

CURRICULUM VITAE

KIMBERLY T. TAIT

1. CONTACT INFORMATION

Work address Department of Natural History (Mineralogy Section)
Royal Ontario Museum
100 Queens Park
Toronto, Ontario, Canada
M5S 2C6

Office phone 416.586.5820

ktait@rom.on.ca
<http://www.rom.on.ca/collections/curators/tait.php>
<http://www.geology.utoronto.ca/Members/tait/tait>

University address Department of Earth Sciences
University of Toronto
22 Russell Street
Toronto, Ontario, Canada
M5S 3B1

kim.tait@utoronto.ca
<http://www.geology.utoronto.ca/Members/tait/tait>

2. DEGREES AND DIPLOMAS

2009 Diploma in Gemmology and Fellowship with the Canadian Gemmological Association

2007 Ph.D. Geosciences, University of Arizona

- Thesis title, “*Inelastic neutron scattering and neutron diffraction studies of gas hydrates*”
- Supervisor: Dr. Robert Downs

2002 M.Sc. Geology, University of Manitoba

- Thesis title, “*Crystal chemistry of the alluaudite-group minerals*”.
- Supervisor, Dr. Frank Hawthorne, Tier I Research Chair in Crystallography and Mineralogy

1999 B.Sc. (1st class Honours), Geology, University of Manitoba

- Thesis title, “*Rare amphiboles and associated minerals from the Kajlidongri and Tirodi manganese mines of Central India*”.
- Supervisor, Dr. Frank Hawthorne, Tier I Research Chair in Crystallography and Mineralogy

3. EMPLOYMENT

3.1 CURRENT APPOINTMENTS

2014 – present	Teck Chair of Mineralogy, Department of Natural History, Royal Ontario Museum, Toronto, Ontario
2012 – present	Curator Mineralogy, Department of Natural History, Royal Ontario Museum, Toronto, Ontario
2007 – 2012	Associate Curator, Mineralogy, Department of Natural History, Royal Ontario Museum, Toronto, Ontario
2014 – 2015	Visiting Research Scholar, Scripps Institution of Oceanography, La Jolla, California

3.2 UNIVERSITY CROSS-APPOINTMENTS

2013 – present	Associate Professor (status only), Department of Earth Sciences, University of Toronto, Toronto, Ontario
2008 – 2013	Assistant Professor (Status-Only), Department of Geology, University of Toronto, Toronto, Ontario

3.3 ADJUNCT APPOINTMENTS

August 2008 – present	Adjunct Professor, Department of Earth Sciences, University of Western Ontario, London, Ontario
2017 – present	Adjunct Professor, Department of Geological Sciences and Geological Engineering, Queens University, Kingston, Ontario
2017 – present	Adjunct Professor, Lassonde School of Engineering, York University, Toronto, Ontario

4. HONOURS AND AWARDS

NASA OSIRIS-REx Group Achievement Award (November 2017)

Fellow, the Canadian Gemmological Association of Canada (October 2009)

5. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

National Academy of Sciences

Appointed to the Sample Analysis of Extraterrestrial materials committee

Canadian Space Agency

OSIRIS-REx Laser Altimeter (OLA) Science Team Member

Mineralogical Association of Canada

Member (1999 – present)

William Pinch Medal Committee (2011-2016)

MAC Travel Award committee (2012-2014)

Councillor (2011-2014)

Hawley medal Committee (2009-2011)

Mineralogical Society of America

Member (2002 – present)

Nominating Committee (2014 – present)

Membership Committee Chair (2013-2016)

Chair, Roebling Medal Award (2015)

Chair, MSA Award (2014)

Councillor (2012-2015)

Geological Association of Canada

Central Representative, Planetary Science Division (2016 – present)

Treasurer, Planetary Science Division (2008-2015)

International Mineralogical Association (IMA)

Secretary, IMA Commission on Museums (2017 – present)

Canadian Representative National Meeting (2009)

Meteoritical Society

Member (2012 – present)

Society of Economic Geologists

Member (2013 – present)

American Geophysical Union

Member (2014 – present)

Canadian Space Agency, Astromaterials Working Group

Member (2008 – present)

Canadian Lunar Research Network

Member (2009 – present)

5.1 JOURNAL EDITORIAL WORK

I have been asked to review several manuscripts in several leading mineralogical journals, such as the Canadian Mineralogist, American Mineralogist, the Physics and Chemistry of Minerals, the European Journal of Mineralogy and Mineralogical Magazine.

2017 Reviews in Mineralogy (RIM) Monograph **Care and Documentation of Mineral Collections review**

2008 – 2013 American Mineralogist New Mineral Names Associate Editor

5.2 NEW MINERALS AND METEORITES

With only just over 5,300 minerals known in nature, discovering and characterizing a new mineral structure is very important in our field. The ROM's mineral collection has primarily been identified by sight, and is a treasure trove of new minerals. My role varies in these projects but typically my role in the characterization of these minerals was the discovery of them, which included a lot of initial chemistry and atomic structure determination. Once the proposal is completed, it is submitted to the International Mineralogical Association- Commission on New Minerals and Mineral Names, where a team of international experts review and subsequently vote on the validity of the proposal.

5.2.1 Approved minerals

Potassic-carpholite IMA2002-064	$(K, \square)(Li, Mn^{2+})Al_4Si_4O_{12}(OH)_4(F, OH)_4$
Dellaventuraitite IMA2003-061	$NaNa_2(MgMn_2TiLi)Si_8O_{22}O_2$
Manitobaite IMA2008-064	$Na_{16}Mn^{2+}_{25}Al_8(PO_4)_{30}$
Ruffite IMA2009-077	$Ca_2Cu(AsO_4)_2 \cdot 2H_2O$
Bobdownsite IMA2008-037	$Ca_9Mg(PO_4)_6(PO_3F)$
Veblenite IMA2010-050	$KNa(Fe^{2+}_5Fe^{3+}_4Mn_7)Nb_4(Si_2O_7)_2 \cdot \cdot (Si_8O_{22})_2O_6(OH)_{10} \cdot 3H_2O$
Ianbruceite IMA2011-049	$Zn_2O[AsO_3(OH)](H_2O)_{3.53}$
Davidlloydite IMA2011-053	$Zn_3(AsO_4)_2 \cdot 4H_2O$
Wopmayite (IMA2011-093)	$Ca_6Na_3\square Mn(PO_4)_3(PO_3OH)_4$
Ferro-ferri-nybøite IMA2013-072	$NaNa_2(Fe^{2+}_3Fe^{3+}_2)(Si_7Al)O_{22}(OH)_2$
Backite IMA2013-013	$AlPb_2TeO_6[Cl_{0.5}S_{0.25}]$
Pieczkaite IMA2014-005	$Mn_5(PO_4)_3Cl$
Ice VII IMA2017-029	H_2O

5.2.2 Approved meteorites

NWA 7436 H5 ordinary chondrite
NWA 8794 H5 ordinary chondrite
NWA 8679 new martian meteorite
NWA 10134 a new mafic shergottite
NWA 11223 new lunar meteorite

5.3 CONFERENCES AND SHORT-COURSES ORGANIZED

2016, September 12: Hosted the Canadian Space Agency (CSA) Planetary Geology, Geophysics and Prospecting Topical Team meeting, including 15 researchers from across Canada. This group helps set planetary science priorities for the CSA.

2013, September: Organized the Astromaterials Workshop at the ROM and University of Toronto. 62 people attended with oral and poster presentation sessions.

2009, May: Joint Assembly: The Meetings of Americas, social committee head

B. ACADEMIC HISTORY

6. RESEARCH

6.1 RESEARCH ENDEAVOURS AND INTERESTS

Main Research Focus: Mineralogy of terrestrial planets

The long-term objective of my research program is to use minerals as probes of solar system evolution. My goal is to expand our observations of the mineralogical constituents of extraterrestrial samples, using modern methods of chemical and structural analysis and use that information to constrain their petrological history. This will include understanding the substitution mechanisms of major elements and trace elements within the crystal structure of minerals within different geological environments, providing critically important tools for petrogenetic reconstructions of the geological processes that shaped the terrestrial planets. My program currently has a strong focus on Martian meteorites, but I am also interested in rare achondrites and lunar samples. Understanding the mineralogy of these rare extra-terrestrial samples are critical to unravelling the most puzzling paradox in the chronology of magmatism, the crystallization history of magmas, differentiation processes, and the conditions of crystallization of the crust of these ancient bodies.

Related interests:

- Atom Probe Tomography
- Crystallography and new mineral structures
- Minerals in extreme environments (high P , low and high T)

C. SCHOLARLY AND PROFESSIONAL WORK

Articles in reverse chronological order; Underlined text indicates student or postdoctoral fellow's work done in my lab.

7. PEER REVIEWED PUBLICATIONS

7.1 MANUSCRIPTS PUBLISHED

2017:

56. **Tait, K.T.** & Day, J.M.D. Chondritic late accretion and evolution of mantle sources in Mars. *Submitted to Earth and Planetary Science letters.*
55. Day, J.M.D., **Tait, K.T.**, Udry, A., Liu, Y., Neal, C.R. Rejuvenated Martian magmatism from plume metasomatized mantle. *Submitted, Nature.*

54. White, L. F., Cernok, A., Darling, J., Cayron, C., Dunlop, J., **Tait, K.** & Anand, M. Ultra-high temperature history of the Moon revealed by cubic zirconia. *Submitted to Nature*.
53. Di Cecco, V., **Tait, K.**, Spooner, E. & Scherba, C. The Vanadium-bearing oxides of the Green Giant Vanadium Deposit, Fotodrevo, Southwest Madagascar. *Submitted to Canadian Mineralogist*.
52. Tschauner, O., Huang, S., Greenberg, E., Prakapenka, V., Ma, C., Rossman, G., Shen, A.H., Zhang, D., Newville, M., Lanzirotti, A. & **Tait, K.** (2017): Ice-VII inclusions in diamonds – evidence for water-saturated regions in the Earth’s deep mantle. *Science*. *In press*.
51. Cloutis, E., Peitrasz, V., Kiddel, C., Izawa, M.R.M., Vernazza, P., Burbine, T., DeMeo, F., **Tait, K.**, Bell III, J., Mann, P., Applin, D. & Reddy, V. (2017): Spectral reflectance “deconstruction” of the Murchison CM2 carbonaceous chondrite and implications for spectroscopic investigations of dark asteroids. *Submitted to Icarus*.
50. Roszjar, J., Moser, D.E., Hyde, B.C., Chanmuang, C., and **Tait, K.T.** (2017): Comparing chemical and structural micro-textures of early Solar System zircon from differentiated asteroids, Mars and Earth. In *Microstructural Geochronology* (Geophysical Monograph Series). American Geophysical Union.
49. Herd, C., Moser, D. E., **Tait, K. T.**, Darling, J., Shaulis, B., & McCoy, T. (2017): Baddeleyite in planetary basaltic rocks: insights from the Earth, Moon, Mars, and Vesta. In *Microstructural Geochronology* (Geophysical Monograph Series). American Geophysical Union.
48. Darling, J.R., White, L., Moser, D.E., Barker, I. & **Tait, K.** (2017): New insights into the shock microstructural evolution of zirconia and links with U-Pb geochronology. In *Microstructural Geochronology* (Geophysical Monograph Series). American Geophysical Union.
47. Dhaliwal, J., Day, J.M.D., Corder, C., **Tait, K.**, Marti, K., Assayag, N., Cartigny, P., Rumble III, D. & Taylor, L. (2017): Early metal-silicate differentiation during planetesimal formation revealed by acapulcoite and lodranite meteorites. *Geochimica et Cosmochimica Acta*. **216**, 115-140. <https://doi.org/10.1016/j.gca.2017.06.042>
-cited 2 times

2016:

46. Lussier, A.J., Hawthorne, F.C., Abdu, Y.A., Ball, N.A., **Tait, K.T.**, Back, M.E., Steede, A.H., Taylor, R. & McDonald, A.M. (2016): Ferro-ferri-nybøite from Mont Saint-Hilaire, Québec, Canada: Correction. *The Canadian Mineralogist*. **55**(3), 515-516.
45. Shaw, A., Daly, M.G., Cloutis, E., Basica, G., Hamilton, D., **Tait, K.**, Hyde, B., Lymer, E. and Balachandran, K. (2016): Reflectance Properties of Gray-scale Spectralon as a

Function of Viewing Angle, Wavelength, and Polarization, *International Journal of Remote Sensing*, **37**(11), 2510-2523.

-cited 1 time

44. Fowler-Gerace, N., **Tait, K.T.**, Moser, D.E. Barker, I. & Tian, B.Y. (2016): Aligned Olivine in the Springwater Pallasite. *Meteoritics and Planetary Science*, 100, 2043-2052.
[doi:10.2138/am-2015-5344](https://doi.org/10.2138/am-2015-5344)

43. Darling, J.R., Moser, D.E., Barker, I.R., **Tait, K.T.**, Chamberlain, K.R., Schmitt, A.K. & Hyde, B.C. (2016): Variable microstructural response of baddeleyite to shock metamorphism in young basaltic shergottite NWA 5298 and improved U-Pb dating of Solar System events. *Earth and Planetary Science Letters*. **444**(15), 1–12.

-cited 5 times

42. van Drongelen, K., Rumble, D. & **Tait, K.T.** (2016): Petrology and Oxygen Isotopic Compositions of Clasts in HED Polymict Breccia NWA 5232. *Meteoritics and Planetary Science*. **51**(6), 1184-1200 <http://dx.doi.org/10.1111/maps.12651>

41. Izawa, M.R.M., Cloutis, E., Schäfer, T., Nathues, A., Mengel, K., **Tait, K.T.** and Appelin, D. (2016): Effects of viewing geometry, aggregation state, and particle size on reflectance spectra of the Murchison CM2 chondrite deconvolved to Dawn FC band passes. *Icarus*, 266, 235-248.

-cited 4 times

40. **Tait, K.T.**, Ball, N.A. & Hawthorne, F.C. (2016): Pieczkaite, ideally $Mn_5(PO_4)_3Cl$, a new apatite-supergrupp mineral from Cross Lake, Manitoba, Canada: Description and crystal structure. *American Mineralogist*, 100(5-6), 1047-1052.

2015:

39. Fowler-Gerace, N., **Tait, K.T.** and Moser, D.E. (2015): Phosphoran olivine overgrowths: Implications for multiple impacts to the Main Group pallasite parent body. *American Mineralogist*, 100(10), 2043-2052.

-cited 4 times

38. Cloutis, E.A., Sanchez, J.A., Reddy, V., Gaffey, M.J., Binzel, R.P., Burbine, T.H., Hardersen, P.S., Hiroi, T., Lucey, P.G., Sunshine, J.M. & **Tait, K.T.** (2015): Olivine-metal mixtures: Spectral reflectance properties and application to asteroid reflectance spectra. *Icarus*, **252**, 39-82.

-cited 6 times

2014:

37. Lussier, A.J., Hawthorne, F.C., Abdu, Y.A., Ball, N.A., **Tait, K.T.**, Back, M.E., Steede, A.H., Taylor, R. & McDonald, A.M. (2014): Ferro-ferri-nyboite, $NaNa_2(Fe^{2+}_3Fe^{3+}_2)$

$\text{Si}_8\text{O}_{22}(\text{OH})_2$, a new clinoamphibole from Mont Saint-Hilare, Quebec, Canada: Description and crystal structure. *Canadian Mineralogist*, **52**, 1019-1026.

36. **Tait, K.T.**, DiCecco, V., Ball, N.A., Hawthorne, F.C. & Kampf, A. (2014): Backite, $\text{Pb}_2\text{Al}(\text{TeO}_6)\text{Cl}$, a new tellurate mineral from the Grand Central Mine, Tombstone Cochise County, Arizona: Description and Crystal Structure. *Canadian Mineralogist*, **52**, 932-942.

35. **Tait, K.T.** and Dunnell, K. (2014). Bobdownsite, a new mineral from Canada. *Journal of Gemmology*. Gem notes, 34(2), 96.

34. Hyde, B.C., Day, J. M. D., **Tait, K.T.**, Ash, R., Holdsworth, D. & Moser, D.E. (2014): A study of weathering and heterogeneous phase distribution in brachinite Northwest Africa 4872 with implications for olivine- and pyroxene-rich achondrites. *Meteoritics and Planetary Science*, **49**(7), 1141-1156.

-cited 6 times

2013:

33. **Tait, K.T.**, Hawthorne, F.C. & Wise, M. A. (2013): The crystal chemistry of the graffonite-beusite minerals. *Canadian Mineralogist*, **51**(4), 653-662.

-cited 2 times

32. Hawthorne, F.C., Abdu, Y., **Tait, K.T.** & Back, M.E. (2013): The crystal structure of yofortierite. *Canadian Mineralogist*, **51**(2), 243-251.

31. Moser, D., Chamberlain, S., **Tait, K.T.**, Schmitt, A.X., Barker, R., Darling, J. & Hyde, B.C. (2013): Solving the Martian meteorite age conundrum using micro-baddeleyite and launch-generated zircon. *Nature*, 499, 454-457.

-Cited 45 times

30. Hawthorne, F.C., Abdu, Y. & **Tait, K.T.** (2013): Hydrogen bonding in the crystal structure of legrandite $\text{Zn}_2(\text{AsO}_4)(\text{OH})(\text{H}_2\text{O})$. *Canadian Mineralogist*, 51(2), 233-241.

-cited 2 times

29. Cooper M.A., Hawthorne, F.C., Abdu, Y.A., Ball, N.A., Ramik, R.R. & **Tait, K.T.** (2013): Wopmayite, ideally $\text{Ca}_6\text{Na}_3\text{Mn}(\text{PO}_4)_3(\text{PO}_3\text{OH})_4$, a new phosphate mineral from the Tanco mine, Bernic Lake, Manitoba: Description and crystal structure. *Canadian Mineralogist*, 51(1), 93-106.

-cited 3 times

28. Cámara, F., Sokolova, E., Hawthorne, F.C., Rowe, R., Grice, J.D. & **Tait, K.T.** (2013): Veblinite, $\text{K}_2(\text{NaFe}^{2+}_5\text{Fe}^{3+}_4\text{Mn}^{2+}_7)\text{Nb}_3\text{Ti}(\text{Si}_2\text{O}_7)_2(\text{Si}_8\text{O}_{22})_2\text{O}_6(\text{OH})_{10}(\text{H}_2\text{O})_3$, a new mineral from Seal Lake, Newfoundland and Labrador: mineral description, crystal structure, and a new veblenite Si_8O_{22} ribbon. *Mineralogical Magazine* **77**(7), 2955-2974.

-cited 5 times

27. Tschauner, O., Kiefer, B., Tetard, F., **Tait, K.**, Bourguille, J., Zerr, A., Dera, P., McDowell, A., Knight, J. & Clark, S. (2013): Elastic moduli and hardness of highly incompressible platinum perpnictide PtAs₂. *Applied Physics Letters*, 103(10), 101901.

-cited 2 times

2012 and earlier:

26. Cooper, M.A., Abdu, Y.A., Ball, N.A., Hawthorne, F.C., Back, M.E., **Tait, K.T.**, Schluter, J., Malcherek, T., Pohl, D. & Gebhard, G. (2012): Ianbruceite, ideally [Zn₂(OH)(H₂O)(AsO₄)](H₂O)₂, a new arsenate mineral from the Tsumeb mine, Otjikoto (Oshikoto) region, Namibia: description and crystal structure. *Mineralogical Magazine*, 76(5), 1119-1131.

25. Hawthorne, F.C., Cooper, M.A., Abdu, Y.A., Ball, N.A., Back, M.E. & **Tait, K.T.** (2012): Davidlloydite, ideally Zn₃(AsO₄)₂(H₂O)₄, a new arsenate mineral from the Tsumeb mine, Otjikoto (Oshikoto) region, Namibia: description and crystal structure. *Mineralogical Magazine*, 76(1), 45-57.

24. Joyce, D.K., **Tait, K.T.**, Vertolli, V., Back, M.E. & Nicklin, I. (2012): The Cobalt Mining District Cobalt, Ontario, Canada. *Mineralogical Record*. **43**(6), 685-713.

23. Zhou, B., Michaelis, V.K., Pan, Y., Yao, Y., **Tait, K.T.**, Hyde, B.C., Wren, J.E.C., Sherriff, B.L. & Kroeker, S. (2012): Crystal structure refinements of borate dimorphs inderite and kurnakovite using ¹¹B and ²⁵Mg nuclear magnetic resonance and DFT calculations. *American Mineralogist*, **97**, 1858-1865.

-cited 13 times

22. **Tait, K.T.**, Ercit, T.S., Abdu, Y. and Hawthorne, F.C. (2011): The crystal structure and crystal chemistry of manitobaite, ideally (Na₁₆ □) Mn²⁺₂₅ Al₈ (PO₄)₃₀, from Cross Lake, Manitoba. *Canadian Mineralogist*, **49**, 1221-1242.

21. Day, J.M.D., Walker, R.J., Ash, R.D., Liu, Y., Rumble III, D., Irving, A.J., Goodrich, C.A., **Tait, K.T.**, McDonough, W.F. & Taylor, L.A. (2012): Origin of Graves Nunataks 06128 and 06129, brachinites, and brachinite-like achondrites by partial melting of volatile-rich primitive parent bodies. *Geochimica et Cosmochimica Acta*, **81**, 94-128.

-Cited 38 times

20. Plotkin, H. & **Tait, K.T.** (2011): V. Ben Meen and the Riddle of Chubb Crater. *Earth Sciences History*. *Earth Sciences History*, **30**(2), 245-272.

19. Yang, H., Downs, R.T., Evans, S.H., Feinglos, M.N. & **Tait, K.T.** (2011): Crystal structure of uchucchacuaite, AgMnPb₃Sb₅S₁₂, and its relationship with ramdohrite and fizélyite. *American Mineralogist*, **96**, 1186-1189.

-cited 7 times ruf

18. **Tait, K.T.**, Barkley, M.C., Thompson, R.M., Origlieri, M.J., Evans, S.H., Prewitt, C.T. & Yang, H. (2011): Bobdownsite, a new member of the whitlockite-group, from Big Fish river, Yukon, Canada, *Canadian Mineralogist*, **49**, 697-709.
-cited 17 times
17. Yang, H., Jenkins, R.A., Downs, R.T., Evans, S.H. & **Tait, K.T.** (2011): Rruffite, $\text{Ca}_2\text{Cu}(\text{AsO}_4)_2 \cdot 2\text{H}_2\text{O}$, a new member of the roselite group, from Tierra Amarilla, Chile. *American Mineralogist*, **49**, 877-884.
-cited 7 times
16. Ercit, T.S., **Tait, K.T.**, Cooper, M.A., Abdu, Y., Ball, N.A., Anderson, A.J., Černý, P. & Hawthorne, F.C. (2010): Manitobaite, $\text{Na}_{16}\text{Mn}^{2+}_{25}\text{Al}_8(\text{PO}_4)_{30}$, a new phosphate mineral species from Cross Lake, Manitoba, Canada. *Canadian Mineralogist*, **48**, 1455-1463.
-Cited 3 times
15. **Tait, K.T.**, Yang, H., Downs, R.T., Li, C. and Pinch, W.W. (2010): The crystal structure of esperite, with a revised chemical formula, $\text{PbCa}_2(\text{ZnSiO}_4)_3$, isostructural with beryllonite. *American Mineralogist*, **95**, 699-705.
-Cited 1 time
14. van Drongelen, K., **Tait, K.T.**, Clark, G. and McCausland, P. (2010): Petrographic and geochemical analysis of the Shelburne meteorite, an L5 ordinary chondrite fall. *Journal of the Royal Astronomical Society of Canada*, **104**(4), 132-141.
13. Bindi, L., Evain, M., Spry, P.G., **Tait, K.T.** & Menchetti, S. (2007): Structural role of copper in the minerals of the pearceite-polybasite group: the case of the new minerals cupropearceite and cupropolybasite. *Mineralogical Magazine*, **71**(6), 593-602.
-Cited 3 times
12. **Tait, K.T.**, Trouw, F., Zhao, Y., Brown, C., and Downs, R.T. (2007): Inelastic neutron scattering studies of $d\text{THF} + \text{H}_2$ clathrate. *Journal of Chemical Physics* **127**(11), 921-927.
-Cited 6 times
11. Zhao, Y., Xu, H., Daemen, L.L., Lokshin, K.A., **Tait, K.T.**, Mao, W.L., Luo, J., Currier, R.P. and Hickmott, D.D. (2007): High-P/low-T neutron scattering of hydrogen inclusion compounds - progress and prospects, *Proceedings of the National Academy of Sciences*, **104**, 5727-5731.
-Cited 10 times
10. **Tait, K.T.**, Hawthorne, F.C., Grice, J.D., Ottolini, L. & Nayak, V.K. (2005): Dellaventuraite, $\text{NaNa}_2(\text{MgMn}_2\text{TiLi})\text{Si}_8\text{O}_{22}\text{O}_2$, a new anhydrous amphibole from the Kajlidongri manganese mine, Jhabua district, Madhya Pradesh, India. *American Mineralogist*, **90**, 304-309.
-Cited 22 times

9. Wang, Z., Zhao, Y., **Tait, K.**, Liao, X., Schiferl, D., Zha, C.S., Downs, R.T., Qian, J., Zhu, Y., & Shen, T.D. (2004): Harder than diamond: A new quenchable hexagonal carbon polymorph synthesized by cold-compression of carbon nanotubes *Proceedings of the National Academy of Sciences USA* **101**(38), 13699-13702.

-Highlight in Nature: September 16, 2004: Vol. 431

-Cited 120 times

8. Wang, Z., **Tait, K.**, Zhao, Y., Schiferl, D., Zha, C.S., Uchida, H., & Downs, R.T. (2004): Size-induced reduction of transition pressure and enhancement of bulk modulus of AlN nanocrystals. *Journal of Physical Chemistry B*, **108**(31), 11506-11508.

-Cited 20 times

7. Bobev, S. & **Tait, K.T.** (2004): Methanol- inhibitor or promoter of the formation of gas hydrates from deuterated ice? *American Mineralogist* **89**, 1208-1214.

-Cited 28 times

6. **Tait, K.T.** & Hawthorne, F. C. (2004): Johillerite from Tolbachik, Kamchatka Peninsula, Russia: Crystal-structure refinement and chemical composition. *Canadian Mineralogist* **42**(3), 717-722.

-Cited 1 time

5. **Tait, K.T.**, Hawthorne, F.C., Černý, P.C. & Galliski, M.A. (2004): Bobfergusonite from the Nancy pegmatite, San Luis Range, Argentina. *Canadian Mineralogist* **42**(3), 705-716.

-Cited 3 times

4. **Tait, K.T.**, Hawthorne, F.C., Grice, J. & Jamar, J. (2004): Potassic-carpholite, a new mineral from the Sawtooth Batholith, Boise County, Idaho. *Canadian Mineralogist* **42**(1), 121-124.

-Cited 6 times

3. **Tait, K.T.** & Hawthorne, F.C. (2003): Refinement of the crystal structure of arsenioleite: Confirmation of its status as a valid species. *Canadian Mineralogist* **41**(1), 71-77.

-Cited 3 times

2. **Tait, K.T.**, Sokolova, E., Hawthorne, F.C & Khomyakov, A.P. (2003): The crystal chemistry of nepheline. *Canadian Mineralogist*, **41**(1), 61-70.

-Cited 44 times

1. **Tait, K.T.**, & Hawthorne, F.C. (2001): Al-Mg disorder in a gem-quality pargasite from Baffin Island, Nunavut, Canada. *Canadian Mineralogist* **39**(6), 1725-1732.

-Cited 7 times

7.1.1. Manuscripts currently in preparation and near submission

- White, L. F., Moser, D. E., **Tait, K.** & Barker, I. Preservation of a 4.3 Ga baddeleyite age within shocked granulitic lunar breccia Northwest Africa 3163. *To be submitted to Meteoritics and Planetary Science.*
- White, L. F., Kizovski, T., **Tait, K.** & Gordon, L. Atomic-scale chemical implications of phase separation, solid state transformation, melting and recrystallization in feldspathic phases. *To be submitted to Nature Geoscience.*
- McCubbin, F.M., Phillips, B.L., Adcock, C.T., **Tait, K.T.**, Steele, A., Vaughn, J.S., Fries, M.D., Atudorei, V., Vander Kaaden, K.E. & Hausrath, E.M. Discreditation of bobdownsite and the establishment of criteria for the identification of minerals with essential monofluorophosphate (PO_3F^{2-}). *To be submitted to American Mineralogist.*
- Hickson, D., Boivin, A., Daly, M.G., Ghent, R., Nolan, M.C., **Tait, K.**, Cunje, A. & Tsai, C-A. Near surface bulk density estimates of NEAs from radar observations and permittivity measurements of powdered geologic material. *Submitted to Icarus.*
- Korchinos, S., **Tait, K.T.**, Tanaka, R., Nakamura, E., Moser, D.E. Ureilite Nova 18: Abundant microdiamonds and mosaicized olivine grains. *To be submitted to Meteoritics and Planetary Science.*
- Hyde, B.C., **Tait, K.T.**, Rumble, D., Moser, D.E. and Thompson, M.S. Eucrite Impactor Clast in the L Chondrite Breccia Northwest Africa 869. *To be submitted to Meteoritics and Planetary Science.*
- Tomes, H., Di Cecco, V., **Tait, K.T.** & Camara, F.: Arrojadite-(BaNa), a second occurrence from Big Fish River, Yukon Territory, Canada. *To be submitted to Canadian Mineralogist.*
- White, L. F., Langelier, B., Moser, D. E., **Tait, K.**, Reinhard, D., Acuri, G., Darling, J. R., Reddy, S., Cernok, A., Bagot, P., & Douglas, J. Constraining hydride interferences in atom probe tomography and implications for oxygen isotope measurement in planetary accessory phases. *To be submitted to Scientific Reports.*
- Izawa, M.R.M., **Tait, K.T.**, Moser, D.E., Lapen, T.J., Andreasen, R., Day, J.M.D., Barker, I.R., Hyde, B.C. & Irving, A.J.: Age of shergottite magmatism constrained by *in situ* U-Pb dating of merrillite. *To be submitted to Meteoritics and Planetary Science.*

7.2 BOOKS

- Moser, D.E., Corfu, F., Darling, J., Reddy, S. & **Tait, K.** (co-editors) (2017): Microstructural Geochronology: Planetary Records Down to Atom Scale. AGU Monographs.
<http://www.wiley.com/WileyCDA/WileyTitle/productCd-1119227240.html>

Tait, K. and Bainbridge, M.J. (2013): Thousand Pound Crystals and Eighty Carat Gemstones-Canada is BIG! In *ExtraLapis. Apatites: The Great Pretender*. 17, page 48-53. Denver, Colorado: Lithographie.

Tait, K. (2011) *Gems and Minerals: Earths Treasures from the Royal Ontario Museum*. Toronto: Firefly Publishers. 257 pp.

8. NON-REFERRED CONTRIBUTIONS

Tomes, H., **Tait, K.T.**, Nicklin, I., Peterson, R. & Beckett, R. (2013): Preliminary observations on the geology and mineralogy of the Rapid Creek Formation, Blow River and Davidson Mountains map area (NTS 117A/8 and NTS117A/9), Yukon. *Yukon Exploration and Geology*.

Gatta, G.D., Cámara, F., **Tait, K.T.** & Belakovskiy, D. (2012): New Mineral Names. *American Mineralogist*, 97, 2064-2072.

Belakovskiy, D. & **Tait, K.T.** (2012): New Mineral Names. *American Mineralogist*, **97**, 1818-1820.

Belakovskiy, D., Welch, M.D., Cámara, F., Gatta, G.D. & **Tait, K.T.** (2012): New Mineral Names. *American Mineralogist*, 97, 1523-1530.

Tait, K.T., Belakovskiy, D., Welch, M.D., Gatta, G.D. & Cámara, F. (2012): New Mineral Names. *American Mineralogist*, 97, 1260-1265.

Tait, K.T. (2012): New Mineral Names. *American Mineralogist*, 97, 759-761.

Cámara, F., Sokolova, E., Hawthorne, F.C., Rowe, R., Grice, J. and **Tait, K.** (2011) Veblenite, IMA 2010-050. *CNMNC Newsletter No. 7*, February 2011, page 29; *Mineralogical Magazine*, **75**, 27-31.

Tait, K.T. & Burrige, M. (2011): T.O.'s H₂O. *ROM Magazine*, Spring 2011; 28.

Burrige, M. & **Tait, K.T.** (2010): "How cool is Toronto?" *ROM Magazine*, Fall 2010: 32-33.

Poirier, G., **Tait, K.T.** & Piilonen, P.C. (2010): New Mineral Names. *American Mineralogist*, **95**, 1121-1124.

Piilonen, P.C., Poirier, G., Ercit, T.S., Rowe, R. & **Tait, K.T.** (2010): New Mineral Names. *American Mineralogist*, **95**, 1594-1600.

Ercit, T. S., Piilonen P.C., Poirier G., **Tait K.T.** (2009): New Mineral Names. *American Mineralogist*, **94**(7), 1075-1083.

- Piilonen, P.C., Poirier, G., & **Tait, K.T.** (2009): New Mineral Names. *American Mineralogist*, **94**(4), 648-652.
- Poirier, G., Ercit, T.S., **Tait, K.T.**, Piilonen P.C. & Rowe, R. (2009): New Mineral Names. *American Mineralogist*, **94**(2-3), 399-408.
- Tait, K.T.** (2009): The hunt for extraterrestrials: What I found in a Saskatchewan farmer's field. *ROM Magazine*, **42**(2): 13.
- Piilonen, P.C., Poirier, G. & **Tait, K.T.** (2008): New Mineral Names. *American Mineralogist*, **93**(11-12), 1941-1946.
- Piilonen, P.C., Poirier, G. & **Tait, K.T.** (2008): New Mineral Names. *American Mineralogist*, **93**(10), 1686-1691.
- Herd, R.K., Herd, C.D., Nicklin, I. & **Tait, K.** (2008): Meteorite Collections in Canada: Collaborating to Support Space Exploration. Lunar and Planetary Institute Science Conference, Abstracts **39**, 2241.
- Poirier, G., **Tait, K.**, Ercit T.S., Rowe, R., & Piilonen P.C. (2008): New Mineral Names. *American Mineralogist*, **93**(4), 702-706.
- Tait, K.T.** (2008): Romancing the Stones. *ROM Magazine*, **41**(2): 24-31.
- Wang, Y., Luo, Y., **Tait, K.T.**, Mao, W.L., Xu, H. & Zhao, Y. (2007): New development of gas inclusion compounds at LANSCE-LC. Poster to the LANSCE LDRD (Los Alamos National Laboratory- Lab Directed Research Dollars) Review, Los Alamos, New Mexico, June 27, 2007.

9. INVITED TALKS

- 2017 December, Niagara Gem and Mineral Club, Niagara Falls, Ontario
- 2017 October, Waterloo Gem and Mineral Club, Waterloo, Ontario
- 2016, May 2016, October, Nerd Nite presentation, Toronto, Ontario
- 2016, March 8-11, Misasa International Symposium MISASA VI "Frontiers in Earth and Planetary Materials Research: Origin, Evolution and Dynamics"
- 2015, April Rochester Mineral Symposium, Rochester, New York
- 2013, Rochester Mineral Symposium, Rochester, New York
- 2011, August 19 Invited Lecturer at the Capital Normal University, Beijing, China
- 2011, August 16 Invited Lecturer at the Chinese Academy of Sciences, Xining, China
- 2011, April 6 Invited Lecture to the Scarborough Gem and Mineral Club
- 2010, May 1 on the ROM's Meteorite Collection to the Canadian Micro Mineral Association (CMMA).
- 2010, November 10, Invited Lecture to the Walker Mineralogical Club

- 2009, Invited Lecturer, Canadian Gemmological Association Annual Meeting
- 2008, November Invited Lecturer, Yukon Geoscience Forum, Kulan distinguished lecturer, Whitehorse, Yukon
- 2008, Invited Lecturer, Queens University “The Renaissance ROM project and highlights from the Earth Sciences Collections”

10. CONFERENCE PROCEEDINGS

Proceedings are in reverse chronological order; Underlined text indicates student or postdoc work done in my lab. * indicates speaker.

2017:

88. Hewson, K., **Tait, K.T.***, Di Cecco, V. & Nicklin, I. The Classification of lunar meteorite Northwest Africa 11223. 80th Annual Meeting of the Meteoritical Society, Santa Fe, New Mexico, July 24-28, 2017.
87. Kizovski, T.V.* & **Tait, K.T.** (2017). Detailed mineralogy and petrology of intermediate martian lherzolitic shergottite Northwest Africa 6342. 80th Annual Meeting of the Meteoritical Society, Santa Fe, New Mexico, July 24-28, 2017.
86. Roszjar, J.* , Moser, D.E., Hyde, B.C., Chanmuang, C. & **Tait, K.T.** (2017): A comparison of microstructures among some of the earliest-formed zircons. 80th Annual Meeting of the Meteoritical Society 2017, Santa Fe, New Mexico, July 24-28, 2017.
85. **Tait, K.T.*** & Day, J.M.D. (2017): Highly Siderophile Element and Os-Sr Isotope Systematics of Shergottites. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.
84. Hyde, B.C., Moser, D.E., **Tait, K.T.**, Darling, J. & Moreira, H. (2017): In search of a group for the ungrouped achondrites NWA 7680 and NWA 6962. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.
83. Kiddell, C.B.* , Cloutis, E.A., **Tait, K.T.** & Nicklin, I. (2017): Spectral Reflectance Properties of < 5 μm Powder on Carbonaceous Chondrites. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.
82. Cloutis, E.A.* , Applin, D.M., Kiddell, C., **Tait, K.**, Nicklin, I. Di Cecco, V. & Hardersen, P.S. (2017): Spectral Reflectance Properties of Mesosiderites. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.
81. Mader, M.* , **Tait, K.T.** & Ireland, D. (2017): Museums and Planetary Missions. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.

80. McCausland, P.J.A.*, **Tait, K.**, Nicklin, I. & Flemming, R. (2017): Regolith Processing on L Chondrite Bodies as Witnessed by NWA 869. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.
79. Roszjar, J.*, Moser, D.E., Hyde, B.C., Chanmuang, C. & **Tait, K.T.** (2017): A comparison of microstructures among some of the earliest-formed zircons. Lunar and Planetary Science Conference, The Woodlands, Texas, March 24-27, 2017.

2016:

78. Darling, J.R.*, Moser, D.E., **Tait, K.T.**, Chamberlain, K.R., Scmitt, A.K. & White, L.F. (2016): Shocked baddeleyite as a new tool for Lunar chronology. Goldschmidt, Yokohama, Japan, June 26-July 1, 2016.
77. Dhaliwal, J.K.*, Day, J.M.D., & **Tait, K.T.** (2016): Establishing a pristinity index for eucrites using the highly siderophile elements. 47th Lunar and Planetary Science Conference, The Woodlands, Texas, March 21-25, 2016.
76. Irving, A.J.*, Kuehner, S.M., Wittke, J.H. & **Tait, K.T.** (2016): Noritic Diogenites and feldspathic diogenites: Evolved ancient cumulates potentially related to mesosiderite and not to any eucrites. 47th Lunar and Planetary Science Conference, The Woodlands, Texas, March 21-25, 2016.
75. Hamilton, D.*, Daly, M.G., Cloutis, E.A. & **Tait, K.** (2016): A Raman spectroscopy comparison of an iron-bearing and a non-iron-bearing sulphate at both green and UV excitation wavelengths. 47th Lunar and Planetary Science Conference, The Woodlands, Texas, March 21-25, 2016.
74. Mader, M. M.*, Ireland, D., Ng, W., **Tait, K.T.**, Engels, S. & Llewellyn, A. (2016): 21st Century Engagement: “Space Rocks” Game Jam. An Immersive, Open-ended, and collaborative science outreach program. 47th Lunar and Planetary Science Conference, The Woodlands, Texas, March 21-25, 2016.
73. **Tait, K.T.*** (2016): The importance of curation: Maintaining Earth Science Collections for the future. MISASA XI, Kurayoshi, Tottori, Japan; March 8–11, 2016.

2015:

72. **Tait, K.T.***, Irving, A.J., Kuehner S.M, Andreasen, R., Righter, M., Lapen, T.J. & Gregory, D.A. (2015): Petrology, mineralogy and radiogenic isotopic composition of enriched mafic shergottite Northwest Africa 10134. 78th Annual Meeting of the Meteoritical Society, Berkeley, California, July 27-31, 2015.
71. **Tait, K.T.***, Izawa, M.R.M., Moser, D. & Hyde, B.C. (2015): Non-destructive analyses of Martian meteorites using Raman Spectroscopy. 2015 AGU Joint Assembly- AGU-GAC-MAC-CGU, Montreal, Quebec, Canada, May 3-7, 2015.

70. Pietrasz, V.* , Izawa, M., Mann, P., Cloutis, E., **Tait, K.**, Shafer, T., Mengel, K., Nathues, A., Shafer, M., Thangjam, G. & Hoffmann, M. (2015): Effects of Viewing Geometry, Aggregation State and particle size on reflectance spectra of the Murchison CM2 Chondrite. 2015 AGU Joint Assembly- AGU-GAC-MAC-CGU, Montreal, Quebec, Canada, May 3-7, 2015.
69. Fowler-Gerace, N.* & **Tait, K.T.** (2015) Phosphorus-rich olivine overgrowths: Evidence for additional impact to the Main Group pallasite parent body. European Geoscience Union. Vienna, Austria, April 12-17, 2015.
68. **Tait K. T.***, Day J.M.D. & Liu Y. (2015): Update on Highly-Siderophile Element Abundances and Re-Os Isotopic Systematics of Martian Meteorites. *46th Lunar and Planetary Science Conference* [#2138].
67. Dhaliwal, J.K., Day, J.M.D., Corder, C.A., **Tait, K.T.** & Marti, K. (2015): Highly siderophile element abundances and 187Re-187Os systematics of acapulcoite-lodranite meteorites. *46th Lunar and Planetary Science Conference* [#1595].
66. **Tait K. T.***, Irving A.J., Nicklin R.I., Day J.M.D., Andreasen R., Kuehner, S.M., Ziegler, K., Lapen, T.J. & Gregory, D.A. (2015): Petrologic and Isotopic Characterization of Enriched Mafic Shergottite Northwest Africa 8679. *46th Lunar and Planetary Science Conference* [#2709].
65. Hyde, B.C., Tait, K.T., Rumble, D., Izawa, M.R.M., Thompson, M.S., Nicklin, I. (2015): Achondritic impactor clasts in Northwest Africa 869. *46th Lunar and Planetary Science Conference* [#1983].
64. Izawa M. R. M.*, **Tait K. T.**, Moser D. E., Barker I. R., Hyde B.C., Nicklin I. & Lapen T.J. (2015): Mineralogy, Petrology and Geochronology of Intermediate Shergottite NWA 7042. *46th Lunar and Planetary Science Conference* [#2523].

2014:

63. Fowler-Gerace, N.*, **Tait, K.T.**, Moser, D.E., Barker, I. & Tian, B.Y. (2014) Aligned Olivine in the Springwater Pallasite, AGU Fall Meeting, December 15-19, 2014.
62. Fowler-Gerace, N.*, **Tait, K.T.** & Hyde, B.C. (2014): Farringtonite, a rare phosphate mineral from the Springwater pallasite. 21st General Meeting of the International Mineralogical Association, Sandeton, South Africa, September 1-5, 2014.
61. Darling, J.* , Moser, D., Barker, I., **Tait, K.T.**, Chamberlain, K. & Schmitt, A. (2014): Highly variable response of baddeleyite to shock metamorphism in shergottite NWA 5298 and implications for planetary chronology. 21st General Meeting of the International Mineralogical Association, Sandeton, South Africa, September 1-5, 2014.

60. **Tait, K.T.*** (2014): Looking ahead at the next 100 years: the centennial and the Kirwin collection at the Royal Ontario Museum. 21st General Meeting of the International Mineralogical Association, Sandeton, South Africa, September 1-5, 2014.
59. Ali, A.*, Banerjee, N.R., Jabeen, I., **Tait, K.T.**, Hyde, B.C., Nicklin, I., & Herrmann, P. (2014): An oxygen isotope perspective on the parent body for eagle station pallasites. 77th Annual Meteoritical Society Meeting Casablanca, *Morocco*, September 7-12, 2014.
58. Shaw, A*., Daly, M.G., Cloutis, E.A., **Tait, K.T.**, Izawa, M.R.M., Barnouin, O.S., Hyde, B.C. & Nicklin, I. (2014): Laboratory laser reflectance measurement and applications to asteroid surface analysis. Asteroids, Comets, Meteors conference.
- 2013:**
57. Moser, D.E.*, Barker, I., **Tait, K.**, Chamberlain, K. & Schmitt, A. (2013): Atomic views of martian evolution. *Mineralogical Magazine*. Goldschmidt, Florence, Italy, August 25, 2013 (1795).
56. Ali, A. *, Jabeen, I., Banerjee, N.R., Osinski, G.R., **Tait, K.T.**, Hyde, B.C., Nicklin, I., Ganderton, T. and Gregory, D. (2014): Oxygen isotope variations in main group pallasites and HEDs. *45th Lunar and Planetary Science Conference (2014)*, Abstract #2390, The Woodlands, Texas, March 17–21, 2014.
55. Fowler-Gerace, N.A*., **Tait, K.T.**, Moser, D.E., Hyde, B.C. (2013): Mineralogical Investigation of the phosphorous-rich Springwater pallasite. 76th Annual Meeting of the Meteoritical Society, Edmonton, Alberta, Canada, July 29-Aug 2, 2013.
54. Shaw, A. *, Daly, M.G., Cloutis, E.A., **Tait, K.T.**, Izawa, M.R.M., Barnouin, O.S., Hyde, B.C. & Nicklin, I. (2013): Laser Return Signature of Analogs to OSIRIS-REx Target Asteroid (101955) 1999 RQ36. *44th Lunar and Planetary Science Conference*, Abstract #1584, The Woodlands, Texas, March 18–22, 2013.
53. Hyde, B.C., **Tait, K.T.**, Nicklin, I., Day, J.M.D., Ash, R.D. & Moser, D.E. (2013): Use of micro-CT and precision cutting to assess meteorite heterogeneity: an example using brachninite NWA 4872. *44th Lunar and Planetary Science Conference*, Abstract #2390, The Woodlands, Texas, March 18–22, 2013.
52. Ali, A., Jabeen, I., Banerjee, N.R., Osiniski, G.R., **Tait, K.T.**, Hyde, B.C & Nicklin, I. (2015): Oxygen isotope variations in main group pallasites and HEDs. *44th Lunar and Planetary Science Conference*, Abstract #2390, The Woodlands, Texas, March 18–22, 2013.
51. Darling, J.R., Moser, D.E., Barker, I., **Tait, K.T.**, Chamberlain, K. & Schmitt, A.K. (2013): Atomic Records of Inner Solar System Impact Processes from U-Pb Dating phases. Large Meteorite Impacts and Planetary Evolution, 1737, abstract #3104.

50. van Drongelen, K.* & **Tait, K.T.** (2013): Polymict eucrite Northwest Africa 5232: The compositional and textural diversity of clasts and a previously undescribed Na-rich eucrite lithology. GAC MAC, May 22-24, 2013.
49. van Drongelen, K.*, **Tait, K.T.** & Dera, P. (2013): Phosphorus-bearing Fe,Ni-sulphide in Murchison and carbonaceous chondrite clasts in polymict eucrite NWA 5232. GAC MAC, May 22-24, 2013.
48. Tomes, H.* & **Tait, K.T.** (2013): Phosphate Nodules from Big Fish River, Yukon, Canada. GAC MAC, May 22-24, 2013.

2012 (and earlier):

47. Flemming, R.L.*, **Tait, K.T.**, Schmidt, M., Cloutis, E., Herd, C.D.K, Sylvester, P., Kissin, S., Brown, P., Osinski, G., Banerjee, N., Webb, E., Moser, D.E. & McCausland, P.J.A. (2012): ASTRO – Astromaterials Training and Research Opportunities CSA Cluster. GAC MAC, May 22-24, 2013.
46. Peterson, R.*, Williamson, M.-C. & **Tait, K.T.** (2013): Terrestrial Analogues of the Martian surface: Comparison of three distinctive sites in the Canadian Arctic. GAC MAC, May 22-24, 2013.
45. **Tait, K.T.*** & Chu, N. (2012): Garyansellite and kryzhanovskite from Rapid Creek, Yukon Territory. Yukon Geoscience Forum, November 18-21, 2012.
44. Tomes, H., **Tait, K.T.** & Peterson, R. (2012): The Geology and Mineralogy of the Big Fish River, Yukon Territory. Yukon Geoscience Forum, November 18-21, 2012.
43. Cloutis, E.*, Daly, M., **Tait, K.T.**, Shaw, A. & Izawa, M. (2012): The NASA-CSA New Frontiers OSIRIS-Rex Asteroid Sample Return Mission: Laboratory Studies in Support of Mission Objectives. Canadian Space Summit, London, Ontario, November 14-16, 2012.
42. Flemming, R.L.*, **Tait, K.T.**, Schmidt, M., Cloutis, E., Herd, C.D.K, Sylvester, P., Kissin, S., Brown, P., Osinski, G., Banerjee, N., Webb, E., Moser, D.E. & McCausland, P.J.A. (2012): ASTRO- Astromaterials Training and Research Opportunities CSA Cluster. Canadian Space Summit, London, Ontario, November 14-16, 2012.
41. Sylvester, P.J.*, Osinski, G.R., **Tait, K.T.**, Cloutis, E.A., McCausland, P.J.A. & Thompson, L.M. (2012): Role of the GAC-Planetary Sciences Division in the Canadian Space Community. Canadian Space Summit, London, Ontario, November 14-16, 2012.
40. DiCecco, V.*, Spooner, E., **Tait, K.** & Scherba, C. (2012): Vanadium minerals from the Green Giant deposit, Madagascar. Fall Mini-Symposium on “*The future of exploration and mining in Canada*”, November 8, 2012.

39. Peterson, R.A.*, **Tait, K.T.** & Nicklin, I. (2012): Dypingite $Mg_5(CO_3)_4(OH)_2 \cdot 5H_2O$ from Rapid Creek, Yukon, Canada. Chemical Composition, optical properties and comparison with similar hydrated magnesium carbonates. Geological Society of America Abstracts with Programs 44(7), 4–7 November 2012, Charlotte, North Carolina.
38. Hyde, B.C.*, Day, J., **Tait, K.T.**, Ash, R. & Holdsworth, D. (2012): Weathering & heterogeneous phase distribution in brachinite NWA 4872. 22nd *Goldschmidt* Geochemistry Conference, Montreal, Quebec, Canada, June 24-29, 2012.
37. van Drongelen, K.*, **Tait, K.**, Gorton, M. & Nicklin, I. (2012): Polymict eucrite NWA 5232: composition of clasts. 22nd *Goldschmidt* Geochemistry Conference, Montreal, Quebec, Canada, June 24-29, 2012.
36. Barlet, G.*, Davis, D., Moser, D., **Tait, K.**, Hyde, B. & Barker, I. (2012): A textural and mineralogical assessment of NWA 3118. 22nd *Goldschmidt* Geochemistry Conference, Montreal, Quebec, Canada, June 24-29, 2012.
35. Moser, D.*, Chamberlain, K., **Tait, K.**, Schmitt, A., Barker, I., Hyde, B. & Darling, J. (2012): Reconstructing a young martian history with igneous microbaddeleyite rimmed by metamorphic zircon. 22nd *Goldschmidt* Geochemistry Conference, Montreal, Quebec, Canada, June 24-29, 2012.
34. Emmanuelle-Morisset, C.*, Jackson, S., Williamson, M.-C., Hipkin, V. & **Tait, K.** (2012): Electron microprobe and LA-ICP-MS analyses of ilmenite from lunar samples. 22nd *Goldschmidt* Geochemistry Conference, Montreal, Quebec, Canada, June 24-29, 2012.
33. Cámara, F.*, Sokolova, E., Hawthorne, F.C., Rowe, R., Grice, J. & **Tait, K.** (2011): Veblenite: a new Ti-silicate related to hoh structures. XXII IUCr Congress. Madrid, Spain, August 22-30, 2011.
32. Charles, C.R.J.*, McCausland, P.J.A., Umoh, J., Holdsworth, D., Davis, D.W., Gregory, D., **Tait, K.T.** & Nicklin, I. (2011): Compositions of single chondrules in the CR2 chondrite NWA801 by medical X-ray micro-computed tomography. 74th Annual Meteoritical Society Meeting, oral presentation, London, England, August 8-12, 2011. online at: <http://www.lpi.usra.edu/meetings/metsoc2011/pdf/5408.pdf>
31. Charles, C.R.J.*, McCausland, P.J.A., Umoh, J., Holdsworth, D., Davis, D.W., Gregory, D., **Tait, K.T.** & Nicklin, I. (2011): Textures of single chondrules in the CR2 chondrite NWA801 by medical X-ray micro-computed tomography. 74th Annual Meteoritical Society Meeting, poster presentation, London, England, August 8-12, 2011. online at: <http://www.lpi.usra.edu/meetings/metsoc2011/pdf/5410.pdf>
30. **Tait, K.T.***, Thompson, R.M., Yang, H., Barkley, M.C., Origlieri, M. & Evans, S.H. (2011): Bobdownsite, a new member of the whitlockite group from Big Fish River, Yukon Canada. 38th Rochester Symposium, oral presentation, Rochester, New York. April 14-17, 2011.

29. **Tomes, H.***, **Tait, K.T.**, Cámara, F., Downs, R.T., Back, M.E. and Nicklin, I. (2011): Arrojadite Group Minerals from Rapid Creek and Big Fish River, Yukon Territory, Canada. 38th Rochester Symposium, oral presentation, Rochester, New York. April 14-17, 2011.
28. Hyde, B.C.* & **Tait, K.T.** (2011): The colours of suolunite from the Lac D'Amiante Mine, Quebec. 38th Rochester Symposium, oral presentation, Rochester, New York. April 14-17, 2011.
27. Back, M.E.*, **Tait, K.T.**, Abdu, Y.A., Cooper, M.C. & Hawthorne, F.C. (2011): Yofortierite from Mont St. Hilaire, Quebec, oral presentation, Rochester, New York. April 14-17, 2011.
26. **Tait, K.T.***, Hawthorne F.C. & Černý, P. (2010): Minerals from the Cross Lake pegmatite, Manitoba, Canada. 5th International Symposium on Granitic Pegmatites, Mendoza, Argentina, oral presentation February 20-27, 2011.
25. Day, J.M.D.*, Ash, R.D., Walker, R.J., Liu, Y., Rumble III, D., Irving, A.J., McDonough, W.F., **Tait, K.T.**, Taylor, L.A. (2011): Volatile-rich asteroid differentiation and links between felsic meteorites Graves Nunataks 06128 and 06129, brachinites and 'brachinite-like' achondrites. 42nd Lunar and Planetary Conference, oral presentation, Woodlands, Texas. Online at: <http://www.lpi.usra.edu/meetings/lpsc2011/pdf/1456.pdf>
24. Thompson, M.*, Rumble III, D., **Tait, K.T.** & Nicklin, I. (2010): Meteorite Northwest Africa (NWA) 869: A study of diverse clasts in the L 4-6 brecciated ordinary chondrite. Geological Association of Canada/Mineralogical Association of Canada annual meeting, oral presentation, May 26, 2011 Ottawa, Ontario. Online at: http://gac.esd.mun.ca/gac_2011/search_abs/sub_program.asp?sess=98&form=10&abs_no=550
23. **Tait, K.T.***, M.A. Cooper, Y. Abdu, F. C. Hawthorne & T.S. Ercit (2010): The Crystal Chemistry of Manitobaite, $(\text{Na}_{16} \square) \text{Mn}^{2+}_{25} \text{Al}_8 (\text{PO}_4)_{30}$, A New Phosphate Mineral of the Alluaudite-Group (sensu late) from Cross Lake, Manitoba, Canada. GeoCanada 2010. Calgary, Alberta, oral presentation, May 10-14, 2010. [abstract published online at: http://www.geocanada2010.ca/uploads/abstracts_new/523_manitobaite_abstract_Geocanada_2010.doc]
22. **Tait, K.T.***, Yang, H., Downs, R.T., Li, C. & Pinch, W.W. (2010): The crystal structure of esperite, with a revised chemical formula, $\text{PbCa}_2(\text{ZnSiO}_4)_3$. *International Mineralogical Association Meeting, Budapest, Hungary, oral presentation, August 21-27, 2010.*
21. **Tait, K.T.*** (2010): *The Teck Suite of Galleries. International Mineralogical Association Meeting, Budapest, Hungary, oral presentation, August 21-27, 2010.*

20. Whitfield, P.*, Roberts, A., Mitchell, L., Le Page, Y., Mills, S. & **Tait, K.** (2010): Mineralogical adventures of a powder diffractionist. Abstracts of the 26th European Crystallography Meeting. Darmstadt, Germany, 29 August - 2 September 2010.
19. van Drongelen, K.D.*, **Tait, K.**, Clark, K. & McCausland, P. (2009): The Known and the Unknown: Petrographic and Geochemical Analysis of the Shelburne Meteorite and an Unknown L6 Ordinary Chondrite. The *Meeting of the Americas*. 24–27 May 2009. Toronto, Ontario, Canada.
18. Soto, F.*, **Tait, K.T.**, Nicklin, I. & Back, M. (2009): Mineralogical Investigation of an Unidentified Ordinary Chondrite. The *Meeting of the Americas*. 24–27 May 2009. Toronto, Ontario, Canada.
17. Trouw, F.*, **Tait, K.T.**, Stevens, R. & Brown, C. (2008): Dynamics of Hydrogen Adsorbed in THF-Ice Clathrate and HKUST-1. Oral presentation to the American Conference of Neutron Scattering (ACNS) May 11-15, Santa Fe, New Mexico.
16. Hartl, M.*, Acatrinei, A., Daemen, L.L., Xu, H., **Tait, K.T.**, Wang, Y., Vogel, S., Zhang, J., & Zhao, Y. (2008): High-pressure Neutron Powder Diffraction and Inelastic Neutron Scattering Studies on the Mineral Jarosite. Oral presentation, APS March meeting. New Orleans, Louisiana.
15. **Tait, K.*** (2008): Meteorite Research at the ROM. Astromaterials Working Group, Planetary Symposium, Oral presentation, Edmonton, Alberta, October 17, 2008.
14. **Nicklin, I.***, **Tait, K.** & **Back, M.** (2008): **Space Rocks: An Overview of the Meteorite Collection of the Royal Ontario Museum** 29th Annual ROM Research Colloquium, February 15, 2008.
13. Back, M.E.*, Steede, T., Nicklin, I. & **Tait, K.** (2008): Minerals from Tsumeb, Namibia; the Charles Key Collection 29th Annual ROM Research Colloquium, February 15, 2008.
12. Wang, Y.*, Luo, J., **Tait, K.T.**, Mao, W.L., Xu, H. & Zhao, Y. (2007): New development of gas inclusion compounds at LANSCE-LC. LDRD-ER Review, LANSCE June 2007.
11. **Tait, K.T.***, Mao, W.L., Zhao, Y., Trouw, F.T., Daemen, L.L. & Downs, R.T. (2006): Gas hydrate experiments at the Los Alamos Neutron Scattering Center (LANSCE). Spallation Neutrons and Pressure (SNAP) 3rd Annual Meeting, April 10-11, 2006.
10. **Tait, K.T.***, Zhao, Y., Downs, R.T., Stern, L.A. & Kirby, S. (2005): Investigations into the stability, morphology and the crystal structure of structure I and II methane-ethane clathrate hydrates. International Conference on Gas Hydrates, June 13-16, 2005.
9. **Tait, K.T.*** & Hawthorne, F.C. (2005): Compositional variations in alluaudite-group minerals, Geological Association of Canada/Mineralogical Association of Canada meeting, Halifax, Nova Scotia, Canada, May 15-18, 2005.

8. Zhao, Y.*, Daemen, L., Zhang, J., Lokshin, K., Qian, J., Pantea, C., Williams, D., **Tait, K.**, Xu, H. & Vogel S. (2005): Scientific Advancements and Technological Developments of High P-T Neutron Diffraction at LANSCE Geophysical Research Abstracts, Vol. 7, 10364, European Geophysical Union, Vienna, Austria, April 24-29, 2005
7. **Tait, K.T.***, Hartl, M., Williams, D., Pantea, C., Daemen, L.L., Zhao Y., & Downs, R.T. (2005): Diffraction and spectroscopy of thorite and huttonite (ThSiO₄), Geophysical Research Abstracts, Vol. 7, 10957, European Geophysical Union, Vienna, Austria, April 24-29, 2005.
6. **Tait, K.*** (2004): High-pressure crystal chemistry of Na_{0.85}K_{0.15}MgF₃ perovskite: an X-ray diffraction study using monochromatic synchrotron radiation at HPCAT. CDAC (Carnegie DOE-Alliance Center) *First Annual SSAAP Symposium*, Albuquerque, New Mexico, USA, March 29-31, 2004.
5. Vogel, S.*, Wenk, H.R., **Tait, K.T.** (2003) HIPPO, the high-pressure preferred orientation diffractometer at LANSCE for characterization of bulk materials. American Crystallographic Association meeting, Covington, Kentucky, USA, July 26-31, 2003.
4. Proffen, T.*, Bilinge, S. & **Tait, K.T.** (2003): NPDF American Crystallographic Association meeting, Covington, Kentucky, USA, July 26-31, 2003.
3. **Tait, K.T.*** & Hawthorne, F.C. (2002): The crystal chemistry of the alluaudite-group minerals. Western Inter-University Geological Conference, Edmonton, Alberta, Canada, January 2002.
2. **Tait, K.T.***, Nayak, V.K. & Hawthorne, F.C. (2000): Rare amphiboles from the Kajlidongri manganese mine of Central India. Annual Meeting of the Geological Society of America, Reno, Nevada, November 2000.
1. **Tait, K.T.***, Nayak, V.K. & Hawthorne, F.C. (1999): Rare amphiboles and associated minerals from the Kajlidongri and Tirodi manganese mines of Central India. Western Inter-University Geological Conference, Vancouver, British Columbia, Canada, January 1999.

D. UNIVERSITY SERVICE

11. UNIVERSITY COURSES TAUGHT

- 2017, EES 381 (undergraduate)/EES 3604S (graduate) Meteorites and Space (Developed Course), taught 100% by me
-Enrollment: 28
- 2016, EES 221, Mineralogy, as second year Geology and Geological Engineering course with four laboratory sections, taught 100% by me
-Enrollment: 67
- 2011, GLG206 Materials of the Earth, a second year Geology course with four laboratory sections, taught 100% by me
-Enrollment: 63
- 2010, Taught XBC199 “Thinking about Planet Earth”, a first-year course, 100% taught by me
-Enrollment: 28
- 2008, Taught SCI199, “Thinking about Planet Earth”, a first-year course, 100% taught by me
-Enrollment: 27

12. STUDENT THESES SUPERVISED

12.1 CURRENT GRADUATE STUDENTS

1. Tanya Kizovski (Ph.D.) University of Toronto
Date started: September 2017
Thesis topic:
Expected date of completion: June 2021
2. Brendt Hyde (Ph.D.) Western University, co-supervised with Desmond Moser
Date started: September 2015
Thesis topic: *Characterization and chronology of early Solar System melt environments recorded in meteorites*
Expected date of completion: June 2020
3. Jordan Poitras (M.Sc.) University of Toronto
Date started: September 2017
Thesis topic: *Using a two-billion-year-old environment at the Kidd Creek mine to simulate a Martian environment for remote sensing purposes*
Expected date of completion: August 2018

4. Cairan Keane Tirona (M.Sc.) University of Toronto
Date started: September 2017
Thesis topic: Lineage or preferred orientation: an
Expected date of completion: August 2018
5. Beth Lymer (M.Sc.) York University, co-supervised with Mike Daly
Date started: September 2015
Thesis topic: *Laser-induced fluorescence spectroscopy as a non-destructive technique for mineral and organic detection in carbonaceous chondrites*
Expected date of completion: November 2017

12.2 CURRENT UNDERGRADUATE STUDENTS

1. Matthew Duffy (B.Sc.) Queens University, co-supervised with Daniel Layton-Matthews
Date started: September 2017
Thesis topic: *Mineralogy and Petrology of an undescribed carbonaceous chondrite*
2. Holly Kuzman (B.Sc.) University of Toronto
Date started: September 2017
Thesis topic: *Mineralogy and Petrology of an undescribed HED meteorite*
3. Samuel Duckworth Battye (B.Sc.), University of Toronto
Date started: September 2017
Thesis topic: *Mineralogy and Petrology of an undescribed carbonaceous chondrite*

12.3 COMPLETED GRADUATE STUDENTS

7. Kamil Chadirji-Martinez (M.Sc.) University of Toronto
Date started: September 2017
Thesis topic: *Geochemical and Isotopic Analysis of Alluvial Sapphire from Montana*
Completed: August 2017
8. Tanya Kizovski (M.Sc.) University of Toronto
Date started: September 2017
Thesis topic: *Detailed mineralogical and petrological analysis of martian shergottite NWA 6342*
Completed: August 2017
9. Neva Fowler-Gerace (M.A.Sc.) University of Toronto
Date started: September 2013
Thesis topic: *Phosphorus-rich olivine overgrowths: Evidence for additional impact to the Main Group pallasite parent body*
Completed: August 2015

10. Natalie Chu (M.A.Sc.) University of Toronto, co-supervised Dr. Ed Spooner
Date started: September 2013
Thesis topic: *Gold mineralization of the Haultain Property, Gowganda, Ontario*
Completed: August 2015
11. Veronica DiCecco (M.A.Sc.) University of Toronto, co-supervised with Dr. Ed Spooner
Date started: September 2011
Thesis topic: *The Geochemistry and Mineralogy of the Green Giant Deposit, Fotodrevo, Madagascar*
Completed: August 2013
12. Heidi Tomes (M.Sc.), University of Toronto
Date started: September 2011
Thesis topic: *Arrojadite-(BaNa), a new arrojadite-group mineral from Big Fish River, Yukon Territory, Canada*
Completed: August 2012
13. Katrina van Drongelen (M.Sc.), University of Toronto
Date started: September 2008
Thesis topic: *Petrographic and Geochemical Analysis of the Shelburne Meteorite, an L5 Ordinary-Chondrite Fall*
Completed: August 2009

12.4 COMPLETED UNDERGRADUATE THESES

7. Frank Hung (B.Sc.), Queens University
Date started: September 2015
Thesis topic: *The Regolith Breccia Meteorite NWA869*
Completed: April 2016
6. Victoria Szlachta (B.Sc.), University of Toronto
Date started: September 2014
Thesis topic: *Investigation of an Ordinary Chondrite from North West Africa*
Completed: May 2015
5. Natalie Chu (B.Sc.), University of Toronto
Date started: September 2012
Thesis topic: *The garyansellite-kryzhanovskite group from Rapid Creek, Yukon Territory*
Completed: April 2013
4. Haris Majeed (B.Sc.), University of Toronto
Date started: September 2012
Thesis topic: *Investigation of an Ordinary Chondrite from North West Africa*
Completed: April 2013

3. Veronica Di Cecco (B.Sc.), University of Toronto
Date started: September 2010
Thesis topic: *El Indio Te-mineralogy*
Completed: April 2011
2. Fernando Soto (B.Sc.), University of Toronto
Date started: September 2008
Thesis topic: *High pressure mineralogy in an unidentified L6 chondrite*
Completed: April 2009
1. Veronica Homolova (B.Sc.), University of Toronto
Date started: September 2008
Thesis topic: *Mineralogical investigation of an undescribed ordinary chondrite*
Completed: April 2009

12.5 POSTDOCTORAL FELLOWS

- | | |
|----------------|---|
| 2017 – present | Dr. Lee White, formerly from the University of Portsmouth
Topic: <i>Atom Probe Tomography of lunar and martian meteorites</i> |
| 2016 – present | Dr. Emmanuel Lalla, formerly from the University of Valladolid and Centro de Astrogeologia (CAB) (co-hosted with Dr. Mike Daly, York University)
Topic: <i>Multi-analytical detection systems for Mineralogy and geochemistry (e.g., Raman-IR, XRD and Mossbauer spectroscopy for Martian missions) and volcanic terrestrial analogs</i> |
| 2015 – 2016 | Dr. Matthew Izawa, formerly from the University of Western Ontario
Topic: <i>Geochronology of phosphates in martian meteorites</i> |
| 2012 – 2014 | Dr. James Darling, formerly from the University of Bristol (co-hosted with Dr. Desmond Moser, University of Western Ontario)
Topic: <i>U/Pb microstructural analyses of baddeleyite</i> |

12.6 OTHER SUPERVISORY ROLES

- 2007 – present, Ian Nicklin Collections and Database Technician Mineralogy and Geology
- 2007 – present, Katherine Dunnell, Collections and Database Technician Mineralogy and Geology
- 2010 – present, Brendt Hyde, Research Technician Mineralogy
- 2007 – present, Tony Steede, volunteer 3x a week, Mineralogy
- 2007 – present, Karen Berkaw volunteer Thursday mornings with the gem collection

- 2016 – present, Grant Cummings, volunteer Kirwin collection
- 2016 – present, Christine Petch, volunteer Kirwin collection
- 2016 – present, Nick Kolhman, volunteer Kirwin collection
- 2017 – present, Sean Yokayama, volunteer working on meteorite research
- 2016 – present, Steve Korchinos, summer NSERC USRA grant, working on a ureilite and now on a CLN grant
- 2016 – present, Jordan Poitras, CLN grant to type meteorites
- 2016 – 2017, Erika Anderson, volunteer Kirwin collection
- 2008 – 2015, Bev Mitchell, volunteers in our section each Wednesday to assist with the collection.
- 2012 – 2014, Caitlyn Flemming volunteer Friday afternoons with the petrology collection
- 2012 – 2014, Victoria Jankowski, volunteer Friday mornings with the mineralogy collection
- 2012 (summer) Joseph Housman, a NSERC CREATE summer student
- 2007 – 2011, Malcolm Back, Research Technician Mineralogy
- 2007 – 2010, Robert Ramik, Research Technician Mineralogy
- 2012 (summer), Michael Joyce, a SEP (Student Employment Program) student
- 2012 (summer), Tahina Choudry, an ASTRO student (Canadian Space Agency grant)
- 2012 (summer), Kun Guo, a NSERC CREATE summer student
- 2012 (summer), Sara Nicholson, a NSERC CREATE summer student
- 2012 (summer), Natalie Chu, a NSERC USRA summer student
- 2011 (summer), Veronica DiCecco, working a NSERC USRA grant, working on Ter-minerals and has discovered two minerals
- 2011 (summer), Christopher Morris with Young Canada Works grant, working on typing meteorites from the ROM's collection
- 2011 (summer), Kevin French funded by Bob and Brenda Beckett for the summer to work on a mineral locality near French River, Ontario
- 2011 (summer), Bryona Fernandes funded by Bob and Brenda Beckett for the summer to work on minerals from Rapid Creek, Yukon
- 2010 (summer), supervised Michelle Thompson (Queens University) NSERC USRA summer grant
- 2010 (summer), Veronica DiCecco, an undergraduate student for the summer on a NSERC USRA grant
- 2010 (summer), Alex Ozaruk (3rd year University of Western Ontario) Young Canada Works student
- 2009 (summer) supervised Keiran Jandersek volunteer to organize a new mineral collection to the ROM
- 2009 (summer-fall) supervised Heidi Tomes to start organizing the Rapid Creek mineral collection, funded by Bob and Brenda Beckett
- 2008 – 2009, Howard Plotkin organizing the meteorite files at the ROM, funded by a casual salary grant
- 2007 – 2013, Harold Dale, volunteer Thursday mornings to scan historic mineral labels
- 2008, supervised Michelle Thompson (Queens University) NSERC USRA summer grant

13. GRADUATE STUDENT ADVISORY COMMITTEE WORK

13.1 CURRENT GRADUATE STUDENT ADVISORY COMMITTEES

1. Sara Mazrouei-Seidani (Ph.D., Started September 2015) University of Toronto
Thesis topic: *Investigating the rate of regolith formation on the Moon*
Expected date of completion: August 202

13.1 COMPLETED GRADUATE STUDENT ADVISORY COMMITTEES

1. Ben Moulton (Ph.D., started September 2011) University of Toronto
Thesis topic: *An in-situ investigation of pressure induced structural changes in haplobasaltic glasses*
Date of completion: August 22, 2016
2. Guilame Barlet (Ph.D., started September 2010) University of Toronto
Thesis topic: *A multielement isotopic study of refractory FUN and F CAIs: Mass-dependent and mass-independent isotope effects*
Date of completion: Passed away during program
3. Levke Koop (M.Sc. started September 2009) University of Toronto
Thesis topic: *Classification of Ordinary Chondrite NWA 6514 and Pb-Pb Chondrule Chronology*
Date of completion: November 11, 2011

13.1.1 External Committee Member (Invited)

1. Debarati Dias (Ph.D., started September 2014) Okayama University, Japan
Thesis topic:
Expected date of completion:
2. Xiaoyu Zhou (Ph.D., started September 2014) Okayama University, Japan
Thesis topic:
Expected date of completion:

13.1.2 External Reader, Final Defense Committees (Invited)

1. Diego David Uribe (M.Sc. Western University)
Thesis title: *Enstatite achondrites as indicators of processes and environments in the early solar system*
Date of Defence: July 14, 2017
2. Matthew Izawa (Ph.D. Western University)
Thesis title: *Planetary Materials Science and Astrobiology*
Date of Defence: April 22, 2014

2. Monika Haring (M.Sc. Western University)
Thesis title: *The Al/Ti composition of fassinite*
Date of Defence: August 13, 2013

3. Kate de Lugt (M.Sc. University of Toronto)
Thesis title: *Remote Sensing of the Lunar Surface*
Date of Defence: August 14, 2012

- 2015-2016: BSc. Student Victoria Szlachta, University of Toronto
- 2012-2013: BSc. Student Natalie Chu University of Toronto
- Fall 2012 M.Sc. thesis reviewer, Kate de Lugt, University of Toronto
- Fall 2012 Ph.D. Examining committee, Matt Izawa, Western University
- 2009 – 2011: M.Sc. committee Levke Koeoep, University of Toronto
- 2008-2009: M.Sc. supervisor Katrina van Drongelen University of Toronto
- 2009 Fernanda Soto University of Toronto

14. OTHER UNIVERSITY SERVICE

- 2016-2017 Walker Club scholarship committee
- 2011 University of Toronto Geology Academic Appeals Committee
- 2010, Reviewed NSERC Discovery Grant application
- 2010, External Reviewer for the University of Western Ontario Academic Development Fund, New Research and Scholarly Initiatives Fund
- 2009, Curation and Planning Team for Extraterrestrial Materials for NASA Canadian Representative
- 2008 – 2010 Walker Club scholarship committee
- 2008 – 2010 Ontario Graduate Scholarship reviewer

E. Curatorial and Other Museum Activities

15. ROM CURATORIAL DUTIES

15.1 MAJOR CURATORIAL RESPONSIBILITIES

- Prioritize and oversee collections management initiatives;
- Prioritize and oversee research activities in the X-ray diffraction and spectroscopy laboratories;
- Conduct scientific research;
- Identify potential acquisitions, and build the collection through major purchases;
- Work with Collections Technicians to improve the Mineralogy, Gemmology, Meteorites and Petrology storage and organization;
- Identify and obtain grants and student internships to improve collections;
- Ensure and improve access to ROM collections for researchers and the public;

- Strategic planning for the Mineralogy, Gemmology, Meteorites and Petrology sections.

15.5 ROM SERVICE

2017 – present	Department Natural History Peer Review Subcommittee
2016 – present	ROMCA Negotiating Committee
2013 – present	Department of Natural History Advisory Committee
2011 – present	Department of Natural History Budget Committee
2010 – present	Department Natural History Advisory Committee
2010 – present	Department Natural History Peer Review Subcommittee
2010 – present	Department Natural History Trust Fund
2015	Search committee Managing Director, Earth and Space
2010 – 2012	Department of Natural History Peer Review Subcommittee
2008-2012	ROMCA Nominating Committee
2011-2012	ROMCA Executive Member at Large
2010	ROM Centenary committee

15.7 GALLERIES AND EXHIBITIONS

15.7.1 Current exhibitions and galleries

Winter 2017: Formation of terrestrial planets, Vale Gallery

We have installed a case that was displaced from the installation of the Barrick Modern Mining Gallery that will focus on planetary formation and highlight some of the ROM's important martian, lunar and rare achondrite meteorites.

Fall 2016: Mission to Bennu temporary exhibition

This new asteroid display will showcase unique samples from the ROM's meteorite collection and highlight ROM research related to the NASA-led OSIRIS-REx space mission to the asteroid *Bennu*, that launched September 2016.

15.7.2 Completed exhibitions and galleries

Summer 2013: Martian meteorite temporary case rotation

Organizing a display of 8 key Martian meteorite samples, including the newest meteorite to our collection NWA 7042 the fourth largest Martian meteorite in the world. This case will highlight our research and Mars mission science.

May 2013: Cullinan Diamond necklace, loan from the Smithsonian

Organized a display of the Cullinan Blue Diamond Necklace, featuring a bow motif with nine sparkling and extremely rare blue diamonds, recently joined the National Gem Collection in the Smithsonian's National Museum of Natural History. Containing 5.32 carats of blue diamonds and 251 other diamonds, the necklace was displayed at the Smithsonian next to the Hope Diamond.

May 2013: Barrick Modern Mining Gallery, Royal Ontario Museum

Working with a team of 2D and 3D in-house designers, two external gaming and graphic designers, an interpretative designer and a mining advisory team we are building an 8-foot interactive table simulating the complexities of modern mining and an interactive wall. Visitors can take on roles such as mining executive, the environment, the Government to participate in opening a mine.

June 2011 Temporary case rotation Teck Gallery, Vesta meteorite display:

Organized a display of 30 representative Howardite-Eucrite-Diogenite meteorites for the rendezvous of the NASA DAWN mission to the asteroid Vesta from which these rocks are believed to originate. Worked with design, IP, preps, and project management to prepare the display. <http://www.rom.on.ca/news/releases/public.php?mediakey=50pkx86jby> Should note that this display was highlighted on NASA's Vesta Fiesta website.

Fall 2011: Earth Sciences Digital Gallery Project, Royal Ontario Museum

The ROM has 150,000 school-aged children coming to the museum, to learn from our in-house educational staff collections-based curriculum. The Earth Sciences Digital Gallery is a hands-on, interactive half day immersive gallery and course that is targeted for grade 4 and grade 8 students, when Earth Sciences is taught. Students will come to the ROM and work at computer terminals to learn about mining and geology, as well as handle specimens related to the modules. Working with education, Overdrive design and our New Media Resources team, I assisted in picking the topics for development in the ten modules and assisted in writing, then reviewed and signed off all text for the project

February 2011-September 2011: Co-Curator Water: The Exhibition (with the AMNH) Garfield Weston Hall, Royal Ontario Museum <http://www.rom.on.ca/water/exhibition/>

Curated the Blockbuster exhibition for the ROM in the 12,000 sq ft exhibition space at the ROM Attended collaborative/development meetings in NYC and Minnesota starting in 2007 and internal meetings for the exhibition starting early 2010

Wrote 20+ panels on Canadian water content, worked with Curators at the ROM to add ROM specimens and Canadian stories to the American Museum of Natural History exhibition Was interviewed for a 2-minute video in the exhibition on my research related to Water Was a media spokesperson for the exhibition, including two spots on the Weather Network (Going Green segment) and CTV News etc.

October 2008-March 2009: Curator: The Nature of Diamonds (with the AMNH) Garfield Weston Hall, Royal Ontario Museum <http://www.rom.on.ca/exhibitions/special/diamonds.php>
Curated the Blockbuster exhibition for the ROM in the 12,000 sq ft exhibition space at the ROM
Attended collaborative/development meetings in NYC starting in 2007 and internal meetings for the exhibition (weekly) for over a year before opening
Wrote all of the Canadian content for the exhibition, worked with Canadian Mining companies to produce a Canadian video for the exhibition
Was the media spokesperson for the exhibition, with several print, internet, radio and television

December 2008-November 2009: Curator: Light and Stone, the Gem Collection of Michael Scott. Gallery of Gems and Gold, Teck Gallery, Royal Ontario Museum <http://www.rom.on.ca/exhibitions/special/lightandstone.php>
~200 exceptional cut gemstones and associated mineral specimens from around the world
Wrote all gallery overview text, and specimen specific text
Worked with our registration department on high value transport of the gems across the border, and assisted with condition reporting of the samples when they arrived and departed the museum
Selected all specimens with the donor in California and organized specimens for display
Worked with design team on interior case design and title wall of exhibition
Liaison with the lender of the gems to make sure he was happy with the display aspects

June 2007-June 2008: Curator: The Black Star Sapphire of Queensland, Royal Ontario Museum <http://www.rom.on.ca/exhibitions/special/blackstar.php>
Rare 733 carat sapphire surrounded with diamonds on display at the ROM for one year
Wrote all text for the exhibition, media spokesperson and attended meetings for the exhibition with design and communications team for six months prior to opening

December 2008: Curator: Teck Suite of Galleries: Earth's Treasures <http://www.rom.on.ca/exhibitions/nhistory/teck.php>
Oversaw the development of a 7,000 square foot permanent suite of galleries at the Royal Ontario Museum, one of the three most popular destinations at the ROM
At the time of building it comprises of three galleries: Canadian Mining Hall of Fame, the Vale Mineral Gallery and the Gallery of Gems and Gold
Canadian Mining Hall of Fame: Worked with the CMHF and Overdrive design to create an interactive, hands-on display of the Canadian Mining History, see: <http://www.overdrivedesign.com/work.php?view=complete&pid=28>
Wrote all inductee screen information (details provided by CMHF) and assisted with all scientific and specimen details in the video component and curatorial media spokesperson at opening events

Vale Mineral Gallery: Oversaw selection of 2,300 minerals for display, worked with Glasbau-Hahn in Frankfurt for case design and lighting (went to Frankfurt to test lighting).
Oversaw all text writing, and worked with Overdrive design to build a new e-labeling system in the gallery, new to the museum; worked closely with Haley Sharpe on design
Galleries of Gem and Gold: Opened December 2009, oversaw all gem selection, wrote all text and worked with design team on layout and text panel placement

April 2009 Temporary case rotation Teck Gallery, Mount Malosa Minerals:

Organized a systematic display of a representative selection of the recently acquired Mount Malosa mineral collection.

December 2008 Temporary case rotation Teck Gallery NWA 5000: Organized a loan of the 2nd largest piece of the Moon in the world for the opening of the Teck Gallery.

<http://www.rom.on.ca/news/releases/public.php?mediakey=lf3mjmmzj> Wrote all text, worked with exhibit design team for case design and registration and prep staff for transport and installation of meteorite.

16. SELECTED MEDIA APPEARANCES

16.1 PRESS RELEASES

A. 2007, May 16: Black Star of Queensland Photo Op and Media Advisory, Glass Room

<http://www.rom.on.ca/news/releases/public.php?mediakey=2k9td2lwct>

B. 2008: The Nature of Diamonds, 90 people in attendance representing about 65 media outlets

<http://www.rom.on.ca/news/releases/public.php?mediakey=bqssmxr1gi>

C. 2008: Teck Gallery <http://www.rom.on.ca/news/releases/public.php?mediakey=gvbb273bne>

D. 2008: Light and Stone: The Gem Collection of Michael Scott

<http://www.rom.on.ca/news/releases/public.php?mediakey=873alcfiit>

E. 2009: Newmarket meteorite:

<http://www.rom.on.ca/news/releases/public.php?mediakey=6wg1g4pi5k>

F. 2010: Springwater pallasite: Coverage immediately went national and has been widespread in approx. 100 outlets (broadcasters, newspapers, websites, news

aggregates: <http://www.rom.on.ca/news/releases/public.php?mediakey=75tr3ccv5s>

G. 2011: Water Exhibition media coverage in over 100 outlets

<http://www.rom.on.ca/news/releases/public.php?mediakey=w5jgq5wqym>

H. Temporary Display, Vesta meteorites and new laboratory,

<http://romlx6.rom.on.ca/news/releases/public.php?mediakey=50pkx86jby>

I: Nature paper on Martian meteorites <https://www.rom.on.ca/en/collections-research/research-community-projects/natural-history/solving-an-age-old-martian-mystery>

16.2 TELEVISION PROGRAMS

A. May 16 and 17, 2007 **Global TV**, **CityTV** and Fairchild TV for the Black Star Sapphire of Queensland.

B. October 31, Interviewed for **Rogers TV**, Interviewed for the **Business News Network (BNN)** Tuesday, December 9. **Corus Television**, January 20, 2008; **Cosmo TV** January 2008 *Diamonds are a Girls Best Friend*, Interviewed about the Four Cs of diamonds; **CP24** Live interview October 16

C. **CityTV**, OMNI News

E. CBC Toronto, CP24, A News Barrie

- F. CBC Toronto, CBC the National, CBC Newsworld, CBC French National News; CBC Ottawa, see: <http://www.cbc.ca/news/technology/story/2010/07/21/rom-meteorite-pallasite-saskatchewan.html>; CTV News local, CTV News national; OMNI News CityTV
- G. Two segments filmed (one on bottled water, the other on water distribution worldwide) for the “Going Green” Segment on the **Weather Channel**, which plays several times a day, also interviewed by **CTV News** live during their weather segment and **OMNI News**
- H. Interviewed by CBC Toronto and CityTV; Mentioned on Breakfast TV

Other:

- 2016: TVO Kids: Now you know guest expert
- 2011: Live 5-minute segment on CityTV Breakfast Television July 18, 2011
- 2011: Interviewed June 2011 by **CBC the National** on “Antimatter”
- 2008: Rocks and Minerals TV, January 21, 2008

16.3 RADIO INTERVIEWS

- B. 2008, October 25: AM740 Live radio appearance; AM 740 (Toronto radio station) with Frank Proctor October 25 at 11:45am (7 mins) interviewed live on exhibition’s opening day
- D. Good Day GTA on the New Classical 96.3FM, to talk about A Season of Gems, Friday, December 12 (5 min in-studio interview)
- E. CBC Radio with Andy Barrie; Kicks FM Barrie
- F. 680 News Online; CIWW-AM (Oldies 1310) Ottawa; EZ Rock 104.9 Edmonton; CFRB AM 1010; CBC radio; Classical 96.3 FM 5 minute in-studio interview August 18

Other:

- 2016, September: Interview with Kris Abel on Jewel Radio (88.5FM, Toronto) about OSIRIS-REx mission
- 2008, CBC Radio North, Whitehorse, Yukon in-studio interview

16.4 NEWSPAPER AND MAGAZINE ARTICLES

- A. Toronto Star, <http://www.thestar.com/News/article/214869> , Globe and Mail,
- B. February 2008: interview of Corporate Nights publication, distributed in the Globe and Mail (for Diamonds); AOL Canada website on October 23; ELLE Magazine; The Varsity (U of T newspaper) by Leonicka Valcius November 2, 2008
- C. National Post: <http://network.nationalpost.com/np/blogs/toronto/archive/2008/12/17/rom-offers-a-sneak-peek-of-an-empty-case.aspx>; Globe and Mail
- E. The Star (front page), <http://www.thestar.com/article/626657>; Toronto Sun <http://www.torontosun.com/news/torontoandgta/2009/04/29/9290951.html>; Globe and Mail; Newmarket Era; Orilla Times
- F. Globe and Mail, National Post, Metro, Toronto Sun, Vancouver Sun, too many to list
- H. National Post, <http://news.nationalpost.com/2010/07/22/rare-meteorite-lands-at-rom/>; Toronto Star, <http://www.thestar.com/news/article/1020952--rare-meteor-specimens-on-display-at-the-rom/>; Metro; the Bulletin; Philapenia;

Other:

2016 September 6 Interview with the Toronto Star regarding OSIRIS-REx

<https://www.thestar.com/news/world/2016/09/07/how-canadian-technology-is-helping-nasa-fetch-a-chunk-of-asteroid.html>

2015 Huffington Post interview: http://www.huffingtonpost.ca/2015/10/14/neil-degrasse-tyson-pluto-revenge_n_8264784.html

2013 Scientific American article, Nature paper

<https://www.scientificamerican.com/article/solved-the-mystery-of-the-meteorites/>

2013 Daily galaxy http://www.dailygalaxy.com/my_weblog/2013/08/mars-meteorites-hint-of-recent-volcanic-activity-the-possibility-of-life.html

2013: Interview with the Toronto star

https://www.thestar.com/news/gta/2013/07/24/mars_had_water_more_recently_than_thought_rom_study_reveals.html

2012: Meteorite donor and APXS instrument <https://news.uoguelph.ca/2012/12/mars-is-closer-than-you-think/>

2010: ROM Meteorite collection, the Varsity: <http://thevarsity.ca/articles/25610>

2010: University of Toronto Alumni news, <http://www.geology.utoronto.ca/alumni/alumni-newsletters/2011%20Alumni%20News%20UT-Geology.pdf>

2008, November 1: The Star, letter to the Editor: Kim Tait's response to October 27 letter to the editor on conflict diamonds

2008, May **CHUM City News.ca**

2008, **Report on Business**: "Whats in a name?" about Paraiba tourmalines

2008, February: Rock and Gem Magazine

2008, November 5: Oakville Beaver article on my position at the ROM

2008, February 19: Toronto Star for The "City Unseen" section on Jan 11th article out February 19, 2008 <http://www.thestar.com/News/article/304735>

2007: Appeared in the JobBOOM section of the Toronto Sun October 31

16.5 INTERNET EXPOSURE

2016, September 28th interviewed by the Weather Network;

<https://www.theweathernetwork.com/news/articles/got-your-hands-on-a-space-rock-heres-how-to-know-for-sure/73817/>

2016 ROM I am a Scientist video <https://www.youtube.com/watch?v=LqMoyMwJNJc>

C. Gallery interview by Treehugger: <http://www.treehugger.com/files/2008/12/rom-mineralogy-gallery.php>; National Post online

E. CBC Online

F. Canadian Mining Journal <http://www.cbc.ca/news/technology/story/2010/07/21/rom-meteorite-pallasite-saskatchewan.html>; Globe and Mail online; CTV.ca; CBC.ca etc.

G. ChicaDEE online, sweetmama.com

H. ~10 online media Artdaily, Art News Worldwide

16.6 SOCIAL MEDIA

2011 – present Twitter @kimttait manage account, post and respond to public

2014 – present Instagram account

2008 – present Facebook account

G. RELEVANT TRAINING

17.1 SAFETY TRAINING

2007 – present	WHMIS Certification
2007 – present	X-ray safety training
2011	Wilderness Advanced First Aid (BLS, Anaphylaxis) Certification
2011	First aid (CPR) Training
2017	Harassment and Discrimination training
2011 – 2018	Canadian non-restricted Firearms safety training
2011 – 2018	Canadian restricted Firearms safety training