

# Justin V. Strauss

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## Education

**Harvard University**, Cambridge, MA  
PhD, Department of Earth and Planetary Sciences May 2015  
MA, Department of Earth and Planetary Sciences May 2014

**The Colorado College**, Colorado Springs, CO  
BA, Department of Geology Aug. 2006

## Teaching and Work Experience

**Dartmouth College, Department of Earth Sciences, Hanover, NH**  
*Assistant Professor* Jan. 2016–present

**Stanford University, Department of Geological Sciences, Stanford, CA**  
*Agouon Institute Geobiology Postdoctoral Scholar* July 2015 - Dec. 2015

**Harvard University, Department of Earth and Planetary Sciences, Cambridge, MA**  
*Teaching Assistant* Sep. 2010 - July 2015

**Princeton University, Department of Geosciences, Princeton, NJ**  
*Lab Technician, Field Assistant – Dr. Adam Maloof* June. 2007 - Dec. 2007

**The Colorado College, Department of Geology, Colorado Springs, CO**  
*Paraprofessional* Sept. 2006 - June 2007

## Honors and Awards

2021 Alfred P. Sloan Foundation Earth System Science Fellow  
2018 National Geographic Explorer  
2018 American Chemical Society Doctoral New Investigator Award  
2015 Agouon Institute Geobiology Postdoctoral Fellowship  
2015 Geological Society of America Graduate Student Research Grant  
2014 Geological Society of America Graduate Student Research Grant  
2013 Star Family Prize for Excellence in Undergraduate Advising Nominee – Harvard University  
2013 Bok Center Distinction in Teaching Award – Harvard University  
2012 Bok Center Distinction in Teaching Award – Harvard University  
2012 GACMAC 2012 Jerome Remick III Poster Award  
2012 National Science Foundation Graduate Research Fellowship Recipient  
2006 William A. Fischer Special Recognition Geosciences Award – Colorado College  
2005 Patricia J. Buster Scholarship for Undergraduate Research – Colorado College  
2004 Patricia J. Buster Scholarship for Undergraduate Research – Colorado College

## Publications

\*Dartmouth Graduate/Postdoc Author    \*\*Dartmouth Undergraduate Author    \*\*\*Joint 1<sup>st</sup> Author

**In Review:**

Bazarnik, J., Kósmínska, K., McClelland, W.C., **Strauss, J.V.**, Piepjohn, K., Elvevold, S., Zielinski, G., and Majka, J., in review, Metamorphic evolution of the metasedimentary rocks from northern Spitsbergen helps locating the major tectonic boundary in the Caledonides of northern Svalbard: *Journal of Metamorphic Petrology*, v. xx, p. xxx–xxx.

Jost, A.B., Mackey, T.J., Wilcots, J., Creveling, J.R., Fairchild, I.J., **Strauss, J.V.**, and Bergmann, K.D., in review, Interpreting diagenesis in carbonate clumped isotopes: A case study from late Cryogenian glacial carbonates of Svalbard: *Geochimica et Cosmochimica Acta*, v. xx, p. xxx.

Koch, M.M., \*Faehrich, K., McClelland, W.C., Crowley, J.L., Melchin, M.J., Beranek, L.P., and **Strauss, J.V.**, in review, Age and significance of the Fire Bay Formation: An Ordovician arc fragment within the Clements Markham Belt, Northwest Ellesmere Island: *Canadian Journal of Earth Sciences*, v. xx, p. xxx–xxx.

Kinney, S.T., Maclennan, S.A., Szymanowski, D., Keller, C.B., VanTongeren, J.A., Setera, J.B., Jaret, S.J., \*\*Town, C.F., **Strauss, J.V.**, Bradley, D.C., Olsen, P.E., and Schoene, B., in review., Onset of long-lived silicic and alkaline magmatism in eastern North America precedes CAMP emplacement: *Geology*, v. xx, p. xxx–xxx.

\*Mehra, A., Keller, C.B., McLennan, S.M., Tosca, N.J., Sperling, E.A., \*Zhang, T., and **Strauss, J.V.**, in review, Orogenic controls on the global sedimentary archive: *Geology*, v. xx., p. xxx–xxx.

Palucis, M.C., Morgan, A.M., **Strauss, J.V.**, Rivera-Hernandez, F., Marshall, J., Menio, E., and \*\*Miller, R., in review, Rates and processes controlling periglacial alluvial fan formation: Implications for Martian fans: *Journal of Geophysical Research Planets*, v. xx, p. xxx–xxx.

Richardson, J.A., Roest-Ellis, S., Phillips, B., **Strauss, J.V.**, Webb, S.M., and Tosca, N.J., in review, Characterization and geological implications of Precambrian calcite-hosted phosphate: *Nature Communications*, v. xx, p. xxx–xxx.

Stein, N.T., Grotzinger, J.P., Quinn, D.P., Lingappa, U.F., Present, T.M., Trower, E.J., Gomes, M.L., Orzechowski, E., Cantine, M., Metcalfe, K.S., Fischer, W.W., Ehlmann, B.L., **Strauss, J.V.**, and Knoll, A.H., in review, Geomorphic and environmental controls on microbial mat fabrics on Little Ambergris Cay, Turks and Caicos Islands: *Sedimentology*, v. xx, p. xxx.

**2022/In Press:**

68. \*Busch, J.F., Hodgin, E.B., Ahm, A.-S., Husson, J.M., Macdonald, F.A., Bergmann, K.D., Higgins, J.A., and **Strauss, J.V.**, 2022, Global and local drivers of the Ediacaran Shuram carbon isotope excursion: *Earth and Planetary Science Letters*, v. 579, p. 117368.

67. McClelland, W.C., **Strauss, J.V.**, Gilotti, J.A., and Colpron, M., in press, Paleozoic evolution of the northern Laurentian margin: Evaluating links between Caledonian, Ellesmerian, and Cordilleran orogenesis: *Geological Society of America Special Paper*, v. xx, p. xxx–xxx.

66. Millikin, A.E.G., **Strauss, J.V.**, Halverson, G.P., Bergmann, K.D., and Rooney, A.D., 2022, Calibrating the Russoya excursion in Svalbard, Norway, and implications for Neoproterozoic chronology: *Geology*, v. xx, p. xxx–xxx.

**2021:**

65. Ahm, A-S.C., Bjerrum, C.J., Hoffman, P.F., Macdonald, F.A., Maloof, A.C., Rose, C.V., **Strauss, J.V.**, and Higgins, J.A., 2021, The Ca and Mg isotope record of the Cryogenian Trezona carbon isotope excursion: *Earth and Planetary Science Letters*, v. 568, p. 117002.

64. \*Busch, J.F., Rooney, A.D., Meyer, E.E., \*\*Town, C., Moynihan, D., and **Strauss, J.V.**, 2021, Late Neoproterozoic–early Paleozoic basin evolution in the Coal Creek inlier of Yukon, Canada: Implications for the tectonic evolution of northwestern Laurentia: *Canadian Journal of Earth Sciences*, v. 58, p. 355–377.

63. \*Faehnrich, K., McClelland, W.C., Colpron, M., \*\*Nutt, C.L., \*\*Miller, R.S., Trembath, M., and **Strauss, J.V.**, 2021, Pre-Mississippian stratigraphic architecture of the Porcupine Shear Zone, Yukon and Alaska, and significance in the evolution of northern Laurentia: *Lithosphere*, p. 7866155.
62. Farrell, U.C., Samawi, R., Anjanappa, S., Klykov, R., Adeboye, O., Agic, H., Ahm, A.-S.C., Boag, T.H., Bowyer, F.T., Brocks, J.J., Brunoir, T.N., Canfield, D.E., Chen, X., Cheng, M., Clarkson, M.O., Cordie, D., Crockford, P.W., Cui, H., Dahl, T.W., Del Mouro, L., Dewing, K., Dornbos, S., Drabon, N., Dumoulin, J.A., Emmings, J.F., Endriga, C., Fraser, T., Gaines, R.R., Gaschnig, R., Gibson, T., Gilleaudeau, G.J., Goldberg, K., Guilbaud, R., Halverson, G.P., Hammarlund, E.U., Hantsoo, K.G., Henderson, M., Hodgskiss, M.S.W., Horner, T.J., Husson, J., Johnson, B.W., Kabanov, P., Keller, C.B., Kimmig, J., Kipp, M.A., Knoll, A.H., Kreitsmann, T., Kunzmann, M., Kurzweil, F., LeRoy, M.A., Li, C., Lipp, A.G., Loydell, D.K., Lu, X., Macdonald, F.A., Magnall, J.M., Mänd, K., Mehra, A., Melchin, M.J., Miller, A.J., Mills, N.T., Mwinde, C., O'Connell, B., Och, L.M., Ossa Ossa, F., Pagès, A., Paiste, K., Partin, C.A., Peters, S.E., Playter, T., Plaza-Torres, S., Porter, S., Poulton, S.W., Pruss, S.B., Richo, S., Ritzer, S.R., Rooney, A.D., Sahoo, S., Schoepfer, S.D., Sclafani, J.A., Shen, Y., Shorttle, O., Slotznick, S., Smith, E., Spinks, S.C., Stockey, R.G., **Strauss, J.V.**, Stüeken, E.E., Tecklenburg, S., Thomson, D., Tosca, N.J., Uhlein, Vizcaíno, M.N., G.J., Wang, H., White, T., Wilby, P., Woltz, C., Wood, R.A., Yurchenko, I., Zhang, T., Planavsky, N.J., Lau, K.V., Johnston, D.T., and Sperling, E.A., 2021, The Sedimentary Geochemistry and Paleoenvironments Project: *Geobiology*, v. 19, p. 545–556.
61. \*Gibson, T.M., \*Faehnrich, K., \*Busch, J.F., McClelland, W.C., Schmitz, M.D., and **Strauss, J.V.**, 2021, A detrital zircon test of large-scale terrane displacement along the Arctic margin of North America: *Geology*, v. 49, p. 545-550.
60. \*Gibson, T.M., Millikin, A.E.G., Anderson, R.P., Myrow, P.M., Rooney, A.D., and **Strauss, J.V.**, 2021, Tonian deltaic sedimentation on the edge of Laurentia: The Veteranen Group of northeastern Spitsbergen, Svalbard: *Sedimentary Geology*, v. 426, p. 106011.
59. \*Mehra, A., Keller, C.B., \*Zhang, T., Tosca, N.J., McLennan, S., Sperling, E.A., Farrell, U., Brocks, J., Canfield, D., Cole, D., Crockford, P., Cui, H., Dahl, T.W., Dewing, K., Emmings, J.F., Gaines, R.R., Gibson, T., Gilleaudeau, G.J., Guillbaud, R., Hodgskiss, M., Jarrett, A., Kabanov, P., Kunzmann, M., Loydell, D.K., Lu, X., Miller, A., Mills, N.T., Mouro, L.D., O'Connell, B., Peters, S.E., Poulton, S., Ritzer, S.R., Smith, E., Wilby, P., Woltz, C., and **Strauss, J.V.**, 2021, Curation and analysis of global sedimentary geochemical data to inform Earth history: *GSA Today*, v. 31, p. 4–9.
58. McClelland, W.C., **Strauss, J.V.**, Colpron, M., Gilotti, J.A., \*Faehnrich, K., Malone, S.J., Gehrels, G.E., Macdonald, F.A., Oldow, J.S., 2021, “Taters” versus “Sliders”: Evidence for a long-lived history of strike-slip displacement along the Canadian Arctic Transform System (CATS): *GSA Today*, v. 31, p. 4–11.
57. Roest-Ellis, S., **Strauss, J.V.**, and Tosca, N.J., 2021, Experimental constraints on non-skeletal CaCO<sub>3</sub> precipitation from mid-Neoproterozoic seawater: *Geology*, v. 49, p. 561–565.
56. Sperling, E.A., Melchin M.J., Fraser, T., Stockey, R.G., Farrell, U.C., Bhajan, L., Browne, T.N., Cole, D.B., Gill, B.C., Lenz, A., Loydell, D.K., \*\*Malinowski, J. Miller, A.J., Plaza-Torres, S., Rodewald, B., Rooney, A.D., Tecklenburg, S.A., Vogel, J.M., Planavsky, N.J., and **Strauss, J.V.**, 2021, An exceptional record of early to middle Paleozoic redox change: *Science Advances*, v. 7, p. eabf4382.
55. Trower, E.J., **Strauss, J.V.**, Sperling, E.A., and Fischer, W.W., 2021, Isotopic analyses of Ordovician–Silurian siliceous skeletons indicate silica-depleted Paleozoic oceans: *Geobiology*, v. 19, p. 460–472.
54. \*Wala, V.T., Ziemniak, G., Majka, J., \*Faehnrich, K., McClelland, W.C., Meyer, E.E., Manecki, M., Bazarnik, J., and **Strauss J.V.**, 2021, Neoproterozoic stratigraphy of the Southwestern Basement Province, Svalbard: Constraints on the Proterozoic–Paleozoic evolution of the North Atlantic–Arctic Caledonides: *Precambrian Research*, v. 358, p. 106138.

#### 2020:

53. \*Faehnrich, K., Majka, J., Schneider, D., Mazur, S., Manecki, M., Ziemniak, G., \*Wala, V.T., and **Strauss, J.V.**, 2020, Geochronological constraints on Caledonian strike-slip displacement in Svalbard, with implications for the evolution of the Arctic: *Terra Nova*, v. 32, p. 290–299.

52. Laakso, T.A., **Strauss, J.V.**, and Peterson, K.J., 2020, Herbivory and its effect on Phanerozoic oxygen concentrations: *Geology*, v. 48, p. 410–414.
51. Rooney, A.D., Cantine, M.D., Bergmann, K.D., Gómez-Pérez, I., Baloushi, B., Boag, T.H., \*Busch, J.F., Sperling, E.A., and **Strauss, J.V.**, 2020, Calibrating the co-evolution of Ediacaran life and environment: *Proceedings of the National Academy of Sciences*, v. 117, p. 16824–16830.
50. **Strauss, J.V.** and Tosca, N.J., 2020, Mineralogical constraints on Neoproterozoic pCO<sub>2</sub> and marine carbonate chemistry: *Geology*, v. 48, p. 599–603.
49. **Strauss, J.V.**, Fraser, T., Melchin, M.J., Allen, T.J., \*\*Malinowski, J., Feng, X., Taylor, J.F., Day, J., Gill, B.C., and Sperling, E.A., 2020, The Road River Group of northern Yukon, Canada: Early Paleozoic deep-water sedimentation within the Great American Carbonate Bank: *Canadian Journal of Earth Science*, v. 57(10), p. 1193–1219.
- 2019:**
48. Ahm, A-S., Maloof, A.C., Macdonald, F.A., Hoffman, P.F., Bjerrum, C.J., Bold, U., Rose, C.V., **Strauss, J.V.**, and Higgins, J.A., 2019, An early diagenetic deglacial origin for basal Ediacaran “cap dolostones”: *Earth and Planetary Science Letters*, v. 506, p. 292–307.
47. Bazarnik, J., Majka, J., McClelland, W.C., **Strauss, J.V.**, Kósmínska, K., Piepjohn, K., Elvevold, S., Czupyt, Z., and Mikuš, T., 2019, U-Pb zircon dating of metaigneous rocks from the Nordbreen Nappe of Svalbard’s Ny-Friesland terrane suggests their affinity to Northeast Greenland: *Terra Nova*, v. 31, p. 518-526.
46. \*Busch, J.F., **Strauss, J.V.**, \*\*Saylor, M.H., Allen, T.J., \*Faehnrich, K., and Taylor, J.F., 2019, Preliminary observations of the Bouvette Formation at Nadaleen Mountain, Yukon (NTS 106C/2,3): in MacFarlane, K.E., ed., *Yukon Exploration and Geology 2018*: Yukon Geological Survey, p. 19-42.
45. Colpron, M., **Strauss, J.V.**, and McClelland, W.C., 2019, Detrital zircon U-Pb geochronological and Hf isotopic constraints on the geological evolution of North Yukon, in Piepjohn, K., **Strauss, J.V.**, Reinhardt, L. and McClelland, W.C., eds., Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens: *Geological Society of America Special Paper 541*, p. 397–437.
44. Johnson, B.G., **Strauss, J. V.**, Taylor, J. F., Ward, W. P., Colpron, M., McClelland, W. C., Toro, J., 2019, Geochronology, paleontology, and geochemistry from the Whale Mountain allochthon of the northeastern Brooks Range, Alaska, in Piepjohn, K., **Strauss, J.V.**, Reinhardt, L. and McClelland, W.C., eds., Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens: *Geological Society of America Special Paper 541*, p. 439–472.
43. \*\*\*Moynihan, D., \*\*\***Strauss, J.V.**, Padget, C.M., and Nelson, L.L., 2019, Upper part of the Windermere Supergroup in the Nadaleen River area, east-central Yukon: stratigraphy, regional correlations and implications for development of the western Laurentian margin: *Geological Society of America Bulletin*, v. 131, no. 9/10, p. 1673–1701.
42. Nelson, L.L., **Strauss, J.V.**, Crockford, P.W., Cox, G.M., Johnson, B.G., Ward, W., Colpron, M., McClelland, W.C., and Macdonald, F.A., 2019, Neodymium isotopic and geochemical constraints on the provenance of pre-Mississippian sedimentary rocks in the North Slope of Yukon and Alaska, in Piepjohn, K., **Strauss, J.V.**, Reinhardt, L. and McClelland, W.C., eds., Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens: *Geological Society of America Special Paper 541*, p. 573–592.
41. **Strauss, J.V.**, Macdonald, F.A., and McClelland, W.C., 2019a, Pre-Mississippian stratigraphy and provenance of the North Slope subterranean of Arctic Alaska I: Platformal rocks of the northeastern Brooks Range and their significance in circum-Arctic evolution, in Piepjohn, K., **Strauss, J.V.**, Reinhardt, L. and McClelland, W.C., eds., Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens: *Geological Society of America Special Paper 541*, p. 493–524.

40. **Strauss, J.V.**, Johnson, B.G., Colpron, M., Nelson, L.L., \*\*Perez, J., Benowitz, J.A., Ward, W., and McClelland, W.C., 2019b, Pre-Mississippian stratigraphy and provenance of the North Slope subterranean of Arctic Alaska II: Basinal rocks of the northeastern Brooks Range and their significance in circum-Arctic evolution, *in* Piepjohn, K., **Strauss, J.V.**, Reinhardt, L. and McClelland, W.C., eds., Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens: *Geological Society of America Special Paper 541*, p. 525–572.

39. Ward, W.P., **Strauss, J.V.**, Johnson, B.G., McClelland, W.C., Colpron, M., von Gosen, W., Piepjohn, K., Cobble, M., Crockford, P.W., and Landis, J., 2019, Age, geochemistry and significance of Devonian felsic magmatism in the North Slope subterranean, Yukon, *in* Piepjohn, K., **Strauss, J.V.**, Reinhardt, L. and McClelland, W.C., eds., Circum-Arctic Structural Events: Tectonic Evolution of the Arctic Margins and Trans-Arctic Links with Adjacent Orogens: *Geological Society of America Special Paper 541*, p. 593–618.

#### 2018:

38. Fraser, T.A., Crawford, I., Gadd, M.G., Henderson, K., Layton-Matthews, D., Melchin, M., Peter, J.M., Sack, P.J., Sperling, E., and **Strauss, J.V.**, 2018, An overview of shale studies in Yukon during the 2017 field season, *in* MacFarlane, K.E., ed., *Yukon Exploration and Geology 2017*: Yukon Geological Survey, p. 37–45.

37. Halverson, G.P., Maloof, A.C., **Strauss, J.V.**, and Kunzmann, M., 2018, The Tonian–Cryogenian transition in northeastern Svalbard: *Precambrian Research*, v. 319, p. 79–95.

36. Macdonald, F.A., Schmitz, M.D., **Strauss, J.V.**, Halverson, G.P., Gibson, T., Eyster, A., Cox, G., \*\*Mamrol, P., and Crowley, J., 2018, The Cryogenian of Yukon: *Precambrian Research*, v. 319, p. 114–143.

35. Trower, E.J., Cantine, M., Gomes, M., Grotzinger, H., Grotzinger, J.P., Knoll, A.H., Lamb, M.P., Lingappa, U., O’Reilly, S.S., Present, T.M., Stein, N., **Strauss, J.V.**, and Fischer, W.W., 2018, Active ooid growth driven by sediment transport in a high energy shoal, Little Ambergris Cay, Turks and Caicos, British Overseas Territories, *Journal of Sedimentary Research*, v. 88, p. 1132–1151.

#### 2017:

34. Cohen, P.A., Irvine, S., and **Strauss, J.V.**, 2017, Vase-shaped microfossils from the Callison Lake Formation of Yukon, Canada: Taxonomy, taphonomy, and stratigraphic paleobiology: *Palaeontology*, v. 60, no. 5, p. 1-19.

33. Cohen, P.A., **Strauss, J.V.**, Rooney, A.D., Sharma, M., and Tosca, N.J., 2017, Controlled hydroxyapatite biomineralization in an ~810 million-year-old unicellular eukaryote: *Science Advances*, v. 3, n. 6, p. 1-8.

32. Eyster, A.E., Fu, R.R., **Strauss, J.V.**, Weiss B.J., Roots, C.F., Halverson, G.P., Evans, D.A.D., and Macdonald, F.A., 2017, Paleomagnetic evidence for a 50 degree rotation of the Yukon block relative to Laurentia: Implications for a low-latitude Sturtian glaciation and the break-up of Rodinia: *Geological Society of America Bulletin*, v. 129, no. 1/2, p. 38–58.

31. Miller, A.J., **Strauss, J.V.**, Halverson, G.P., Macdonald, F.A., Johnston, D.T., and Sperling, E.A., 2017, Tracking the onset of Phanerozoic-style redox-sensitive trace metal enrichments: New data from basal Ediacaran post-glacial strata in NW Canada: *Chemical Geology*, v. 457, p. 24–37.

30. **Strauss, J.V.**, Hoiland, C.W., and Nelson, L.L., 2017, Field Report: Exploring the Doonerak fenster of the central Brooks Range, Alaska, USA: *Geoscience Frontiers*, v. 8, p. 915–918.

29. **Strauss, J.V.**, Hoiland, C.W., Ward, W., Johnson, B.G., Nelson, L., and McClelland, W.C., 2017, Orogen transplant: Taconic–Caledonian magmatism in the Brooks Range of Alaska: *Geological Society of America Bulletin*, v. 129, no. 5/6, p. 649–676.

#### 2016:

28. Cox, G.M., Halverson, G.P., Poirier, A., Le Heron, D., Stevenson, R., and **Strauss, J.V.**, 2016a, A model for Cryogenian iron formation: *Earth and Planetary Science Letters*, v. 433, p. 280–292.

27. Cox, G.M., Halverson, G.P., Stevenson, R.K., Vokaty, M., Poirier, A., Kunzmann, M., Li, Z.-X., Denyszyn, S.W., **Strauss, J.V.**, and Macdonald, F.A., 2016b, Continental flood basalt weathering as a trigger for Neoproterozoic Snowball Earth: *Earth and Planetary Science Letters*, v. 446, p. 89–99.
26. Johnson, B.G., **Strauss, J.V.**, Toro, J., Benowitz, J.A., and Ward, W.P., 2016, Detrital geochronology of pre-Mississippian strata in the northeastern Brooks Range, Alaska: Insights into the tectonic evolution of northern Laurentia: *Lithosphere*, v. 8, no. 6, p. 649–667.
25. Knoll, A.H., Bergmann, K.D., and **Strauss, J.V.**, 2016, Life: The First Two Billion Years: *Philosophical Transactions of the Royal Society B*, v. 371, p. 1-13.
24. Sperling, E.A., Carbone, C., **Strauss, J.V.**, Johnston, D.J., Narbonne, G.M., and Macdonald, F.A., 2016, Oxygen, facies, and secular controls on the appearance of Cryogenian and Ediacaran body and trace fossils in the Mackenzie Mountains of northwestern Canada: *Geological Society of America Bulletin*, v. 128, no. 3-4, p. 558–575.
- 2015:**
23. Cox, G.M., **Strauss, J.V.**, Halverson, G.P., McClelland, W.C., Schmitz, M., and Macdonald, F.A., 2015, Kikiktat Volcanics of Arctic Alaska: Melting of subcontinental lithospheric mantle associated with the Franklin Large Igneous Province: *Lithosphere*, v. 7, no. 3, p. 275–295.
22. Martindale, R.C., **Strauss, J.V.**, Sperling, E.A., Johnson, J.E., Van Kranendonk, M.J., Flannery, D., French, K., Lepot, K., Mazumder, R., Rice, M.S., Schrag, D.P., Summons, R., Walter, M., Abelson, J., and Knoll, A.H., 2015, Sedimentology, chemostratigraphy and stromatolites of lower Paleoproterozoic carbonates, Turee Creek Group, Western Australia: *Precambrian Research*, v. 266, p. 194–211.
21. McClelland, W.C., Colpron, M., Piepjohn, K., von Gosen, W., Ward, W., and **Strauss, J.V.**, 2015, Preliminary detrital zircon geochronology of the Neruokpuk Formation in the Barn Mountains, Yukon: *in* Yukon Exploration and Geology, K.E. MacFarlane, M.G. Nordling, and P.J. Sack (eds.), Yukon Geological Survey, p. 123–143.
20. Rooney, A.D., **Strauss, J.V.**, Brandon, A.D., and Macdonald, F.A., 2015, A Cryogenian chronology: Two long-lasting, synchronous Neoproterozoic Snowball Earth glaciations: *Geology*, v. 43, no. 5, p. 459–462.
19. **Strauss, J.V.**, Macdonald, F.A., Halverson, G.P., Tosca, N.J., Schrag, D.P., and Knoll, A.H., 2015, Stratigraphic evolution of the Neoproterozoic Callison Lake Formation: Linking the break-up of Rodinia to the Islay carbon isotope excursion: *American Journal of Science*, v. 315, p. 881–944.
18. Taylor, J.F., Allen, T.J., Repetski, J.E., **Strauss, J.V.**, and Irwin, S.J., 2015, Life on the edge in eastern Alaska: basal Ordovician (Tremadocian) platform-margin faunas of the Jones Ridge Limestone, *in* S.A. Leslie, D. Goldman, and R.C. Orndorff, eds., 12th International Symposium on the Ordovician System, Short Papers and Abstracts: *Stratigraphy*, v. 12, no. 2, p. 70-77.
- 2014:**
17. Macdonald, F.A., Pruss, S. B., and **Strauss, J.V.**, 2014, Trace fossils with spreite from the Late Ediacaran Nama Group, Namibia: Complex feeding patterns five million years before the Precambrian–Cambrian boundary: *Journal of Paleontology*, v. 88, no.2, p. 299-308.
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### Recent Conference Abstracts (2017–2022)

\*Dartmouth Graduate Presenter \*\*Dartmouth Undergraduate Presenter \*\*\*Dartmouth Postdoc Presenter

#### 2022:

\*Faehnrich, K., McClelland, W.C., Webb, L.E., Rasbury, E.T., Colpron, M., and **Strauss, J.V.**, 2022, Displacement history along the Porcupine Shear Zone and its role in the opening of the Canada Basin: International Conference on Arctic Margins: Ottawa, Canada.

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Palucis, M.C., Marshall, J.A., and **Strauss, J.V.**, 2022, Sediment production and transport processes in an Arctic watershed undergoing climate change: European Geophysical Union, Paper No. 10812.

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Reusch, D., and **Strauss J.V.**, 2022, Update on detrital zircon U/Pb geochronology from Proterozoic and early Paleozoic rocks of the Penobscot Bay inlier, Maine: Geological Society of America Northeastern Meeting, Paper No. xx.

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**Strauss, J.V.**, and Tosca, N.J., 2018, Chemical sedimentation in the Callison Lake Formation, Yukon, Canada: A window into Tonian seawater carbonate chemistry: American Geophysical Union, Paper No. PP51A-03.

Thompson, P.J., and **Strauss, J.V.**, 2018, Reevaluation after 50 years of nappes in western New Hampshire: Are the Skitchewaug and Cornish nappes one and the same?: Geological Society of America Northeastern Section Meeting, Burlington, Paper No. 29-2.

\*Wala, V.T., **Strauss, J.V.**, Majka, J., Ziemniak, G., Faehnrich, K., Meyer, E.E., Czerny, J., Bellefroid, E.J., Feng, X., and McClelland, W.C., 2018, Neoproterozoic stratigraphy of the Southwestern Basement Province, Svalbard: Constraints on the Proterozoic–Paleozoic evolution of the North Atlantic–Arctic Caledonides: American Geophysical Union, Paper No. T43I–3712.

#### 2017:

Allen, T.J., \*\*Cornish Morales, I.M., Wallace, V.C., Piepjohn, K., Bergmann, K., Halverson, G.H., Tosca, N.J., McClelland, W.C., and **Strauss, J.V.**, 2017, Detrital zircon geochronology and provenance of the Hecla Hoek Succession of northeastern Svalbard, Norway: Geological Society of America Annual Meeting, Seattle, Paper No. 90-1.

Colpron, M., McClelland, W.C., and **Strauss, J.V.**, 2017, Detrital zircon U-Pb geochronology and Hf isotopic constraints on the geological evolution of North Yukon: Geological Society of America Annual Meeting, Seattle, Paper No. 28-9.

\*Faehnrich, K., Majka, J., Schneider, D., **Strauss, J.V.**, Ziemniak, G., Manecki, M., Wala, V.T., and Czerny, J., 2017, Late Caledonian shearing in SW Spitsbergen – new age constraints from  $^{40}\text{Ar}/^{39}\text{Ar}$  muscovite geochronology: Geological Society of America Annual Meeting, Seattle, Paper No. 90-4.

Johnson, B., **Strauss, J.V.**, Taylor, J.F., Ward, W.P., Colpron, M., McClelland, W.C., and Toro, J., 2017, The Whale Mountain allochthon of the northeastern Brooks Range, Alaska: An Arctic vestige of the Iapetus Ocean: Geological Society of America Annual Meeting, Seattle, Paper No. 28-8.

McClelland, W.C., **Strauss, J.V.**, Colpron, M., and Faehnrich, K., 2017, The Porcupine Shear Zone: A fundamental link between the Arctic and Cordilleran margins of Laurentia: Geological Society of America Annual Meeting, Seattle, Paper No. 28-10.

Repetski, J.E., Taylor, J.F., Kulenguski, J.T., and **Strauss, J.V.**, 2017, New conodont and trilobite occurrences from the Cambrian of eastern Alaska: Geological Society of America Annual Northeastern Section Meeting, Pittsburgh, Paper No. 4-1.

Rooney, A.D., **Strauss, J.V.**, Cohen, P., Condon, D., and Schmitz, M.D., 2017, New Re-Os and U-Pb age constraints for the biological innovations and geochemical and climatic perturbations of the Neoproterozoic: Geological Society of America Annual Meeting, Seattle, Paper No. 346-1.

Sperling, E.A., **Strauss, J.V.**, Fraser, T.A., Miller, A., Farrell, U.C., Planavsky, N.J., Cole, D.B., Bhajan, L., Torres Plaza, S., Malinowski, J., Loydell, D.K., and Lenz, A., 2017, An exceptional record of early- to mid-Paleozoic redox change from the Road River Group, Yukon, Canada: Geological Society of America Annual Meeting, Seattle, Paper No. 11-3.

**Strauss, J.V.**, 2017, Ordovician–Silurian arc magmatism recorded in the Apoon assemblage of the Doonerak fenster, central Brooks Range, Alaska: Implications for circum-Arctic terrane linkages and paleogeography: Circum-Arctic Structural Events Workshop, Hannover, Germany.

Taylor, J.F., **Strauss, J.V.**, and Repetski, J.E., 2017, A new trilobite fauna and associated carbon isotopic excursion at the top of the Ptychaspis biomere in eastern Alaska: Whittling down a gap in the late Cambrian time scale: Geological Society of America Annual Meeting, Seattle, Paper No. 41-2.

\*Wala, V.T., Ceaser, I.M., Ziemniak, G., Faehnrich, K., Meyer, E.E., Czerny, J., Majka, J., McClelland, W.C., and **Strauss, J.V.**, 2017, Neoproterozoic stratigraphy and provenance of Wedel Jarlsberg Land, Svalbard: New insights into

the origin and transport history of the Southwestern Province: Geological Society of America Annual Meeting, Seattle, Paper No. 90-2.

### Awarded Research Grants

- 2021 NSF Polar Programs. *Collaborative Research: Watershed-scale geomorphic response to climate change in the Aklavik Range, NWT (Canada)*. M. Palucis and **J.V. Strauss** (PI and Co-PI, Dartmouth) and J. Marshall (Co-PI, University of Arkansas), \$520,231 Dartmouth, \$776,798 total.
- 2021 Alfred P. Sloan Foundation Fellowship. *Exploring archives of non-skeletal carbonate sedimentation*. **J.V. Strauss** (PI, Dartmouth), \$75,000.
- 2021 USGS EDMAP Program. *Bedrock geological mapping of the northeastern Arctic D-1 quadrangle, Brooks Range, Alaska, with implications for the amalgamation of Arctic Alaska*. **J.V. Strauss** (PI, Dartmouth), \$25,000.
- 2020 NSF Frontiers in Earth Sciences, EAR-2021176. *Collaborative Research: Co-evolution of Earth and life across the Proterozoic–Phanerozoic transition: Integrated perspectives from outcrop and drill core*. E.F. Smith (Lead PI, Johns Hopkins University), **J.V. Strauss** and C.B. Keller (PI and Co-PI, Dartmouth), K. Lau (PI, University of Wyoming), A.D. Rooney and D.A. Evans (PI and Co-PI, Yale University), and S. Xiao (PI, Virginia Tech), \$739,430 Dartmouth, \$3,000,000 total.
- 2020 NSF Tectonics, EAR-1929593. *Collaborative Research: An Alaskan perspective on middle Paleozoic terrane translation, contraction, and subduction initiation in northwestern Laurentia*. **J.V. Strauss** (Lead PI, Dartmouth), W.C. McClelland (Co-PI, University of Iowa), and C. Connors (Co-PI, Washington and Lee University), \$249,582 Dartmouth, \$613,948 total.
- 2020 Dartmouth College Neukom CompX. *Acquisition of unmanned aerial vehicles for training the next generation of field scientists*. A. Mehra and **J.V. Strauss** (Dartmouth), \$39,998.
- 2019 NSF Low-Temperature Geochemistry and Geobiology, EAR-1929593. *Collaborative Research: Developing a multi-proxy approach for reconstructing deep-time silicate weathering*. A.D. Rooney (Lead PI, Yale University) and **J.V. Strauss** (Co-PI, Dartmouth), \$246,900 Dartmouth, \$525,040 total.
- 2018 NSF MRI, EAR-1828099. *MRI: Acquisition of an Isotope Ratio Mass Spectrometer (IRMS) to enable interdisciplinary research at Dartmouth and beyond*. C. Hicks Pries (Lead PI, Dartmouth), W. Leavitt (Co-PI, Dartmouth), and **J.V. Strauss** (Co-PI, Dartmouth), \$483,128 total.
- 2018 NASA Solar Systems Workings Program, *How much water does it take to build a fan under a “cold and icy” Mars climate scenario?*. M. Palucis (Lead PI, Dartmouth) and **J.V. Strauss** (Co-I, Dartmouth), \$343,160 total.
- 2018 National Geographic Society, *The Neoproterozoic of Svalbard: Critical archives for ancient seawater chemistry and animal evolution*. **J.V. Strauss** (PI, Dartmouth), \$30,000 total.
- 2018 American Chemical Society–Petroleum Research Fund–Doctoral New Investigator, *Neoproterozoic Analogs for Mg-silicate-bearing Petroleum Basins*. **J.V. Strauss** (PI, Dartmouth), \$110,000.
- 2017 NSF Tectonics, EAR-1650152. *Collaborative Research: Displacement history of the Pearya terrane – evaluating a strike-slip origin for the Canadian Arctic margin*. J.A. Gilotti (Lead PI, University of Iowa), W.C. McClelland (Co-PI, University of Iowa), **J.V. Strauss** (Co-PI, Dartmouth), \$141,662 Dartmouth, \$415,040 total.
- 2017 Research Council of Norway Arctic Field Grant, *Neoproterozoic stratigraphy and provenance of Wedel Jarlsberg Land, Southwest terrane, Spitsbergen*. V. Wala (Graduate Student, Dartmouth), **J.V. Strauss** (Dartmouth), \$9,100.

- 2016 NSF Tectonics, EAR-1624131. *Collaborative Research: The Kaltag-Porcupine fault system of northern Yukon: Evaluating large-scale terrane displacement in the Arctic and beyond.* **J.V. Strauss** (Lead PI, Dartmouth), W.C. McClelland (Co-PI, University of Iowa), \$241,522 Dartmouth, \$414,709 total.
- 2016 G. Norman Albree Trust Fund, *2016 Albree Trust Grant Proposal: Earth Science Micro- and Macro-photography.* **J.V. Strauss** (Lead PI, Dartmouth), \$10,000.
- 2015 GSA Graduate Student Research Grant, **J.V. Strauss** (Graduate Student, Harvard), \$1,900.
- 2014 GSA Graduate Student Research Grant, **J.V. Strauss** (Graduate Student, Harvard), \$900.
- 2012 NSF Graduate Research Fellowship, *An integrated study of Cambrian stratigraphy in Arctic Alaska and Canada.* **J.V. Strauss** (Graduate Student, Harvard), \$96,000.

### Supervised and Co-Supervised Undergraduate Theses

#### Dartmouth College, Department of Earth Sciences, Hanover, NH

- Peter Kannam – *Early Paleozoic deep-marine mercury (Hg) deposition* in progress
- Rebecca Miller – *Compilation bedrock geology along the Alaska–Yukon border from the Arctic Ocean to the Yukon River* grad. June 2020
- Christian Trejo – *Age and significance of early Paleozoic unnamed chert units in the Zavkhan Terrane of Mongolia* grad. June 2020
- Charlotte Nutt – *Middle to late Paleozoic stratigraphy and provenance of the Porcupine terrane: Implications for the tectonic history of western North America* grad. June 2019
- Maxwell Saylor – *A sedimentological and paleontological study of the Cambrian–Devonian Bouvette Formation at Nadaleen Mountain, Yukon, Canada* grad. June 2019
- Caleb “Forrest” Town – *U-Pb geochronology of the Moat Volcanics, White Mountains, New Hampshire* grad. June 2018
- Joe Malinowski – *The basal Road River Group of Yukon, Canada: New insights into the Cambrian–Ordovician carbon cycle* grad. June 2018
- Jack Taylor – *Sedimentological and chemostratigraphic analysis of Ediacaran carbonate platforms in the Canadian Cordillera* grad. June 2018
- Joshua Perez – *Age, Geochemistry, and Significance of Middle Paleozoic Volcanics in the Brooks Range* grad. June 2017
- Peter Mamrol – *Age and Significance of the Cambrian–Ordovician Dempster Volcanics, Yukon, Canada* grad. June 2016

#### Harvard University, Department of Earth and Planetary Sciences, Cambridge, MA

- Lyle Nelson – *Provenance of Ediacaran–Cambrian strata of the North Slope of Alaska* grad. May 2015
- Esther Kennedy – *The sedimentology and chemostratigraphy of the Jones Ridge Limestone, AK* grad. May 2013

### Supervised and Co-Supervised Graduate Theses

(\*indicates main supervisor)

#### Dartmouth College, Department of Earth Sciences, Hanover, NH

- \*James Busch – PhD supervisor in progress
- \*Karol Faehnrich – PhD supervisor in progress
- \*George Geier – MSc supervisor in progress
- \*Tianran Zhang – PhD supervisor in progress
- Gailin Pease – MSc committee member grad. Dec 2021
- Danielle Niu – PhD committee member grad. Dec 2021
- Alice Zhou – MSc committee member grad. May 2019
- \*Virginia Wala – MSc supervisor grad. May 2019
- Mackenzie Marti – MSc committee member grad. Jan 2018
- Helen Doyle – MSc committee member grad. July 2016

#### University of Iowa, Department of Earth and Environment, Iowa City, IA

- Matthew Trembath – MSc external examiner grad. July 2020



**Yale University, Department of Earth and Planetary Sciences, New Haven, CT**  
Alexie Millikin – PhD external examiner

in progress

**Université Pierre et Marie Curie, Institut des Sciences de la Terre, Paris, France**  
Nicolas Lemonnier – PhD external examiner

grad. Dec. 2015

### **Supervised and Co-Supervised Postdoctoral Scholars**

**Dartmouth College, Department of Earth Sciences, Hanover, NH**  
Akshay Mehra  
Timothy Gibson

in progress  
now at Yale University

### **Courses Taught**

**Dartmouth College, Department of Earth Sciences, Hanover, NH**  
Earth Sciences 2: *Evolution of Earth and Life*  
Earth Sciences 38: *Sedimentary Systems*  
Earth Sciences 58/158: *Sedimentary Petrology and Stratigraphy*  
Earth Sciences 45/46/47: *The Stretch*  
Earth Sciences 201: *Fundamentals and Pedagogy in Earth Sciences*  
Earth Sciences 272: *Topics in Historical Geobiology*

### **Professional Service**

**Editorial Review Board**  
Geology (2021-2023)

**Journal Reviewer**  
Chemical Geology  
Geology  
Geosphere  
Geological Society of America Bulletin  
Journal of the Geological Society of London  
Lithosphere  
Nature Geoscience  
Norwegian Journal of Geology  
Palaeogeography, Palaeoclimatology, and Paleoecology  
Precambrian Research  
Sedimentology  
Sedimentary Geology

**Ad hoc Panel Reviewer and Panelist**  
NSF Tectonics  
NSF Sedimentary Geology and Paleobiology  
ACS Petroleum Research Fund

**Conference Session Convener**  
2022 GSA Annual Meeting: *The geological evolution of northern Alaska: A session in honor of Charles “Gil” Mull*  
2022 GSA Annual Meeting: *Cambrian–Ordovician Faunas and Events: A session in honor of John F. Taylor and John E. Repetski*  
2022 GSA Annual Meeting: Pardee Symposium: *The Proterozoic–Phanerozoic Transition: Laying the Foundation for the Modern Earth System*  
2020 GSA Annual Meeting: *Precambrian Basin Analysis*  
2019 AGU Annual Meeting: *The North Atlantic Realm from Neoproterozoic to Cenozoic: Orogens Old and New*

- 2019 AGU Chapman Meeting: *Subduction-related Magmatism in the Arctic*
- 2019 GSA Northeastern Meeting: *Detrital mineral constraints on Appalachian tectonics*
- 2017 GSA Annual Meeting: *New perspectives on Cordilleran tectonics, paleogeography, and metallogeny*
- 2017 GSA Annual Meeting: *Circum-Arctic structural events: tectonic evolution of the Arctic margins and trans-Arctic links with adjacent orogens*
- 2016 AGU Annual Meeting: *Interpretations of stable carbon isotope records in sedimentary systems*
- 2016 GACMAC Annual Meeting: *Proterozoic Basins of Northern Laurentia*
- 2015 GACMAC-AGU Joint Session: *The Neoproterozoic-Paleozoic Earth system: records from an Earth in transition*
- 2015 GSA Annual Meeting: *Precambrian Geology of the North American Cordillera: An Exploration of New Developments in Laurentia's Ancient History*

**Professional Societies**

- Alaska Geological Society
- International Association of Sedimentologists
- American Geophysical Union
- Geological and Mineralogical Association of Canada
- American Association of Petroleum Geologists
- Society for Sedimentary Geology (SEPM)
- Geological Society of America
- American Alpine Club

**College/Departmental Committee Work**

- Departmental Website Committee, Chair 2020-present
- Departmental Seminar Organizer 2019-2020
- Departmental Inclusion, Diversity, and Equity Committee 2019-2020