



MISSISSIPPI STATE UNIVERSITY™
DEPARTMENT OF GEOSCIENCES

HUAN CUI, PH.D.

Assistant Professor of Geobiology and Biogeochemistry
Department of Geosciences, Mississippi State University
P.O. Box 5448, Mississippi State, MS 39762, USA
Email: huan.cui@geosci.msstate.edu
Profiles: [ResearcherID](#), [ORCID](#), [Google Scholar](#), [University webpage](#)

RESEARCH INTERESTS

paleoceanography, biogeochemistry, geobiology, astrobiology, sedimentology, stratigraphy, stable isotope geochemistry, Earth evolution

EMPLOYMENT

2022-present, Mississippi State University
Assistant Professor, Department of Geosciences, Starkville, Mississippi, USA

2020-2022, Université Paris Cité & University of Toronto
Postdoctoral Scholar, Geomicrobiology Team, Institute of the Physics of the Globe in Paris (Institut de Physique du Globe de Paris - IPGP), Paris, France;
Department of Earth Sciences, Toronto, Canada

2018-2020, Free University of Brussels (Vrije Universiteit Brussel)
Postdoctoral Scholar, Analytical, Environmental & Geo-Chemistry Group, Brussels, Belgium; ET-HOME (Evolution and Tracers of the Habitability of Mars and Earth) Astrobiology Research Consortium, Belgium

2015-2018, University of Wisconsin–Madison
Postdoctoral Scholar, Wisconsin Secondary Ion Mass Spectrometer (WiscSIMS) Laboratory, Department of Geoscience, Madison, USA;
NASA Astrobiology Institute / Wisconsin Astrobiology Research Consortium

EDUCATION

Ph.D., Geology, 2015, University of Maryland
Paleoclimate / Stable Isotope Laboratory
Department of Geology, College Park, Maryland, USA
Dissertation: Authigenesis, Biomineralization, and Carbon-Sulfur Cycling in the Ediacaran Ocean

M.S., Geology, 2011, Peking University

Department of Geology, School of Earth and Space Sciences, Beijing, China
Thesis topic: Sedimentological and Geochemical Investigations of
Hydrothermal Dolomite Reservoirs in the Tarim Basin, NW China

B.S., Geology, 2008, Southwest Petroleum University

School of Geosciences and Technology, Chengdu, China
Thesis topic: Integrated Facies and Reservoir Characterization for a Drilled
Hole in SW China

AWARDS & HONORS

External:

- 2022, Excellent Reviewer Award
Issued by *Science Bulletin* (Elsevier) Editorial Office
- 2019, Visiting Fellowship / Awardee of Open Research Grant
Issued by State Key Laboratory of Palaeobiology and Stratigraphy,
Nanjing Institute of Geology and Palaeontology, Chinese Academy of
Sciences, relinquished due to the COVID-19 pandemic
- 2018, Awardee of Early-Career Travel Grant
Issued by NASA Astrobiology Institute
- 2015, Recipient of the MSA Grant for Student Research in Mineralogy and
Petrology
Issued by Mineralogical Society of America (MSA)
- 2014, Recipient of seven Student Research Grants
Issued by Sigma Xi, Society of Economic Geologists (SEG),
International Association of Sedimentologists (IAS), American
Association of Petroleum Geologists (AAPG), Geological Society of
America (GSA), Explorers Club, Explorers Club Washington Group
(ECWG)
- 2014, Best Talk Award
Issued by the Sino-UK Coevolution of Life & Planet Summer School,
Nanjing Institute of Geology and Palaeontology, Chinese Academy of
Sciences, Nanjing, China

Internal:

- 2015, Green Fellowship in Global Climate Change
Issued by University of Maryland, College Park
- 2015, Best Talk Award of Graduate Talk Day
Issued by Department of Geology, University of Maryland, College Park

2014, Dean's Outstanding Teaching Assistant Award
Issued by College of Computer, Mathematical, and Natural Sciences,
University of Maryland, College Park

2013, Distinguished Teaching Assistant Award
Issued by University of Maryland, College Park

TEACHING EXPERIENCE

Pedagogical Training Participated

- 2023, Three-week program designed for new faculty:
"New Faculty Teaching Academy"
Center for Teaching and Learning, Mississippi State University, USA
- 2019, Semester-long course designed for lecturers and postdocs:
"English for Lecturers: Communication for University Teaching"
Free University of Brussels-VUB, Brussels, Belgium
- 2018, Semester-long course designed for lecturers and postdocs:
"English for Lecturers: Vocabulary Expansion"
Free University of Brussels-VUB, Brussels, Belgium

Courses Taught at Mississippi State University (2022-present)

- **GG 1113 Earth Science Survey (3 credits)**
Three hours of lecture per week
Introductory-level science elective for non-geology majors
Instructor, Fall 2022, Spring 2023
- **GG 4443/6443 Principles of Sedimentary Deposits II (3 credits)**
Three hours of lecture per week
Also known as Sedimentology and Stratigraphy
Core course of Professional Geology major
Existing course in catalog with a complete revision
Instructor, Spring 2023, 2024
- **GG 4883/6883 Biogeochemical Evolution of Planet Earth (3 credits)**
Three hours of lecture per week
Science elective for seniors and graduate students
Newly developed course after moving to MSU
Instructor, Fall 2023
- **GG 8990 Global and Planetary Change (3 credits)**
Three hours of lecture per week
Science elective for graduate students
Newly developed course after moving to MSU

Instructor, Spring 2024

Teaching Experience in Belgium (2018-2020)

- Invited guest lecture, "Reconstructing the Precambrian"
Ghent University, Ghent, Belgium, 2020
- Invited guest lecture, "Sulfur Isotopes: Fractionation, Analysis, and Applications"
Free University of Brussels-VUB, Brussels, Belgium, 2019
- Invited guest lecture, "Life in the Precambrian"
Free University of Brussels-VUB, Brussels, Belgium, 2019
- Invited guest lecture, "Precambrian Geobiology & Biogeochemistry"
Free University of Brussels-VUB, Brussels, Belgium, 2018

Courses Taught at the University of Maryland (2012-2014)

- Dean's Outstanding Teaching Assistant Award
Issued by College of Computer, Mathematical, and Natural Sciences,
University of Maryland, College Park, 2014
- Distinguished Teaching Assistant Award
Issued by University of Maryland, College Park, 2013
- **GEOL 342 Sedimentology and Stratigraphy** (4 credits)
Three hours of lecture and three hours of laboratory per week
Teaching Assistant, Spring 2012, 2013, 2014
Cotaught with Prof. Alan J. Kaufman and Lecturer John Merck (UMD)
- **GEOL 445 High Temperature Geochemistry** (4 credits)
Three hours of lecture and three hours of laboratory per week
Teaching Assistant, Fall 2013, 2014
Cotaught with Prof. Roberta Rudnick (UMD, now at UCSB)
- **GEOL 444 Low Temperature Geochemistry** (4 credits)
Three hours of lecture and three hours of laboratory per week
Teaching Assistant, Fall 2012
Cotaught with Prof. James Farquhar (UMD)
- **GEOL 110 Physical Geology Laboratory** (1 credit)
Three hours of laboratory per week
Instructor, Summer 2012

STUDENT MENTORING

MS students

- 2020, Chaoqun Yin, Free University of Brussels-VUB

Committee Member

- 2023-now, Christiana Eziashi, PhD student, Mississippi State University
- 2023-now, Mustafa Rezaei, PhD student, Mississippi State University

External Examiner

- 2020, Sergio Caetano Filho, Ph.D., University of São Paulo, Brazil

Laboratory Mentor

- 2015, Zakri Siegel, Intern, Bethesda-Chevy Chase High School
- 2014, Kalev Hantsoo, BS, University of Maryland

REVIEW AND EDITORIAL SERVICE

Summary (2016-present)

- Reviewed ~200 manuscripts for >40 scholarly journals
- Handled ~60 manuscripts as an Academic Editor
- Verified review and editorial record on Web of Science:
<https://www.webofscience.com/wos/author/record/905681>

Manuscript Reviews for Scholarly Journals

- Top ten journals based on [the number of reviews](#):
Precambrian Research
Chemical Geology
Palaeogeography Palaeoclimatology Palaeoecology
Geology
Frontiers of Earth Sciences
Earth and Planetary Science Letters
Geochimica et Cosmochimica Acta
Global and Planetary Change
Marine and Petroleum Geology
Nature Communications
- 2022, Excellent Reviewer Awardee
Issued by *Science Bulletin* (Elsevier) Editorial Office

Editorial Board of Scholarly Journals

- 2020-now, Associate Editor
Marine and Petroleum Geology (Elsevier)
- 2020-now, Editorial Board Member
Astrobiology (Mary Ann Liebert)
- 2019-now, Academic Editor
PLOS One (Public Library of Science)
- 2019-2021, Guest Editor
Special Issue "Neoproterozoic Earth-Life system" (including 21 papers)
Precambrian Research (Elsevier)

Grant Proposal Reviews for Funding Agencies

- American Chemical Society (ACS)
Petroleum Research Fund
- National Aeronautics and Space Administration (NASA)
Postdoctoral Program
- Geological Society of America (GSA)
Graduate Student Research Grant
- International Association of Sedimentologists (IAS)
Postdoctoral Research Grant

SOCIETY AND COMMITTEE SERVICE

Academic Organizations

- 2023-2024, Committee Member
International Association of Sedimentologists (IAS) Diversity, Equity, and Inclusion (DEI) Task Force
- 2021-2023, Committee Member
Geological Society of America (GSA) Research Grants Committee
- 2019-2022, Committee Member
International Association of Sedimentologists (IAS) Early-Career Scientists Committee

Mississippi State University

- 2023-2025, Committee Member
Department of Geosciences Strategic Planning Committee

Conference Convener

- 2022, Lead Convener & Poster Judge
International Sedimentological Congress, virtual
Topical session: "Development and Applications of In Situ Analysis in Sedimentology and Geobiology"
- 2020, Lead Convener
Geological Society of America Annual Meeting, virtual
Topical session: "Deep-Time Carbon Cycles, Redox Changes, and the Evolution of the Biosphere"
- 2020, Co-convener
Geological Society of America Annual Meeting, virtual
Topical session: "Assessing the Fidelity of Geochemical Signals in Deep Time: Primary, Authigenic, and Diagenetic Signals in Proxy Data"
- 2019, Co-convener
Geological Society of America Annual Meeting in Phoenix, Arizona, USA
Pardee keynote symposium & topical session: "Understanding the Neoproterozoic Earth-Life System"

FUNDING

Research Grants

2022, Start-up Research Grant, Mississippi State University

2019, Open Research Grant / Visiting Fellowship

Issued by the State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, ¥120K for 3 years

Relinquished due to the COVID-19 pandemic

Funded Proposal: "Chemostratigraphy of a candidate GSSP for Terminal Ediacaran Stage"

Postdoctoral Travel Grants

2019, Belgian Flanders Research Foundation

Postdoctoral Travel Grant

Trip for Geological Society of America annual meeting in Phoenix, Arizona, USA

2019, Belgian Flanders Research Foundation

Postdoctoral Travel Grant

Sampling trip to Adelaide, Australia

2018, NASA Astrobiology Institute
Early-Career Scientist Travel Grant, \$1K
Astrobiology Grand Tour organized by Australian Centre for
Astrobiology, University of New South Wales, Australia

Research Grants Received as a Graduate Student PI

- 2015, Mineralogical Society of America
Graduate Student Research Grant, \$5K
Funded Proposal: "Linking authigenic carbonate mineralization to the largest carbon isotope excursion in Earth history"
- 2014, Geological Society of America
Graduate Student Research Grant, \$1.5K
Funded Proposal: "Testing the origin of enigmatic $^{87}\text{Sr}/^{86}\text{Sr}$ anomaly in Ediacaran carbonate successions, Saudi Arabia"
- 2014, American Association of Petroleum Geologists
Graduate Student Research Grant, \$3K
Funded Proposal: "Reconstructing the biogeochemical carbon and sulfur cycling for the Ediacaran Dengying Formation, China"
- 2014, International Association of Sedimentologists
Graduate Student Research Grant, \$1K
Funded Proposal: "Clumped isotope analysis of Ediacaran authigenic carbonates during the Shuram event"
- 2014, Sigma Xi - The Scientific Research Honor Society
Graduate student research grant, \$0.6K
Funded Proposal: "The Hüttenberg excursion: Carbon and sulfur isotopic clues to the onset of Cryogenian glaciation?"
- 2014, Society of Economic Geologists
Graduate Student Research Grant, \$2K
Funded Proposal: "Biogeochemical approaches to understanding Ediacaran and Early Cambrian phosphogenesis"
- 2014, Explorers Club
Graduate Student Research Grant, \$3K
Funded Proposal: "Field investigation of Earth's oldest methane seep deposits in South China"
- 2014, Explorers Club Washington Group
Graduate Student Research Grant, \$3.5K
Funded Proposal: "Searching for early animal skeletons and reconstructing biogeochemical fuse to Cambrian Explosion"

ANALYTICAL EXPERIENCES

Routine laboratory analysis (from rock to data) of light stable isotopes

- Elemental Analyzer (EA)
- Continuous-Flow Isotope Ratio Mass Spectrometer (CF-IRMS)
- Multi-Flow Isotope Ratio Mass Spectrometer (MF-IRMS)
- Extraction of Carbonate-Associated Sulfate (CAS)
- $\delta^{13}\text{C}_{\text{carbonate}}$, $\delta^{13}\text{C}_{\text{organic}}$, $\delta^{18}\text{O}_{\text{carbonate}}$, $\delta^{15}\text{N}_{\text{solid}}$, $\delta^{34}\text{S}_{\text{sulfate}}$, $\delta^{34}\text{S}_{\text{sulfide}}$, TOC, TS
- Paleoclimate / Stable Isotope Laboratory, University of Maryland

Routine laboratory analysis (from rock to data) of $^{87}\text{Sr}/^{86}\text{Sr}$

- Thermal Ionization Mass Spectrometer (TIMS)
- Cation exchange method using Eichrom Sr-specific resin columns
- Radiogenic Isotope Laboratory, University of Maryland

Integrated in situ isotopic and elemental analyses

- Secondary Ion Mass Spectrometry (SIMS)
- Scanning Electron Microscope (SEM)
- Energy Dispersive Spectroscopy (EDS)
- Electron microprobe analysis (EMPA)
- Elemental mapping by Micro X-ray Fluorescence (μXRF)
- Wisconsin Secondary Ion Mass Spectrometer (WiscSIMS) Laboratory, University of Wisconsin–Madison

Other analyses as an external user:

- Cathodoluminescence analysis of thin sections and SIMS mounts
- U-Pb dating of zircons by laser ablation
- Isotopic mapping by NanoSIMS
- Extraction of detrital zircons by magnetic/gravity separation
- Fluid inclusion analysis by a heating/cooling stage

INVITED TALKS

- 2022, Mississippi State University
Department of Geosciences, Starkville, USA
- 2021, American Geophysical Union fall meeting, online
Session "Carbonate Sediments Through Time: Processes of Deposition and Diagenesis"
- 2021, Khalifa University
Department of Earth Sciences, UAE, online
- 2021, Geological Society of America annual meeting, online
Session "The Neoproterozoic Earth-Life System"

- 2021, Goldschmidt conference, online
Session "Co-evolution of Earth's Surface Environment and Biotic
Innovation from the Neoproterozoic through the Pre-Cambrian"
- 2021, University of North Carolina at Chapel Hill
Department of Geological Sciences, online
- 2020, China University of Geosciences-Wuhan
Carbonate seminar, online
- 2020, Shanghai Jiao Tong University
School of Oceanography, online
- 2020, China University of Geosciences-Wuhan, online
- 2020, University College London
Department of Earth Sciences, online
- 2020, University of Texas at Dallas
Department of Geosciences, online
- 2020, Southwest Petroleum University
School of Geoscience & Technology, online
- 2020, Nanjing University
Geobiology seminar, online
- 2020, Southern University of Science and Technology (SUSTech)
Department of Earth and Space Sciences, Shenzhen, China
- 2019, Nanjing Institute of Geology and Palaeontology
Chinese Academy of Sciences, Nanjing, China
- 2019, Northwest University
Department of Geology, Xi'an, China
- 2019, University of Adelaide
Department of Earth Sciences, Adelaide, Australia
- 2018, Institute of Geology and Geophysics
Chinese Academy of Sciences, Beijing, China
- 2018, Nanjing University
School of Earth Sciences and Engineering, Nanjing, China
- 2018, China University of Geosciences
State Key Laboratory of Geological Processes and Mineral Resources,
Wuhan, China
- 2018, Sun Yat-sen University
School of Marine Sciences, Zhuhai, China
- 2014, Peking University
Geobiology seminar, Department of Geology, Beijing, China
- 2014, Yunnan University
Institute of Palaeontology, Kunming, China
- 2014, Southwest Petroleum University
School of Geoscience & Technology, Chengdu, China
- 2013, Virginia Tech
Geobiology seminar, Department of Geosciences, Blacksburg, USA

FIELDWORK

- 2023/11, Eastern Brazil
The Ediacaran-Cambrian Bambuí Group; Field conference organized by International Subcommissions on Ediacaran and Cryogenian Stratigraphy
- 2023/10, Green River, Utah
Sequence stratigraphy; Theme "Are Siliciclastic Parasequences Still Relevant?", Field conference organized by SEPM - Society for Sedimentary Geology
- 2019/10, Guadalupe, Spain
Ediacaran-Cambrian Transition; Field conference organized by the International Subcommissions on Ediacaran and Cambrian Stratigraphy
- 2019/06, Adelaide, Australia
Sampling trip for chemostratigraphy, South Australia Drill Core Reference Library, Ediacaran drill cores
- 2019/04, Shaanxi Province, South China
Sampling trip for chemostratigraphy, Ediacaran Dengying Formation at the Lijiagou section
- 2018/07, Western Australia
Astrobiology Grand Tour; Field conference organized by the Australian Centre for Astrobiology
- 2015/12, Ontario, Canada
Sampling trip for chemostratigraphy, Paleoproterozoic Huronian Supergroup, Ontario Geological Survey, the Great Oxidation Event
- 2014/07, Newfoundland, Canada
Sampling trip for chemostratigraphy, Golden Spike / Global Boundary Stratotype Section and Point (GSSP) of the Ediacaran-Cambrian boundary
- 2014/06, Yangtze Gorges area, South China
Sampling trip for chemostratigraphy, Ediacaran Doushantuo and Dengying formations + An additional field conference organized by the International Subcommission on Ediacaran Stratigraphy
- 2014/06, Shaanxi Province, China
Sampling trip for chemostratigraphy, Ediacaran Dengying Formation at Gaojiashan at the Gaojiashan section
- 2012-2014, Maryland, Virginia, and Pennsylvania of the USA
University of Maryland GEOL 342 Sedimentology and Stratigraphy course field excursions
- 2011/08, Siberia, Russia
Neoproterozoic Oselok and Karagassy groups, Sayan Mountains; Field conference organized by the International Subcommission on Ediacaran Stratigraphy

- 2010/04, Qaidam Basin, NW China
Facies analysis, stratigraphic description and correlation
- 2009/08, Tarim Basin, NW China
Cambrian and Ordovician carbonate reservoirs, hydrothermal diagenesis

PEER-REVIEWED PUBLICATIONS

H-index = 23 based on [Google Scholar](#).

Under Review / In Revision

39. Coauthored paper (Qin et al.), **In Revision**
38. Coauthored paper (Stockey et al.), Multiple sustained increases in atmospheric oxygen and marine productivity through the Neoproterozoic and Paleozoic Eras, *Nature Geoscience*, **In Revision**, <https://www.researchsquare.com/article/rs-3438740/v1>

2024

37. **Cui, H.**, Kitajima, K., Orland, I.J., Baele, J.-M., Denny, A., Spicuzza, M.J., Fournelle, J.H., Goderis, S., de Winter, N.J., Valley, J.W., 2024. Questioning the role of methane in the wake of a snowball Earth: Insights from isotopically anomalous cap dolostone cements with a complex diagenetic history. *Geochimica et Cosmochimica Acta*, **364**, 195–210. <https://doi.org/10.1016/j.gca.2023.11.002>.
36. Lu, C., Koeshidayatullah, A., Li, F., **Cui, H.**, Zou, H., Swart, P.K., 2023. A clumped isotope diagenetic framework for the Ediacaran dolomites: Insights to fabric-specific geochemical variabilities. *Sedimentology*, **71**, 546-572. <https://doi.org/10.1111/sed.13144>.
35. Han, S., Löhr, S.C., Abbott, A.N., Baldermann, A., Shields, G.A., **Cui, H.**, Kaufman, A.J., Chen, B., Yu, B., 2024. Authigenic clay mineral constraints on spatiotemporal evolution of restricted, evaporitic conditions during deposition of the Ediacaran Doushantuo Formation. *Earth and Planetary Science Letters*, **626**, 118524. <https://doi.org/10.1016/j.epsl.2023.118524>
34. Kang, J., Gregory, D.D., Gill, B., Huang, S., Lai, C., Chang, Z., **Cui, H.**, Belousov, I., Xiao, S., 2024. Trace element evidence for diverse origins of superheavy pyrite in Neoproterozoic sedimentary strata. *Geochimica et Cosmochimica Acta*, **364**, 1–9, <https://doi.org/10.1016/j.gca.2023.11.005>.

2022

33. **Cui, H.**, Kitajima, K., Orland, I.J., Baele, J.-M., Xiao, S., Kaufman, A.J., Denny, A., Spicuzza, M.J., Fournelle, J.H., Valley, J.W., 2022. An authigenic response to Ediacaran surface oxidation: Remarkable micron-scale isotopic heterogeneity revealed by SIMS. *Precambrian Research*, **377**, 106676, <https://doi.org/10.1016/j.precamres.2022.106676>.
32. **Cui, H.**, Kaufman, A.J., Xiao, S., Zhou, C., Zhu, M., Cao, M., Loyd, S., Crockford, P., Liu, X.-M., Goderis, S., Wang, W., Guan, C., 2022. Dynamic interplay of biogeochemical C, S, and Ba cycles in response to the Shuram oxygenation event. *Journal of the Geological Society*, **179**, jgs2021-081, <https://doi.org/10.1144/jgs2021-081>.
31. Tang, Q., **Cui, H.**, Zhang, F., 2022. Neoproterozoic Earth-life system. *Precambrian Research*, **368**, 106486, <https://doi.org/10.1016/j.precamres.2021.106486>.

2021

30. **Cui, H.**, Kitajima, K., Orland, I.J., Xiao, S., Baele, J.-M., Kaufman, A.J., Denny, A., Zhou, C., Spicuzza, M.J., Fournelle, J.H., Valley, J.W., 2021. Deposition or diagenesis? Probing the Ediacaran Shuram Excursion by SIMS. *Global and Planetary Change*, **206**, 103591, <https://doi.org/10.1016/j.gloplacha.2021.103591>.
29. Farrell, Ú.C., Samawi, R., Anjanappa, S., Klykov, R., Adeboye, O.O., Agic, H., Ahm, A.-S.C., Boag, T.H., Bowyer, F., Brocks, J.J., Brunoir, T.N., Canfield, D.E., Chen, X., Cheng, M., Clarkson, M.O., Cole, D.B., Cordie, D.R., Crockford, P.W., **Cui, H.**, Dahl, T.W., Mouro, L.D., Dewing, K., Dornbos, S.Q., Drabon, N., Dumoulin, J.A., Emmings, J.F., Endriga, C.R., Fraser, T.A., Gaines, R.R., Gaschnig, R.M., Gibson, T.M., Gilleaudeau, G.J., Gill, B.C., Goldberg, K., Guilbaud, R., Halverson, G.P., Hammarlund, E.U., Hantsoo, K.G., Henderson, M.A., Hodgskiss, M.S.W., Horner, T.J., Husson, J.M., Johnson, B., Kabanov, P., Brenhin Keller, C., 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.N., O'Connell, B., Och, L.M., Ossa Ossa, F., Pagès, A., Paiste, K., Partin, C.A., Peters, S.E., Petrov, P., Playter, T.L., Plaza-Torres, S., Porter, S.M., Poulton, S.W., Pruss, S.B., Richoz, S., Ritzer, S.R., Rooney, A.D.,

Sahoo, S.K., Schoepfer, S.D., Sclafani, J.A., Shen, Y., Shorttle, O., Slotznick, S.P., Smith, E.F., Spinks, S., Stockey, R.G., Strauss, J.V., Stüeken, E.E., Tecklenburg, S., Thomson, D., Tosca, N.J., Uhlein, G.J., Vizcaino, M.N., Wang, H., White, T., Wilby, P.R., Woltz, C.R., Wood, R.A., Xiang, L., Yurchenko, I.A., Zhang, T., Planavsky, N.J., Lau, K.V., Johnston, D.T., Sperling, E.A., 2021. The Sedimentary Geochemistry and Paleoenvironments Project. *Geobiology*, **19**, 545–556. <https://doi.org/10.1111/gbi.12462>.

28. Mehra, A., Keller, C.B., Zhang, T., Tosca, N.J., McLennan, S.M., Sperling, E., Farrell, U., Brocks, J., Canfield, D., Cole, D., Crockford, P., **Cui, H.**, Dahl, T.W., Dewing, K., Emmings, J., Gaines, R.R., Gibson, T., Gilleaudeau, G.J., Guilbaud, R., Hodgkiss, M., Jarrett, A., Kabanov, P., Kunzmann, M., Li, C., 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., Strauss, J.V., 2021. Curation and analysis of global sedimentary geochemical data to inform Earth history. *GSA Today*, **31**, 4–10, <https://doi.org/10.1130/GSATG484A.1>.
27. Wang, W., Hu, Y., Muscente, A.D., **Cui, H.**, Guan, C., Hao, J., Zhou, C., 2021. Revisiting Ediacaran sulfur isotope chemostratigraphy with in situ nanoSIMS analysis of sedimentary pyrite. *Geology*, **49**, 611–616, <https://doi.org/10.1130/G48262.1>.
26. Liu, X.-M., Kah, L.C., Knoll, A.H., **Cui, H.**, Wang, C., Bekker, A., Hazen, R.M., 2021. A persistently low level of atmospheric oxygen in Earth’s middle age. *Nature Communications*, **12**, 351, <https://doi.org/10.1038/s41467-020-20484-7>.

2020

25. **Cui, H.**, Warren, L.V., Uhlein, G.J., Okubo, J., Liu, X.-M., Plummer, R.E., Baele, J.-M., Goderis, S., Claeys, P., Li, F., 2020. Global or regional? Constraining the origins of the middle Bambuí carbon cycle anomaly in Brazil. *Precambrian Research*, **348**, 105861, <https://doi.org/10.1016/j.precamres.2020.105861>.
24. **Cui, H.**, Kaufman, A.J., Zou, H., Kattan, F.H., Trusler, P., Smith, J., Ivantsov, A.Y., Rich, T.H., Qubsani, A.A., Yazedi, A., Liu, X.-M., Johnson, P., Goderis, S., Claeys, P., Vickers-Rich, P., 2020. Primary or secondary? A dichotomy of the strontium isotope anomalies in the Ediacaran carbonates of Saudi Arabia. *Precambrian Research*, **343**, 105720, <https://doi.org/10.1016/j.precamres.2020.105720>.

23. Xiao, S., **Cui, H.**, Kang, J., McFadden, K.A., Kaufman, A.J., Kitajima, K., Fournelle, J.H., Schwid, M., Nolan, M., Baele, J.-M., Valley, J.W., 2020. Using SIMS to decode noisy stratigraphic $\delta^{13}\text{C}$ variations in Ediacaran carbonates. *Precambrian Research*, **343**, 105686, <https://doi.org/10.1016/j.precamres.2020.105686>.
22. Wang, W., Guan, C., Hu, Y., **Cui, H.**, Muscente, A.D., Chen, L., Zhou, C., 2020. Spatial and temporal evolution of Ediacaran carbon and sulfur cycles in the Lower Yangtze Block, South China. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **537**, 109417, <https://doi.org/10.1016/j.palaeo.2019.109417>.
21. Cao, M., Daines, S.J., Lenton, T.M., **Cui, H.**, Algeo, T.J., Dahl, T.W., Shi, W., Chen, Z.-Q., Anbar, A., Zhou, Y.-Q., 2020. Comparison of Ediacaran platform and slope $\delta^{238}\text{U}$ records in South China: Implications for global-ocean oxygenation and the origin of the Shuram Excursion. *Geochimica et Cosmochimica Acta*, **287**, 111–124, <https://doi.org/10.1016/j.gca.2020.04.035>.
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SHORT COMMENTS

04. Cui, H., 2022. Citation for the Geological Society of America Geobiology and Geomicrobiology Division Distinguished Career Award to Prof. John W. Valley. *Geological Society of America website*. <https://www.geosociety.org/GSA/About/awards/GSA/Awards/2022/gbgm-dca.aspx>.
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02. Cui, H., 2021. Inside out: Deep carbon linked to deep-time carbon cycle. *Science Bulletin*, **66**, 1822–1824, <https://doi.org/10.1016/j.scib.2021.06.001>.
01. Cui, H., 2017. Rock magnetic chronostratigraphy of the Shuram carbon isotope excursion: Wonoka Formation, Australia: COMMENT. *Geology*, **45**, e429, <https://doi.org/10.1130/g39593c.1>.

ABSTRACTS

Over 20 first-author and more coauthored abstracts have been published in Geological Society of America (GSA), American Geophysical Union (AGU), and Goldschmidt meetings over the past ten years. Abstract list is available upon request.

MEMBERSHIP

- Geological Society of America, including the GSA Geobiology & Geomicrobiology Division and the GSA Sedimentary Geology Division
- International Association of Sedimentologists
- SEPM - Society of Sedimentary Geology
- Geochemical Society
- Geological Society of London (Fellow since 2018)

PERSONAL

- Born in 1986, growing up from a working-class household in the Renqiu oil city, Hebei Province, China
- First-generation high school graduate, lived in China until 2011
- Married, father of two daughters
- Languages: Mandarin and English

CAREER BREAKS

- 2022/05-07 (3 months) Relocation from Paris to Mississippi
- 2020/07-09 (3 months) Relocation from Brussels to Paris
- 2018/06-08 (3 months) Relocation from Wisconsin to Brussels
- 2015/11-12 (1 month) Relocation from Maryland to Wisconsin
- 2011/07-08 (1 month) Relocation from China to Maryland, USA

FORMER MENTORS

My academic career cannot be possible without the support of my mentors. Along this journal, I have been fortunate to have worked with and inspired by many great (and humble) scientists. Some of them are role models in my career.

* Member, National Academy of Sciences

Ph.D. Advisor (2011-2015)

- Alan J. Kaufman, Professor of Biogeochemistry, University of Maryland, College Park

Ph.D. Advisory Committee (2011-2015)

- Alan J. Kaufman, Chair, Professor of Biogeochemistry, University of Maryland, College Park
- Shuhai Xiao*, Professor of Geobiology, Virginia Tech
- James Farquhar*, Distinguished Professor of Geochemistry, University of Maryland, College Park

- Roberta L. Rudnick*, Distinguished Professor of Geochemistry, University of Maryland, College Park; now at University of California, Santa Barbara

Graduate Program Director (2011-2015)

- William F. McDonough, Professor of Geochemistry, University of Maryland, College Park

Former Postdoctoral Mentors/Hosts

- 2020-2022, Bénédicte Menez, Professor of Geomicrobiology, Institute of the Physics of the Globe in Paris (Institut de Physique du Globe de Paris - IPGP), Université Paris Cité, Paris, France
- 2020-2022, Barbara Sherwood Lollar*, University Professor of Geochemistry, University of Toronto, remote co-advisor
- 2018-2020, Steven Goderis, Research Professor of Geochemistry, Free University of Brussels (Vrije Universiteit Brussel), Brussels
- 2015-2018, John W. Valley*, Charles R. Van Hise Professor of Geochemistry, Emeritus, University of Wisconsin–Madison

MS Advisor (2008-2011)

- Ping Guan, Professor Emeritus of Sedimentary Geology, Peking University, Beijing