

Curriculum Vitae

Dr. Stefan V. Lalonde

CNRS Researcher
UMR6538 Laboratoire Géosciences Océan
Institut Universitaire Européen de la Mer Université de
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Canadian citizen, 37 years old, fluent in English and French.

Expertise

Low-temperature aqueous and isotope geochemistry; Geobiology; Sedimentology; Geochemical evolution of surface and marine environments in deep time; Geomicrobiology; Biomineralization.

Responsibilities

IUEM Scientific Coordinator for the Pôle Spectrométrie Océan, 9 mass spectrometers and 5 clean labs dedicated to elemental and isotopic analysis, 2015–present.

Scientific council member for EUR ISBlue, representing Theme 2 “Earth-Ocean Interactions”, 2018–present.

Principle Coordinator, LabexMER Axis 3 “Geobiological Interactions in Marine Environments”, 2015–2018.

Editorial Advisory Board, *Geobiology*, 2014–present.

Reviewer for *Nature*, *Science*, *Geology*, *Nature Geoscience*, *Nature Communications*, *Earth and Planetary Science Letters*, *Geobiology*, *Geochimica et Cosmochimica Acta*, *Chemical Geology*, *Geomicrobiology Journal*, *Geochemical Journal*, *Frontiers in Microbiology*, *Frontiers in Environmental Science*, *Frontiers in Earth Science*, *Biogeosciences*.

Grant reviewer for the Natural Environment Research Council (UK), Deutsche Forschungsgemeinschaft (Germany), Israel Science Foundation, American Chemical Society, National Science Foundation, National Science and Engineering Research Council (Canada).

Scientific Committee Member, Programme National de Planétologie, CNRS, 2014–2018.

Academic Employments

10/2013 - present

CNRS researcher

UMR 6538 Laboratoire Géosciences Océan (LGO) (formerly Domaines Océaniques, LDO)

European Institute for Marine Studies, University of Brest

11/2012 - 09/2013

LABEX Mer Postdoctoral Fellow, metal and metalloid stable isotope geochemistry

UMR 6538 Domaines Océaniques and UMR 6539 Laboratoire des Sciences de l'Environnement Marin, European Institute for Marine Studies, University of Brest

01/2011 - 01/2013

NSERC Postdoctoral Fellow, metal and metalloid stable isotope geochemistry

UMR 6538 Domaines Océaniques, European Institute for Marine Studies, University of Brest

Education

1986-1991 Sacred Heart School of Halifax (Halifax, NS, Canada)

1991-1993 Halifax Grammar School (Halifax, NS, Canada)

1994-1999 Whitefish High School (Whitefish, MT, USA)
1997-1998 1^{ère} Scientifique, Lycée Blaise Pascal (Clermont Ferrand, France)

Bachelor of Science in Anatomy and Cell Biology
McGill University, Montreal, QC, 2005

Master of Science in Geomicrobiology
University of Alberta, Edmonton, AB, 2006
Department of Earth and Atmospheric Sciences
Thesis: Microbial cell surface reactivity and silicification
Supervisor: Dr. Kurt Konhauser

Doctor of Philosophy in Geochemistry
University of Alberta, Edmonton, AB, 2011
Department of Earth and Atmospheric Sciences
Thesis: Surface chemical reactivity and metal adsorptive properties of natural microbial mats, iron oxides, and infaunal mucus secretions
Supervisor: Dr. Kurt Konhauser

Awards and Funded Projects

(2017) Université de Bretagne Occidentale Presidential Medal, awarded for accomplishments in research.

(2017–2022) Sole PI, EU H2020 ERC Starting Grant, EARTHBLOOM – Earth’s first biological bloom: An integrated field, geochemical, and geobiological examination of the origins of photosynthesis and carbonate production 3 billion years ago. 1,848,685€ over 5 years.

(2017) Co-PI, ICDP Funded Workshop “Archean Surface Environments, Moodies Group, Barberton Greenstone Belt”. \$50,000 USD to support workshop and fieldwork in Barberton in Oct 2017.

(2016–2018) Lead PI, in partnership with Pierre Sansjofre (IUEM, Brest), EU FP7 Prestige Marie Curie Fellowship and LabexMER International Postdoc Fellowship for Dr. Martin Homann, CARB–FACTORY: Operation of the carbon and nitrogen cycles at the initiation of widespread carbonate precipitation on Earth. 120,000€ over two years.

(2016–2018) Lead PI, in partnership with Pascal Philippot (IPGP, Paris), EU H2020 Marie Curie Incoming Postdoctoral Fellowship for Dr. Bryan Killingsworth, ANOXIA-MEM – Probing the Memory of Earth Anoxia: New Stable Isotope Constraints on the Rise of Oxygen. 185,076€ over two years.

(2015) Region of Brittany support for preparation of an ERC proposal, Project INSPIRE: An Integrated Study of Earth's First Breath: Sedimentology, Geochemistry, Chronology, and Biology of Earth’s Earliest Traces of Oxygen. 10,275€ over 5 months.

(2015) Region of Brittany Strategy of Attractivity, Project S-GEOBIO: Biogeochemical cycling of sulfur at different timescales. 122,493€ over 2 years (2015-2016). Co-PI with Pierre Sans Jofre (IUEM, Brest). 18 months of Postdoctoral salary, some general operating funds, and 48,500€ for construction of an automated carbonate-associated sulfate and trace metal leach apparatus.

(2014) LabexMER Axe 3 “Interactions Géobiologiques” Exploratory Project PROXIM: Development of New Proxies to Assess the Environmental Impacts of Seafloor Hydrothermal Systems. €23,000 over 2 years (2014–2015). co-PI with Olivier Rouxel (IFREMER) with collaborators at IFREMER, Univ. Nantes, Univ. Hawaii (USA), Woods Hole Oceanographic Institution (USA).

(2014) NSF Creating New International Collaborations (CNIC), co-I with Dr. Russell Shapiro (Cal. State Univ. Chico, USA): U.S.-France Collaborative Study of the Alteration of Ancient Stromatolites: New Insights through Coupled Petrology and Isotope Geochemistry. \$29,741 USD over 1 year.

(2013–2015) A total of 14 days synchrotron time for analysis of trace element uptake and diagenesis in synthetic hydrothermal particles, beamline 18, Diamond Light Source (Oxford, UK): 4 days in 2013 (ref. SP8624, Ni EXAFS),

4 days in 2014 (ref. SP9829, P EXAFS), and 6 days in 2015 (SP11705, Ni EXAFS). In collaboration with Caroline Peacock (Univ. Leeds, UK) and Kurt Konhauser (Univ. Alberta).

CNRS/Institut National des Sciences de l'Univers (INSU) small equipment grant (2013)
National award – 3,000€.

LABEX Mer Postdoctoral Fellowship (Nov. 2012 – Oct. 2014)
International award – 47,815€ plus 5,000€ operating funds per annum.

NSERC Postdoctoral Fellowship (Jan. 2011 – Dec. 2012)
National award - \$40,000 CDN per annum.

Teaching and Training Activities

09/2016–11/2018 (in progress) Primary supervisor of EU FP7 Prestige Marie Curie Fellow and LabexMER International Postdoc Fellow Dr. Martin Homann, in partnership with Pierre Sansjofre (IUEM, Brest), project CARB-FACTORY: Operation of the carbon and nitrogen cycles at the initiation of widespread carbonate precipitation on Earth. 120,000€ over two years.

10/2015–01/2019 (in progress) – PhD co-supervisor (with Arnaud Agranier, IUEM/UBO, and Aradhna Tripathi, UCLA and IUEM/UBO) of Ian Foster, École doctorale Sciences de la Mer (EDSM, IUEM): “Tracing continental emergence during the Precambrian using Sm-Nd-Hf-Lu geochemistry of banded iron formations”.

10/2015–12/2018 (in progress) – PhD co-supervisor (with Kurt Konhauser, University of Alberta, Canada) of Marie Thoby, École doctorale Sciences de la Mer (EDSM, IUEM): “The stable isotope composition of Mo and Fe in ancient stromatolites and other carbonates and their use for paleo-environmental reconstruction”.

09/2014–07/2018 – PhD co-supervisor (with Kurt Konhauser and Dan Alessi, University of Alberta, Canada) of Leslie (Jamie) Robbins: “Banded iron formations as critical paleomarine proxies: their formation, reliability, and new considerations of Archean to Paleoproterozoic marine geochemistry”. University of Alberta, Canada. Laureat of the prestigious NSERC Vanier Scholarship (150,000\$ CAD).

03/2016–04/2018 Primary supervisor of EU H2020 Marie Curie Incoming Postdoctoral Fellow Dr. Bryan Killingsworth, in partnership with Pascal Philippot (IPGP, Paris) and Pierre Sansjofre (IUEM, Brest), project ANOXIA-MEM – Probing the Memory of Earth Anoxia: New Stable Isotope Constraints on the Rise of Oxygen. 185,076€ over two years.

09/2014–03/2018 – PhD co-supervisor (with Pierre Sansjofre, UMR6538 LDO, and Mohamed Jebbar, UMR6197 LM2E), “METANIS: Evaluation of the effect of pression and temperature on anaerobic metabolisms, biogeochemical and isotopic approach.” École doctorale Sciences de la Mer (EDSM, IUEM). One half-funding from ARED (Région Bretagne) and the EDSM obtained 05/2014. Student desisted due to health issues.

02/2018 – 9 hours of courses in the module “Evolution”, License 3, UFR Sciences, University of Western Brittany

01/2017–06/2017 – Primary supervisor of 2nd year MSc student Dimitri Rigoussen (IUEM), thesis: “The trace element geochemistry of carbonates: new analyses of multiple redox tracers through the Precambrian”.

01/2016–06/2017– Secondary supervisor of 2nd year MSc student Lucille Roue (IUEM), thesis: “Multi-proxy (stable isotope and trace element) study of the Noonday cap-carbonates, Death Valley, USA”.

10/2017 – 15 hours of courses and exercises in oceans and climate, Marine chemistry MSc program, UMR6539 LEMAR.

10/2016 – 15 hours of courses and exercises in oceans and climate, Marine chemistry MSc program, UMR6539 LEMAR.

01/2016–06/2016 – Primary supervisor of 1st year MSc student Dimitri Rigoussen (IUEM), thesis: “Compilation of the elemental composition of carbonates through geological time”.

02/2016 – 8 hours of courses and exercises in geochemistry, MSc mineral resources module, UMR6538 LDO.

10/2015 – 15 hours of courses and exercises in oceans and climate, Marine chemistry MSc program, UMR6539 LEMAR.

01/2015–06/2015 – Primary supervisor of two 2nd year MSc projects, “The isotopic composition of Germanium in seawater: development of a preconcentration method and first analyses” and “The molybdenum isotope composition of modern and ancient stromatolites”. Co-financed by the University of Bristol (collaboration with Kate Hendry) and the University of Alberta (collaboration with Kurt Konhauser), respectively. Also in collaboration Pierre Sans Jofre (IUEM, second subject), Olivier Rouxel (IFREMER, both subjects), Phil Fralick (Lakehead U., second subject) and Dawn Sumner (UC Davis, second subject).

02/2015 – 8 hours of courses and exercises in geochemistry, MSc mineral resources module, UMR6538 LDO.

09/2014–09/2018 – PhD co-supervisor (with Kurt Konhauser, University of Alberta, Canada) of Leslie Robbins, NSERC Vanier scholar. “Evolution of the composition of chemical sediments in the Archean”.

09/2014–09/2017 – PhD co-supervisor (with Pierre Sans Jofre, UMR6538 LDO, and Mohamed Jebbar, UMR6197 LM2E), “METANIS: Evaluation of the effect of pressure and temperature on anaerobic metabolisms, biogeochemical and isotopic approach.” École doctorale Sciences de la Mer (EDSM, IUEM). One half-funding from ARED (Région Bretagne) and the EDSM obtained 05/2014.

04/2014–04/2015 – Supervisor of LabexMER postdoc Aurelie Godrant (with Géraldine Sarthou, UMR6539 LEMAR, and Olivier Rouxel, IFREMER), “Iron and molybdenum stable isotope signatures of diazotrophic bacteria as potential tracers of nitrogen and metal limitation”. The continuation of the LabexMER postdoctoral fellowship I was attributed in 2012.

02–06/2014 – Sole supervisor of 2nd yr MSc student Etienne EMILY, thesis: “Evidence for Milankovitch cycles on Primitive Earth – A cyclostratigraphic approach”. The student’s project was classed #1 of 2nd yr MSc projects in 2014.

02/2014 – Four hours of courses and exercises in geochemistry, MSc mineral resources module, UMR6538 LDO.

09-10/2014 – Sole supervisor of Gwenn Le Normand, 2nd year undergraduate, preparation for professional life project, “The silicon isotope composition of hydrothermal jaspers from the Løkken (0,47 Ga, Norway) and Jerome (1,72 Ga, USA) deposits”. UBO/IUEM

11–12/2013 – Four hours of courses and exercises in marine chemistry, MSc methods module, UMR6539 LEMAR.

09/2013–11/2013 – Ten hours of courses and exercises in geochemistry, 3rd year undergraduate geochemistry, Biologie / Science de la Terre et l’Univers program, l’UFR Sciences et Techniques, UBO.

02/2013 – Four hours of courses and exercises in geochemistry, MSc mineral resources module, UMR6538 LDO.

Missions and Field Experience

08/2003 – Yellowstone National Park, USA. Sampling and characterization of extant and silicified thermophilic chemolithoautotrophic communities, Lower Falls area, YNP.

07/2005 – Willapa Bay Estuary, USA. Sampling and microelectrode profiling of oxygen, sulfide, and pH gradients in diverse infaunal invertebrate burrow walls in the intertidal zone.

2004 - 2006 – Cooking lake, near Edmonton, AB. Sediment coring and microelectrode profiling of oxygen, sulfide, and pH gradients in larval-burrowed sediments of seasonally euxinic Cooking lake, AB.

07/2005 – Yellowstone National Park, USA. Sampling, potentiometric titration and metal desorption assays of cyanobacterial mats, Firehole river area, YNP.

10/2005 – Yellowstone National Park, USA. Sampling, potentiometric titration and metal desorption assays of hydrous ferric oxides, red algal mats, and thermophilic chemolithoautotrophs, Norris geyser basin area, YNP.

08/2007 – Pipit Lake, Banff National Park, AB. Sediment coring, trap experiments, and on-site silicon porewater profiles investigating early diatom test dissolution in Pipet Lake, a high alpine helicopter-access-only lake in the Canadian Rockies.

09/2007 – Yellowstone National Park, USA. Organized, fundraised, and lead the University of Alberta Geology graduate students' association (ATLAS) annual field trip. Sole guide and chaperone for 25 graduate students during 5 days; visits included 2 days throughout YNP, tour of the Butte (MT) Berkley Pit copper mine/largest US EPA superfund site, and the Lewis and Clark (MT) speleothem system.

09/2007 – Archean and Paleoproterozoic sedimentary units of geobiological interest throughout northern ON and QC. Participated in the 2007 NASA Astrobiology workshop "Biosignatures in Ancient Rocks" and subsequent 14 day sampling trip throughout the Canadian Precambrian shield.

02/2009 – Archipelago Los Roques, Caribbean Venezuela. Sampling and microelectrode profiling of microbial authigenic carbonates, extant stromatolites, associated microbial mats and porewaters in ephemeral and permanent hypersaline lagoons throughout the carbonate atoll and national park Los Roques, Venezuela.

09/2010 – Archean and Paleoproterozoic sedimentary units of geobiological interest throughout Western Australia. Participated in the 2010 5th International Archean Symposium in Perth, WA and subsequent 12-day sampling trip throughout Northwestern Australia. An additional week was spent collecting core samples from governmental and industry archives.

08/2013 – 4 days of beamtime at the Diamond Light Source, Oxfordshire, UK (beamtime reference SP8624). Preparation and Ni K-edge EXAFS analyses of Si-doped ferrihydrite for better understanding of trace metal uptake in ancient and modern hydrothermal particles.

05/2014 – 4 days of beamtime at the Diamond Light Source, Oxfordshire, UK (beamtime reference SP9828). P K-edge EXAFS analyses of P- and Si-doped ferrihydrite for better understanding of phosphorus uptake in ancient and modern hydrothermal particles.

06/2015 – 6 days of beamtime at the Diamond Light Source, Oxfordshire, UK (beamtime reference SP11705). Ni K-edge EXAFS analyses of diagenesis of Si-doped ferrihydrite for better understanding of trace element retention during diagenesis of modern and ancient hydrothermal particles.

08/2016 – Archean and Paleoproterozoic sedimentary units of geobiological interest throughout South Africa. Participated in the 35th International Geological Congress in Cape Town, SA followed by 8 days of field work and sampling throughout South Africa.

10/2016 – 10 days of drill core sampling at Goldcorp mine Red Lake, Canada, and at the Geological Survey of Norway at Trondheim (NGU).

12/2016 – 8 days of geological field work and sampling of Neoproterozoic Snowball Earth in the Death Valley region of the Mojave desert, U.S.A.

08/2017 – 8 days of geological field work and sampling of stromatolitic carbonates and associated sediments of the Ball assemblage, Red Lake, Canada.

10/2017 – one of eight co-PIs of the ICDP drilling workshop “Archean surface environments, Moodies group, Barberton Greenstone Belt”, S. Africa; 7 days of discussion and field study of potential drilling sites.

08/2016 – Archean and Paleoproterozoic sedimentary units of geobiological interest throughout South Africa. Participated in the 35th International Geological Congress in Cape Town, SA followed by 8 days of field work and sampling throughout South Africa.

10/2016 – 10 days of drill core sampling at Goldcorp mine Red Lake, Canada, and at the Geological Survey of Norway at Trondheim (NGU).

12/2016 – 8 days of geological field work and sampling of Neoproterozoic Snowball Earth sediments (Parhump Group) in the Death Valley region of the Mojave desert, U.S.A.

08/2017 – 8 days of geological field work and sampling of stromatolitic carbonates and associated sediments of the Ball assemblage, Red Lake, Canada.

10/2017 – one of eight co-PIs of the ICDP drilling workshop “Archean surface environments, Moodies group, Barberton Greenstone Belt”, S. Africa; 7 days of discussion and field study of potential drilling sites.

08/2018 – 8 days of geological field work and sampling of stromatolitic carbonates and associated sediments in the Sachigo province, Northern Ontario, Canada.

Annex 2

Summary of Research Outputs

Citation metrics as of 15 Nov. 2018

Google Scholar:	H-index: 23 Citations: 2504	Documents: 94
Scopus:	H-index: 20 Citations: 1932	Documents: 52
Web of Science:	H-index: 21 Citations: 1872	Documents: 56

Manuscripts in review or revision

1. Killingsworth B, Sansjofre P, Philippot P, Cartigny P, Thomazo C, **Lalonde SV**. Oxygen isotope evidence for a transitional marine sulfur cycle at the onset of atmospheric oxygenation. *Nature Geoscience*, in review.
2. Robbins LJ, Konhauser KO, Warchola TJ, Homann M, Thoby M, Foster I, Mloszewsk AM, Alessi DS, **Lalonde SV**. A comparison of bulk versus laser ablation trace element analyses in banded iron formations: Insights into the mechanisms leading to compositional variability. *Chemical Geology*, in review.
3. Robbins LJ, Funk S, Flynn S, Warchola TJ, Li Z, **Lalonde SV**, Rostron B, Smith AJB, Beukes NJ, Alessi DS, Konhauser KO. Hydrogeological constraints on the post-secondary oxidation of Paleoproterozoic iron formation. *Nature Geoscience*, in review.
4. Foster I, Agranier A, Köhler I, Homann M, Heubeck C, Nonnotte P, Konhauser KO, Tripathi A, **Lalonde SV**. Hafnium isotope evidence for emergence of the continents prior to 3.22 billion years ago. *Nature Geoscience*, in review.
5. Thoby M, Konhauser KO, Fralick PW, Altermann W, Visscher PT, **Lalonde SV**. Global importance of oxic molybdenum sinks prior to 2.6 Byr revealed by the Mo isotope composition of Precambrian carbonates. *Geology*, in review.

Articles published in refereed journals

1. Homann M, Sansjofre P, Van Zuilen M, Heubeck C, Gong J, Killingsworth B, Foster IS, Airo A, Van Kranendonk MJ, Ader M, **Lalonde SV**. Terrestrial life and biogeochemical cycling on land 3,220 Myr ago. *Nature Geoscience*, DOI: 10.1038/s41561-018-0190-9
2. Wang X, Planavsky NJ, Hofmann A, Saupe EE, De Corte BP, Philippot P, **Lalonde SV**, Jemison NE, Zou H, Ossa Ossa F, Rybacki K, Alfimova N, Larson MJ, Tsikos H, Fralick PW, Johnson TM, Knudsen AC, Reinhard CT, Konhauser KO (2018) A Mesoarchean shift in uranium isotope systematics. *Geochimica et Cosmochimica Acta* 238, 438-452.
3. Philippot P, Ávila A, Killingsworth B, Tessalina S, Baton F, Caqueneau T, Muller E, Pecoits E, Cartigny P, **Lalonde SV**, Ireland T, Thomazo C, van Kranendonk M, Busigny V. (2018) Globally asynchronous sulphur isotope signals require re-definition of the Great Oxidation Event. *Nature Communications*, DOI: 10.1038/s41467-018-04621-x
4. Warchola T, **Lalonde SV**, Pecoits E, von Gunten K, Robbins LJ, Alessi DS, Philippot P, Konhauser KO (2018) Petrological and Geochemical Analyses of the Boolgeeda Iron Formation, Hamersley Basin, Western Australia. *Precambrian Research*, DOI: 10.1016/j.precamres.2018.07.015
5. Gueguen B, Sorensen JV, **Lalonde SV**, Peña J, Toner BM, Rouxel OJ (2018) Variable Ni isotope fractionation between Fe-oxyhydroxides and implications for the use of Ni isotopes as geochemical tracers. *Chemical Geology* 481, 38-52.
6. Konhauser KO, Robbins LJ, Alessi DS, Shannon FL, Gingras MK, Martinez RE, Kappler A, Swanner ED, Li Y-L, Crowe SA, **Lalonde SV** (2017) Phytoplankton contributions to the trace element composition of Precambrian

banded iron formation. *GSA Bulletin*, DOI: 10.1130/B31648.1

7. Konhauser KO, Planavsky NJ, Hardisty DS, Robbins LJ, Warchola TJ, Haugaard R, **Lalonde SV**, Partin CA, Oonk PBH, Tsikos H, Lyons TW, Bekker A, Johnson CM (2017) Iron formations: A global record of Neoproterozoic to Palaeoproterozoic environmental change. *Earth-Science Reviews* 172, 140-177.
8. Guillermin M, **Lalonde SV**, Hendry KR, Rouxel OJ (2017) The isotope composition of inorganic germanium in seawater and deep sea sponges. *Geochimica et Cosmochimica Acta* 212, 99-118.
9. Playter T, Corlett H, Konhauser K, Robbins L, Rohais S, Crombez, V, Maccormack K, Rokosh D, Prenoslo D, Furlong CM, Pawlowicz J, Gingras M, **Lalonde SV**, Lyster S, Zonneveld, J-P (2017) Clinoform identification and correlation in fine-grained sediments: A case study using the Triassic Montney Formation. *Sedimentology*. DOI:10.1111/sed.12403
10. Warchola T, Flynn SL, Robbins LJ, Liu Y, Myers R, Gauger T, Kovalchuk O, Alam S, Wei S, **Lalonde SV**, Kappler A, Alessi, DS, Konhauser KO (2017) Field- and Lab-Based Potentiometric Titrations of Microbial Mats from the Fairmont Hot Spring, Canada. *Geomicrobiology journal*, DOI: 10.1080/01490451.2017.1282557
11. Robbins LJ, **Lalonde SV**, Planavsky NJ, Partin CA, Reinhard CT, Kendall B, Scott C, Hardisty DS, Gill BC, Alessi DS, Dupont CL, Saito MA, Crowe SA, Poulton SW, Bekker A, Lyons TW, Konhauser KO (2016) Trace elements at the intersection of marine biological and geochemical evolution. *Earth Science Reviews* 163, 323-348.
12. Chi-Fu E, Rodríguez NP, Partin CA, **Lalonde SV**, Andersson P, Weiss DJ, Albani El A, Rodushkin I, Konhauser KO (2016) Cu isotopes in marine black shales record the Great Oxidation Event. *Proceedings of the National Academy of Sciences* 113, 4941-4946.
13. Haugaard R, Pecoits E, **Lalonde SV**, Rouxel O, Konhauser K (2016) The Joffre banded iron formation, Hamersley Group, Western Australia: Assessing the palaeoenvironment through detailed petrology and chemostratigraphy. *Precambrian Research* 273, 12-37.
14. Liu Y, Alessi DS, Owttrim GW, Kenney JPL, Zhou Q, **Lalonde SV**, Konhauser KO (2016) Cell surface acid-base properties of the cyanobacterium *Synechococcus*: Influences of nitrogen source, growth phase and N:P ratios. *Geochimica et Cosmochimica Acta* 187, 179-194.
15. Dekov VM, **Lalonde SV**, Kamenov GD, Bayon G, Shanks III WC, Fortin D, Fouquet Y, Moscati RJ. (2015) Geochemistry and mineralogy of a silica chimney from an inactive seafloor hydrothermal field (East Pacific Rise, 18°S). *Chemical Geology* 415, 126-140.
16. **Lalonde SV**, Konhauser KO (2015) Benthic perspective on Earth's oldest evidence for oxygenic photosynthesis. *Proceedings of the National Academy of Sciences* 112, 995-1000.
17. Konhauser KO, Robbins LJ, Pecoits E, Peacock C, Kappler A, **Lalonde SV**. (2015) The Archean nickel famine revisited. *Astrobiology* 15, 804-815.
18. Robbins LJ, Swanner ED, **Lalonde SV**, Eickhoff M, Paranih ML, Reinhard CT, Peacock CL, Kappler A, Konhauser KO (2015) Limited Zn and Ni mobility during simulated iron formation diagenesis. *Chemical Geology* 402, 30-39.
19. Liu Y, Petrash DA, Mloszewska AM, Owttrim, GW, Alessi D, **Lalonde SV**, Zhou QX, Konhauser KO (2015) Cell surface reactivity of *Synechococcus* sp. PCC 7002: Implications for metal sorption from seawater. *Geochimica et Cosmochimica Acta* 169, 30-44.
20. Petrash DA, **Lalonde SV**, González-Arismendi G, Gordon RA, Méndez JA, Gingras MK, Konhauser KO (2015) Can Mn-S redox cycling drive sedimentary dolomite formation? A hypothesis. *Chemical Geology* 404, 27-40.
21. Dekov VM, Egueh NM, Kamenov GD, Bayon G, **Lalonde SV**, Schmidt M, Liebetrau V, Munnik F, Fouquet Y, Tanimizu M, Awaleh MO, Guirreh I, Le Gall B (2014) Hydrothermal carbonate chimneys from a continental rift (Afar Rift): Mineralogy, geochemistry, and mode of formation. *Chemical Geology* 387, 87-100.

22. Planavsky N, Asael D, Hofmann A, Reinhard CT, **Lalonde SV**, Ossa Ossa F, Knudsen A, Wang X, Pecoits E, Smith B, Beukes N, Bekker A, Johnson T, Konhauser KO, Lyons TW, Rouxel OJ (2014) Evidence for Oxygenic Photosynthesis Half a Billion Years Before the Great Oxidation Event. *Nature Geoscience* 7, 283-286.
23. Swanner ED, Planavsky N, **Lalonde SV**, Robbins LJ, Bekker A, Rouxel O, Kappler A, Mojzsis SJ, Konhauser KO (2014) Cobalt and marine redox evolution. *Earth and Planetary Science Letters* 390, 253-263.
24. Reinhard CT, **Lalonde SV**, Lyons TW (2013) Oxidative sulfide dissolution on the early Earth. *Chemical Geology* 362, 44-55.
25. Partin CA, **Lalonde SV**, Planavsky NJ, Bekker A, Rouxel OJ, Lyons TW, Konhauser KO (2013) Uranium in iron formations and the rise of atmospheric oxygen. *Chemical Geology* 362, 82-90.
26. Partin CA, Bekker A, Planavsky NJ, Scott CT, Gill BC, Li C, Podkovyrov V, Maslov A, Konhauser KO, **Lalonde SV**, Love GD, Poulton SW, Lyons TW (2013) Large-scale fluctuations in Precambrian atmospheric and oceanic oxygen levels from the record of U in shales. *Earth and Planetary Science Letters* 369-370, 284-293.
27. Robbins LJ, **Lalonde SV**, Saito MA, Planavsky NJ, Mloszewska AM, Pecoits E, Scott CT, Dupont CL, Kappler A, Konhauser KO (2013) Authigenic iron oxide proxies for marine zinc over geological time and implications for eukaryotic metallome evolution. *Geobiology*, 11, 295-306.
28. Reinhard CT, Planavsky NJ, Robbins LJ, Partin CA, Gill BC, **Lalonde SV**, Bekker A, Konhauser KO, Lyons TW (2013) Proterozoic ocean redox and biogeochemical stasis. *Proceedings of the National Academy of Sciences*, 110, 5357-5362.
29. Orange F, **Lalonde SV**, Konhauser KO (2013) Experimental simulation of evaporation-driven siliceous sinter formation and microbial silicification in hot spring systems. *Astrobiology* 13, 163-176.
30. Orange F, **Lalonde SV**, Konhauser KO (2013) The formation and preservation of *Synechococcus elongatus* cell moulds in simulated silica sinter: implications for the identification of microfossils. *Geomicrobiology Journal* 30, 327-336.
31. Petrash DA, Gingras MK, **Lalonde SV**, Orange F, Pecoits E, Konhauser KO (2012) Dynamic controls on accretion and lithification of modern gypsum-dominated thrombolites, Los Roques, Venezuela. *Sedimentary Geology* 245-256, 29-47.
32. Konhauser KO*, **Lalonde SV***, Planavsky NJ, Pecoits E, Lyons TW, Mojzsis SJ, Rouxel OJ, Barley ME, Rosière C, Fralick PW, Kump LR, Bekker A (2011) Aerobic bacterial pyrite oxidation and acid rock drainage during the Great Oxidation Event. *Nature* 478, 369-373. *Authors contributed equally.
33. Gingras M, Hagadorn JW, Seilacher A, **Lalonde SV**, Pecoits E, Petrash D, Konhauser KO (2011) Possible evolution of mobile animals in association with microbial mats. *Nature Geoscience* 4, 372-375.
34. Petrash DA, **Lalonde SV**, Gingras MK, Konhauser KO (2011) A surrogate approach to studying the chemical reactivity of burrow mucous linings in marine sediments. *Palaaios* 26, 594-600.
35. Petrash DA, **Lalonde SV**, Raudsepp M, Konhauser KO (2011) Assessing the importance of organic matrix materials in biofilm chemical reactivity: insights from proton and cadmium adsorption onto the commercially-available biopolymer alginate. *Geomicrobiology Journal* 28, 266-273.
36. Planavsky NJ, Rouxel OJ, Bekker A, **Lalonde SV**, Konhauser KO, Reinhard CT, Lyons TW (2010). The evolution of the marine phosphate reservoir. *Nature* 467, 1088-1090.
37. Hobbs WO, **Lalonde SV**, Vinebrooke RD, Konhauser KO, Weidman RP, Graham MD, Wolfe, AP (2010) Algal-silica cycling and pigment diagenesis in recent alpine lake sediments: mechanisms and paleoecological implications. *Journal of Paleolimnology* 44, 613-628.

38. **Lalonde SV**, Dafoe LT, Pemberton SG, Gingras MK, Konhauser KO (2010) Investigating the Geochemical Impact of Burrowing Animals: Proton and Cadmium Adsorption onto the Mucus Lining of *Terebellid* Polychaete Worms. *Chemical Geology* 271, 44-51.
39. Baker MG, **Lalonde SV**, Konhauser KO, Foght JM (2010) The role of extracellular polymeric substances in the surface chemical reactivity of *Hymenobacter aerophilus*, a psychrotolerant bacterium. *Applied and Environmental Microbiology* 76, 102-109.
40. Konhauser KO, Pecoits E, **Lalonde SV**, Papineau D, Nisbet EG, Barley ME, Arndt NT, Zahnle K, Kamber BS (2009) Oceanic Nickel Depletion and a Methanogen Famine Before the Great Oxidation Event. *Nature* 458, 750-754.
41. Konhauser KO, **Lalonde SV**, Phoenix, VR (2008) Bacterial Biomineralization: Where to from here? *Geobiology* 6, 298-302.
42. **Lalonde SV**, Smith DS, Owttrim GW, Konhauser KO (2008) Acid-base properties of cyanobacterial surfaces I: influences of growth phase and nitrogen metabolism on cell surface reactivity. *Geochimica et Cosmochimica Acta* 72, 1257-1268.
43. **Lalonde SV**, Smith DS, Owttrim GW, Konhauser KO (2008) Acid-base properties of cyanobacterial surfaces II: silica as a chemical stressor influencing cell surface reactivity. *Geochimica et Cosmochimica Acta* 72, 1269-1280.
44. Konhauser KO, Amskold L, **Lalonde SV**, Posth NR, Kappler A, Anbar A (2007) Decoupling photooxidation from shallow-water BIF deposition. *Earth and Planetary Science Letters* 258, 87-100.
45. Konhauser KO, **Lalonde SV**, Amskold L, Holland HD. (2007) Was there really an Archean phosphate crisis? *Science* 315, 1234.
46. **Lalonde SV**, Amskold L, McDermott TR, Inskeep WP, Konhauser KO (2007) Chemical reactivity of microbe and mineral surfaces in hydrous ferric oxide depositing hydrothermal springs. *Geobiology* 5, 219-234.
47. **Lalonde SV**, Amskold L, Warren LA, Konhauser KO (2007) Surface chemical reactivity and metal adsorptive properties of natural cyanobacterial mats from an alkaline hydrothermal spring, Yellowstone National Park. *Chemical Geology* 243, 36-52.
48. Gingras MK, **Lalonde SV**, Amskold L, Konhauser KO (2007) Wintering Chironomid larvae mine oxygen. *Palaios* 22, 433-438.
49. Zorn ME, **Lalonde SV**, Gingras MK, Pemberton SG, Konhauser KO (2006) Microscale distribution of oxygen in the burrow walls of seven intertidal invertebrates from Willapa Bay, Washington. *Geobiology* 4, 137-145.
50. **Lalonde SV**, Konhauser KO, Reysenbach AL, Ferris FG (2005) The experimental silicification of *Aquificales* and their role in hot spring sinter formation. *Geobiology* 3, 41-52.

Other refereed contributions

1. Peacock CL, **Lalonde SV**, Konhauser KO (2017) Iron minerals as archives of Earth's redox and biogeochemical evolution. *European Mineralogical Union Notes in Mineralogy*, volume 17, 121-172.
2. Konhauser KO, **Lalonde SV** (2010) Microbial Silicification at Hot Springs. In Schroeder, PA (Editor), Clays of Yellowstone National Park. Clay Mineral Society Workshop Lecture Series volume 17, 94 pp.
3. Reysenbach A-L, Banta A, Civello S, Daly J, Mitchel K, **Lalonde SV**, Konhauser KO, Rustenholtz K, Takacs-Vesbach C (2005) The *Aquificales* in Yellowstone National Park, In Inskeep WP and TR McDermott (Editors), Geothermal Biology and Geochemistry in Yellowstone National Park: proceedings of the Thermal Biology Institute workshop. Montana State University Publications, Bozeman, MT.

Non-refereed contributions (only 2007 – present listed)

1. **Lalonde SV**, Sansjofre P, Homann M, Thoby M, Afroz M, Killingsworth B, McIntyre T, Kurucz S, Lebeau O, Timpa S, Konhauser K, Riding R, Fralick P (2018) Project EARTHBLOOM: field and drill core study of Earth's oldest carbonate platform (2.94 Ga Red Lake Greenstone Belt, Ontario, Canada). Réunion des Sciences de la Terre 2018, Lille, France. Oral presentation.
2. Homann H, Sansjofre P, Van Zuilen M, Heubeck C, Gong J, Killingsworth B, Foster I, Airo A, Van Kranendonk M, **Lalonde SV** (2018) Terrestrial microbial mats and biogeochemical cycling on land 3,220 Myr ago. Réunion des Sciences de la Terre 2018, Lille, France. Oral presentation.
3. Foster I, Agranier A, Köhler I, Homann H, Heubeck C, Nonnotte P, Konhauser K, Tripathi A, **Lalonde SV** (2018) The Lu-Hf isotope geochemistry of Banded Iron Formations: Secular evolution and evidence for emerged continents 3.2 billion years ago. Réunion des Sciences de la Terre 2018, Lille, France. Oral presentation.
4. Philippot P, Ávila J, Killingsworth B, Tessalina S, Caqueneau T, Muller E, Pecoits E, Cartigny P, **Lalonde SV**, Ireland T, Thomazo C, Van Kranendonk M, Busigny V (2018) Globally asynchronous sulphur isotope signals require re-definition of the Great Oxidation Event. Réunion des Sciences de la Terre 2018, Lille, France. Oral presentation.
5. Thoby M, Warchola T, Philippot P, Killingsworth B, Alam M, Alessi D, Thomazo C, Ader M, Konhauser KO, **Lalonde SV** (2018) A Mo isotope challenge for oxidative Mn cycling during the Great Oxidation Event. Réunion des Sciences de la Terre 2018, Lille, France. Oral presentation.
6. Sansjofre P, Homann M, Afroz M, Lebeau O, Fralick P, **Lalonde SV** (2018) Paired carbon isotope data from the 2.94 Ga Red Lake carbonate platform, Ontario, Canada. Réunion des Sciences de la Terre 2018, Lille, France. Poster presentation.
7. Homann M, Fralick P, Sansjofre P, Kurucz S, Afroz M, Ojala T, Thoby M, Rigoussen D, **Lalonde SV** (2018) The Red Lake Greenstone Belt (2.94 Ga, Canada): A new window into carbon cycling at the dawn of Earth's carbonate factory. Geobiology Gordon Research Conference "The Microbial Planet from Deep Time to Today", Galveston, TX. Poster presentation.
8. Mand K, Paiste K, Thoby M, **Lalonde SV**, Robbins LJ, Lepland A, Kirsimäe K, Konhauser KO (2018) Redox-sensitive element enrichment in the ~2.0 Ga Zaonega Formation: Implications for late Paleoproterozoic redox conditions. Geobiology Gordon Research Conference "The Microbial Planet from Deep Time to Today", Galveston, TX. Poster presentation.
9. Thoby M, Konhauser KO, Philippot P, Killingsworth B, Warchola T, **Lalonde SV** (2018) Post-GOE redox insights from Mo isotopes, Ce anomalies, and Mn from the ~2.24 Ga Kazput Formation. Geobiology Gordon Research Conference "The Microbial Planet from Deep Time to Today", Galveston, TX. Poster presentation.

10. Homann M, Heubeck C, Airo A, Van Kranendonk M, Van Zuilen M, Gong J, Sansjofre P, **Lalonde SV** (2017) Terrestrial Microbial Mats at 3, 220 Myr ago (Moodies Group, SA). 2017 Goldschmidt Conference, Paris, France. Poster presentation.
11. Richet N, Sansjofre P, Dupré S, Lebeau O, **Lalonde SV** (2017) Origin of Authigenic Carbonates from the NW Continental Margin of Madagascar (Marine Expedition Pamela-Moz01): A Mineralogical and Geochemical Investigation. 2017 Goldschmidt Conference, Paris, France. Poster presentation.
12. Thoby M, **Lalonde SV**, Fralick P, Sumner D, Visscher P, Konhauser KO (2017) An Expanded Molybdenum Isotope Dataset for Precambrian Stromatolitic Carbonates. 2017 Goldschmidt Conference, Paris, France. Poster presentation.
13. Foster I, Agranier A, Heubeck C, Köhler I, Homann M, Tripathi A, Nonnotte P, Ponzevera E, **Lalonde SV** (2017) Ultra-Radiogenic Hafnium in Archean BIF: Intense Sedimentary Lu/Hf Fractionation at 3.2 Ga. 2017 Goldschmidt Conference, Paris, France. Poster presentation.
14. Killingsworth B, Sansjofre P, Philippot P, Thomazo C, Cartigny P, **Lalonde SV** (2017). ^{18}O -Depleted Sulfate Fingerprint of Paleoproterozoic Glacial Meltwater. 2017 Goldschmidt Conference, Paris, France. Oral presentation.
15. Selva G, Sansjofre P, Jebbar M, Thomazo C, Cocquerez T, **Lalonde SV** (2017) Temperature, Growth Rate, and Pressure Dependence on S Isotope Fractionation in *Desulfovibrio Hydrothermalis*. 2017 Goldschmidt Conference, Paris, France. Poster presentation.
16. Sansjofre P, Roué L, Rigoussen D, Shapiro R, Homann M, Killingsworth B, Tanvet C, **Lalonde SV**. A Shallow-To-Deepwater Geochemical Transect of a Neoproterozoic Marinoan Cap Dolostone (Noonday Formation, Death Valley Region). 2017 Goldschmidt Conference, Paris, France. Poster presentation.
17. **Lalonde SV**, Sansjofre P, Homann M, Thoby M, Rigoussen D, Fralick P (2017) Preliminary Geochemical Data from Earth's Oldest Carbonate Platform (2.94 Ga Red Lake Greenstone Belt, Canada). 2017 Goldschmidt Conference, Paris, France. Poster presentation.
18. Liorzou C, Sansjofre P, Breton T, Mandic M, Smajgi D, **Lalonde SV** (2017) A New Method for the Analysis of $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ of Dissolved Inorganic Carbon. 2017 Goldschmidt Conference, Paris, France. Poster presentation.
19. Defliese W, Dixit Y, Retallack G, **Lalonde SV**, Tripathi A (2017). Constraints on Paleoenvironments and Surface Temperatures in the Neoproterozoic and Paleozoic and Implications for Metazoan Evolution. 2017 Goldschmidt Conference, Paris, France. Poster presentation.
20. Philippot P, Ávila J, Killingsworth B, Baton F, Caquineau T, Muller E, Pecoits E, Cartigny P, Tessalina S, **Lalonde SV**, Ireland T, Thomazo C, Van Kranendonk M, Busigny V. Globally Asynchronous Sulfur Isotope Signals Require Re-definition of the Great Oxidation Event. 2017 Goldschmidt Conference, Paris, France. Oral presentation.
21. **Lalonde SV** (2017) Geological evidence for the origin of oxygenic photosynthesis. 1st meeting of the Geobiology Society, Banff, Canada. Invited oral presentation.
22. Killingsworth B, Sansjofre P, Philippot P, Thomazo C, Cartigny P, **Lalonde SV** (2017). Oxygen isotope evidence of a Paleoproterozoic snowball Earth. 1st meeting of the Geobiology Society, Banff, Canada. Poster presentation.
23. Rigoussen D, Sansjofre P, Thoby M, Fralick P, Konhauser KO, **Lalonde SV** (2017) Major and trace element compositions of sedimentary carbonates through geological time. 1st meeting of the Geobiology Society, Banff, Canada. Poster presentation.

24. Thoby M, **Lalonde SV**, Fralick P, Sumner DY, Visscher PT, Konhauser KO (2017) The molybdenum isotope composition of stromatolitic carbonates. 1st meeting of the Geobiology Society, Banff, Canada. Poster presentation.
25. Mänd K, Üpraus K, Thoby M, **Lalonde SV**, Robbins LJ, Lepland A, Kirsimäe K, Konhauser KO (2017) Trace metal enrichment in 1.98 Ga black shales of the Zaonega Formation. 1st meeting of the Geobiology Society, Banff, Canada. Poster presentation.
26. Homann M, Heubeck C, Airo A, Van Kranendonk M, Van Zuilen M, Gong J, Sansjofre P, **Lalonde SV** (2017). Microbial mats thrived on the continental surface 3,220 Myr ago. 1st meeting of the Geobiology Society, Banff, Canada. Poster presentation.
27. **Lalonde SV** (2017) The chemical evolution of seawater through geological time: insights from Precambrian iron formation. UCA Clermont Ferrand, invited seminar.
28. **Lalonde SV** (2017) The chemical evolution of seawater through geological time: insights from Precambrian iron formations. ENS Lyon, invited seminar.
29. **Lalonde SV** (2016) À la recherche des premières traces de vie sur Terre. University of Brest, Public lecture.
30. Petryshyn VP, **Lalonde SV**, Greene SE, Ibarra Y, Corsetti FA, Bottjer DJ, Tripathi AE (2016) Temperature and oxygenation of the shallow Tethys during the end-Triassic extinction event. American Geophysical Union, Fall Meeting 2016, abstract B21E-0462. Poster presentation.
31. **Lalonde SV**, Konhauser KO (2016) Earth's earliest oxidative weathering: geochemical evidence and mechanistic considerations. Workshop on Origin and Evolution of the Early Earth, St Etienne, France. Oral presentation.
32. Homann M, Heubeck C, Sansjofre P, **Lalonde SV** (2016) The conquest of land: terrestrial microbial mats at 3.22 Ga. Workshop on Origin and Evolution of the Early Earth, St Etienne, France. Oral presentation.
33. Killingsworth B, Sansjofre P, Philippot P, Cartigny P, **Lalonde SV** (2016) Challenges in the extraction of early Earth sulfate for stable isotope measurements. Workshop on Origin and Evolution of the Early Earth, St Etienne, France. Poster presentation.
34. Thoby MA, **Lalonde SV**, Fralick P, Sumner DY, Visscher PT, Konhauser KO (2016) The isotopic composition of molybdenum and redox evolution of seawater over geological time: new insights from stromatolitic carbonates spanning 2.94 Ga to present. Workshop on Origin and Evolution of the Early Earth, St Etienne, France. Poster presentation.
35. Sansjofre P, **Lalonde SV**, Trindade RIF, Nogueira Afonso CR, Killingsworth B, Strauss H, Ader M (2016) Enhanced bio-productivity in the immediate aftermath of the Marinoan Snowball Earth: a new high-resolution redox approach. Workshop on Origin and Evolution of the Early Earth, St Etienne, France. Poster presentation.
36. Foster IS, Agranier A, Tripathi AK, Nonnotte P, Ponzevera E, **Lalonde SV** (2016) Ultra-radiogenic Hafnium in Archean banded iron formation: evidence of a seawater signal for tracking continental emergence. Workshop on Origin and Evolution of the Early Earth, St Etienne, France. Poster presentation.
37. **Lalonde SV** (2016) Global changes and metal isotope proxies. FAR-DEEP workshop, Geological Survey of Norway at Trondheim (NGU). Oral Presentation.
38. Petryshyn VP, **Lalonde SV**, Greene SE, Ibarra Y, Gammariello R, Corsetti FA, Bottjer DJ, Tripathi AE (2016) High-resolution trace metal analysis of a stromatolite deposited during the end-Triassic extinction event. 35th International Geological Congress, Cape Town, S. Africa. Oral presentation.

39. **Lalonde SV**, Emily E, Konhauser KO (2016) Evidence for Milankovic cycles on the Early Earth? A cyclostratigraphic study of Precambrian iron formation. 35th International Geological Congress, Cape Town, S. Africa. Poster presentation.
40. Thoby MA, **Lalonde SV**, Fralick P, Konhauser KO (2016) The molybdenum isotope composition of modern and ancient stromatolites. 35th International Geological Congress, Cape Town, S. Africa. Poster presentation.
41. **Lalonde SV** (2016) Modern insights into Precambrian metal cycling. Geobiology Gordon Research Conference “Reconstructing Processes from Genes to the Geologic Record”, Galveston, TX. Invited speaker.
42. Nies SM, Shapiro RS, **Lalonde SV** (2015) Preservation of REE and Fe isotopes in altered stromatolites and the paleo-environmental record. American Geophysical Union, Fall Meeting 2015, abstract PP33B-2302. Poster presentation.
43. **Lalonde SV** (2015) The banded iron formation (BIF) record of Precambrian seawater composition... and orbital parameters? University of Geneva, Invited Seminar.
44. **Lalonde SV**, Konhauser KO (2015) Benthic O₂ Factories and Earth's Earliest Oxidative Weathering. Goldschmidt Geochemistry Conference, Prague, CZ. Invited Oral Presentation.
45. **Lalonde SV**, Pecoits E, Beaumais A, Konhauser KO, Philippot P (2015) A High Resolution Record of Paleoproterozoic Environmental Change: XRF Core Scan Data from the Turee Creek Drilling Project (TCDP), Hamersley and Turee Creek Groups, Western Australia. Goldschmidt Geochemistry Conference, Prague, CZ. Poster Presentation.
46. Robbins L, **Lalonde SV**, Mloszewska A, Kappler A, Konhauser KO (2015) Testing 'Bio-Inorganic Bridges' Using the Iron Formation Record: Updates on Nickel and Zinc. Goldschmidt Geochemistry Conference, Prague, CZ. Oral Presentation.
47. Konhauser KO, Alessi D, Robbins L, Liu Y, Martinez R, **Lalonde SV**, Mloszewska A, Kappler A, Li Y (2015) Marine Photoferrotrophs and their Trace Element Contributions to Precambrian Banded Iron Formations. Goldschmidt Geochemistry Conference, Prague, CZ. Invited Oral Presentation.
48. Mloszewska AM, Owttrim GW, Whitford DS, **Lalonde SV**, Kappler A, Konhauser KO (2015) Silica Saved our Earliest Marine Cyanobacteria. Goldschmidt Geochemistry Conference, Prague, CZ. Oral Presentation.
49. Sans Jofre P, Trindade R, Tribovillard N, **Lalonde SV**, Nogueira A, Ader M (2015) Paleo-Redox Conditions in the Marinoan Glaciation Aftermath from Rare Earth Element, Araras Carbonate Platform (Brazil). Goldschmidt Geochemistry Conference, Prague, CZ. Poster Presentation.
50. **Lalonde SV** (2015) The chemical evolution of seawater through geological time: insights from Precambrian iron formations. Dalhousie University, Invited Seminar.
51. **Lalonde SV** (2015) Trace element evolution of seawater through geological time: insights from Precambrian iron formations. University of Bristol, Invited Seminar.
52. Konhauser KO, Pecoits E, Peacock C, Robbins LJ, Kappler A, **Lalonde SV** (2014) Precambrian Secular Evolution of Oceanic Nickel Concentrations: An Update. American Geophysical Union, Fall Meeting 2014, abstract U53A-07. Oral presentation.
53. **Lalonde SV** (2014) How do microorganisms silicify? Experimental insights into microbial silicification mechanisms, rates, taphonomy, and physiological responses to entombment in silica. Muséum National d'Histoire Naturelle Paris, Invited Seminar.

54. **Lalonde SV** (2014) Trace element evolution of seawater through geological time as revealed by Precambrian iron formations. University of Leeds, Invited Seminar.
55. **Lalonde SV** (2014) Trace element evolution of seawater through geological time as revealed by Precambrian iron formations. Institut de Physique du Globe de Paris, Invited Seminar.
56. Konhauser KO, **Lalonde SV** (2014) Benthic Oxygenic Photosynthesis on the Archean Landmass. Goldschmidt Geochemistry Conference, Sacramento, USA. Invited Keynote.
57. Konhauser KO, **Lalonde SV** (2014) Oxidative Continental Weathering Before the Great Oxidation Event. 3rd International Geobiology Conference, Wuhan, China. Invited Keynote.
58. Mloszewska A, **Lalonde SV**, Whitford D, Owttrim G, Konhauser KO (2014) Archean Seawater as a Sunscreen: UV Attenuation and Cyanobacterial Growth in Fe- and Si-Rich Media. Goldschmidt Geochemistry Conference, Sacramento, USA. Oral Presentation.
59. Konhauser KO, **Lalonde SV** (2014) Evolution of Oxidative Continental Weathering. EGU General Assembly, Vienna, Austria, Oral Presentation.
60. Swanner E, Planavsky N, **Lalonde SV**, Robbins LJ, Bekker A, Rouxel OJ, Konhauser KO, Mojzsis SJ (2013) Sedimentary cobalt concentrations track marine redox evolution. EGU General Assembly, Vienna, Austria, Oral Presentation.
61. **Lalonde SV**, Konhauser KO, Rouxel OJ (2012) Germanium and Silicon isotopic evolution of seawater inferred from Precambrian iron formations. Goldschmidt Geochemistry Conference, Montreal, Canada. Oral Presentation 13a/16:00.
62. Reinhard CT, **Lalonde SV**, Lyons TW (2012) Oxidative weathering on the early Earth. Goldschmidt Geochemistry Conference, Montreal, Canada. Oral Presentation 15d/17:45.
63. Haugaard R, Pecoits E, **Lalonde SV**, Aubet N, Van Kranendonk M, Konhauser KO (2012) High-resolution chemostratigraphy of the 2.46 Ga Joffe banded iron formation, Western Australia. Goldschmidt Geochemistry Conference, Montreal, Canada. Poster Presentation 2a/6.
64. Robbins L, **Lalonde SV**, Konhauser KO (2012) Paleo-marine trace element partitioning relationships recorded in Precambrian iron formations. Goldschmidt Geochemistry Conference, Montreal, Canada. Poster Presentation 13h/118.
65. **Lalonde SV** (2012) Hydrothermalism and Earth System Evolution: New insights from the elemental and isotopic composition of modern and ancient hydrothermal sediments. Audition, Centre National de la Recherche Scientifique (CNRS) Observatoire de Paris-Meudon, March 2012.
66. **Lalonde SV** (2012) Chemical sedimentary proxies for the evolution of Earth's primitive oceans and biosphere. Invited Seminar and audition, Stanford University, March 2012.
67. **Lalonde SV**, Planavsky NJ, Rouxel OJ, Pecoits E, Konhauser KO (2011) Molybdenum and Vanadium abundances in Banded Iron Formations and the onset of oxidative continental weathering. Goldschmidt Geochemistry Conference, Prague, Czech Republic. Oral Presentation 02i/11:00.
68. Konhauser KO, **Lalonde SV**, Planavsky NJ, Pecoits E, Lyons TW, Mojzsis SJ, Rouxel OJ, Barley ME, Rosiere C, Fralick PW, Kump LR, Bekker A (2011) Chromium enrichment in iron formations record Earth's first acid rock drainage during the Great Oxidation Event. Goldschmidt Geochemistry Conference, Prague, Czech Republic. Oral Presentation 02i/10:30.

69. Robbins LJ, **Lalonde SV**, Konhauser KO (2011) The evolution of the marine Zn reservoir: Comparing the proteomic and sedimentary records. Goldschmidt Geochemistry Conference, Prague, Czech Republic. Poster Presentation 07b/2005.
70. Petrash DA, **Lalonde SV**, Gingras MK, Konhauser KO (2011) Mn(IV) reduction: A driving mechanism for Mg²⁺-enrichment in shallow marine carbonates? Goldschmidt Geochemistry Conference, Prague, Czech Republic. Poster Presentation 07b/2004.
71. Rouxel OJ, Escoube R, Qi H, **Lalonde SV**, Ponzevera E (2011) Germanium isotopic variations in seafloor hydrothermal systems and sedimentary rocks. EGU General Assembly, Vienna, Austria, Oral Presentation
72. **Lalonde SV**, Konhauser KO (2010) The Great Oxidation Event recorded by transition element abundances in banded iron formations. 5th International Archean Symposium, Perth, W. Australia, Oral Presentation Theme 4, 9/8/2010.
73. **Lalonde SV**, Pecoits E, Konhauser KO (2010) Transition element abundances in Banded Iron Formations record the Great Oxidation Event. Goldschmidt Geochemistry Conference, Knoxville, Tennessee. Oral Presentation 02d/12:00.
74. Petrash D, **Lalonde SV**, Pecoits E, Gingras M, Konhauser KO (2010) Microbially-catalyzed cementation of modern gypsum-dominated thrombolites. Goldschmidt Geochemistry Conference, Knoxville, Tennessee. Oral Presentation 15j/15:15.
75. Petrash DA, **Lalonde SV**, Pecoits E, Gingras MK, Konhauser KO (2010) Microbially-catalyzed cementation of modern gypsum-dominated thrombolites. Geocanada 2010 meeting, Calgary, AB. Poster Presentation.
76. **Lalonde SV**, Pecoits E, Konhauser KO (2010) Shifting transition element abundances in Banded Iron Formation mark the Great Oxidation Event. Geocanada 2010 meeting, Calgary, AB. Oral Presentation.
77. **Lalonde SV**, Pecoits E, Konhauser KO (2009) Partitioning of Si, P, V, Mo, and Ni during the experimental precipitation of ferric oxyhydroxides and their use as paleo-proxies in Banded Iron Formation. Goldschmidt Geochemistry Conference, Davos, Switzerland. Oral Presentation 07a/9:45.
78. Pecoits E, **Lalonde SV**, Barley, M, Kamber BS, Konhauser KO (2009) Precambrian nickel sources and sinks. Goldschmidt Geochemistry Conference, Davos, Switzerland. Oral Presentation 10b/14:30.
79. Konhauser KO, Pecoits E, **Lalonde SV**, Papineau D, Nisbet EG, Barley ME, Arndt NT, Zahnle K, Kamber BS (2009) Oceanic Nickel Depletion and a Methanogen Famine before the Great Oxidation Event. Goldschmidt Geochemistry Conference, Davos, Switzerland. Oral Presentation 07a/10:00.
80. Petrash DA, **Lalonde SV**, Konhauser KO (2009) Experimental Investigation of Proton and Cadmium adsorption by Mucin, a commercially-available extracellular polymeric substance (EPS) analog. Goldschmidt Geochemistry Conference, Davos, Switzerland. Poster Presentation 17a/277.
81. **Lalonde SV**, Pecoits E, Papineau D, Nisbet EG, Barley ME, Arndt NT, Zahnle, Kamber BS, Konhauser, KO (2008) Do Secular Trends in the Nickel Content of Banded Iron Formation Record a Methanogen Famine? American Geophysical Union Fall Meeting, San Francisco, CA. Poster B21B-0347.
82. **Lalonde SV**, Konhauser KO (2008) Proton Adsorption and in situ Metal Sequestration by Diverse Microbial Mats from Yellowstone National Park, USA. Goldschmidt Geochemistry Conference, Vancouver, BC. Oral Presentation 19a/11:00/4.
83. Pecoits E, **Lalonde SV**, Kamber BS, Konhauser KO (2008) REE and Y Compositions of Archean and Paleoproterozoic Banded Iron-Formations. Goldschmidt Geochemistry Conference, Vancouver, BC. Poster 03e/21/1.

84. Konhauser KO, Pecoits E, Ballard N, **Lalonde SV** (2008) Partitioning of P, V, Mo, and Ni during Precipitation of Ferric Oxyhydroxides and Implications for Archean Ocean Nutrient Availability during BIF Deposition. Goldschmidt Geochemistry Conference, Vancouver, BC. Poster 03e/18/1.
85. **Lalonde SV**, Konhauser KO (2008) Was There Really an Archean Ocean Phosphate Crisis? SETI Institute Astrobiology Science Conference, Santa Clara, California. Oral presentation 15-12-O.
86. **Lalonde SV**, Konhauser KO (2008) Elemental Partitioning from Natural Waters to Mineral and Microbial Assemblages in Yellowstone National Park, USA: Can Surface Adsorption Processes Provide a Biosignature? SETI Institute Astrobiology Science Conference, Santa Clara, California. Poster 24-28-P.
87. Pecoits E, **Lalonde SV**, Konhauser KO (2008) Ni in Banded Iron-formations: Potential Evolutionary Implications. SETI Institute Astrobiology Science Conference, Santa Clara, California. Poster 24-38-P.
88. Konhauser KO, **Lalonde SV** (2007). Partitioning of trace metals into BIF and implications for Archean ocean nutrient availability. Royal Society of London Meeting on Photosynthesis, London, England. Oral Presentation.
89. Konhauser KO, **Lalonde SV**, Anbar A (2007) Decoupling Photochemical Fe(II) Oxidation from Shallow-Water BIF Deposition. NASA Astrobiology workshop "Biosignatures in Ancient Rocks", Sudbury, Ontario. Poster BAR-11.
90. **Lalonde SV**, Pecoits E, Wall K, Konhauser KO (2007) Partitioning of P, V, Mo, and Ni during Precipitation of Ferric Oxyhydroxides and Implications for Archean Ocean Nutrient Availability during BIF Deposition. NASA Astrobiology workshop "Biosignatures in Ancient Rocks", Sudbury, Ontario. Poster BAR-12.
91. Pecoits E, **Lalonde SV**, Konhauser KO (2007) Ni in Banded Iron Formations: Its Origin and Potential Evolutionary Implications. NASA Astrobiology workshop "Biosignatures in Ancient Rocks", Sudbury, Ontario. Poster BAR-17.
92. **Lalonde SV**, Konhauser KO (2007) Cell surface chemistry of naturally occurring microbes: Proton adsorption and in-situ metal sequestration by diverse microbial mats from Yellowstone National Park, USA. Frontiers in Mineralogy Conference, Cambridge, UK.
93. Konhauser KO, **Lalonde SV**, Amskold L, Holland HD (2007) Was there really an Archean phosphate crisis? Frontiers in Mineralogy Conference, Cambridge, UK. Oral Presentation.