

## 工作经历

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## 工作经历

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澳大利亚研究学会未来学者，澳大利亚国立大学地球科学学院	2015/1-2019
学者，澳大利亚国立大学地球科学学院	2012/8-2015/1
美国国家实验室研究员，美国 Livermore 国家实验室	2011/9-2012/8
拉蒙特副研究员，哥伦比亚大学	2011/9-今
拉蒙特助理研究员，哥伦比亚大学	2011/2-2011/8
拉蒙特博后学者，哥伦比亚大学	2008/9-2011/1
“Comer” 博士后，剑桥大学地球科学系	2006/4-2008/8

## 教育经历

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博士，剑桥大学，地球化学，古气候，古海洋	2002/9-2006/3
硕士，南京大学，地球化学，矿床学	1999/9-2002/6
本科，南京大学，地质学基地班	1995/9-1999/7

## 学术论文

### 第一作者论文：

- J. Yu**, L. Menviel, Z.D. Jin, D.J.R. Thornalley, G.L. Foster, E.J. Rohling, I.N. McCave, J.F. McManus, Y. Dai, H. Ren, F. He, F. Zhang, P.J. Chen, A.P. Roberts, More efficient North Atlantic carbon pump during the Last Glacial Maximum, *Nature Communications*, 2019  
<https://doi.org/10.1038/s41467-019-10028-z>
- J. Yu**, L. Menviel, Z.D. Jin, D.J.R. Thornalley, S. Barker, G. Marino, E.J. Rohling, Y. Cai, F. Zhang, X. Wang, Y. Dai, P. Chen, W.S. Broecker, Sequestration of carbon in the deep Atlantic during the last glaciation, *Nature Geoscience*, doi: 10.1038/ngeo2657. (Article) 2016
- J Yu**, Henry Elderfield, Zhangdong Jin, Paul Tomascak, Eelco J. Rohling, Controls on Sr/Ca in benthic foraminifera and implications for seawater Sr/Ca during the late Pleistocene, *Quat. Sci. Rev.*, DOI: 10.1016/j.quascirev.2014.05.018. 2014

- Yu J., Anderson R.F., Jin Z.D., Menviel L., Zhang F., Ryerson F.J., Rohling E.J., Deep South Atlantic carbonate chemistry and increased interocean deep water exchange during last deglaciation, *Quat. Sci. Rev.*, doi: 10.1016/j.quascirev.2014.02.018. 2014
- Yu J., Anderson R.F., Rohling E.J., Deep ocean carbonate chemistry and glacial-interglacial atmospheric CO<sub>2</sub> changes. *Oceanography* 27(1), 16-25, 2014  
http://dx.doi.org/10.5670/oceanog.2014.04.
- Yu J., Anderson R.F., Jin Z.D., Rae J., Opdyke B.N., Eggins S., Responses of the deep ocean carbonate system to carbon reorganization during the Last Glacial–interglacial cycle, *Quat. Sci. Rev.* 76, 39-52. http://dx.doi.org/10.1016/j.quascirev.2013.06.020. 2013
- Yu J., Thornalley D.J.R., Rae J.W.B., and McCave I.N., Calibration and application of B/Ca, Cd/Ca and  $\delta^{11}\text{B}$  in *Neogloboquadrina pachyderma* (sinistral) to constrain CO<sub>2</sub> uptake in the subpolar North Atlantic during the last deglaciation, *Paleoceanography*, doi: 10.1029/2012PA002432. 2013
- Yu, J.M., Broecker, W.S., Elderfield, H., Jin, Z.D., McManus, J., Zhang, F., Loss of carbon from the deep sea since the Last Glacial Maximum, *Science*, doi: 10.1126/science.1193221. 2010
- Yu, J.M., Foster, G.L., Elderfield, H., Broecker, W.S. and Clark, E., An evaluation of benthic foraminiferal B/Ca and  $\delta^{11}\text{B}$  for deep ocean carbonate ion and pH reconstructions. *Earth Planet. Sci. Lett.*, 293(1-2): 114-120. 2010
- Yu, J.M. and Broecker, W.S., Comment on “Deep-Sea Temperature and Ice Volume Changes Across the Pliocene-Pleistocene Climate Transitions”, *Science*, 328, 1480c, 2010  
doi:10.1126/science.1186544.
- Yu, J.M., Elderfield, H. and Piotrowski, A., Seawater carbonate ion- $\delta^{13}\text{C}$  systematics and application to glacial-interglacial North Atlantic ocean circulation. *Earth Planet. Sci. Lett.*, 271(1-4): 209-220. doi:10.1016/j.epsl.2008.04.010. 2008
- Yu, J.M. and Elderfield, H., Mg/Ca in the benthic foraminifera *Cibicidoides wuellerstorfi* and *Cibicidoides mundulus*: Temperature versus carbonate ion saturation. *Earth Planet. Sci. Lett.*, 276(1-2): 129-139. doi: 10.1016/j.epsl.2008.09.015. 2008
- Yu, J.M., Elderfield, H., Jin, Z.D. and Booth, L., A strong temperature effect on U/Ca in planktonic foraminifer carbonates. *Geochim. Cosmochim. Acta* (72): 4988-5000. 2008
- Yu, J.M. and Elderfield, H., Benthic foraminiferal B/Ca ratios reflect deep water carbonate saturation state. *Earth Planet. Sci. Lett.*, 258(1-2): 73-86. 2007
- Yu, J.M., Elderfield, H., Greaves, M. and Day, J., Preferential dissolution of benthic foraminiferal calcite during laboratory reductive cleaning. *Geochem. Geophys. Geosyst.*, 8: Q06016, 2007  
doi:10.1029/2006GC001571.
- Yu, J.M., Elderfield, H. and Hönisch, B., B/Ca in planktonic foraminifera as a proxy for surface water pH. *Paleoceanogr.*, 22: PA2202, doi:10.1029/2006PA001347. 2007
- Yu, J.M., Day, J., Greaves, M. and Elderfield, H., Determination of multiple element/calcium ratios in foraminiferal calcite by quadrupole ICP-MS. *Geochem. Geophys. Geosyst.*, 6: Q08P01, doi:10.1029/2005GC000964. 2005

- Yu, J.M.** and Jiang, S.Y., Chemical compositions of tourmaline from the Yunlong tin deposit, Yunnan, China: Implication for ore genesis and mineral exploration. *Mineralogy and Petrology*, 77(1-2): 67-84. 2003
- Yu, J.-M.**, Jiang, S.-Y., Pan, J.-Y., Ni, P., Fluid inclusion and stable isotope study on the Yunlong tin deposit, Western Yunnan, China. *Bulletin of Mineralogy Petrology and Geochemistry*, 20(4):373-375. 2001

### 共同作者论文:

- F. Zhang, Z. Jin, A.J. West, Z. An, R.G. Hilton, J. Wang, G. Li, A.L. Densmore, **J. Yu**, X. Qiang, Y. Sun, L. Li, L. Gou, Y. Xu, X. Xu, X. Liu, Y. Pan & C.-F. You, Monsoonal control on a delayed response of sedimentation to the 2008 Wenchuan earthquake, *Science Advances*, DOI: 10.1126/sciadv.aav7110. 2019
- N.E. Umling, D.W. Oppo, P. Chen, **J. Yu**, Z. Liu, M. Yan, G. Gebbie, D. C. Lund, K. R. Pietro, Z.D. Jin, K.-F. Huang, K.B. Costa, F.A.L. Toledo, Atlantic circulation and ice sheet influences on upper South Atlantic temperatures during the last deglaciation, *Paleoceanography and Paleoclimatology*, DOI: 10.1029/2019PA003558. 2019
- R.F. Anderson, J.P. Sachs, M.Q. Fleisher, K.A. Allen, **J. Yu**, A. Koutavas, S.L. Jaccard, Deep-sea oxygen depletion and ocean carbon sequestration during the last ice age, *Global Biogeochemical Cycles*, DOI: 10.1029/2018GB006049. 2019
- L. Menviel, P. Spence, **J. Yu**, M. Chamberlain, R. Matear, K. Meissner, and M. England, Southern Hemisphere westerlies as a driver of the early deglacial atmospheric CO<sub>2</sub> rise, *Nature Communications*, DOI: 10.1038/s41467-018-04876-4. 2018
- X. Ma\*, J. Tian, W. Ma, K. Li, **J. Yu**, Changes of deep Pacific overturning circulation and carbonate chemistry during middle Miocene East Antarctic ice sheet expansion, *Earth Planet. Sci. Lett.*, 484: 253-263. (访问博士生论文) 2018
- E.J. Rohling, F.D. Hibbert, F.H. Williams, K.M. Grant, G. Marino, G.L. Foster, R. Hennekam, A.P. Roberts, **J. Yu**, J.M. Webster, Y. Yokoyama, Differences between Quaternary ice ages, *Quat. Sci. Rev.*, 176, 1-28. 2017
- A.P. Hasenfratz, R. Schiebel, D.J.R. Thornalley, J. Schönfeld, S.L. Jaccard, A. Martínez-García, A. Holbourn, A.E. Jennings, W. Kuhnt, C.H. Lear, T.M. Marchitto, U. Quillmann, Y. Rosenthal, **J. Yu**, G.H. Haug, Mg/Ca-temperature calibration for the benthic foraminifera *Melonis barleeanum* and *Melonis pompilioides*, *Geochim. Cosmochim. Acta*, 217, 365-383. <http://dx.doi.org/10.1016/j.gca.2017.08.038> 2017
- M. Lacerra, D. Lund, **J. Yu**, A. Schmittner, Carbon storage in the mid-depth Atlantic during millennial-scale climate events, *Paleoceanography*, doi: 10.1002/2016PA003081. 2017
- J. Kerr, R. Rickaby, **J. Yu**, H. Elderfield, A.Y. Sadokov, The effect of ocean alkalinity and carbon transfer on deep-sea carbonate ion concentration during the past five glacial cycles, *Earth Planet. Sci. Lett.*, 471, 42-53. 2017
- L. Menviel, **J. Yu**, F. Joos, A. Mouchet, K.J. Meissner, M.H. England, Poorly ventilated deep ocean at the Last Glacial Maximum inferred from carbon isotopes: a data-model comparison study, *Paleoceanography*, doi: 10.1002/2016PA003024. 2017

- P. Chen, **J. Yu**, Z.D. Jin, An evaluation of benthic foraminiferal U/Ca and U/Mn proxies for deep ocean carbonate chemistry and redox conditions, *Geochem. Geophys. Geosyst.*, 8, doi: 10.1002/2016GC006730. (学生论文) 2017
- L. Menviel, **J. Yu**, F. Joos, A. Mouchet, K.J. Meissner, M.H. England, Poorly ventilated deep ocean at the Last Glacial Maximum inferred from carbon isotopes: a data-model comparison study, *Paleoceanography*, doi: 10.1002/2016PA003024. 2016
- K. Allen, B. Hönisch, S. M. Eggins, L. L. Haynes, Y. Rosenthal, **J. Yu**, Trace element proxies for surface ocean conditions: A synthesis of culture calibrations with planktic foraminifera, *Geochim. Cosmochim. Acta* (193): 197-221. 2016
- Y. Dai, **J. Yu**, H. Johnstone, Distinct responses of planktonic foraminiferal B/Ca to dissolution on seafloor, *Geochem. Geophys. Geosyst.*, 17, doi: 10.1002/2015GC006199. (学生论文) 2016
- Zhangdong Jin, A. Joshua West, Fei Zhang, Zhisheng An, Robert G. Hilton, **Jimin Yu**, Jin Wang, Gen Li, and Xulong Wang, Seismically enhanced solute fluxes link silicate weathering with tectonic activity, *Geology*, doi:10.1130/G37246.1, v. 44; no. 1; p. 47–50. 2016
- G. Marino, E. J. Rohling, L. Rodri'guez-Sanz, K. M. Grant, D. Heslop, A. P. Roberts, J. D. Stanford & **J. Yu**, Bipolar seesaw control on last interglacial sea level, *Nature*, doi:10.1038/nature14499. 2015
- D. J. R. Thornalley, H. A. Bauch, G. Gebbie, W. Guo, M. Ziegler, S. M. Bernasconi, S. Barker, L. C. Skinner, **J. Yu**, Awarm and poorly ventilated deep Arctic Mediterranean during the last glacial period, *Science*, 349(6249):706-710. 2015
- Broecker W.S., **Yu J.** and Putnam A.E., Two contributors to the glacial CO<sub>2</sub> decline, *Earth Planet. Sci. Lett.*, 429: 191-196. 2015
- Jin Z.D., An Z., **Yu J.** Li F., and Zhang F., Lake Qinghai sediment geochemistry linked to hydroclimate variability since the last glacial, *Quat. Sci. Rev.*, 122:63-73. 2015
- Zhang F., Jin Z.D., **Yu J.**, Zhou Y., and Zhou L., Hydrogeochemical processes between surface and groundwaters on the northeastern Chinese Loess Plateau: Implications for water chemistry and environmental evolutions in semi-arid regions, *Journal of Geochemical Exploration*, <http://dx.doi.org/10.1016/j.gexplo.2015.08.010>. 2015
- S. Kender, **J. Yu** and V.L. Peck, Deep ocean carbonate ion increase during mid Miocene CO<sub>2</sub> decline, *Scientific Reports*, doi: 10.1038/srep04187. 2014
- Menviel L., England M.H., Meissner K.J., Mouchet A., and **Yu J.**, Atlantic-Pacific seesaw and its role in outgassing CO<sub>2</sub> during Heinrich events. *Paleoceanography*. doi: 10.1002/2013PA002542. 2014
- Zhang F., Jin Z.D., Li F., **Yu J.**, You C.F., Zhou L., The dominance of loess weathering on water and sediment chemistry within the Daihai Lake catchment, northeastern Chinese Loess Plateau, *Applied Geochemistry*, 35, 51-63. 2013
- Zhang F., Jin Z.D., Li F., **Yu J.**, and Xiao J., Controls on seasonal variations of silicate weathering and CO<sub>2</sub> consumption in two river catchments on the NE Tibetan Plateau, *Journal of Asian Earth Sciences*, 62:547-560 2013
- A.M. Piotrowski, A. Galy, J.A.L. Nicholl, N. Roberts, D. J. Wilson, J. Clegg and **J. Yu**, Reconstructing deglacial North and South Atlantic deep water source using foraminiferal Nd isotopes, *Earth Planet. Sci. Lett.*, 357-358:289-297. 2012

- Jin Z.D., You C.F., **Yu J.**, Wu L., Zhang F., Liu H.C., Seasonal contributions of catchment weathering and eolian dust to river water chemistry, northeastern Tibetan Plateau: Chemical and Sr isotopic constraints, *Journal of Geophysical Research - Earth Surface*, 2011  
doi:10.1029/2011JF002002
- K. A. Allen, B. Hönisch, S. M. Eggins, **J. Yu**, H. J. Spero, H. Elderfield, Controls on boron incorporation in cultured tests of the planktic foraminifer *Orbulina universa*. *Earth Planet. Sci. Lett.*, doi:10.1016/j.epsl.2011.07.010. 2011
- Chuan-Chou Shen, Chung-Che Wu, Yi Liu, **Jimin Yu**, Ching-Chih Chang, Doan Dinh Lam, Jain-Ru Jhou, Li Lo, Kuo-Yen Wei, Measurements of Natural Carbonate Rare Earth Elements in Femtogram Quantities by Inductive Coupled Plasma Sector Field Mass Spectrometry, *Analytical Chemistry*, dx.doi.org/10.1021/ac201736w. 2011
- Broecker, W.S. and **Yu, J.**, What do we know about the evolution of Mg to Ca ratios in seawater?, *Paleoceanogr.*, doi:10.1029/2011PA002120. 2011
- Johnstone, H., **Yu, J.**, Elderfield, H. and Schulz, M., Improving temperature estimates derived from Mg/Ca of planktonic foraminifera using X-ray computed tomography-based dissolution index, *Paleoceanogr.*, doi:10.1029/2010PA001940. 2011
- B. Hönisch, K. A. Allen, A. D. Russell, S. M. Eggins, J. Bijma, H. J. Spero, D. W. Lea, and **J. Yu**, Planktic foraminifera as recorders of seawater Ba/Ca. *Marine Micropaleontology*, doi:10.1016/j.marmicro.2011.01.003. 2011
- Jin, Z.D., Bickle, M., Chapman, H., **Yu, J.**, An, Z.S., Wang, S.M. and Greaves, M., Ostracod Mg/Sr/Ca and <sup>87</sup>Sr/<sup>86</sup>Sr geochemistry from Tibetan lake sediments: Implications for early to mid-Pleistocene Indian monsoon and catchment weathering. *Boreas*: doi: 10.1111/j.1502-3885.2010.00184.x. 2011
- Peck, V.L., **Yu, J.**, Kender, S. and Riesselman, C.R., Shifting ocean carbonate chemistry during the Eocene-Oligocene climate transition: implications for deep ocean Mg/Ca-paleothermometry. *Paleoceanogr.*: doi:10.1029/2009PA001906. 2010
- Palmer, M.R., Brummer, G.J., Cooper, M., Elderfield, H., Greaves, M., Reichart, G.J., Schouten, S. and **Yu, J.**, Multi-proxy reconstruction of surface water pCO<sub>2</sub> in the northern Arabian Sea since 29 ka. *Earth Planet. Sci. Lett.*, 295: 49-57. 2010
- Jin, Z.D., Bickle, M., Chapman, H., **Yu, J.M.**, Wang, S.M. and Chen, S.Y., Early to mid-Pleistocene ostracod δ<sup>18</sup>O and δ<sup>13</sup>C in the central Tibetan Plateau: Implication for Indian monsoon change. *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, 280(3-4): 406-414. 2009
- Jin, Z.D., You, C.F. and **Yu, J.M.**, Toward a geochemical mass balance of major elements in Lake Qinghai, NE Tibetan Plateau: A significant role of atmospheric deposition. *Applied Geochemistry*, 24(10): 1901-1907. 2009
- Jin, Z.D., **Yu, J.M.**, Wang, S.M., Zhang, F., Shi, Y.W. and You, C.F., Constraints on water chemistry by chemical weathering in the Lake Qinghai catchment, northeastern Tibetan Plateau (China): clues from Sr and its isotopic geochemistry. *Hydrogeology Journal*, 17: 2037-2048. 2009
- Hönisch, B., **Yu, J.M.** and Hemming, N.G., Pleistocene records of marine carbonate chemistry. *PAGES NEWS*, 16(1): 11-12. 2008
- Jin, Z.D., **Yu, J.M.**, Chen, H.X., Wu, Y.H., Wang, S.M. and Chen, S.Y., The influence and chronological uncertainties of the 8.2 ka cooling event on continental climate records in China. *The Holocene*, 17(7): 1041-1050. 2007

- Elderfield, H., **Yu, J.M.**, Anand, P., Kiefer, T. and Nyland, B., Calibrations for benthic foraminiferal Mg/Ca palaeothermometry and the carbonate ion hypothesis. *Earth Planet. Sci. Lett.*, 250: doi:10.1016/j.epsl.2006.07.041. 2006
- Jin, Z.D., Bickle, M., Chapman, H., **Yu, J.M.**, Greaves, M., Wang, S.M. and Chen, S.Y., An experimental evaluation of cleaning methods for fossil ostracod Mg/Ca and Sr/Ca determination. *Journal of Paleolimnology*: doi 10.1007/s10933-006-9007-8. 2006
- Jin, Z.D., Li, F.C., Cao, J.J., Wang, S.M. and **Yu, J.M.**, Geochemistry of Daihai Lake sediments, Inner Mongolia, north China: Implications for provenance, sedimentary sorting, and catchment weathering. *Geomorphology*: doi:10.1016 /j.geomorph.2006.02.006. 2006
- Jiang, S.Y., **Yu, J.M.** and Lu, J.J., Trace and rare-earth element geochemistry in tourmaline and cassiterite from the Yunlong tin deposit, Yunnan, China: implication for migmatitic–hydrothermal fluid evolution and ore genesis. *Chem. Geol.*, 209: 193-213. 2004
- Jiang, S.Y., Woodhead, J., **Yu, J.M.**, Pan, J.Y., Liao, Q.L. and Wu, L.P., A reconnaissance of Cu isotopic compositions of hydrothermal vein-type copper deposit, Jinman, Yunnan, China. *Chinese Science Bulletin*, 47(3): 247-250. 2002

## 学术评审

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**学术期刊:** *Nature, Science, Nature Geoscience, Nature Education, Nature Communications, Proceedings of the National Academy of Sciences, Geology, Earth and Planetary Science Letters, Paleoceanography, Geochimica et Cosmochimica Acta, G-cubed, Biogeosciences, Climate of the Past, Oceanography, Deep-Sea Research I, Geophysical Research Letters, Journal of Geophysical Research, Chemical Geology, Journal of Earth System Science, Marine micropaleontology, Science China, Chinese Science Bulletin, Journal of Asian Earth Sciences, 以及 Applied Water Science.*

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**编委:** *Nature Scientific Reports*

## 科研基金

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澳大利亚研究协会 "探索课题" 基金 "Deep Atlantic's role in millennial atmospheric CO<sub>2</sub> changes", Chief Investigator: **J Yu**; \$330,000. 2019-2021

*Major Equipment Committee*, "Replacement of an obsolete quadrupole Inductively-Coupled-Plasma Mass Spectrometer", **J Yu**, SM Eggins, MJ Ellwood, SJ Fallon, EJ Rohling, \$146,000. 2018-2019

*Major Equipment Committee*, "Upgrade of an aging Multi-Collector Inductively Coupled Plasma Mass Spectrometer"; MJ Ellwood, **J Yu**, SM Eggins, SJ Fallon; \$111,000. 2017-2018

<i>Australian IODP Office</i> “North Atlantic Ocean circulation, climate, and carbon cycle during past 150 ka”; <b>J Yu</b> , J Wu, SM Eggins, L. Menviel; \$20,000.	2015-2017
澳大利亚研究协会“未来学者”基金 "Deep-sea carbonate cycles and their role in glacial-interglacial atmospheric CO <sub>2</sub> changes"; <b>J Yu</b> ; \$758,724.	2014-2018
澳大利亚研究协会“探索课题”基金 "Constraining the origin of mysterious old waters at mid-depths of the North Atlantic during the last deglaciation"; Chief Investigator: <b>J Yu</b> ; \$303,000.	2014-2018
<i>GCCF from Gary Comer Foundation</i> , 13-5598093, awarded to <b>Jimin Yu</b> and Xianfeng Wang, \$173,068, USA	2010-2012
<i>Lamont-Doherty Earth Observatory Climate Center awards</i> ; 4 次, \$7500, \$8000, \$8000, \$8000; PI: <b>Jimin Yu</b> .	2008-2011
<i>NERC (UK)</i> : “Temporal evolution of the deep-sea carbonate system and implications for the role of the oceans in glacial-interglacial changes in atmospheric CO <sub>2</sub> ”; £397K; highest grade $\alpha 5$ , used for NERC training; Co-PI: <b>Jimin Yu</b> (PI, H. Elderfield).	2008-2010