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## Cin-Ty A. Lee

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**Born: 1974**  
**Nationality: U.S. citizen**

### Academic History

6/11 - Rice University (Full Professor)  
6/08 - 5/11 Rice University (Associate Professor)  
5/02 - 5/08 Rice University (Assistant Professor)  
2/01 – 2/02 California Institute of Technology (post-doctoral Fellow)  
post-doctoral advisor Gerald J. Wasserburg  
9/96 – 3/01 Harvard University (Ph.D. - geochemistry)  
doctoral advisor Roberta L. Rudnick  
9/92 – 6/96 University of California, Berkeley (B.A.- geology)  
undergraduate advisor George H. Brimhall, Jr.

### Other academic experience

2012 [Miller visiting professor](#) at UC Berkeley  
2011 Visiting professor at the School of Ocean and Environmental Sciences, University of Tokyo  
2002 Visiting professor at Academia Sinica, Taiwan

### Employment History

2016 (July 1) – Chair of the Department of Earth Science  
2002 to present – Professor at Rice University  
2001-2002 – postdoctoral fellow, California Institute of Technology  
1995 – Research assistant at the Pacific Southwest Research Station, Riverside, CA – geomorphologic impacts of fire  
1991 – research assistant at the United States Salinity Laboratory, Riverside, CA

### Leadership positions

7/16 - Chair of the Department of Earth Science, Rice University  
2015 – Project leader for Habitat Restoration proposal for Hogg Bird Sanctuary, Memorial Park, Houston  
2015-2017 – Secretary of the Volcanology, Geochemistry, and Petrology (VGP) section of the American Geophysical Union  
2013-2014 – Chair of the Kuno Award Committee – VGP section (American Geophysical Union)

2013 Lead organizer of the summer school at UC Berkeley (Cooperative Institute of Deep Earth Interior - CIDER)

### **Awards, Scholarships (after 2003)**

- 2016-2017 Mineralogical Society of America Distinguished Lecturer
- 2014 Mineralogical Society of America Fellow
- 2013 Shen-Su Sun Lecturer, Chinese Geochemistry Society
- 2012 Agassiz Lecturer, Harvard University
- 2012 Miller Visiting Professor, UC Berkeley  
<http://millerinstitute.berkeley.edu/all.php?nav=48#Earth%20&%20Planetary%20Science>
- 2011 Mutch Lecturer, Brown University
- 2010 Geological Society of America Fellow
- 2009 Donath Medal – Geological Society of America  
<http://www.geosociety.org/awards/aboutAwards.htm#donath>)
- 2009 Clarke Medal – Geochemical Society  
<http://www.geochemsoc.org/awards/fwclarkeaward.htm>)
- 2008 Kuno Award – American Geophysical Union – Volcanology, Geochemistry, Petrology  
[http://vgp.agu.org/kuno\\_award.html](http://vgp.agu.org/kuno_award.html))
- 2005 David and Lucile Packard Fellow ([www.packard.org](http://www.packard.org))
- 2005 Great Texas Birding Classic – 2<sup>nd</sup> place team UTC section
- 2004 Great Texas Birding Classic – 1<sup>st</sup> place team UTC section (214 species in 24 hours)

### **Honorary Lectures**

- 2016 Mineralogical Society of America Distinguished Lecturer
- 2013 Shen-su Sun Lecturer, China
- 2012 Agassiz Lecturer, Harvard University
- 2011 Mutch Lecturer, Brown University

### **Miscellaneous awards prior to my PhD.**

- Mineralogical Society of America Grant for Research – 2000
- Derek Bok Distinguished Teaching Award (Harvard University) 1999
- National Science Foundation Graduate Fellowship – 1996-1999
- Departmental Citation (University of California, Berkeley) -1995
- University of California, Berkeley Alumni Leadership Scholarship – 1992 and 1995
- Geological Society of America Outstanding Senior Award – 1995
- Association for Rewards to College Scientists (ARCS) Scholarship – 1995
- Cross Scholarship
- National Merit Finalist – 1992
- California State Science Fair, Zoology Category: “*How does avian diversity relate to the physiognomy of an urban habitat in southern California during winter?*” - 1991
- San Bernardino Valley Audubon Society Scholarship – 1989
- Riverside Unified School District Art Contest Finalist – 1984

## Research statement

I use isotope and trace-element geochemistry, petrology, field geology and simple geodynamic models to investigate the physical and chemical processes of planetary differentiation, with particular emphasis on the origin and evolution of the Earth's crust and mantle. I am also investigating the chemical interactions between the solid Earth (crust + mantle), the hydrosphere and the atmosphere. I am particularly interested in deep Earth connections to long-term climate change.

My most important contributions fall in the following categories.

- 1) the petrogenetic and dynamic origins of continents, particularly the origin of continental lithospheric mantle and continental crust.
- 2) how continental lithospheric mantle is chemically modified and how this affects the long-term evolution of continental lithosphere
- 3) mantle geochemistry and petrology; constraints on trace element partitioning and mantle redox

## Teaching statement

I currently teach igneous and metamorphic petrology and radiogenic isotope and trace-element geochemistry. I also co-teach our spring field mapping course, which involves 9 days of mapping in Big Bend National Park, TX.

ESCI 101 – The Earth

ESCI 502 – Advanced Field Geology

ESCI 322 –Earth Chemistry and Materials

ESCI 410 – Optical Mineralogy/Petrography

ESCI 412 – Advanced Petrology

ESCI 416 – Economic Geology of Mineral Resources

ESCI 430 – Isotope and trace-element geochemistry (sole instructor)

ESCI 334 – Geological and Geophysical Techniques – field geology (co-taught with Morgan)

ESCI 414 - Introduction to the physics and chemistry of the atmosphere (Lee and Lenardic)

ESCI 434 – Introduction to mass spectrometry (sole instructor)

ESCI 562 – Advanced topics in Geophysics (co-taught with Lenardic, Levander, and Niu)

ESCI 518 – Dimensional Analysis in the Earth sciences and beyond (Lenardic and Lee)

ESCI 413 – Introduction to the dynamics and physical properties of the Earth

BIOS 337/237 – Field Bird Biology Laboratory (Dept of Ecology and Evolutionary Biology)

Other courses that I can teach or participate in

Physics and chemistry of the Earth

Introductory geodynamics

General Geology

Ore geology

## Analytical experience

Clean laboratory experience; quadrupole and magnetic-sector ICP-MS, multiple collector magnetic-sector icp-ms (MC-ICP-MS), laser ablation, thermal ionization mass spectrometry (including negative ions), electron microprobe, fourier transform infrared-spectroscopy.

### **Field mapping experience**

1. Poleta Folds, White Mountains, California: 3 weeks of mapping as an undergraduate.
2. Berkeley Hills, California: 1 semester of mapping as an undergraduate
3. Sierran foothills: 3 weeks of magnetometer surveys of Eocene paleo-river channels (undergraduate)
4. Sun city complex in the Peninsular Ranges, CA: mapping for fun
5. Mariscal fold, Big Bend National Park, TX: mapping each spring since 2003 as an instructor.
6. Feather River Ophiolite, CA – mapping for an NSF-funded project.
7. Peninsular Ranges Batholith, CA
8. Cretaceous stratigraphy in west Texas
9. Magma mixing in the Perris pluton, California
10. Skarns in the eastern Peninsular Ranges Batholith
11. Santa Rosa Mylonite, California

### **Organized geologic field trips**

1. Southern California and Owens Valley – annual field trip for Rice undergraduates; sole leader
2. New Mexico, Rio Grande Rift – field trip for Rice undergraduates
3. Big Bend National Park – Mariscal Mountain – Field Geology at Rice University
4. Geology of Big Cottonwood Canyon, Wasatch Mtns, Utah; Packard fellows meeting
5. Transect across California from Coast Ranges, Sierra Nevada foothills, Sierra Nevada batholiths, Long Valley, Owens Valley, Death Valley
6. Geology of northern Utah, western Wyoming, and southeastern Idaho
7. Geology of the Llano uplift, Texas
8. Geology in the Yerington porphyry copper deposit, Nevada
9. Cretaceous Interior Seaway, west Texas
10. Geology of Bernasconi Hills pluton, California
11. Geology of the Santa Rosa Mylonite, California
12. Northern Arizona geology

### **FUNDING**

Total accumulated funds since 2003: \$6,947,220

### **Active Grants**

- 2014-2017 EAR – 1347085 – The deep sulfur cycle in subduction zones and arc magmas, 379,666\$.
- 2013-2019 OCE-1338842: FESD Type 1 Proposal: Continent-island Arc Fluctuations: Linking deep Earth Dynamics to Long-term Climate, \$4,300,000. Lead PI

### **Previous grants**

- 2011-2014 NSF-EAR 1119315– The deep lithosphere filter and the growth of continental arcs, \$339,084, Lead PI
- 2009-2010 NSF-EAR 0918577 - Quantifying the role of chemical weathering on the composition of the continental crust using Mg isotopes and other tracers, 100,000\$, Lead PI
- 2008-2011 NSF- EAR 0745540 EARTHSCOPE: Collaborative Research: Mantle Dynamics and Magmatism Across the Basin and Range, co-PI with Don Forsyth (Brown U; lead university) and Terry Plank (Lamont-Doherty Earth Observatory); \$90,000, co-PI

Cin-Ty Lee

- 2007-2010 NSF- EAR 0365338 “Collaborative Research: Field and Modeling-Based Tests of the Role of Water in Nominally Anhydrous Minerals in controlling the Strength/Stability of Continental Lithospheric Mantle” 01/01/07 – 12/31/09; \$190,000; Lead PI
- 2005-2010 Packard Foundation Fellowship, 2005-2010; \$725,000; Lead PI
- 2004-2008 NSF 0409423 Collaborative Research: On the Origins of Primitive Magmas in the Cascade Volcanic Arc, \$193,477.00; co-PI with Leeman
- 2006-2007 NSF EAR – 0549268 Acquisition of laser ablation system to quantify matrix and grain boundary trace element partitioning in olivine and pyroxenes: an integrated bulk and in situ approach, \$115,100; Lead PI
- 2005-2007 NSF EAR-0440033 “Resolving the paradox of fO<sub>2</sub> in arcs” (\$180,000), Lead PI with Leeman
- 2004-2006 NSF-EAR-0352803 “Meeting of Young Researchers in the Earth Sciences MYRES: A Conference Series and Community Development Initiative” (\$63,180), Lead PI
- 2002-2006 NSF-EAR-0309121 “Thermodynamic, petrologic, geochemical and isotopic constraints on metal mobility during hydrothermal serpentinization of ultramafics” (\$214,023), Lead PI
- 2003-2004 NSF-EAR-0236761 “Upgrade of JEOL JSM-840 Scanning microscope” (\$37,690); co-PI with A Luttgge

### **Honor Societies**

Golden Key National Honor Society, Phi Beta Kappa, Sigma Xi

### **Professional Societies**

Geochemical Society  
Mineralogical Society of America  
American Geophysical Union  
Geological Society of America  
Houston Geological Society

### **Employment**

2016 Chair of the Department of Earth Science (July 1, 2016 - )  
2011 Full Professor, Rice University, Dept. Earth Science  
2008 Associate Professor, Rice University, Dept. Earth Science  
2002 Assistant Professor, Rice University, Department of Geology and Geophysics  
2001 Postdoctoral Fellow, California Institute of Technology (Prof. Gerald Wasserburg)  
1995 grader: Geochemistry 131 “Theoretical geochemistry” (UC Berkeley, Prof. Harold Helgeson)  
1994 lab assistant: thin section and sample preparation (UC Berkeley, Prof. Ian S. Carmichael)  
1994 grader: Geology 10 “Planetary Geology” (UC Berkeley, Prof. Raymond Jeanloz)  
1993 research assistant (geomorphology): United States Dept. Agriculture Pacific Southwest Research Station (supervisor, Peter Wohlgemuth)  
1991 research assistant: United States Salinity Laboratory, Riverside, CA (supervisor, Dr. Suarez)

### **Editorial positions**

Current  
Editor – Geochemistry, Geophysics, Geosystems –2013 to present  
Associate Editor – American Journal of Science (2016-2019)  
Editorial Advisory Board for Earth and Planetary Science Letters (2009-present)  
Editorial Advisory Board for Solid Earth Sciences (2015-present)

Past

Associate Editor – Journal of Geophysical Research (2011-2013)

**Public Service**

Solicited Journal Reviews: *Science, Nature, Nature Geoscience, Chemical Geology, Earth and Planetary Science Letters, Geochimica Cosmochimica Acta, Contributions to Mineralogy and Petrology, Geochemical Journal, G-cubed, Geology, Physics of the Earth and Planetary Interiors, Tectonophysics, Journal of Geophysical Research, Journal of Petrology, Lithos*

Reviews for funding agencies

NSF – EAR, OCE– Petrology and Geochemistry, Instrumentation and Facilities, Geology and Paleontology, Continental Dynamics, Geophysics, Tectonics, Ocean sciences, Margins Program

ACS – Petroleum Research Fund

ETH – Swiss Federal Institute of Science and Technology

Canadian Research Council

2016 – Mineralogical Society of America Award Committee

2015 – Project leader for Habitat Restoration of I. M. A. Hogg Bird Sanctuary

2015 – Houston Memorial Park Eco-tech conservation committee

2015-2017 – Secretary of the Volcanology, Geochemistry, and Petrology (VGP) section of the American Geophysical Union

2014 – Panel member on Schmidt Oceanographic Institution proposals

2014 – Member of Technical Ecology Advisory Panel on Master Planning team for the Memorial Park Conservancy Conservation, Houston, TX

2014 – co-organizer of NASA-NSF-Smithsonian workshop on “Beyond Habitability: life and early Earth”

2013-2014 – Chair of the Kuno Award Committee – VGP section (American Geophysical Union)

2013 Lead organizer of the summer school at UC Berkeley (Cooperative Institute of Deep Earth Interior - CIDER)

2012 – AGU Kuno awards committee

2011 – Student mentor for Empowering Leadership Alliance of Rice University (under-represented minorities and women)

2011 – NSF Panel member Continental Dynamics

2011 – CIDER (Cooperative Institute for Deep Earth Research) – steering and planning committee

2011-2013 American Geophysical Union Kuno Awards committee

2011 – Goldshmidt 2011, Thematic session leader

2011 – NSF Panel member Continental Dynamics

2010 – NSF Panel member Continental Dynamics (EAR) and Geoprisms (OCE)

2010 – Program Planner; US National Academy of Sciences joint meeting with Japan Society for the Promotion of Science

2010 CIDER (Cooperative Institute for Deep Earth Research) – steering committee

2009- NSF Panel member (EAR) Continental Dynamics

- 2009- Program Planner for Kavli Frontiers of Science Meetings – US National Academy of Science
- 2008 CIDER (Cooperative Institute for Deep Earth Research) – member of steering committee
- 2006 Earthscope workshop participant
- 2006 Instructor at CIDER Workshop at UC Santa Barbara
- 2005 NASA – Geology and Geophysics Panelist
- 2004 Steering Committee Member for first MYRES “Meeting of Young Researchers in the Earth Sciences” – La Jolla, CA

### **Departmental and University Service**

- 2016 - Chair of the Department of Earth Sciences
- 2016 – Laboratory Safety Committee
- 2015 - Departmental Webpage Chair
- 2015 – Associate Chair of Earth Science Dept, Rice University
- 2014 – Chair of 1 tenure case in Earth Science Dept, Rice University
- 2014 -2015 – Chair of strategic plan
- 2014 – Chair of Graduate Admissions Committee
- 2014 – Committee member for the search of the Dean of Natural Sciences
- 2013 – Chair of the Faculty Search Committee
- 2013 – Chair of the Graduate Admissions Committee
- 2012 – Committee for preparing review of Deans, Rice University
- 2012 – Chair of 1 tenure case in Earth Science Department, Rice University
- 2011 – Chair of 2 tenure cases in Earth Science Department, Rice University
- 2003 – Undergraduate fellowships committee at Rice University

### **Students, post-docts supervised or advised**

#### **Current**

- Wenrong Cao (post doc)
- Julia Ribeiro (post doc)
- Monica Erdman (PhD)
- Alexandra Malouta (PhD)
- Michael Farner (PhD)
- Hehe Jiang (PhD)
- Julin Zhang (PhD)
- Graham Eldridge (BSc)
- Emily Paine (BSc)
- Elli Ronay (BSc)
- Sarah Gerenday (BSc)

#### **Past Members**

##### **Visiting students**

- Xun Yu (visiting PhD student from Nanjing University)
- Anna van Brummen (visiting undergrad from Princeton University)
- Fernando Nasciementos Santos (visiting undergrad from Brazil)
- Detao He (visiting PhD student from China University of Geosciences, Wuhan)

Xu-Jie Shu (Nanjing University, China)

**PhD (primary advisor) = 3**

Emily Chin (PhD-2014) – deep lithosphere dynamics in arcs, now post-doct at Brown University

Zheng-xue Li (PhD – 2007) – Serpentinization; global water cycle, lithosphere dynamics; now at Conoco-Phillips

Mark G. Little (PhD 2007) – Weathering and soil formation; public policy; Luce Fellow; GSA Congressional Science Fellow in Washington, now interim director of Keenan Institute at University of North Carolina Chapel Hill.

**MSc. (primary advisor)**

Kelley Liao (MSc, 2012) – magma-wallrock interaction (now at Schlumberger)

Nigel Watt (M.Sc. 2011) – impacts and craters

Heather Dalton (MSc, 2009) – Martian meteorites (now Education/Outreach Officer at Lunar and Planetary Institute, Clear Lake, TX)

Amy Maloy – lunar granulites (MSc 2007; joint with Lunar and Planetary Institute)

Min Hu (MSc 2007) – marine geochemistry of redox sensitive elements

H. Patrick Young – (MSc 2009; Grenvillian lithospheric mantle; now PhD student at Yale U)

**BSc. (primary advisor)**

Yunong Xu (BSc)

Catherine Ross (BSc, McGill University)

Chi-Tang (Zoe) Wu (BSc)

Larisa LaMere (BSc)

Mark Mikus (BSc)

Blake Dyer (B.Sc., 2010) – now PhD candidate at Princeton University

Masaru Oka – (undergrad summer intern from Stanford University)

Artemis Harbert – (B. Sc. 2008)

Michael Kallstrom (B.Sc. 2008)(MSc UT Austin)

Stephen Turner – (B.Sc. 2007) – arc-related harzburgites; PhD, Harvard U, now post-doct at Durham University, United Kingdom)

Ulyana Horodyskyj (B.Sc. 2007) – Origin of eclogites; MSc. Brown University, now PhD candidate at U Colorado

Katelyn Gray (BSc) – now PhD candidate at Yale University

Janelle Homburg (BSc – 2006) (PhD Columbia University, now at ExxonMobil)

Nivedita Thiagarajan (BSc 2005) – Varnish studies; magnetite ores (PhD Caltech, now post-doctorate at Caltech)

Jessica Hawthorne (B.Sc. 2007) (PhD Princeton, now Academic Research Fellow at Leeds)

Martin Collier (BSc 2004 – PhD Columbia University, now at ExxonMobil.

Shayda Naficy (undergrad)

**High school students**

Daphne Jin



### **Postdoctorates**

Peter Luffi - petrology

Tobias Höink – geodynamics

Bing Shen – Mg isotopes (now a professor at Beijing University)

Da-Ren Wen - petrology

Sune Nielsen (now assistant professor WHOI)

Veronique Le Roux (assistant professor, WHOI)

Arnaud Agranier (2005-2007) – isotope geochemistry of arc lavas; now professor at  
Universite de Bretagne Occidentale, France

Maik Pertermann – (2006-2007) mantle petrology, geochemistry; now faculty at San Jacinto  
College, Houston, TX

### **Visiting Scientists**

Lin Dong (professor Beijing National University, China)

Qingguo Zhai (Beijing Geological Survey)

Yongsheng Liu (China University of Geosciences, Wuhan)

Jianping Zheng (China University of Geosciences, Wuhan)

Claudia Sayao-Valladares (Rio de Janeiro State University, Brasil)

## **Peer-reviewed publications in the Earth sciences**

**\* denotes that primary research was done in our group**

**\*\*denotes lead author in our group**

papers can be downloaded here: <http://www.cintylee.org>

citation rates: google.scholar

total citations: 4756

H-index: 39

Total papers: 124

### **IN PREPARATION**

Lee, C-T A, Emergence of continents and the Cambrian explosion

Lee, C-T A, Bottom up eruption of silicic magma bodies

**Lee, C-T A**, Yang, W., Ingram, L., Chin, E. J., Yu, X., DePaolo, D., Sulfur isotopic compositions of deep arc cumulates and implications for deep sulfur cycling in subduction zones, in preparation for G-cubed.

**Lee, C-T A**, Pluton barometry revisited and implications for mapping average pluton emplacement depths.

**Lee, C-T A**, Physics of the Earth 101

**Lee, C-T A**, Constraining mantle fertility and density from basaltic lavas: implications for deep lithosphere dynamics

Paine, Lee, Orbicular granitoids as physical constraints on the extent of mafic-felsic mixing

Cao and Lee, A map of felsic magmatism through time.

Jiang and Lee, U/Pb dating of agates

Jiang and Lee, Constraints on the nature of pluton emplacement from fore-arc sediments

Farner and Lee, Variations in magma composition as a function of crustal thickness

Cao and Lee, On the origin of megacrysts in porphyries

Ronay and Lee, Volcanic Ash in the Eagle Ford

**Submitted**

Blichert-Toft, J., Delile, H., **Lee, C.-T.**, Stos-Gale, Z., Billström, K., Andersen, T., Hannu, H., Albarede, F., 2016, Large-scale tectonic cycles and the Pb isotope provinces of Europe, submitted to *G-cubed*.

**PUBLISHED, IN PRESS OR ACCEPTED PENDING REVISION (PEER-REVIEWED ONLY)  
2016**

124. Lee, C.-T. A., Geochemical classification of the elements. In Earth Sciences Series. Encyclopedia of Geochemistry.
123. \*Yu, X., Lee, C.-T. A., 2016, Critical porosity of melt segregation during crustal melting: constraints from zonation of peritectic garnets in a dacite volcano, *Earth and Planetary Science Letters* 449: 127-134.
122. Righter, K., Danielson, L. R., Pando, K. M., Shofner, G. A., Sutton, S. R., Newville, M., **Lee, C.-T.**, 2016, Valence and metal/silicate partitioning of Mo: implications for conditions of Earth accretion and core formation, *Earth and Planetary Science Letters* 437: 89-100.
121. **Lee, C.-T. A.**, Yeung, L. Y., McKenzie, N. R., Yokoyama, Y., Ozaki, K., Lenardic, A., 2016. Two-step rise in atmospheric oxygen is an inevitable consequence of the growth of granitic continents and continental carbonates, *Nature Geoscience* doi:10.1038/NGEO2707.
120. McKenzie, N. R., Horton, B. K., Loomis, S. E., Stockli, D. F., Planavsky, N., **Lee, C.-T. A.**, 2016, Continental arc volcanism as the principle driver of icehouse–greenhouse variability, *Science* 352:444-447.
119. \*Erdman, M. E., **Lee, C.-T. A.**, Levander, A., Jiang, H., 2016, Rise of arc magmatism and lower crustal foundering in controlling elevation history of the Nevadaplano and Colorado Plateau: a case study of pyroxenitic lower crust from central Arizona, USA, *Earth and Planetary Science Letters* 439:48-57.

**2015**

118. \*Jiang, H., **Lee, C.-T. A.**, Morgan, J. K., Ross, C. H., 2015, Geochemistry and thermodynamics of an earthquake: a case study of pseudotachylites within mylonitic granitoid, *Earth and Planetary Science Letters* 430:235-248.
117. **Lee, C.-T. A.**, N. R. McKenzie, 2015, Rise of the continents, *Nature Geoscience* 8:506-507, DOI: 10.1038/NGEO2466.
116. \*Yu, X., **Lee, C.-T. A.**, Chen, L.-H., Zeng, G., 2015, Magmatic recharge in continental flood basalts: insights from the Chifeng igneous province, *Geochemistry, Geophysics, Geosystems*, DOI: 10.1002/2015GC005805.
115. **Lee, C.-T. A.**, Thurner, S., Paterson, S., Cao, W., 2015, The rise and fall of continental arcs: interplays between magmatism, uplift, weathering, and climate, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2015.05.045.
114. **Lee, C.-T. A.** and Anderson, D., 2015, Continental crust formation at arcs, the arclogite “delamination” cycle, and one origin for fertile melting anomalies in the mantle, *Science Bulletin* DOI:10.1007/s11434-015-0828-6
113. \*Shu, X.-J., **Lee, C.-T. A.**, 2015, Sulfur and major element determination by laser ablation high resolution magnetic sector ICP-MS applied to glasses, aphyric lavas, and micro-laminated sediments, *Chinese Journal of Geochemistry*, DOI 10.1007/s11631-015-0051-9.
112. \*Chin, E. J., **Lee, C.-T. A.**, Blichert-Toft, J., 2015, Geochronologic constraints on the thermal evolution of the deep lithosphere beneath continental arcs, *Geochemical Perspectives Letters* 1:20-32; doi:10.7185/geochemlet.1503.
111. **Lee, C.-T. A.**, Morton, D. M., Farnier, M. J., Moitra, P., 2015, Field and model constraints on silicic melt segregation by compaction/hindered settling: The role of water and its effect on latent heat release, *American Mineralogist*; <http://dx.doi.org/10.2138/am-2015-5121>.

110. \*Le Roux, V., Dasgupta, R., **Lee, C.-T. A.**, 2015, Recommended mineral-melt partition coefficients for FRTEs (Cu), Ga and Ge during mantle melting, *American Mineralogist*; <http://dx.doi.org/10.2138/am-2015-5215>.
109. \*Dong, L., Shen, B., **Lee, C.-T. A.**, Shu, X., Peng, Y., Sun, Y., Tang, Z., Rong, H., Lang, X., Ma, H., Yang, F., Guo, W., 2015, Germanium/silicon of the Ediacaran-Cambrian Laobao cherts: Implications for bedded chert formation and paleoenvironment interpretations, *Geochemistry, Geophysics, Geosystems*; DOI: 10.1002/2014GC005595.
108. \*Ding, S., Dasgupta, R., **Lee, C.-T. A.**, Wadhwa, M., 2015, New bulk sulfur measurements of Martian meteorites and modeling the fate of sulfur during melting and crystallization-Implications for sulfur transfer from Martian mantle to crust-atmosphere system, *Earth and Planetary Science Letters*, 409: 157-167.
- 107. Lee, C-T A**, and Lackey, J. S., 2015, Global continental arc flare-ups and their relation to long-term greenhouse conditions, *Elements* 11:125-130; DOI: 10.2113/gselements.11.2.125.
106. Zheng, J. P., **Lee, C.-T. A.**, Lu, J. G., Zhao, J. H., Wu, Y. B., Xia, B., Li, X. Y., Zhang, J. F., Liu, Y. S., 2015, Refertilization-driven destabilization of subcontinental mantle and the importance of initial lithospheric thickness for the fate of continents, *Earth Planet. Sci. Lett.* 409: 225-231.
- 105. Lee, C-T A**, Morton, D. M., 2015, High silica granites: terminal porosity and crystal settling, *Earth and Planetary Science Letters* 409:23-31.

## 2014

104. Nielsen, S. G., Shimizu, N., **Lee, C.-T. A.**, Behn, M. D., 2014, Chalcophile behavior of thallium during MORB melting and implications for the sulfur content of the mantle, *Geochemistry, Geophysics, Geosystems* 15; doi:10.1002/2014GC005536.
103. Barnes, J. D., Beltrando, M., **Lee, C.-T. A.**, Cisneros, M., Loewy, S., Chin, E., 2014, Geochemistry of Alpine serpentinites from rifting to subduction: a view across paleogeographic domains and metamorphic grade, *Chemical Geology* 389:29-47.
102. \*Erdman, M., **Lee, C-T A**, 2014, Implications and limitations of buoyancy-driven exhumation of high-pressure and ultrahigh-pressure terranes, *Earth-Science Reviews* 139:33-46.
101. Karlstrom, L., **Lee, C-T A**, Manga, M., 2014, The role of magmatic crustal thickening on arc front migration, *Geochemistry, Geophysics, Geosystems* 15: doi:10.1002/2014GC005355.
100. Albarede, F., Albalat, E., **Lee, C-T A**, 2014, An intrinsic volatility scale relevant to the Earth and Moon and the status of water in the Moon, *Meteoritics and Planetary Sciences* 1-10; doi:10.1111/maps.12331.
99. Huang, S., **Lee, C.-T. A.**, Yin, Q.-Z., 2014, Missing lead and high  $^3\text{He}/^4\text{He}$  in ancient sulfides associated with continent formation, *Scientific Reports* 4(5314); doi:10.1038/srep05314
98. **Lee, C.-T. A.**, Chin, E. J., 2014, Calculating melting temperatures and pressures of peridotite protoliths: implications for the origin of cratonic mantle, *Earth and Planetary Science Letters*, 397: 184-200, doi:10.1016/j.epsl.2014.06.048.
97. Clausen, B. L., Morton, D. M., Kistler, R. W., **Lee, C.-T. A.**, 2014, Low initial-Sr felsic plutons of the northwestern Peninsular Ranges batholith, southern California, and the role of mafic felsic magma mixing in continental crust formation, *Geol. Soc. Am. Mem.* 211, 317-344, doi:10.1130/2014.1211(08).
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3. [C.-T. Lee](#), R.L. Rudnick, W.F. McDonough and I. Horn, Petrologic and geochemical investigation of carbonates in peridotite xenoliths from northeastern Tanzania, *Contrib. Mineral. Petrol.* **139**, 470-484, 2000.

### 1999

2. [C.-T. Lee](#) and R.L. Rudnick, Compositionally stratified cratonic lithosphere: petrology and geochemistry of peridotite xenoliths from the Labait Volcano, Tanzania, in: Proc. VIIth International Kimberlite Conference, B. J. Dawson volume, J.J. Gurney, J.L. Gurney, M.D. Pascoe and S.R. Richardson, eds., pp. 503-521, 1999.
1. Chesley, J T, Rudnick, R L, and [Lee, C.-T.](#), 1999, Re-Os systematics of mantle xenoliths from the East African Rift: age, structure, and history of the Tanzanian craton, *Geochimica et Cosmochimica Acta* **63**:1203-1217.

**Opinions and essays (non peer-reviewed)**

7. Lee, C.-T., 2012, Acceptance of the 2009 FW Clarke Award. *Geochimica Cosmochimica Acta* 89:346-348.
6. Lee, C.-T., 2009, Book Review: *Isotope Geology*, *Elements* 5:331.
5. [Lee, C.-T.](#), 2009. Book Review: *Quantitative Geochemistry*, *Geochemical Society, Geochemical Newsletter* 139.
4. [Lee, C.-T.](#), 2009. "Lee receives 2008 Hisashi Kuno Award", *EOS Transactions*, 90(11).
3. [Lee, C.-T.](#), 2007. "Rudnick receives N.L. Bowen award", *EOS Transactions*, 88(8):98-99.
2. [Lee, C.-T.](#), Little, M. G., 2006, Historically exploited should not be mocked, Letter to the Editor in *The Rice Thresher*, Sep 29, 2006.
1. Simons, F. J., Becker, T. W., Kellogg, J. B., Billen, M., Hardebeck, J., Lee, C.-T. A., Montesi, L. G. J., Panero, W., Zhong, S., 2004, Young solid earth researchers of the world unite! *EOS Transactions, AGU, Vol. 85, Issue 16, 160-161. doi:10.1029/2004EO160011*

**Publications in ornithology**

**(\*peer-reviewed)**

17. Lee, C-T, 2011, Answers to the January Photo Quiz, *Hard Shorebirds, Birding* 43:54-57.
16. \*[Lee, C-T A](#), Wen, Y-Y, 2010, Breeding-plumaged Curlew Sandpiper *Calidris ferruginea* in Taiwan during the northern winter, *Birding Asia Bulletin of the Oriental Bird Club* 13:79.
15. [Lee, C.-T.](#), Wen, Y.-Y., 2009, *The natural history of the Galapagos Islands*, *Natura-Aviflora Press*, 156 pages, ISBN-13: 978-0-9842192-0-9.
14. \*[Lee, C-T](#), Birch, A, Eubanks, T., 2008, Advances in the field identification of Western and Eastern Wood-Pewees, *Birding* 40: 34-40.
13. \*[Lee, C-T](#) and Birch, A, 2006, Advances in the field Identification of North American dowitchers, *Birding* 38:34-43.
12. \*[Lee, C-T](#) and Birch, A, 2002, Notes on the distribution, vagrancy, and field identification of American Pipit and "Siberian Pipit", *North American Birds* 56:388-398.
11. \*[Lee, C-T](#) and Birch, A. 2001, Wing covert pattern as a diagnostic feature in identifying immature and female Bullock's and Baltimore Orioles: *reply to A. Jaramillo*, "Wing covert pattern as an aid to identifying female and immature Bullock's and Baltimore Orioles- Another look", *Birding*, 33: 64-68.
10. \*[Lee, C-T](#) and Shany, N 1998, *Birding Taiwan*, *Birding* 30:492-503.
9. \*[Lee, C-T](#) and Birch A, 1998, Field identification of female and immature Bullock's and Baltimore Orioles, *Birding* 30: 282-295.
8. \*[Lee, C-T](#) and Birch A, 1998, Answers to the June photo quiz, *Birding* 30: 296-298.
7. \*Birch, A. and [Lee, C-T](#), 1997, Field identification of Arctic and Pacific Loons, *Birding* 29: 106-115.
6. Lee, C-T, 1996, *Birding Taiwan: 1996 report*. In *Foreign Field Note Series*, American Birding Association.
5. \*[Lee, C-T](#), 1995, "Birdwatching in Riverside, California", *San Bernardino County Museum Association, Redlands*, volume 42, 218 pp., 117 figures.
4. \*Birch, A and [Lee, C-T](#), 1995, Identification of the Pacific Diver - a potential vagrant to Europe, *Birding World* 8:458-466.
3. Lee, C-T, 1994, A teenaged birder's syndrome, *A Bird's Eye-view* 2:6.

2. \*[Lee, C-T](#), 1994, More records of breeding Barn Swallows in Riverside, California, *Western Birds* 26:155-156.
1. [Lee, C-T](#), 1994, Birding Taiwan: Trip report from summer 1994. In *Foreign Field Note Series*, American Birding Association

## Invited Lectures (Earth Sciences)

112. University of Washington (2016)
111. Yale University (2016)
110. University of Pennsylvania (2016)
109. University of Las Vegas, NV (2016)
108. U Oregon (Nov, 2015)
107. Vanderbilt University, Nashville, TN (Oct, 2015)
106. University of Minnesota, Minneapolis (April, 2015)
105. UC Santa Barbara (July, 2015) "Rise of oxygen"
104. University of California, Riverside (October, 2014), "Rise and fall of magmatic orogens"
103. ETH, Zurich, Switzerland (September, 2014), "Rise and fall of magmatic orogens"
102. University of California Santa Barbara, February (2014), "Long-term climate evolution"
101. University of Science and Technology in China, Hefei (Dec, 2013)
100. Nanjing University, Nanjing, China (Dec, 2013), "Redox evolution of the mantle"
99. Tongji University, Shanghai, China (Dec, 2013)
98. Chinese Academy of Sciences, Institute of Geochemistry in Guangzhou, China (Dec, 2013)
97. China University of Geosciences, Wuhan, China (Nov, 2013)
96. Northwestern University, Xian, China (Nov, 2013)
95. China University of Geosciences, Beijing (Nov, 2013), "Copper and continental arcs"
94. Chinese Academy of Sciences, Beijing (Nov, 2013), "Continental dynamics and craton formation"
93. Peking University (Nov, 2013), "Long-term climate change and continent formation"
92. University of Victoria, Canada (October, 2013), "Making continental crust"
91. Southern Methodist University, April, 2012,, "Long-term climate change and continent formation"
90. Agassiz Lecturer, Harvard University (March, 2012) , "Long-term climate change and continent formation"
89. Scripps Institute of Oceanography, UC San Diego (February, 2012), "Long-term climate change and continent formation"
88. UC Davis, Feb 2012, "Long term climate change and continent formation"
87. UC Berkeley, Physics Dept Lunchtime colloquium, Feb, 2012; "The Earth as a system"
86. Miller Visiting Professor talk, UC Berkeley, CA, Jan 31, 2012, "Copper systematics and continent formation"
85. Thomas A. Mutch Lecture, Brown University, 27 Oct, 2011, "Long-term climate change and continental arcs"
84. Rice University, International Student Orientation, "How to be a successful graduate student", 8 Aug 2011
83. Earthscope Workshop, 19 Sep, 2011, Portland, OR; "Continental lithosphere"
82. Copper and the Pb – paradox, Harvard, May, Dziewonski Festival, 2011
81. Pomona College, California, April, 2011, "Long term climate change and continental arcs"
80. Tokyo Institute of Technology, Japan, Feb 2011, "Mantle differentiation"
79. University of Tokyo, Japan, Feb, 2011 (4 Lecture series)
78. University of Tokyo, Earthquake Research Institute, Japan, Feb 2011, "Cratonic mantle"
77. University of Oregon, 19 Jan, 2011, "Continental lithosphere dynamics"
76. University of California, Los Angeles, 6 Jan, 2011 "Continent formation"
75. Rice University, International Studies Program, 5 Jan, 2011 – "How to be a successful Phd student"

74. American Geophysical Union, Dec 2010 – keynote “Element cycling through time”
73. University of Texas, Austin, Nov, 2010 “Long-term climate change and continent formation”
72. University of Texas, Austin, Nov, 2010 “Redox evolution of the Earth”
71. Texas A&M, Bryan, TX, Oct 2010 “Long-term climate change and continent formation”
70. Cal State Fresno, Sep, 2010 “Long-term climate change and continent formation”
69. Monterey Bay Aquarium, Packard Fellows, September, 2010, Long-term climate change
68. ETH- Zurich, Switzerland, October, 2010 “Life and legacy of continental arcs”
67. Roberts Elementary School, Sept, 2010, Volcanoes
66. Kavli Institute of Theoretical Physics, July 2010, Santa Barbara, CA; “Physics and chemistry of the Earth” chalkboard talk
65. University of Texas, Dallas, March, 2010, Legacy of continental arcs
64. Goldschmidt, keynote talk July, 2010, Redox of sub-arc mantle from Zn/Fe systematics
63. Los Alamos National Laboratory, June 2010, Long-term climate change and continent formation
62. COMPRES Meeting, June, 2010, keynote talk, Intensive variables in the Earth sciences
61. Cornell University, April 2010, Deep lithosphere filter in arcs
60. Lamont Doherty Earth Observatory, Columbia University, April, 2010, “Deep lithosphere filter”
59. University of Iowa, April, 2010, Deep lithosphere filter in arcs
58. Woods Hole Oceanographic Institute/MIT, March 2010, Deep lithosphere filter in arcs
57. University of Colorado, Nov, 2009
56. Lunar and Planetary Institute, Clear Lake, Houston, TX, Oct, 2009
55. Stanford University, Nov, 2009
54. GSA Gold Lecture Series – Donath, October, 2009, Portland, OR
53. Roberts Elementary School, Houston, TX, October, 2009; “Geologic forces” for 4<sup>th</sup> graders
52. Goldschmidt, 2009, Davos, Switzerland, Keynote talk
51. University of British Columbia, March 2009
50. UC Davis, Feb 2009
49. Roberts Elementary School, Houston, TX, 9 Jan 2009; “What’s inside the Earth” for 4<sup>th</sup> graders
48. University of Southern California Nov 17, 2008
47. Boston University, Oct 2008
46. Kavli Institute of Theoretical Physics (KITP) and Cooperative Institute for Deep Earth Research (CIDER) – lecturer, summer 2008
45. UC Berkeley, “The role of serpentine in making cratonic mantle”, 16 April, 2008
44. Tulane University, Louisiana April 25, 2008
43. University of Illinois, Urbana-Champaign, Illinois January 2008
42. “Recycling mafic lower crust” American Geophysical Union, Fall, invited Dec 2007.
41. “Goldilocks problem of making continents” American Geophysical Union, Fall, invited, Dec 2007
40. “Role of weathering in modulating the growth of continents”, University of Arizona, Nov, 2007
39. “Weathering, igneous differentiation, life and the origin of continents”, Harvard University, 24 Sept 2007
38. “Role of weathering in modulating the growth of continents”, UC Berkeley, Nov, 2007
37. “Life, continents, and weathering”, Yale University, 25 April, 2007
36. “Igneous and weathering processes in the origin of continents” University of Chicago, 16 Feb, 2007.
35. “Origin of continental lithospheric mantle” U Wyoming Nov 7, 2006
34. “Making continental crust in arcs” U. Wyoming, Nov 6, 2006
33. “The origin of continental crust”, Princeton University, Oct, 2006.
32. “Making continents and continental crust”, Monterey Bay Aquarium, Packard Fellows Meeting 7 Sep, 2006.
31. CIDER 2006 Workshop – lecture series, Kavli Institute of Theoretical Physics, UC Santa Barbara, CA

30. "Chemical modification of continental lithosphere – implications for the physical evolution of continents", keynote at Goldschmidt, Melbourne, Australia, August, 2006
29. "Continental crust formation from the Sierra Nevada and Peninsular Ranges", keynote at Penrose conference, Alaska, July 2006.
28. "Compositional controls on seismic velocities", invited keynote at IRIS, Tucson, AZ, May 2006
27. "Origin and evolution of continents" University of New Mexico, Oct 2005
26. "Constraints on the fO<sub>2</sub> of arcs from V/Sc systematics" invited talk for Goldschmidt 2005.
25. "Oceanic balance of redox-sensitive elements – constraining paleo-oxygen contents" University of Oklahoma, April, 2005.
24. "The role of chemical boundary layers in controlling the thickness of oceanic and continental thermal boundary layers", Geological Society of America Fall Meeting 2004.
23. "Mantle geochemistry" for Meeting of Young Researchers in the Earth Sciences, La Jolla, CA, August, 2004.
22. "Origin of continental crust and deep lithosphere dynamics", Princeton University, 11/18/03.
21. "Evolution of oxygen in the atmosphere and mantle: the vanadium perspective", NSCORT Origins of Life, Rensselaer Polytechnic University, NY, 11/03/03.
20. "Origin of continental crust and deep lithosphere dynamics", UC Santa Cruz, 10/28/03; Whole Earth Seminar.
19. "Origin of continental crust and deep lithosphere dynamics", University of Houston, 10/24/03.
18. "Transport of platinum group elements in supercritical fluids", Iceland Deep Drilling Project Organizational Meeting, Iceland, 10/13/02
17. "An overview of mantle metasomatism", Unmixing the SNCs: chemical, petrologic, and isotopic components of Martian meteorites, NASA Johnson Space Center, 10/11/02
16. "The behavior of platinum group elements in the marine environment", Institute of Earth Sciences, *Academia Sinica*, Taiwan 4/9/02
15. "Re-Os isotopic studies of mantle xenoliths and implications for deep lithospheric dynamics", Institute of Earth Sciences, *Academia Sinica*, Taiwan, 4/11/02.
14. "Geochemical insights into deep lithospheric dynamics beneath western USA", *University of California, Berkeley*, 3/19/02
13. "The origin of Archean lithospheric mantle: arcs, plumes or both", *Rice University*, 3/29/01.
12. "A geochemical approach to the tectonics and geodynamics of southwestern USA", *Rice University*, 3/28/01
11. "A geochemical approach to the tectonics and geodynamics of southwestern USA", *University of Oregon*, 3/15/01.
10. "Stability of continental lithosphere: geodynamic and geochemical constraints from southwestern USA", *University of California, Los Angeles*, 2/6/01.
9. "Stability of continental lithosphere: geodynamic and geochemical constraints from southwestern USA", *Brown University departmental colloquium*, 2/1/01.
8. "Origin of Si-enriched cratonic mantle by infusion of cumulate orthopyroxene in deep ultramafic magma chambers", *Brown University Lunchtime seminar*, 2/1/01.
7. "Deep lithospheric dynamics in the North American Cordillera", *University of California, Riverside, Geoclub*, 12/7/00.
6. "Deep lithospheric dynamics in the Sierra Nevada and Mojave Desert", *Caltech Geology Club*, 12/6/00.
5. "On the origin and stability of continental lithosphere: insights from the lithospheric mantle", *Woods Hole Oceanographic Institute*, 10/31/2000.
4. "Os isotopic evidence for delamination of lithospheric mantle beneath the Sierra Nevada", *The University of Chicago Geophysics weekly seminar* (2/25/00)
3. "Os isotopic evidence for delamination of lithospheric mantle beneath the Sierra Nevada", *Northwestern University special departmental seminar* (2/24/00)

2. “Re-Os isotopic evidence for unusual Archean lithospheric mantle beneath Mojavia (and refractory Proterozoic lithosphere beneath the Colorado Plateau): the role of bulk composition in lithosphere stability”, *GSA Annual Meeting*, Reno, 11/14/00 (Deep structure of Archean cratons).
1. “Thermobarometric and Os isotopic evidence for Mesozoic delamination of lithospheric mantle beneath the Sierra Nevada”, *GSA Annual Meeting*, Reno, 11/15/00 (Xenolith-based studies of the physical and chemical evolution of the deep North American lithosphere)

## **NATURAL HISTORY EXPERIENCE**

### **Appointments**

Member of the Texas Rare Birds Committee (2006-2008)

### **Teaching**

BIOS 337/237 – Field Bird Biology at Rice University

### **Official talks/lectures/courses/field trips in ornithology**

2015 – Identification of Empidonax Flycatchers, Kleb Woods Nature Preserve

2015 – Sparrow identification, Nature Discovery Center, Bellaire, TX

2014 – Shorebird workshop for Nature Discovery Center, Bellaire, TX

January, 2012 – field trips in Houston for Texas Ornithological Society

16 November, 2012 – Lecture on shorebird identification; Kleb Woods Nature Preserve

March, 2012, Houston Audubon Society, Lake Anahuac, TX

8 November 2008, Texas Ornithological Society Field Trip, Upper Texas Coast

11 October 2008, Geological Society of America Birding field trip, Galveston, TX

27 March, 2008, Invited Lecture, Galveston Audubon Society, Texas

29 Sep, 2007, Leader for Texas Ornithological Society Field Trip to Bolivar Flats

8 Sep, 2007, Leader and organizer of natural history field trip in Monterey and Carmel River, California; 2007 Packard Fellows Meeting and Annual outing.

6 Aug, 2007, Invited Lecture, “Shorebird migration and identification along the Upper Texas Coast”, Houston Ornithology Group, Houston, TX.

4 Aug, 2007, Leader for Texas Ornithological Society shorebirding field trip, Upper Texas Coast

13 June, 2007, Invited Lecture, “Dowitcher identification: new advances and potential pitfalls”, 13 June, 2007; Los Angeles Audubon Society, West Hollywood, CA

May, 2007 Shorebird Workshop – a two-day shorebird identification course for the Houston Audubon Society; co-taught with Glenn Olsen

### **Other experiences in biology**

Reasonably good at identifying North American plants, reptiles, and mammals. Familiar with insect families.

### **Scientific illustration**

Goauche and watercolor, pen-and-ink, scratchboard, and pencil

### **Abstracts (not peer-reviewed)**

2005 and earlier only

- Lee, C-T A**, Anderson, D. L., Cheng, X., 2005, Continental Crust Formation at Arcs, The "Garnet Pyroxenite" Delamination Cycle, And The Origin of Fertile Melting Anomalies in the Mantle, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V44C-04
- \***Li, Z-X A, Lee, C-T A**, 2005, Geochemical Investigation of Serpentinized Oceanic Lithospheric Mantle in the Feather River Ophiolite, California: Implications for the Recycling Flux of Water by Subduction, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V41A-1421
- O'Neill, C. J., Lenardic, A., Moresi, L., Torsvik, T., **Lee, C-T A.**, 2005, Episodic Precambrian subduction, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract U43B-0835
- Agranier, A., **Lee, C-T A**, Leeman, W. P., 2005, Depth Variations in Redox State and Fluid Mobile Element Enrichments in the Mantle Wedge Beneath the Cascades, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V31B-0612
- \***Hu, M., Lee, C-T A**, 2005, Increased Oxygenation of the Oceans Since the Mid-Cenozoic as Constrained by Cr/Co and Os/Ir Ratios in Oxic Pelagic Sediments, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract PP51C-0623
- Sommer, H., **Lee, C-T**, Regenauer-Lieb, K., 2005, Grain boundaries, a possible water reservoir in the Earth's mantle? *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V53F-06.
- \***Horodyskyj, U., Lee, C-T**, 2005, An arc origin for Archean high MgO "eclogite" xenoliths? *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V41B-1438.
- \***Harbert, A., Lee, C-T**, 2005, Towards a comprehensive and internally consistent database for partition coefficients of REEs in ultramafic minerals, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract V43B-1575.
- Lee, C-T A**, Leeman, W P, Canil, D, Li, Z X A, 2005, Similar V/Sc systematics in MORBs and arc basalts: implications for the oxygen fugacities of their mantle source regions, Goldschmidt Conference.
- Lee, C-T A**, Little, M G, 2005 Theoretical and observational links between erosion and chemical weathering, Goldschmidt Conference.
- Yin, Q-Z, Ott, U, **Lee, C-T**, 2005, The S-process in presolar SiC grains: Barium through Hafnium. 68<sup>th</sup> Annual Meteoritical Society Meeting, #5053.
- Lee, C-T A**, Lenardic, A., Li, Z. (2005) Transition metal evidence for coherent sections of recycled oceanic lithosphere in hotspot source regions: implications for the origins of hotspot magmatism, *EOS Trans. AGU* 86(18), Jt. Assem. Suppl. V42A-05
- Leeman, W., **Lee, C-T A**, Canil, D, Li, Z., 2004. Similar oxygen fugacities in arc and MORB mantle source regions: evidence from V/Sc systematics, AGU Fall.
- Lee, C-T A**, Lenardic, A., 2004, Lithospheric thickness, preservation of recycled oceanic lithosphere and the importance of water, AGU Fall.
- Li, Z.-X., **Lee, C-T A**, 2004, Geochemical constraints on the origin of serpentinization of oceanic mantle, AGU Fall
- Lee, C-T A**, 2004, Fear not the tectosphere, AGU Fall.
- Little, M. G., **Lee, C-T A**, 2004, Investigating an inverted soil column in Northern Tanzania: Could intense groundwater weathering be the culprit?, AGU Fall.
- Thiagarajan, N., **Lee, C-T A**, 2004, Trace Element Evidence for a Hydrothermal/Magmatic Origin of Stratiform Magnetite Deposits in the Crystal Spring Formation, AGU Fall.
- Lee, C-T**, Lenardic, A, Cooper, C M, Niu, F, Levander, A, The possible role of chemical boundary layers in regulating the thermal thickness of continents and oceans, GSA Fall.
- Li, Z., **Lee, C-T.**, 2004, The constancy of upper mantle  $fO_2$  through time inferred from V/Sc ratios in basalts: implications for the rise in atmospheric  $O_2$ , LPI conference "Oxygen in the terrestrial planets", July 20-23, 2004.
- Lee, C-T**, Lenardic, A, Cooper, C M, Niu, F, Levander, A, On the possible role of chemical boundary layers in regulating the thermal thickness of continents and oceans, AGU Spring Meeting 2004
- Lee, C-T**, Brill, NE, The role of garnet pyroxenites in making continental crust from arc basalts, AGU Spring Meeting 2004
- Niu, F, Levander, Cooper, C M, **Lee, C-T**, Lenardic, A, James, D, Depth of the tectosphere beneath Kaapvaal craton, AGU Spring Meeting 2004.
- Brill, NE, **Lee CA**, The Origin of Continental Crust by Intracrustal Differentiation of Basalt in Magmatic Arcs: Trace and Major Element Evidence From Lower Crustal Eclogites Beneath the Sierra Nevada Batholith; *Eos Trans. AGU*, 84(46), Fall Meet. Suppl., Abstract, 2003
- Thiagarajan, N., **Lee, CA**, Trace-Element Evidence for an Aqueous Atmospheric Origin of Desert Varnish: implications for the aqueous atmospheric input flux into the ocean, *Eos Trans. AGU*, 84(46), Fall Meet. Suppl., Abstract, 2003
- Lee, C-T**, Xenolith constraints on deep lithospheric dynamics beneath the central North American Cordillera, Geol. Assoc. Canada Meeting Abstract, 2003.

- Lee, C-T Aeolus**, Wasserburg, G J, Kyte F T, Platinum group elements and Re in marine sediments across the K-T boundary; constraints on Re-PGE transport in the marine environment, Abstracts of the 12<sup>th</sup> annual V. M. Goldschmidt conference, *Geochimica et Cosmochimica Acta*, vol.66, no.15A, pp.440, Aug 2002.
- Lee, C-T**, Wasserburg, G J, Kyte, F T, 2001, The disposition of the PGEs in marine sediments and the K/T boundary, *EOS Trans. AGU, Fall Meet. Suppl.*, AGU 82, 662.
- Lee, C-T**. 2001, Osmium isotopic and platinum group element geochemistry of peridotite xenoliths from the Sierra Nevada arc and the Basin and Range, *GSA Abst. Prog.*, p. 304.
- Zheng, L., **Lee, C-T**, Saleeby, J, 2001, Nd-Sr-Os systematics of mantle xenoliths from the Sierra Nevada batholith: structural and geochemical evolution of a subcontinental lithospheric mantle, *GSA Abst. Prog.*, p. 396.
- Lee, C-T**, Rudnick, R L, Q-Z Yin, Jacobsen, S B, 2000, Thermobarometric and Os isotopic evidence for Mesozoic removal of lithospheric mantle beneath the Sierra Nevada, California, Abstracts with Programs - Geological Society of America, vol.32, no.7, pp.387, 2000.
- Lee, C-T**, 2000, An analytical model for wholesale delamination of mafic lower crust, including non-linear viscosity: application to the hypothetical lower crustal delamination event beneath the Sierra Nevada, submitted to GSA Annual Meeting.
- Lee, C-T**, Yin, Q-Z, Rudnick, R L, Jacobsen, S B, 2000, Re-Os isotopic evidence for unusual Archean lithospheric mantle beneath Mojavia (and refractory Proterozoic lithosphere beneath the Colorado Plateau): the role of bulk composition in lithosphere stability, Abstracts with Programs - Geological Society of America, vol.32, no.7, pp.165, 2000.
- Lee, C-T**, 2000, V and Sc systematics in cratonic mantle peridotites: a cumulate origin for the excess Si in the mantle beneath Archean cratons, Xth Goldschmidt Conference, Oxford, England, p. 630.
- Lee, C-T**, Yin, Q-Z, Rudnick, R L, Jacobsen, SB, 2000, The role of lithospheric mantle in continent stability: Re-Os isotopic mapping of the upper mantle in southwestern USA, Xth Goldschmidt Conference, Oxford, England, p. 631
- Yin, Q-Z, **Lee, C-T**, 2000, Plasma centrifuge and isotopic fractionation in MC-ICP-MS, 10th Goldschmidt Conference, Oxford, England, p. 1113.
- Rudnick, R L, **Lee, C-T**, Yin, Q-Z, 2000, Crustal Recycling through lithospheric delamination and the nature of the Moho: a case study from the Sierra Nevada, USA, in Pan-Lithoprobe II workshop (in press).
- Lee, C-T**, Yin, Q-Z, Rudnick, R L, Jacobsen, S B, 2000, Osmium isotopic evidence for contrasting geodynamic evolution of continental lithospheric mantle beneath southwestern USA: the role of bulk composition in lithosphere stability, *EOS Trans.* (in press).
- Yin, Q-Z, **Lee, C-T**, Jacobsen, S B, 2000, Osmium spike calibration, meteorite isochron, and the <sup>187</sup>Re half-life, *EOS Trans.* (in press).
- Chesley, J T; Rudnick, Roberta L; Lee, C T, Geochemical evidence for plume metasomatism and old lithospheric mantle beneath the East African Rift in Tanzania, Abstracts with Programs - Geological Society of America, vol.32, no.7, pp.164, 2000
- Lee, C-T**, Yin, Q-Z, Rudnick, R L, Chesley, J T, Jacobsen, S B, 1999, Os isotopic and thermobarometric evidence for recent delamination of the subcontinental lithospheric mantle beneath the Sierra Nevada, California, *EOS Trans.* 80:1175-1176.
- Yin, Q-Z, **Lee, C-T**, Jacobsen, S B, 1999, The <sup>187</sup>Re half-life and accurate determination of Re and Os concentrations in meteorites, *Eos, Transactions, American Geophysical Union*, vol.80, no.46, Suppl., pp.1076, 16 Nov 1999.
- Yin, Q-Z, **Lee, C-T**, McDonough, W F, Horn, I, Rudnick, R L, Jacobsen, S B, 1999, Precise and accurate calibration of Os spike, *Lunar & Planetary Science Abstracts XXIX*, 335.
- Lee, C-T**, Yin, Q-Z, Chesley, J T, Rudnick R L, McDonough, W F, Brimhall, G H, Jacobsen, S B, 1999, Delamination of continental lithosphere beneath an active margin? Thermobarometric and Re-Os isotopic constraints from Sierra Nevada xenoliths, *Lunar & Planetary Science Abstracts XXIX*, 168.
- Lee, C-T**, Yin, Q-Z, Horn, I, Rudnick, R L, McDonough, W F, 1999, Metasediments in the lower crust: tectonic origin inferred from in-situ Hf isotopic analyses of zircons in a metasedimentary xenolith, *Lunar & Planetary Science Abstracts XXIX*, 167-168.
- Rudnick, R L, Chesley, J T, **Lee, C-T**, 1999, Impingement of a mantle plume on cratonic lithosphere, East African Rift, Tanzania, *EOS Trans.* 80:215.
- Rudnick, R L, McDonough, W F, Horn, I, **Lee, C-T**, Brennan, J M, Sattari, P, 1998, In situ studies of PGEs: natural and synthetic sulfides and silicates, *EOS Trans.* 79:953.
- Lee, C-T** and Rudnick, R L, 1998, The origin and demise of cratonic lithosphere: a geochemical perspective from the Tanzanian craton, 7<sup>th</sup> *Internat. Kimberlite Conf.*, Cape Town, Extended Abstracts, 492-494.



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- Lee, C-T**, 1998, Are inflected geotherms real?, *7<sup>th</sup> Internat. Kimberlite Conf.*, Cape Town, Extended Abstracts, 489-491.
- Lee, C-T** and Rudnick, R L, 1997, The formation and destruction of cratonic lithosphere; insights from the Tanzanian craton, *EOS Trans.* 78:746.