International Symposium on Synchrotron Radiation, Hiroshima, Mar 13,14, **2008**
79. A.P. Hitchcock and G.A. Johansson, *3-d chemical imaging using angle-scan tomography in soft X-ray scanning transmission X-ray microscopes: Current capabilities, challenges and opportunities*, Hyperspectral Imaging II Workshop , National Institute of Standards and Technology in Gaithersburg, MD, October 23-26, **2007**
78. A.P. Hitchcock and G.A. Johansson, *3-d chemical imaging using angle-scan tomography in soft X-ray scanning transmission X-ray microscopes* Workshop on Hard and Soft X-ray Tomography, ALS Users Meeting, Oct 5, **2007**
77. A.P. Hitchcock, *X-ray microscopy of natural and synthetic polymers*, lecture at the 1st Croatian Synchrotron Radiation Summer School, 3-7 September **2007**, Rijeka, Croatia
76. A.P. Hitchcock, *NEXAFS Spectroscopy*, lecture at the 1st Croatian Synchrotron Radiation Summer School, 3-7 September **2007**, Rijeka, Croatia
75. A.P. Hitchcock, G.A. Johansson, G.E. Mitchell, M. Keefe and T. Tyliczszak, *3-d chemical imaging using angle-scan tomography in a soft X-ray scanning transmission X-ray microscope*, 15<sup>th</sup> Int. Conf. Vac. Ultraviolet Physics, Berlin, 29 Jul – 3 Aug, **2007**.
74. A.P. Hitchcock, *Materials Analysis using synchrotron spectroscopy techniques*, 5th Annual BIMR Advanced Materials Workshop McMaster University, 19 June **2007**
73. A.P. Hitchcock, J.J. Dynes, G.A. Johansson, J. Wang and G.A. Botton, *Comparison of TEM-EELS and NEXAFS microscopy for studies of soft matter*, Microscopical Society of Canada annual meeting, Edmonton, June 12-15, **2007** (plenary)
72. A.P. Hitchcock, D. Hernández-Cruz, J.J. Dynes, M.-E. Rousseau and M. Pézolet, *Chemical Imaging by Soft X-ray Scanning Transmission X-ray Microscopy*, Microscopy and Microanalysis 2006, Chicago July 30-Aug 3, **2006**.
71. A.P. Hitchcock, *Environmental science with scanning transmission X-ray microscopy*, Symposium on Microbial Habitat: Evolution, Structure and Distribution in Soils, in 18<sup>th</sup> World Congress of Soil Science, Philadelphia, July 9-15, **2006**.
70. A.P. Hitchcock, *Soft X-ray spectromicroscopy*, Frontiers in Microscopy Workshop, Jackson Laboratory, Bar Harbor, Maine July 5-8, **2006**.
69. A.P. Hitchcock, J.J. Dynes, D.R. Korber, G.G. Leppard and J. R. Lawrence. *Synchrotron-based soft X-ray spectromicroscopy of biofilms*. 3rd Northern Lights Summer Conference, U. Saskatchewan Saskatoon, SK 14 – 18 June, **2006**
68. A.P. Hitchcock, *Soft X-ray spectromicroscopy of soft materials*, PacifiChem 2005, Honolulu 14-18 Dec **2005**.
67. A.P. Hitchcock, X. Zhang and D. Guay, *STXM studies of wet electrochemical systems under potential control*, Novel Approaches to Soft X-ray Spectroscopy: Scanning Transmission X-ray Microscopy and Ambient Pressure X-ray Photoelectron Spectroscopy, ALS Users Meeting, Oct. 20, **2005**
66. A.P. Hitchcock, *Materials analysis by soft X-ray spectromicroscopy*, 51<sup>st</sup> ICASS, Quebec, 9-13 Oct **2005**
65. A.P. Hitchcock, X. Zhang and D. Guay, *in situ STXM: studies of wet electrochemical systems under potential control*, X-ray Microscopy 2005, Himeji, Japan, July 26-30, **2005**
64. A.P. Hitchcock, *Quantitative mapping of composition and orientation using scanning transmission X-ray microscopy*, ISSP International Symposium: "Advanced Bio-Science Opened by Third Generation Soft X-ray Synchrotron Radiation", U. Tokyo, 25 July **2005**
63. Adam P. Hitchcock, Harald Stöver, Ron Childs, Li Li, James J. Dynes and John R. Lawrence, *Quantitative chemical mapping of polymer and biological samples using synchrotron soft x-ray spectromicroscopy*, Microscopical Society of Canada, 32<sup>nd</sup> Annual Meeting, Hamilton, ON 18-20 May **2005**.
62. A.P. Hitchcock, *Materials analysis by core excitation spectroscopy in a scanning transmission X-ray microscope*, Workshop on Electron Energy Loss Spectroscopy, Grundlesee May 1-5, **2005**

61. A.P. Hitchcock, *Soft X-ray spectromicroscopy: a powerful synchrotron tool for nanoscale chemical analysis*, Australian Synchrotron workshop, Adelaide, Australia, 2 Dec **2004**.
60. A.P. Hitchcock, *Polymer Microstructure Optimization aided by Scanning Transmission X-ray Microscopy*, 27<sup>th</sup> Australasian Polymer symposium, Adelaide, Australia, 1-3 Dec **2004**.
59. A.P. Hitchcock, C. Morin, L. Li, J. Brash, A. Scholl and A. Doran, *Methods and Examples of Quantitative Chemical Mapping using Synchrotron Soft X-ray Spectromicroscopy*, Microscopy and Microanalysis 2004, Savannah, GA, Aug 1-4, **2004**
58. A.P. Hitchcock, *Soft X-ray Spectromicroscopy of Biological and Synthetic Polymer Systems*, plenary lecture in 14<sup>th</sup> International Conference on Vacuum Ultraviolet Radiation Physics, Cairns, Australia, July 26-31, **2004**
57. A.P. Hitchcock, *Soft X-ray spectromicroscopy: current capabilities and future prospects*, Keynote talk at Australian Synchrotron Radiation Project meeting, Canberra, Feb 7, **2004**
56. A.P. Hitchcock, *X-ray microscopy of Biomaterials*, in Workshop on Applications of Synchrotron Radiation to Biomaterials, Canadian Light Source Users' Meeting, November 14, **2003**
55. A.P. Hitchcock, *Studies of Protein - Polymer Interactions using Soft X-ray Microscopy* in "Synchrotron based methods for the study of bio-interfaces" Symposium at the 50<sup>th</sup> American Vacuum Society meeting, Baltimore, Nov 5, **2003**
54. A.P. Hitchcock, *Methods and examples of quantitative chemical mapping by soft X-ray spectromicroscopy*, Workshop on X-ray microscopy, ALS Users' meeting Oct 9, **2003**
53. A.P. Hitchcock, C. Morin, J. L. Brash, and S.G. Urquhart, *Selective adsorption of protein on polymer surfaces studied by soft X-ray photoemission electron microscopy*, 9<sup>th</sup> Int. Conf on Electronic Structure and Spectroscopy, Uppsala, Sweden, Jun 28-Jul 2, **2003**.
52. A.P. Hitchcock, *Studies of Protein - Biomaterial Interactions using Soft X-ray Microscopy*, Biological Surfaces and Interfaces : Euroconference on Understanding and Improving Specific Interactions, Castelvechio Pascoli, Italy, 21 - 26 June **2003**.
51. A.P. Hitchcock, *Soft X-ray microscopy of polymers and biofilms*, X-ray Imaging and Spectromicroscopy: the Present and the Future, a workshop held in conjunction with the Stanford Synchrotron Radiation Laboratory Annual Meeting, 9 Oct **2002**.
50. A.P. Hitchcock, T. Tyliszczak, I. Koprinarov, T. Araki and C. Morin, *Soft X-ray Spectromicroscopy of Natural and Synthetic Polymers*, 7th Int. Conf. X-ray Microscopy, Grenoble, France, 28 Jul-Aug 3, **2002**.
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47. A.P. Hitchcock, *Polymers and Biofilms*, Department of Energy Basic Energy Sciences Review of the Advanced Light Source, Feb. **2002**.
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45. A.P. Hitchcock, *Soft X-ray Spectromicroscopy of polymers, biomaterials and biological systems*, Int. Conf. On Vacuum Ultraviolet Radiation Physics, Trieste, Italy, 23-29th July **2001**
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42. A.P. Hitchcock, *Soft X-ray Spectromicroscopy: Quantitative Chemical Analysis of Functional Materials at High Spatial Resolution*, Pacificchem 2000, Honolulu, 16-19 Dec **2000**

41. A.P. Hitchcock, *The Canadian Light Source: Scientific plans and industrial access*, 16<sup>th</sup> Applications of Accelerators to Research and Industry, Denton, TX Nov. 1-4, **2000**
40. A.P. Hitchcock, *Soft X-ray Spectromicroscopy of Polymers and Bio-polymer Interfaces*, XAFS XI, Ako, Japan, July 26-3, **2000**
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37. A.P. Hitchcock, *Synchrotron Spectromicroscopy*, in Workshop on Biomaterials Surface Analysis for the New Millenium, 6th World Biomaterials Congress, Hawaii, 15-20 May, **2000**
36. A.P. Hitchcock, *"Etudes des Surfaces et Interfaces par Absorption Rayons-X avec Rayonnement Synchrotron"*, SIMA-2, Lyon, France 8-Dec, **1999**
35. A.P. Hitchcock, T. Tylliszczak, P. Brodersen and Z.H. Lu , *"Structure of chemically prepared passivation layers on single crystal semiconductors studied by X-ray absorption"* International Conference on the Structure of Surfaces (ICSOS), Vancouver, July 26-30, **1999**.
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31. A.P. Hitchcock, *"Quantitative Chemical Speciation of Multi-phase Polymers Using Zone-Plate X-ray Microscopy"*, Microscopy and Microbeam Analysis, Atlanta (Jul 13, **1998**)
30. A.P. Hitchcock, *"Studies of Phase Segregation in Polymers using Soft X-ray Spectromicroscopy"*, CAP Congress, Waterloo (Jun 16, **1998**)
29. A.P. Hitchcock, *"Scientific Programme of the Canadian Light Source"* Workshop on Opportunities for Synchrotron Light: Planning the CLS, Montreal, (Apr 25, **1998**)
28. A.P. Hitchcock, *"Overview of Synchrotron Light Applications in Materials and Manufacturing"* Workshop on Opportunities for Synchrotron Light in Materials and Manufacturing: Focus on X-ray Spectromicroscopy of Polymers, Sheridan Park, (Feb 10, **1998**)
27. A.P. Hitchcock, *Electron Spectroscopy towards the new millenium: Summary of the 7th International Conference on Electron Spectroscopy*, Chiba, Japan, Sep 14, **1997**.
26. A.P. Hitchcock, *Research at the Canadian Light Source - Proposed Beam Lines and End Stations, Symposium of Chemical Applications of Synchrotron Radiation IV*, CSC-97, Chemical Society of Canada, (Windsor, Jun 1-3, **1997**)
25. A.P. Hitchcock, J. Aubry, T. Tylliszczak, Z.H. Lu, J.M. Baribeau and T.E. Jackman, *Combined Si-K and Ge-K XAFS Study of the Si-Ge bond length in  $Si_xGe_{1-x}$  single crystal alloys*. IX XAFS Int. Conf., Grenoble, Aug, **1996**.
24. *in situ X-ray absorption spectroscopy of electrode surfaces*, A.P. Hitchcock, T. Tylliszczak, S. Wu and J. Lipkowski, 79th CSC meeting, St. John's, Nfld, Jun 24, **1996**.
23. *Ionic photofragmentation studied using inner-shell excitation and ionization*, symposium on "Dynamical Studies in the Production and Reactivities of Molecular Photoions", Spring ACS meeting, New Orleans, (Mar 25-29, **1996**)
22. *Materials Analysis by X-ray Absorption Spectroscopy using Synchrotron Radiation*, Pacific Basin Chemistry conference (Dec 14-17, **1995**)

21. *Inner-shell Excitation, Relaxation and Fragmentation of Cluster Beams and Molecules*, XIX ICPEAC, Whistler, BC (Jul-26-Aug-1, **1995**)
20. *Inner-shell Excitation and Fragmentation of Molecules*, 78th CSC, Guelph, Ont (May 28-Jun-1, **1995**)
19. *Inner-shell Excitation, Relaxation and Fragmentation of Rare Gas Clusters and Organometallic Compounds*, Int. Workshop on Photoionization, San Francisco, (Oct-23-26, **1994**)
18. *X-ray Absorption Studies of Single Crystal Materials*, symposium on "Applications of Synchrotron Radiation", at Metallurgical Society meeting, Jun 18-20, **1994**.
17. *Inner-shell Excitation Studies of Surfaces by Reflection Electron Energy Loss Spectroscopy*, 10th International Surface Science Workshop, Milwaukee, Jun 2-4, **1994**
16. *Application of X-ray Absorption Spectroscopies to Semiconductor Materials Characterisation*, Symposium on Materials Research Using Synchrotron Radiation, Canadian Association of Physics, Annual Meeting (SFU, Burnaby, BC) Jun 12-14, **1993**
15. *Near Edge Spectroscopy by Electron Energy Loss: A Comparison to X-ray Absorption*, Proc. of XAFS-VII, Kobe, Japan, Aug 23-29, **1992**
14. *Inner-shell Excitation Studies of Molecules: Models for Polymers and Semiconductors*, MAX II Workshop, Lund, Sweden, May 24-26, **1992**
13. *Inner-shell Excitation of Molecules as Models for NEXAFS of Polymers and Surface Adsorbates*, NEXAFS Workshop, Swedish Crystallographic Society, Uto, Sweden, May 10-13, **1992**
12. A series of four presentations on "*Inelastic Electron Scattering and its Application to Molecular Spectroscopy*" at the Escola Latino-Americana de Fisica, Caxambu, Brazil, Aug **1991**
11. "*Molecular Inner-shell Spectroscopy by Electron Impact and Synchrotron Radiation Excitation*", American Chemical Society 201st National meeting, Atlanta April **1991**
10. "*Core Electron Excitation of Chemisorbates by Reflection Electron Energy Loss Spectroscopy*", EELS Workshop (satellite conf. of EMSA), Lake Tahoe, Aug. **1990**.
9. "*Inner-shell Electron Excitation of Surface Adsorbates by Electron Impact*" Surf. Science Symposium. Can. Chem. Conf. (Dalhousie, NS) July **1990**.
8. "*Inner-shell Excitation Spectroscopy of Molecules*", Regional symposium on Chemical Physics, U. Waterloo, Nov. **1989**.
7. "*Core Excitation and Ionization of Molecules*", July, **1989**, 9th Int. Conf. on Vacuum Ultraviolet Radiation Physics (Honolulu, Hawaii).
6. "*Inner-Shell Excitation: An Element-specific Probe of Geometric and Electronic Structure*" (Noranda Award lecture), June, **1989**, Can. Chem. Conf. (Victoria, BC)
5. "*Inner-Shell Electron Energy Loss Spectroscopy: The Atomic and Molecular Viewpoint*" March, **1988**. Aussois, France. Electron Beam Induced Spectroscopies at Very High Spatial Resolution: A Joint US-French Workshop.
4. "*Inner-Shell Excitation Spectra of Complex Free Molecules*", in "Surface Science of Catalysis: Characterization of Catalysts by Synchrotron Radiation", April **1986**, New York. Symposium at the American Chemical Society national meeting.
3. "*Near Edge and EXAFS X-ray Absorption Spectroscopy of Inorganic and Bioinorganic Molecules*", October **1983**, Vancouver. Symposium on Electronic Spectroscopy at UV and X-ray Energies, Canadian Spectroscopy Society Annual Meeting.
2. "*Inner-Shell Excitation by Electron Impact*", June 18, **1981**, Bozeman, Montana. 36th NW regional meeting, American Chemical Society.
1. "*Inner-Shell Excitation of Molecules by Electron Impact*", March 28, **1980**, New York. American Physical Society March meeting.

D.2 Contributed (or other, invited)  
(underlined indicates presenter)

(T#=oral presentation, P#=poster)



- T357 [Juan Wu](#)<sup>1</sup>, A.P Hitchcock, M. Lerotic, D. Shapiro, V. Berejnov, D. Susac and J. Stumper, *4d Imaging of Polymer Electrolyte Membrane Fuel Cell Cathodes by Scanning Transmission X-Ray Microscopy*, 2016 Collaborative Conference on 3D and Materials Research (CC3DMR), Incheon, Korea, 20-24 Jun 2016 (**invited**)
- T356 [A.P. Hitchcock](#), N. Appathurai, V. Berejnov, D. Susac and J. Stumper, *Characterizing polymer electrolyte fuel cell materials by soft x-ray scanning transmission x-ray microscopy*, PacifiChem 2015, 15-20 Honolulu, HI, USA Dec **2015**.
- T355 [X.H. Zhu](#), T. Tyliczszak, H.-W. Shiu, D. Shapiro, D.A. Bazylinski, U. Lins and A.P. Hitchcock *Biomagnetism Study of Magnetotactic Bacteria by Soft X-Ray Scanning Transmission X-Ray Microscope and Ptychography*, Application of XAFS to the Study of Magnetic Materials, satellite to XAFS-2016, Stuttgart, Aug 30 – Sep 02, **2015 (invited)**
- T354 [X. Zhu](#), A.P. Hitchcock, C. Bittencourt, P. Umek and P. Krüger, *Individual 1D Nanostructures Investigated by 3D-resolved Polarization Dependent X-ray Absorption Spectra*, XAFS-2016, Karlsruhe, Germany, 23-28 Aug **2015**
- T353 D. Erbahar, T. Susi, X. Rocquefelte, C. Bittencourt, M. Scardamaglia, P. Guttman, G. Rotas, N. Tagmatarchis, X. Zhu, A.P. Hitchcock and [Chris P. Ewels](#), *Fullerenes in Space : Fullerene-Water interaction and the origins of life*, Fullerenes - Past, Present and Future: Celebrating the 30th Anniversary of Buckminster Fullerene, Royal Soc. Chemistry, London, UK, 15,16 Jul **2015**
- T352 [J.J. Dynes](#), A.F.G. Leontowich, C. Karunakaran, J. Wang, Y. Lu, T.Z. Regier, D. Bertwistle, B. Yates, A.P. Hitchcock, S. Urquhart. *Cleaning Carbon Deposited Optics on Soft X-ray Beamlines using a H<sub>2</sub>-Ar Plasma*. 12th International Conference on Synchrotron Radiation Instrumentation, New York, NY, USA, 6-10 July **2015**.
- T351 [T. Ohigashi](#), M. Nagasaka, T. Horigome, N. Kosugi, S.M. Rosendahl and A.P. Hitchcock, *Development of In-situ Sample Cells for Scanning Transmission X-ray Microscopy*, Synchrotron Radiation International 2015 (New York, July **2015**)
- T350 [Lis G. de A. Melo](#), G.A. Botton and Adam P. Hitchcock, *Quantification of the critical dose for radiation damage to perfluorosulfonic acid membranes using soft X-ray microscopy*, Microscopy & Microanalysis Portland, July **2015**.
- T349 A. F.G. Leontowich, D.M. Taylor, C. Regier, R. Berg, G. Wright, J. Swirsky, J. Wang, C. Karunakaran, A.P. Hitchcock and [S. G. Urquhart](#), *Prospects for Surface and Interfacial Science at the Upgraded Spectromicroscopy Beamline*, Surface Canada, Saskatoon, June **2015**.
- T348 [Lis G. de A. Melo](#), G.A. Botton and Adam P. Hitchcock, *Quantification of the critical dose for radiation damage to perfluorosulfonic acid membranes using soft X-ray microscopy*, Microscopical Society of Canada Annual Meeting, Hamilton, Canada, May 26-29, **2015**.
- T347 [X.H. Zhu](#), T. Tyliczszak, H.-W. Shiu, D. Shapiro, D.A. Bazylinski, U. Lins and A.P. Hitchcock, *Biomagnetism of Magnetotactic Bacteria Studied by Soft X-Ray STXM And Ptychography* Microscopical Society of Canada Annual Meeting, Hamilton, Canada, May 26-29, **2015**.
- T346 [J. Wu](#), V. Lee, V. Berejnov, D. Susac and A.P. Hitchcock *3d Chemical Imaging of Fuel Cell Cathodes by Scanning Transmission X-Ray Microscopy Tomography*, Microscopical Society of Canada Annual Meeting, Hamilton, Canada, May 26-29, **2015**.
- T345 [A.P. Hitchcock](#), S.M. Rosendahl and N. Appathurai, *Spatially resolved spectro-electrochemistry using soft X-ray Scanning Transmission X-Ray Microscopy*, 227<sup>th</sup> Electrochemical Society meeting, Chicago, Apr **2015**.
- T344 [T. Susi](#), D. Mowbray, M.P. Ljungberg, D. Erbahar, X. Rocquefelte, C. Bittencourt, M. Scardamaglia, P. Guttman, N. Tagmatarchis, X. Zhu, A.P. Hitchcock, C.P. Ewels and P/ Ayala, *Calculating core level binding energies for graphene and azafullerenes*, International Winterschool on Electronic Properties of Novel Materials (IWEPNM2015) workshop, 7-14 March **2015**, Tirol, Austria.
- T343 [E. M. Muehe](#), E. Adaktylou, M. Obst, C. Schroeder, S. Behrens, A.P. Hitchcock, T. Tyliczszak, M. Michel, U. Kraemer and A. Kappler, *Cd mobility in anoxic Fe-mineral-rich environments – potential use of Fe(III)-reducing bacteria in soil remediation*, 2014 Annual meeting of the

- American Geophysical Union, San Francisco, 15-19 Dec **2014**.
- P342 [A. P. Hitchcock](#), [X. Zhu](#), C. Bittencourt, P. Umek and P. Krüger, *Electronic structure of titanate nanoribbons studied by O 1s and Ti 2p X-ray absorption and 3-dimensional dichroism measured in a scanning transmission X-ray microscope (STXM)*, PacSurf2014, 7-11 Kona, Hawaii, Dec **2014**.
- T341 [A.P. Hitchcock](#), V. Lee, V. Berejnov, D. Susac and J. Stumper, *Characterizing automotive fuel cell materials by soft x-ray scanning transmission x-ray microscopy (STXM)*, PacSurf2014, 7-11 Kona, Hawaii, Dec **2014**.
- P340 [A. F. G. Leontowich](#), C. Regier, D. M. Taylor, R. Berg, K. Epp, J. Swirsky, C. Karunakaran, A. P. Hitchcock and S. G. Urquhart, *Design and installation of a cryo scanning transmission x-ray microscope at the Canadian Light Source*, International Conference on X-ray Microscopy (XRM2014), Melbourne, Australia, Oct, **2014**
- P339 [X.H. Zhu](#), [A. P. Hitchcock](#), T. Tylliszczak, D.A. Bazyliniski and U. Lins, *Application of X-Ray Magnetic Circular Dichroism in Stxm to Study The Magnetic Polarities of Individual Magnetotactic Bacteria*, International Conference on X-ray Microscopy (XRM2014), Melbourne, Australia, Oct, **2014**
- P338 [X. Zhu](#), [A.P. Hitchcock](#), C. Bittencourt, P. Umek and P. Krüger, *Individual Titanium Oxide Nanostructures Studied by 3D-Resolved O 1s and Ti 2p Polarization Dependent X-Ray Absorption Spectra Measured with STXM*, International Conference on X-ray Microscopy (XRM2014), Melbourne, Australia, Oct, **2014**
- P337 [A.P. Hitchcock](#), [Z. Qin](#), S.M. Rosendahl and V. Lee, *In Situ Electrochemical Deposition Of Cu Studied With Scanning Transmission X-Ray Microscopy*, International Conference on X-ray Microscopy (XRM2014), Melbourne, Australia, Oct, **2014**
- I336 [D. Susac](#), V. Berejnov, M. Saha, V. Lee, M. West, A.P. Hitchcock and Jürgen Stumper, *Advances in Structural Characterization of PEM Fuel Cell Catalyst Layers by Soft X-ray Scanning Transmission Microscopy*, 226 ECS Conference, Cancun, Mexico, Oct, **2014 invited**
- P335 [X. Zhu](#), A.P. Hitchcock, D.A. Shapiro, T. Tylliszczak and D.A. Bazyliniski, *Spectro-ptychography study of biomagnetism using soft X-ray microscopy*, ALS Users Meeting, Berkeley, CA, 8 Oct, **2014**
- P334 [J. Wu](#), V. Lee, V. Berejnov, D. Susac, J. Stumper and A.P. Hitchcock, *3D chemical distributions in PEMFC cathodes measured by Scanning Transmission X-ray microscopy*, ALS Users Meeting, Berkeley, CA, 8 Oct, **2014**
- T333 [X. Zhu](#), A.P. Hitchcock, T. Tylliszczak, P.E. Leão, D.A. Bazyliniski and U. Lins, *Characterization of the chemistry and magnetism of individual magnetotactic bacterial cells using X-ray spectromicroscopy*, 4<sup>th</sup> Int. Meeting on Magnetotactic Bacteria (MTB2014) Rio de Janeiro Sep 15-18, **2014**
- T332 [P. Krüger](#), [X. Zhu](#), C. Bittencourt and A. P. Hitchcock, *X-ray absorption of individual titania nanostructures - theory and STXM Experiments*, Japanese Physical Society, Sep.7-10, **2014**.
- T331 [D. Rossouw](#), M. Bugnet, [E. Najafi](#), V. Lee, A. P. Hitchcock and G. A. Botton, *Illuminating the electronic properties of individual carbon nanotubes with photons and electrons*, International Microscopy conference (refereed abstract), Prague, Czech Republic, Sep 6-10, **2014**
- T330 [L.G.A. Melo](#), V. Lee, D. Susac, V. Berejnov, J. Stumper, G.A. Botton and A.P. Hitchcock, *Effects of Sample Preparation Technique on Quantitative Analysis of Automotive Fuel Cell Catalyst Layers*, Microscopy& Microanalysis 2014, Hartford, CT, Aug **2014**.
- T329 [X.H. Zhu](#), A.P. Hitchcock, T. Tylliszczak and D.A. Bazyliniski, *Probing Magnetic Polarities of Magnetotactic Bacteria by X-ray Magnetic Circular Dichroism in a Scanning Transmission X-ray Microscope*, Microscopy& Microanalysis 2014, Hartford, CT, Aug **2014**.
- P328 [J. Wu](#), V. Lee, A.P. Hitchcock and V. Berejnov, *STXM tomography of PEM-FC, CaRPE-FC* Annual Technical meeting, Vancouver, 6 June **2014**
- P327 [L.G.A. Melo](#), V. Lee, D. Susac, V. Berejnov, J. Stumper, G.A. Botton and A.P. Hitchcock, *Effects of Sample Preparation Technique on Quantitative Analysis of Automotive Fuel Cell*

- Catalyst Layers*, CaRPE-FC Annual Technical meeting, Vancouver, 6 June **2014**
- T326 A.P. Hitchcock, *Imaging and Diagnostics*, Annual Technical meeting of the Catalyst Research for Polymer electrolyte Fuel Cells (CaRPE-FC) network, Vancouver, 6 June **2014**
- T325 L.G.A. Melo, V. Lee, D. Susac, G.A. Botton A.P. Hitchcock, V. Berejnov and J. Stumper, *Effects of Sample Preparation Damage to Catalyst Layers in Fuel Cell Materials*, Chemical Society of Canada, Vancouver, 1-5 Jun **2014**
- P324 Z.B. Yan, A.P. Hitchcock and G. Goward, *The investigation of ionomer and platinum degradation in Catalyst coated membranes for fuel cells*, Chemical Society of Canada, Vancouver, 1-5 Jun **2014**
- P323 Z. Qin, S. Rosendahl, V. Lee, J. Wang, C. Karunakaran and A.P. Hitchcock, *In situ electrochemical deposition of Cu with Scanning Transmission X-ray Microscopy*, CLS Annual Users' Meeting, Saskatoon, SK, 2 May **2014**.
- P322 A.F. G. Leontowich, D.M. Taylor, C. Regier, C. Karunakaran, A.P. Hitchcock. and S. G. Urquhart, *Enhanced scintillator-photomultiplier tube detector for a UHV soft x-ray microscope*, CLS Annual Users' Meeting, Saskatoon, SK, 2 May **2014**.
- T321 J.R. Lawrence, G.D.W. Swerhone, J.J. Dynes, A.P. Hitchcock, and D.R. Korber. *Formation of a complex organic corona on carbon nanotubes reduces toxicity by suppressing reactive oxygen species production*. SETAC North America, November 17-21, **2013**, Nashville, TN. SETAC 34<sup>th</sup> Annual Meeting.
- T320 T. Ohigashi, Inagaki, Horigome, N. Masanari, N. Kosugi and A.P. Hitchcock, *Development of sample cells for STXM*, Japanese Synchrotron Research Association meeting, Nov 5, **2013**, Nagoya, Japan (in Japanese)
- T319 Z. Qin, V. Lee and A.P. Hitchcock, *Quantitative chemical speciation of copper electro-deposition studied by STXM*, 224 Electrochemical Society Conference, San Francisco, Oct 27 -31 **2013**.
- T318 V. Lee, D. Susac, S. Kundu, V. Berejnov, R. T. Atanasoski, A.P. Hitchcock and J. Stumper, *STXM Characterization of Nanostructured Thin Film Anode Before and After Start-up Shut-down and Reversal Tests*, 224 Electrochemical Society Conference, San Francisco, Oct 27 -31 **2013**.
- T317 V. Lee, V. Berejnov, D. Susac, J. Stumper and A.P. Hitchcock, *In situ scanning transmission X-ray microscopy studies on the effects of relative humidity and temperature on MEA materials*, 224 Electrochemical Society Conference, San Francisco, Oct 27 -31 **2013**.
- T316 X. Zhu, Adam Hitchcock and Dennis Bazylinski, *Application of X-ray Magnetic Circular Dichroism in a Scanning Transmission X-ray Microscope to Differentiate Biogenic and Abiogenic Magnetite*, 2013 ALS Users Meeting, Berkeley, CA Oct 7,8 **2013**.
- T315 D. Rossouw, E. Bellido, E. Najafi, V. Lee, A. P. Hitchcock and G.A. Botton, *High-resolution EELS studies of metallic nanostructures and carbon nanotubes* 14<sup>th</sup> Frontiers of Electron Microscopy in Materials Science, Lorne, AU 18-13 Sep **2013**.
- P314 M. Nagasaka, H. Yuzawa, T. Horigome, Z. Qin, A.P. Hitchcock and N. Kosugi, *Electrochemical Reaction of Aqueous Iron Sulfate Solutions Studied by Fe L-Edge Soft X-Ray Absorption Spectroscopy*, 38<sup>th</sup> Int. Conf. Vac. Ultraviolet X-ray Physics, Hefei, China, 12-17 July **2013**
- P313 C. Karunakaran, J. Wang, Y. Lu, A.P. Hitchcock and S.G. Urquhart *Scientific capabilities of the spectromicroscopy facility at the Canadian Light Source*, 38<sup>th</sup> Int. Conf. Vac. Ultraviolet X-ray Physics, Hefei, China, 12-17 July **2013**
- T312 A. P. Hitchcock, X. Zhu, C. Bittencourt, P. Umek and P. Kruger, *Titanium oxide nanostructures studied by O 1s and Ti 2p X-ray absorption and dichroism measured in STXM*, 38<sup>th</sup> Int. Conf. Vac. Ultraviolet X-ray Physics, Hefei, China, 12-17 July **2013**
- T311 L.G.A. Melo, J. Huang, Z. Qin, V. Lee, D. Susac, V. Berejnov, J. Stumper, A. P. Hitchcock and G.A. Botton, *Nanostructural characterization of catalyst layers in PEMFC: Sample preparation considerations*, 223 Electrochemical Society Conference, Toronto, On, Canada May **2013**.
- T310 Z. Qin, V. Lee and A.P. Hitchcock, *Spatially resolved studies of copper electroplating by scanning transmission X-ray microscopy*, 223 Electrochemical Society Conference, Toronto, On,

- Canada May **2013**.
- T309 V. Lee, V. Berejnov, D. Susac, J. Stumper and A.P. Hitchcock, *Characterization of PEM-FC materials with scanning transmission X-ray microscopy*, 223 Electrochemical Society Conference, Toronto, On, Canada May **2013**.
- T308 J. Stumper, D. Susac, J. Jankovic, V. Berejnov, V. Lee and A.P. Hitchcock, *Advanced Characterization of PEMFC Catalyst layers*, 223 Electrochemical Society Conference, Toronto, On, Canada May **2013**.
- T307 V. Berejnov, D. Susac, J. Stumper, V. Lee and A.P. Hitchcock, *Visualizing the Ionomer and Carbon Support in PEM FCs Using Scanning Transmission X-ray Microscopy: the Good, the Bad and the Ugly*, MRS Spring meeting, San Francisco, April 1-5, **2013**
- T306 C. Bittencourt, C. Karunakaran, . Wang, Y. Lu and A.P. Hitchcock, *Bond directionality in boron nitride nanotubes probed by STXM-NEXAFS*, Finnish workshop on Nanomaterials. Feb **2013**
- T305 D. Susac, V. Berejnov, A.P. Hitchcock and J. Stumper, *STXM Characterization of PEM Fuel Cell Catalyst Layers*, 221 Electrochemical Society Conference, Honolulu, USA Oct 7-12, **2012**
- T304 V. Berejnov, D. Susac, J. Stumper and A.P. Hitchcock, *3D chemical mapping of PEM Fuel Cell Cathodes by Scanning Transmission soft X-ray Spectro-tomography*, 221 Electrochemical Society Conference, Honolulu, USA Oct 7-12, **2012**
- T304 W. Cao, M. Masnadi, Y.-F. Hu, J.-M. Baribeau, J. C. Woicik, M. Huttula A.P. Hitchcock and S. G. Urquhart, *The Unusual Electronic and Morphological Structures of SiGe alloys Grown on Ge Substrates*, 12<sup>th</sup> Int. Conf. on Electronic Structure and Spectra, St. Malo, France, 16-20 Sep, **2012**
- T303 A.P. Hitchcock, E. Najafi, D. Rossouw and G.A. Botton, *Inner shell spectra and linear dichroism of single chirality carbon nanotubes by X-ray absorption and electron energy loss spectromicroscopy*, 12<sup>th</sup> Int. Conf. on Electronic Structure and Spectra, St. Malo, France, 16-20 Sep, **2012**
- T302 C. Karunakaran, C. Gaillard, J. Wang, Y. Lu, J. Dynes and A.P. Hitchcock, *High resolution soft X-ray spectromicroscopy reveals distribution and association of biopolymers with mineral nutrients in seeds*, 11th International Conference on X-ray Microscopy (XRM2012), Shanghai, China, 5-10 Aug **2012**.
- T301 P. Krüger, C. Bittencourt and A. P. Hitchcock, *Dichroism in x-ray absorption of titanium oxide nanostructures*, at "XAFS theory and nano particles", a satellite meeting to the 15<sup>th</sup> International conference on X-ray Absorption Fine Structure, Chiba, Japan, 18-20 July, **2012**
- T300 A.P. Hitchcock, B.O. Leung, J.L. Brash, E. Najafi, D. Rossouw and G.A. Botton, *Chemical and structural characterization with soft X-ray spectro-microscopies in correlation with electron and atomic force microscopies*, Microscopy and Microanalysis, Phoenix, 29-Jul – 4 Aug **2012**
- T299 A.F.G. Leontowich and A.P. Hitchcock, *Carbon contamination and the future of high volume photolithography*, SRI conference Satellite Workshop on "Carbon Contamination of Optics", Solei, Paris, France, 16-17 July, **2012**
- T298 S.S. Kaliraj, K.P. Lam, D.A. Bazylinski, U. Lins and A.P. Hitchcock, *Magnetism of Individual Magnetosomes in Magnetotactic Bacteria*, Goldschmidt, Montreal, June 24-29, **2012**
- T297 M. Obst, T. Lösekann-Behrens, S. Behrens, A. Kappler, T. Tyliczszak and A. P. Hitchcock, *Spatial distribution of As(V) in cell-mineral aggregates formed by NO<sub>3</sub><sup>-</sup>-reducing Fe(II)-oxidizing bacteria*, Goldschmidt, Montreal, June 24-29, **2012**
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- T293 J.L. Brash, B.O. Leung, A.P. Hitchcock, A. Scholl and A. Doran, *Soft X-ray spectromicroscopy of protein interactions with phase segregated polymer surfaces*, Symposium on Proteins at



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