

A. Articles in fully peer-reviewed journals

In press or published

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Inner-shell Electron Energy Loss Spectroscopy of Cyclic Organic Molecules
- 1990-xx** Frank Esposto (M.Sc.) (1988-1990)
EXAFS of Pd₄₀Ni₄₀P₂₀ 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 Film
- 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 surface
- 2008-02** Jian Wang (PhD) (2002-2008)
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D. Presentations at Meetings

D.1 Invited

94. A.P. Hirschcock 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
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. Hirschcock 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. Tyliczszak, D. Hernández Cruz, G.A. Johansson, 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*, 12th 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. Tyliczack, *3-d chemical imaging using angle-scan tomography in a soft X-ray scanning transmission X-ray microscope*, 15th 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 18th 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*, 51st 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, 32nd 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*, 27th 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 14th 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 50th 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*, 9th 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 Spectro-microscopy: 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. Tyliczszak, 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**.
49. A.P. Hitchcock, *Inner-shell excitation by electrons and photons: from molecules to biofilms*, Symposium on Cross-sections and Electron Momentum Distributions in honor of the career of Dr. C..E. Brion, CSC annual meeting, UBC, 4 June **2002**.
48. A.P. Hitchcock, *Analysis of Biomaterials by Soft X-ray Spectro-Microscopy*, Retirement Festschrift for John, Brash, McMaster, 31 May **2002**
47. A.P. Hitchcock, *Polymers and Biofilms*, Department of Energy Basic Energy Sciences Review of the Advanced Light Source, Feb. **2002**.
46. A.P. Hitchcock, J.R. Lawrence and G.G. Leppard, *X-ray Spectromicroscopy: Chemical Mapping Techniques Applicable to Molecular Environmental Sciences*, A. Molecular Environmental Science Workshop at ALS Users' Meeting, Berkeley, Oct **2001**
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**
44. A.P. Hitchcock, C. Morin, T. Tyliczszak, H. Ikeura Sekiguchi and I. Koprinarov, *Analysis of Soft Materials by NEXAFS Microscopy*, Chemical Society of Canada 84th annual meeting, Montreal, Canada. May 26-30, **2001**
43. A.P. Hitchcock, C. Morin, T. Tyliczszak, I. Koprinarov and H. Ikeura Sekiguchi, *Soft X-Ray Spectromicroscopy: Quantitative Chemical Analysis At High Spatial Resolution*, MRS Spring meeting 2001, San Francisco, April 18-22, **2001**

42. A.P. Hitchcock, *Soft X-ray Spectromicroscopy: Quantitative Chemical Analysis of Functional Materials at High Spatial Resolution*, Pacifichem 2000, Honolulu, 16-19 Dec **2000**
41. A.P. Hitchcock, *The Canadian Light Source: Scientific plans and industrial access*, 16th 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**
39. A.P. Hitchcock, *Soft X-ray Research at the Canadian Light Source*, CAP 2000, York, Jun 4, **2000**.
38. A.P. Hitchcock, *X-ray spectromicroscopy of polymer surfaces and the bio-polymer interface*, Surface Canada, UWO, London, ON May 22-24, **2000**
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. Tyliczszak, 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**.
34. A.P. Hitchcock, T. Tyliczszak and Z.H. Lu , *"Structure of Chemically Passivated Semiconductor Surfaces Determined Using X-Ray Absorption Spectroscopy"* MRS Spring Meeting, Symposium on Compound Semiconductor Surface Passivation and Novel Device Processing, San Francisco, April 5-9, **1999**.
33. A.P. Hitchcock, *"Biological, Materials and Environmental Applications of soft X-ray Spectromicroscopy"*, NRC Workshop on Synchrotron Radiation, Steacie Institute for Molecular Science, NRC, Ottawa, Mar 18, **1999**
32. A.P. Hitchcock, T. Tyliczszak, S.G. Urquhart, H. Ade, G.E. Mitchell, E.G. Rightor, and T. Warwick, *"Polymer microanalysis using NEXAFS spectromicroscopy in a Scanning Transmission X-Ray Microscope"*, International Workshop on Spectromicroscopy, Madison, WI, Oct 23-25, **1998**
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 $\text{Si}_x\text{Ge}_{1-x}$ 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) (T#=oral presentation, P#=poster)
(underlined indicates presenters other than APH)

- T255 Bonnie O. Leung, Adam P. Hitchcock, John L. Brash, Andreas Scholl, and Andrew Doran, *Soft X-ray Spectromicroscopy of Protein Interactions with Model Biomaterials*, AVS 2009 meetin, San Jose, Ca, USA, Nov 8-13, **2009**
- P254 B.O. Leung, K.P. Lam, A.P. Hitchcock, M. Obst, U. Lins, *Measuring magnetic properties of individual magnetosomes by Scanning Transmission X-ray Microscopy*, in symposium, Quantitative Nanoscale Sensing at Biosurfaces and Interfaces, AVS 2009 meetin, San Jose, Ca, USA, Nov 8-13, **2009**
- P253 E. Najafi, J. Wang, A.P. Hitchcock, C. Andrei, G. Botton, J. Guan and B. Simard, *X-ray Absorption and Electron Energy Loss Spectroscopy of Individual Carbon Nanotubes*, 25th Chemical Physics Symposium, Waterloo, ON, 6-8 Nov **2009**
- P252 G. Ceccone, M. J. Perez-Roldan, A. Valsesia, P. Colpo, F. Rossi, B. Leung, A.P. Hitchcock and A. Scholl, *X-Ray spectromicroscopy study of protein adsorption on plasma polymerized micro and nanostructures*, 13th European Conference on Applications of Surface and Interface Analysis (ECASIA'09), Antalya, Turkey Oct 18-23, **2009**.
- P251 A.F.G. Leontowich and A.P. Hitchcock, *The scanning transmission X-ray microscope (STXM) as a lithographic tool*, ALS Users' Meeting, Oct 16, **2009**
- P250 A.P. Hitchcock, *Soft X-ray spectromicroscopy of polymer, biological and environmental samples*, 11th International Conference on Electronic Spectroscopy and Structure, Nara, Japan, Oct 6-10, **2009**
- P249 A.Felten, X. Gillon, B. Douhard, E. Najafi, M. Obst, A.P. Hitchcock and J.-J. Pireaux, *Single carbon nanotube spectroscopy: electronic and structural defects by Scanning Transmission X-ray Microscopy (STXM)*, 11th International Conference on Electronic Spectroscopy and Structure, Nara, Japan, Oct 6-10, **2009**

- P248 N. Iwata, A. Watada, H. Ikeura-Sekiguchi, T. Araki, A.P. Hitchcock, *Comparison of Scanning Transmission X-ray Microscopy and energy filtered Transmission Electron Microscopy for studies of toner particles* 11th International Conference on Electronic Spectroscopy and Structure, Nara, Japan, Oct 6-10, **2009**
- P247 A.P. Hitchcock, R.A. Bonham, C.A. Chatzidimitriou-Dreismann and G. Cooper, *Quasi-elastic electron scattering from atoms and molecules* 11th International Conference on Electronic Spectroscopy and Structure, Nara, Japan, Oct 6-10, **2009**
- P246 A.P. Hitchcock, G. Cooper, J.A. Bradley, G.T. Seidler and M. Vos, *Valence electronic excitation of N₂ studied by q-dependent electron energy loss spectroscopy and non-resonant inelastic X-ray scattering*, 11th International Conference on Electronic Spectroscopy and Structure, Nara, Japan, Oct 6-10, **2009**
- T245 C. Bittencourt, A. Felten, X. Ke, E. Najafi, A. P. Hitchcock and G. Van Tendeloo, *Combined HRTEM and STXM-NEXAFS study of a patterned CNT*, 11th Int. Conf. on Advanced Materials, Rio de Janeiro, Brazil, 20-25 Sep **2009**. (invited)
- T244 K.L.I. Norlund, Kelsey, A.P. Hitchcock and L.A. Warren, *Microbial Sulphur Cycling: New Evidence of Microbial Cooperation in Global Elemental Cycles*, International Symposia on Environmental Biogeochemistry (ISEB2009), Hamburg, Germany – Sept. 14 to 18, **2009**
- P243 M. Obst, J. Wang and A.P. Hitchcock, *3D chemical mapping by STXM angle scan tomography*, Interdisciplinary Symposium on 3D microscopy 2009, Interlaken, Switzerland, 12-16 July **2009**
- P242 Bonnie O. Leung, Adam P. Hitchcock, John L. Brash, Andreas Scholl, and Andrew Doran, *Soft X-ray Spectromicroscopy of Protein Interactions with Model Biomaterials*, ESF-EMBO Symposium on 'Biological Surfaces and Interfaces' , Sant Feliu de Guixols, Spain, 27 Jun – 2 July **2009**
- T241 M. Obst, J. Wang, C. Karunakaran, K. Benzerara, J. J. Dynes, J.R. Lawrence, G. D. W. Swerhone and A. P. Hitchcock, *2D, 3D, and in-situ STXM in Geomicrobiology*, Goldschmidt 2009, Davos, Switzerland, 21-26 Jun, **2009**
- T240 D. Bessarabov, S. Lee, R. Vohra, A.P. Hitchcock and J. Wang, *Soft X-ray spectro-microscopy of catalyst-coated membranes (CCM) subjected to automotive-specific test conditions*, Annual meeting of the North American Membrane Society, Charleston, South Carolina USA, June 20-24, **2009**.
- P239 K.P. Lam, A.P. Hitchcock, M. Obst, J.R. Lawrence, G.D.W. Swerhone, T. Tyliczszak, C. Karunakaran, J. Wang, D. Bazyliniski and U. Lins, *X-ray Magnetic Circular Dichroism of individual magnetosomes in a magnetotactic bacterium (MV-1) measured by Scanning Transmission X-ray Microscopy*, CLS Annual Users' Meeting, Saskatoon, Jun 17,18, **2009**.
- P238 A.P. Hitchcock, M. Obst, K. Norlund, L. Warren and J. Wang, *STXM studies of a novel syntrophic sulphur metabolizing consortia at the S 1s and S 2p edges*, CLS Annual Users' Meeting, Saskatoon, Jun 17,18, **2009**.
- T237 C. Karunakaran, U.D. Lanke, J. Wang, Y. Chen, S.G. Urquhart and A.P. Hitchcock, *Soft X-ray Spectromicroscopy – A Synchrotron based Advanced Technique for Materials and Life Sciences Research*, Microscopical Society of Canada 2009 Annual meeting, Winnipeg, June 14-16, **2009**
- T236 C. Gaillard, A. Berquand, C. Karunakaran, H. Gnaegi, B. Bouchet, E. Larquet and A.P. Hitchcock, *Imaging wheat grain tissue through a Fluorescence / AFM / TEM / STXM*

- correlative microscopy approach*, French Microscopy Society annual meeting, Strasbourg, France, 8-12 June **2009**.
- T235 B.O. Leung, A.P. Hitchcock, J.L. Brash, A. Scholl and A. Doran, *Soft X-ray Spectromicroscopy of Protein Interactions with Candidate Biomaterials* Chemical Society of Canada Annual Meeting, Hamilton, Canada, May 30 - 3 Jun **2009**.
- P234 B.O. Leung, A.P. Hitchcock, M. T. Weidner, D.G. Castner A. Scholl, and A. Doran, *Soft X-ray Spectromicroscopy of Patterned Polymeric Surfaces as Candidate Protein Microarrays*, Chemical Society of Canada Annual Meeting, Hamilton, Canada, May 30 - 3 Jun **2009**.
- P233 B.O. Leung, A.P. Hitchcock, A. Scholl, and A. Doran, *Soft X-ray spectromicroscopy of protein interactions with polymeric biomaterials*, Chemical Society of Canada Annual Meeting, Hamilton, Canada, May 30 - 3 Jun **2009**.
- T232 K.P. Lam, A.P. Hitchcock\$, M. Obst and J.J. Dynes, J.R. Lawrence, G.D.W. Swerhone, G.G. Leppard, T. Tyliczszak, C. Karunakaran, K. Kaznatcheev, J. Wang, D. Bazyliniski and U. Lins, *Characterization of Fe₃O₄ Bacterial Nano-crystals by Scanning Transmission X-ray Microscopy and X-ray Magnetic Circular Dichroism*, Chemical Society of Canada Annual Meeting, Hamilton, Canada, May 30 - 3 Jun **2009**.
- P231 E. Najafi, J. Wang, A.P. Hitchcock, A. Felten² and J.-J. Pireaux, *Quantitation of Structural Defects in Carbon Nanotubes by Scanning Transmission X-Ray Microscopy*, Chemical Society of Canada Annual Meeting, Hamilton, Canada, May 30 - 3 Jun **2009**.
- P230 K. Kaznatcheev, C. Karunakaran, M. Obst and A.P. Hitchcock, *Soft x-ray linear dichroism: the route from spectra to images*, Chemical Society of Canada Annual Meeting, Hamilton, Canada, May 30 - 3 Jun **2009**.
- P229 E. Najafi, J. Wang, A.P. Hitchcock, L. Sorin, C. Andrei and G. Botton, *Characterizing defects in individual carbon nanotubes by X-ray absorption and electron energy loss spectromicroscopy*, EDGE 2009, Banff, Canada, 18-22 May **2009**
- P228 M. Obst, C. Karunakaran, J. Wang, J.J. Dynes, K. Benzerara, J.R. Lawrence, S.W. Swerhone, A.P. Hitchcock, *Quantitative mapping of composition and orientation in biological systems using scanning transmission X-ray microscopy*, 119th Eastern Forum of Science and Technology, Shanghai, 31. Oct **2008**
- P227 E. Najafi, A. P. Hitchcock, D. Hernandez-Cruz, M. Obst, A. Felten and J.-J. Pireaux, *Quantitation of Structural Defects in Multi-Walled Carbon Nanotubes by X-Ray Absorption Spectromicroscopy*, ALS Users Meeting, Berkeley, CA, 13,14 Oct **2008**
- P226 B.O. Leung, A.P. Hitchcock, M. T. Weidner, D.G. Castner A. Scholl, and A. Doran, *Soft X-ray Spectromicroscopy of Patterned Polymeric Surfaces as Candidate Protein Microarrays*, ALS Users Meeting, Berkeley, CA, 13,14 Oct **2008**
- P225 J. Wang, A.P. Hitchcock, M.M. West and G.A. Botton, *Quantitative comparison of radiation damage to polyethyleneterephthalate (PET) in electron and X-ray microscopes*, ALS Users Meeting, Berkeley, CA, 13,14 Oct **2008**
- P224 B.O. Leung, A.P. Hitchcock, A. Scholl, and A. Doran, *Soft X-ray spectromicroscopy of protein interactions with polymeric biomaterials*, ALS Users Meeting, Berkeley, CA, 13,14 Oct **2008**
- T223 Martin Obst, J. Wang, A.P. Hitchcock, James J. Dynes, J. R. Lawrence, G.D.W. Swerhone and C. Karunakaran, *New insights into biomineral nucleation provided by STXM*, Highlight young Investigator talk at ALS Users Meeting, Berkeley, CA, 13,14 Oct **2008**
- P222 A. Felten, X. Ke, S. Bals, X. Gillon, J.-J. Pireaux, E. Najafi, A. P. Hitchcock, C.

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