

## PUBLISHED WRITINGS AND CREATIVE ACTIVITIES

- 2010 Q. Williams (Editor-in-Chief), Understanding the Building Blocks of the Planet—The Materials Science of Earth Processes, Report to the National Science Foundation, Geoprose, Inc., Arlington, VA, 68 pp. (available at [http://compres.us/sites/default/files/publications/building\\_blocks\\_5-24-10.pdf](http://compres.us/sites/default/files/publications/building_blocks_5-24-10.pdf))

### Published Articles

- 2019 Q. Williams, M.H. Manghnani and T. Matsui, The effect of coordination changes on the bulk moduli of amorphous silicates: The SiO<sub>2</sub>-TiO<sub>2</sub> system as a test case, *American Mineralogist*, doi: 10.2138/am-2019-6729.
- 2019 K. Sawchuk, E.F. O'Bannon, C. Vennari, A. Kavner, E. Knittle and Q. Williams, An infrared and Raman spectroscopic study of PbSO<sub>4</sub>-anglesite at high pressures, *Physics and Chemistry of Minerals*, doi: [10.1007/s00269-019-01027-z](https://doi.org/10.1007/s00269-019-01027-z).
- 2019 A. Pommier, Q. Williams, R.L. Evans, I. Pal and Z. Zhang, Electrical investigation of natural lawsonite and application to subduction contexts, *Journal of Geophysical Research*, *124*, doi: 10.1029/2018JB016899.
- 2018 E. O'Bannon, C.M. Beavers, M. Kunz and Q. Williams, High-pressure study of dravite tourmaline: Insights into the accommodating nature of the tourmaline structure, *American Mineralogist*, *103*, 1622-1633.
- 2018 C.E. Vennari, C.M. Beavers and Q. Williams, High pressure/temperature behavior of the alkali/calcium carbonate shortite (Na<sub>2</sub>Ca<sub>2</sub>(CO<sub>3</sub>)<sub>3</sub>): Implications for carbon sequestration in Earth's transition zone, *Journal of Geophysical Research*, *123*, 6574-6591.
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- 2018 Q. Williams, The thermal conductivity of Earth's core: A key geophysical parameter's constraints and uncertainties, *Annual Review of Earth and Planetary Sciences*, *46*, 47-66.
- 2018 N.A. Blanc, Q. Williams, B. El-Bali and R. Essehli, A vibrational study of phase transitions in Fe<sub>2</sub>P<sub>2</sub>O<sub>7</sub> and Cr<sub>2</sub>P<sub>2</sub>O<sub>7</sub> under high-pressures, *Journal of the American Ceramic Society*, *101*, 5257-5268.
- 2018 C.E. Vennari and Q. Williams, A novel carbon bonding environment in deep mantle high-pressure dolomite, *American Mineralogist*, *103*, 171-174.
- 2017 E. O'Bannon and Q. Williams, Delocalization in Cr<sup>3+</sup> luminescence of clinocllore: A pressure-induced transition from single-ion emission to pair emission, *Journal of Physics and Chemistry of Solids*, *109*, 89-99.
- 2017 J. Valencia-Cardona, Q. Williams, G. Shukla and R.M. Wentzcovitch, Bullen's parameter as a seismic observable for spin crossovers in the lower mantle, *Geophysical Research Letters*, *44*, doi/10.1002/2017GL074666.

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