# Claire Zurkowski

## Contact Information

Claire Zurkowski
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## Education

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| Current | **The University of Chicago**, Chicago, IL<br>PhD candidate, Geophysical Sciences |
| Jan-15–June-16 | **San Francisco State University**, San Francisco, CA<br>B.S., Geology |
| Jan-14–Jan-15 | **University of Maryland**, College Park, MD<br>Undergraduate Student, Geology |
| Aug-13–Jan-14 | **Pratt Institute**, Brooklyn, NY<br>Undergraduate Student, Design |

## Publications

**Zurkowski C.C.**, Lavina B., Chariton S., Greenberg E., Tkachev S. N., Prakapenka, V.B. & Campbell A. J. (2020). The novel high-pressure/high-temperature compound $Co_{12}P_7$ determined from synchrotron data. *Acta Crystallographica E*76, 1665-1668. https://doi.org/10.1107/S2056989020012657

## Publications in Press

**Zurkowski C.C.**, Lavina B., Chariton S., Greenberg E., Prakapenka V.B. & Campbell A.J. (2021) The crystal structure of $Fe_2S$ at 90 GPa based on single-crystal X-ray diffraction techniques. *American Mineralogist*, in press. https://doi.org/10.2138/am-2022-7973

## Submitted Publications

**Zurkowski C.C.**, Lavina B., Chariton S., Greenberg E., Prakapenka V.B. & Campbell A.J. Stability of $Fe_2S$ and phase relations in the Fe–S–O system to 170 GPa and high temperatures. Submitted to *Journal of Geophysical Research: Solid Earth*.

**Zurkowski C.C.**, Davis A. H., Chariton S., Greenberg E., Prakapenka V. B. & Campbell A. J. A hexagonal $Fe_3S$ phase at Earth's core conditions. Submitted to *American Mineralogist*.

## Publications in Prep

**Zurkowski C. C.**, Brauser N. M., Greenberg E., Prakapenka V. B., & Campbell A. J. Thermal equations of state of *Pnma* $Fe_2S$, $I\bar{4}$ $Fe_3S$, and $P\bar{6}2m$ $Fe_2S$ to 140 GPa and high temperatures.

**Zurkowski C. C.**, Lavina B., Chariton S., Greenberg E., Tkachev S. N., Prakapenka, V.B. & Campbell A. J. Compression of $Co_2P$, $Co_{12}P_7$, and CoP to 48 GPa and high temperatures, a single crystal synchrotron X-ray diffraction study.

## Scholarships and Awards

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| 2020 | Arts, Science + Culture Initiative Graduate Collaboration Grant awarded |

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| 2019 | Student Presentation Award, COMPRES Annual Meeting |
| 2018 | Student Presentation Award, COMPRES Annual Meeting |
| 2018–2021 | NSF Graduate Research Fellowship |
| 2017 | Outstanding Student Paper Award, Mineral and Rock Physics, AGU Fall Meeting |
| 2016–2021 | McCormick Fellowship, University of Chicago |
| 2016 | Department Honoree, San Francisco State University's Geology Department |
| 2016 | Summa Cum Laude, San Francisco State University |
| 2013–2016 | Dean's List; Pratt Institute, University of Maryland, San Francisco State University |
| 2013 | Presidential Scholarship, Pratt Institute |
| 2013 | Valedictorian, The John Carroll School |
| 2013 | Judith Resnick Scholarship for Women in the Math and Sciences |
| 2013 | William J. Sacco Scholarship for Applied Mathematics |
| 2013 | Math, Physics and Art Student of the Year, The John Carroll School |

## Professional Experience

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| Jan-19–Mar 19 | **Teaching assistant**, University of Chicago Department of Geophysical Sciences<br>*Mineralogy* |
| May-18–present | **Laboratory of Mineral Physics**, University of Chicago<br>*PhD candidate*<br>Advisor: Dr. Andrew Campbell |
| Sep-16–May-18 | **Laboratory of Mineral Physics**, University of Chicago<br>*Graduate Student*<br>Advisor: Dr. Andrew Campbell |
| Jul-16–Sep-16 | **Laboratory of Mineral Physics**, University of Chicago<br>*Visiting Student*<br>Advisor: Dr. Andrew Campbell |
| Jan-15–Jun-16 | **High Temperature Geochemistry Research Group**, San Francisco State University<br>*Geochemistry Field and Research Assistant*<br>Advisor: Dr. Mary Leech |
| Jan-15–Jun-15 | **United States Geological Society**, Menlo Park<br>*Geophysics Research Assistant*<br>Advisor: Dr. Walter Mooney |
| Jan-14–Jan-15 | **The Isotope Geochemistry Laboratory**, University of Maryland<br>*Geochemistry Research Assistant*<br>Advisors: Dr. Roberta Rudnick and Dr. William McDonough |

## Invited Talks

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| 2021 | **Carnegie Institute for Science** - Experimental Petrology and Mineral Physics Group |

## Conference Presentations

**Zurkowski, C.C.**, Lavina, B., Chariton, S., Greenberg E., Prakapenka V.B., and Campbell A.J. (2020) Phase stability and structural properties of $Fe_2S$ and its analog $Co_2P$ at high pressures and temperatures. Abstract EGU21-1862 presented at 2021 meeting, EGU, 26 Apr. (Oral Presentation)

**Zurkowski, C.C.**, Lavina, B., Chariton, S., Greenberg E., Prakapenka V.B., and Campbell A.J. (2020) Phase stability and structural properties of $Fe_2S$ and its analog $Co_2P$ at high pressures and temperatures. Abstract MR024-05 presented at 2020 meeting, AGU, 1-17 Dec. (Oral Presentation)

**Zurkowski, C.C.**, Davis,A.H., Chariton, S., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2020) A hexagonal $Fe_3S$ phase at Earth's core conditions. Abstract. COMPRES Annual Meeting (Oral Presentation)

**Zurkowski, C.C.**, Brauser, N.M., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2019) Phase stability and thermal equations of state of $Fe_3S$ and $Fe_2S$ polymorphs to Earth's core pressures and high temperatures. Abstract Dl13A-05 presented at 2019 meeting, *AGU*, Washington, D.C., 9-13 Dec. (Oral Presentation)

**Zurkowski, C.C.**, Brauser, N.M., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2019) Phase stability and thermal equations of state of $Fe_3S$ and $Fe_2S$ polymorphs to Earth's core pressures and high temperatures. Abstract. COMPRES Annual Meeting (Poster Presentation)

**Zurkowski, C.C.**, Chidester, B.A., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2018). Phase relations in the Fe–S–O system to Earth and planetary core conditions. Abstract MR42A-02 presented at 2018 meeting, *AGU*, Washington, D.C., 10-14 Dec. (Oral Presentation)

**Zurkowski, C.C.**, Chidester, B.A., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2018). Stability of the high pressure phase $Fe_3(S,O)_2$ to Earth and planetary core conditions in the Fe–S–O system Abstract. *COMPRES Annual Meeting*. (Oral Presentation).

**Zurkowski, C.C.**, Chidester, B.A., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2018). Stability of the high pressure phase $Fe_3(S,O)_2$ to Earth and planetary core conditions in the Fe–S–O system. Abstract. *COMPRES Annual Meeting*. (Poster Presentation).

**Zurkowski, C.C.**, Chidester, B.A., Davis, A.H., Brauser, N.M., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2017). Stability of the high pressure phases $Fe_3S_2$ and $Fe_2S$ to Earth's core pressures in the Fe–S–O and Fe–S–O–Si systems. Abstract MR54A-07 presented at 2017 meeting, *AGU*, New Orleans, Louisiana, 10-15 Dec. (Oral Presentation).

Brennan, M, **Zurkowski, C.C.**, Chidester, B.A., Campbell, A.J. (2017) Deep-Earth equilibration between molten iron and solid silicates. Abstract MR43C-0483 presented at 2017 meeting, *AGU*, New Orleans, Louisiana, 10-15 Dec. (Poster Presentation).

**Zurkowski, C.C.**, Chidester, B.A., Davis, A.H., Brauser, N.M., Greenberg, E., Prakapenka, V.B. and Campbell, A.J. (2017) Stability of the high pressure phase $Fe_3S_2$ up to 175 GPa in the Fe–S–O system. Abstract. *COMPRES Annual Meeting*. (Poster Presentation)

## Service and Outreach

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| 2020 | **UChicago Department of the Physical Sciences Conduct Committee**<br>Committee member |
| 2020 | **Notre**<br>Art-science interview |
| 2020 | **Space Us**<br>Art-science interview |
| 2019 | **UChicago News**<br>Art-science interview |
| 2019 | **AGU Mineral and Rock Physics**<br>Twitter account manager |
| 2019 | **ArtSciInitiative**<br>Instagram account manager |

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| 2018 | **COMPRES Student Planning Committee** |
| | Vice Chair |
| 2019 | **AGU Mineral and Rock Physics Planning Committee** |
| | Student Representative |
| 2018 | **COMPRES Student Planning Committee** |
| | Committee member |
| 2018 | **UChicago Women in Graduate Science Student Leadership Team** |
| | Geophysical sciences representative |
| 2018 | **UChicago Physical Sciences Division Dean's Student Advisory Committee** |
| | Geophysical sciences representative |
| 2017 | **Field Museum Outreach** |
| | Docent |
| 2017 | **Marillac Social Center** |
| | Math and science tutor |
| 2016 | **UChicago Lab Tours** |
| | Featured speaker and tour guide |
| 2016 | **Chicago Upward Bound Tutoring Program** |
| | Math and science tutor |
| 2016 | **Argonne National Lab's Hour of Code Initiativet** |
| | Classroom assistant at Peck Elementary School |
| 2016 | **Mentor Matching Engine Chicago** |
| | Mentor |

Chicago, 07 March 2021