Kun Wang — Curriculum Vitae

Contact Information

Associate Professor
Dept. of Earth, Environmental, and Planetary Sciences
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Research Interests

Planetary formation and differentiation
Non-traditional isotope geochemistry
Analytical development (MC-ICP-MS)

Employment

Associate Professor, Washington University in St. Louis	2023 –
Faculty Fellow, McDonnell Center for the Space Sciences	2016 –
Assistant Professor, Washington University in St. Louis	2016 – 2023
Origins Prize Postdoctoral Fellow, Harvard University	2014 – 2016
Research Assistant, Washington University in St. Louis	2009 – 2013
Research Assistant, Chinese Academy of Sciences	2008 – 2009

Education

Ph. D., Washington University in St. Louis	2013
M.S., Washington University in St. Louis	2011
B.S., China University of Geosciences	2008

Awards

F.G. Houtermans Award	2020
Harvard Origins of Life Initiative Prize Fellowship	2014 – 2016
NASA Earth and Space Science Fellowship	2012 – 2013
LPI Career Development Award	2012
Carl Tolman Prize for Outstanding Graduate Teaching	2011
Graduating with Honors and Academic Outstanding	2008
National People's Scholarship	2007
Zhongkai Mining Company Fellowship	2006

Grants

NASA, Emerging Worlds Program, co-investigator	2025 – 2029
NASA, OSIRIS-REx Sample Analysis Participating Scientist Program, principal investigator	2022 – 2026
NASA, Emerging Worlds Program, principal investigator	2021 – 2023
NASA, Apollo Next Generation Sample Analysis, co-I	2019 – 2023
NASA, Emerging Worlds Program, co-investigator	2018 – 2019
NASA, Solar System Workings Program, co-investigator	2017 – 2019

Mission Activities

JAXA, Ryugu Reference Project Measurement Definition Team (RRP-MDT)	2024 – 2025
NASA-ESA, Mars Sample Return Sample Receiving Project Measurement Definition Team (SRP-MDT)	2023 – 2025
NASA, OSIRIS-REx Sample Analysis Team	2022 –
NASA, Astromaterials Allocation Review Board (AARB)	2022 –
NASA, Apollo Next Generation Sample Analysis (ANGSA) Sample Analysis Team	2019 – 2023

Peer-Reviewed Publications

73 peer-reviewed journal publications; 84 conference abstracts

Asterisk (*) indicates first authors who are students/postdocs in my group

73. Wang, X., Liu, X.-M., Jurikova, H., Henkel, D., **Wang, K.**, and Shakouri, M. (2025). Potassium isotope fractionation in the cultured brachiopod Magellania venosa. *Geochimica et Cosmochimica Acta*, **in press.** DOI:10.1016/j.gca.2025.12.023

72. Liu, H., Xue, Y.-Y., An, S., Gu, H.-O., Sun, H., **Wang, K.**, Guo, S., Yan, M., and Sun, W.-D. (2025). Extremely light potassium isotopic compositions of the continental eclogites and high-pressure metamorphic veins reveal the fluid-rock interactions in subduction zones. *Geochimica et Cosmochimica Acta*, **in press.** DOI:10.1016/j.gca.2025.12.030

71. Carrier, B., Sefton-Nash, E., Graham, H., Herd, C.D.K., Bridges, J., Debaille, V., Fox, A., French, K.L., Haltigin, T., Hausrath, E.M., Krzesińska, A., Paardekooper, D., Rampe, E., Schwenzer, S., Viotti, M., Duprat, J., Ferrari, M., Glamoclija, M., Harrington, A.D., Hutzler, A., Liu, Y., Magnabosco, C., Marlow, J., Maurel, C., McLaurin, H.M., Ogliore, R., Pack, A., Pillai, S., Schroeder, C., Sessions, A., Siljeström, S., Steele, A., Teece, B.L., Tu, V., and **Wang, K.** (2025) Mars Sample Return (MSR) Sample Receiving Project (SRP) Measurement Definition Team (MDT) Final Report. *Astrobiology*, **25**, 665-670. DOI:10.1177/15311074251382248

70. Broussard, M.*, Neuman, M., Koefoed, P., Moynier, F., Nie, N. X., Morris, R. V, Jolliff, B. L., and **Wang, K.** (2025) Copper and zinc isotopic variation in Apollo 17 double drive tube 73001/2 reveals space weathering history of lunar regolith. *Geochimica et Cosmochimica Acta*, **407**, 144-157. DOI:10.1016/j.gca.2025.09.004

69. Li, W., Liu, X.-M., **Wang, K.**, Shakouri, M., and Chauvel, C. (2025) Potassium isotope composition in global loess: Origins and implications. *Geochimica et Cosmochimica Acta*, **in press**. DOI:10.1016/j.gca.2025.04.023

68. Barnes, J. J., Nguyen, A. N., Abernethy, F. A. J., Bajo, K., Bekaert, D. V, Bloch, E., Brennecka, G. A., Busemann, H., Cowpe, J. S., Crowther, S. A., Ek M., Fawcett, L. J., Fehr, M. A., Franchi, I. A., Füri, E., Gilmour, J. D., Grady, M. M., Greenwood, R. C., Haenecour, P., Kawasaki, N., Koefoed, P., Krietsch, D., Le, L., Liszewska, K. M., Maden, C., Malley, J., Marrocchi, Y., Marty, B., Meyer, L. A. E., Peretyazhko, T. S., Piani, L., Render, J., Russell, S. S., Rüfenacht, M., Sakamoto, N., Schönbächler, M., Shollenberger, Q. R., Smith, L., Thomas-Keprta, K., Verchovsky, A. B., Villeneuve, J., **Wang, K.**, Welten, K. C., Wimpenny, J., Worsham, E. A., Yurimoto, H., Zimmermann, L., Zhao, X., Alexander, C. M. O., Amini, M., Baczynski, A., Bland, P., Borg, L. E., Burgess, R., Caffee, M. W., Chaves, L. C., Clay, P. L., Dworkin, J. P., Foustoukos, D. I., Glavin, D. P., Hamilton, V. E., Hill, D., House, C. H., Huss, G. R., Ireland, T., Jilly, C. E., Jourdan, F., Keller, L. P., Kruijer, T. S., Lai, V., McCoy, T. J., Nagashima, K., Nishiizumi, K., Ogliore, R., Ong, I. J., Reddy, S. M., Rickard, W. D. A., Sandford, S., Saxey, D. W., Timms, N., Weis, D., Wilbur, Z. E., Zega, T. J., DellaGiustina, D. N., Wolner, C. W. V, Connolly, H. C., and Lauretta, D. S. (2025) The variety and origin of materials accreted by Bennu's parent asteroid. *Nature Astronomy*, **9**, 1785-1802. DOI:10.1038/s41550-025-02631-6

67. Neuman, M.*, Jolliff, B. L., **Wang, K.**, Petro, N., Valenciano, J., Neal, C. R., Eckley, S., Kent, J., Sun, L., Lucey, P., Bell, S., Joy, K. H., Tartese, R., Jones, R., Carpenter, P., Morris, R. V, Haney, N. C., Simon, S., Cato, M., Shearer, C. K., Welten, K. C., Nishiizumi, K., Caffee, M. W., Colina-Ruiz, R. A., Kroll, T., Sokaras, D., Ishii, H. A., Bradley, J. P., Gillis-Davis, J., McFadden, J. A., Thompson, M. S., Christoffersen, R., Keller, L. P., Simon, J. I., McCubbin, F. M., Zeigler, R. A., Gross, J., Ketcham, R. A., Hanna, R. D., Edey, D., and the ANGSA Science Team (2025) Revealing the Moon's Taurus-Littrow landslide via integrated analysis of pristine Apollo 17 soil core 73001/2. *Journal of Geophysical Research: Planets*, **130**, e2024JE008556. DOI:10.1029/2024JE008556

66. Koefoed, P.*, and **Wang, K.** (2025) Unravelling chondrule formation processes: Clues from the potassium isotopic composition of chondrules from unequilibrated ordinary chondrites. *Geochimica et Cosmochimica Acta*, **398**, 163-177. DOI:10.1016/j.gca.2025.04.012

65. Broussard, M.*, Neuman, M., Jolliff, B. L., Koefoed, P., Korotev, R. L., Morris, R. V, Welten, K. C., and **Wang. K.** (2025) The isotopic variation of K and Fe in Apollo 17 double drive tube 73001/2 and implications for regolith history and space weathering. *Journal of Geophysical Research: Planets*, **130**, e2024JE008371. DOI:10.1029/2024JE008371

64. **Wang, K.**, Tian, Z., Broussard, M., Neuman, M., Koefoed, P., Pravdivtseva, O., Avice, G., Morris, R. V, Welten, K. C., Korotev, R. L., and Jolliff, B. L. (2025) Potassium isotopic compositions and model exposure ages of lunar soils. *Geochimica et Cosmochimica Acta*, **396**, 28-41. DOI:10.1016/j.gca.2025.01.043

63. Neuman, M.*, Koefoed, P., **Wang, K.**, Jolliff, B. L., Korotev, R. L., and Morris, R. V. (2025) Major and trace element variations and lithologic component analysis in Apollo 17 drive tube 73001/2. *Journal of Geophysical Research: Planets*, **130**, e2024JE008373. DOI:10.1029/2024JE008373

62. Liu, H., Xue, Y.-Y., Geldmacher, J., Hoernle, K., Wiechert, U., An, S., Gu, H.-O., Sun, H., Tian, F., Li, X., **Wang, K.**, Zhu, H., and Sun, W.-D. (2024) Potassium isotope evidence for subducted upper and lower oceanic crust in ocean island basalt sources. *Earth and Planetary Science Letters*, **646**, 119015. DOI:10.1016/j.epsl.2024.119015

61. Koefoed, P.*, Folco, L., Di Vincenzo, G., Nie, N. X., Glass, B. P., Neuman, M., and **Wang, K.** (2024) Understanding microtektite formation: Potassium isotope evidence for condensation in a vapor plume. *Geochimica et Cosmochimica Acta*, **379**, 23-38. DOI:10.1016/j.gca.2024.06.015

60. Lauretta, D. S., Connolly, Jr H. C., Aebersold, J. E., Alexander, C. M. O., Ballouz, R.-L., Barnes, J. J., Bates, H. C., Bennett, C. A., Blanche, L., Blumenfeld, E. H., Clemett, S. J., Cody, G. D., DellaGiustina, D. N., Dworkin, J. P., Eckley, S. A., Foustoukos, D. I., Franchi, I. A., Glavin, D. P., Greenwood, R. C., Haenecour, P., Hamilton, V. E., Hill, D. H., Hiroi, T., Ishimaru, K., Jourdan, F., Kaplan, H. H., Keller, L. P., King, A. J., Koefoed, P., Kontogiannis, M. K., Le, L., Macke, R. J., McCoy, T. J., Milliken, R. E., Najorka, J., Nguyen, A. N., Pajola, M., Polit, A. T.,

Righter, K., Roper, H. L., Russell, S. S., Ryan, A. J., Sandford, S. A., Schofield, P. F., Schultz, C. D., Seifert, L. B., Tachibana, S., Thomas-Keprta, K. L., Thompson, M. S., Tu, V., Tusberti, F., **Wang, K.**, Zega, T. J., Wolner, C. W. V, and the OSIRIS-REx Sample Analysis Team (2024) Asteroid (101955) Bennu in the laboratory: Properties of the sample collected by OSIRIS-REx. *Meteoritics & Planetary Sciences*, **59**, 2453-2486. DOI:10.1111/maps.14227

59. Gamaleldien, H., **Wang, K.**, Johnson, T. E., Ma, J.-F., Abu Anbar, M., Zhang, X. J., Olierook, H.K.H., and Kirkland, C. L. (2024) Potassium isotopes trace the formation of juvenile continental crust. *Geoscience Frontiers*, **15**, 101882. DOI: 10.1016/j.gsf.2024.101882

58. Li, W., Coogan, L. A., **Wang, K.**, Takahashi, Y., Shakouri, M., Hu, Y. and Liu, X.-M. (2024) Hydrothermal origin of heavy potassium isotope compositions in altered oceanic crust: Implications for tracing the elemental cycle. *Earth and Planetary Science Letters*, **625**, 118448. DOI:10.1016/j.epsl.2023.118448

57. Yang, T., Liu, H., Li, Y., Xue, Y.-Y., Li, X., **Wang, K.**, and Sun, W.-D. (2023) High-temperature inter-mineral potassium isotope fractionation in ultrapotassic and granitic rocks: Implications for the potassium isotopic compositions of arc magmas. *Chemical Geology*, **641**, 121770. DOI:10.1016/j.chemgeo.2023.121770

56. Liu, H., Yang, T., Xue, Y.-Y., Deng, J., Xiao, Y., Sun, H., Tong, F., **Wang, K.**, Gao, Y., Lin, K.-Y., Zhang, F., Jin, X., and Sun, W.-D. (2023) Slab dehydration and potassium-lithium recycling in the forearc indicated by potassium and lithium isotope compositions of exhumed metabasites. *Geochimica et Cosmochimica Acta*, **360**, 16-35. DOI:10.1016/j.gca.2023.09.006

55. Koefoed, P.*, Barrat J.-A., Pravdivtseva, O., Alexander, C.M.O'D., Lodders, K., Ogliore, R., and **Wang, K.** (2023) The potassium isotopic composition of CI chondrites and the origin of isotopic variations among primitive planetary bodies. *Geochimica et Cosmochimica Acta*, **358**, 49-60. DOI: 10.1016/j.gca.2023.07.025

54. **Wang, K.**, and Ionov, D. (2023) Potassium isotope evidence for slab-derived fluids in the sub-arc mantle. *Earth and Planetary Science Letters*, **619**, 118315. DOI:10.1016/j.epsl.2023.118315

53. Turner, S. J., Barickman, M. H., Rodriguez, J., Fike, D. A., Jones, C. M., **Wang, K.**, Savov, I. P., Agostini, S., Krawczynski, M. J., and Parai, R. (2023) Boron isotopes in Central American volcanics indicate a key role for the subducting oceanic crust. *Earth and Planetary Science Letters*, **619**, 118289. DOI:10.1016/j.epsl.2023.118289

52. Li, W., Liu, X.-M., **Wang, K.**, McManus, J., Haley, B. A., Takahashi, Y., Shakouri, M. and Hu, Y. (2022) Potassium isotope signatures in modern marine sediments: Insights into early diagenesis. *Earth and Planetary Science Letters*, **599**, 117849. DOI:10.1016/j.epsl.2022.117849

51. Koefoed, P.*, Pravdivtseva, O., Ogliore, R., Jiang, Y., Lodders, K., Neuman, M. and **Wang, K.** (2022) The dynamic formation process of the CB chondrite Gujba. *Geochimica et Cosmochimica Acta*, **332**, 33-56. DOI: 10.1016/j.gca.2022.06.021

50. Li, W., Liu, X.-M., **Wang, K.**, Takahashi, Y., Hu, Y. & Chadwick, O. A. (2022) Soil potassium isotope composition during four million years of ecosystem development in Hawaiʻi. *Geochimica et Cosmochimica Acta*, **332**, 57-77. DOI: 10.1016/j.gca.2022.06.025

49. Neuman, M.*, Holzheid, A., Lodders, K., Fegley, B. Jr., Jolliff, B.L., Koefoed, P., Chen, H., and **Wang, K.** (2022) High temperature evaporation and isotopic fractionation of K and Cu. *Geochimica et Cosmochimica Acta*, **316**, 1-20. DOI:10.1016/j.gca.2021.09.035

48. Li, W., Liu, X.-M., **Wang, K.**, Hu, Y.-F., Suzuki, A., and Yoshimura, T. (2022) Potassium incorporation and isotope fractionation in cultured scleractinian corals. *Earth and Planetary Science Letters*, **581**, 117393. DOI: 10.1016/j.epsl.2022.117393

47. Tian, Z.*, Magna, T., Day, J.M.D., Mezger, K., Scherer, E.E., Lodders, K., Hin, R.C., Koefoed, P., Bloom, H., and **Wang, K.** (2021) Potassium isotope composition of Mars reveals a mechanism of planetary volatile retention. *Proceedings of the National Academy of Sciences*, **118**, e2101155118. DOI:10.1073/pnas.2101155118

46. Kuhnel, W.W., Jacobsen, S. B., Li, Y., Ku, Y., Petaev, M.I., Huang, S., Wu, Z., and **Wang, K.** (2021) High-temperature inter-mineral potassium isotope fractionation: Implication on K-Ca-Ar chronology. *ACS Earth and Space Chemistry*, **5**, 2740-2754. DOI:10.1021/acsearthspacechem.1c00147

45. **Wang, K.**, Li, W., Li, S., Tian, Z., Koefoed, P., and Zheng, X-Y. (2021) Geochemistry and cosmochemistry of potassium stable isotopes. *GEOCHEMISTRY*, **81**, 125786. DOI:10.1016/j.chemer.2021.125786

44. Magna, T., Jiang, Y., Skála, R., **Wang, K.**, Sossi, P.A., and Zák, K. (2021) Potassium elemental and isotope constraints on the formation of tektites and element loss during impacts. *Geochimica et Cosmochimica Acta*, **312**, 321-342. DOI:10.1016/j.gca.2021.07.022

43. Liu, H., Xue, Y-Y., Zhang, G., Sun, W-D., Tian, Z., Tuller-Ross, B., and **Wang, K.** (2021) Potassium isotopic composition of low-temperature altered oceanic crust and its impact on the global K cycle. *Geochimica et Cosmochimica Acta*, **311**, 59-73. DOI:10.1016/j.gca.2021.08.001

42. Ionov, D., and **Wang, K.** (2021) Potassium distribution and isotope composition in the lithospheric mantle in relation to global Earth's reservoirs. *Geochimica et Cosmochimica Acta*, **309**, 151-170. DOI:10.1016/j.gca.2021.06.033

41. Liu, H., Xue, Y-Y., Wang, K., Sun, W-D., and **Wang, K.** (2021) Contributions of slab-derived fluids to ultrapotassic rocks indicated by K isotopes. *Lithos*, **396-397**, 106202. DOI:10.1016/j.lithos.2021.106202

40. Li, W., Liu, X.-M., **Wang, K.**, Joel Fodrie, F., Yoshimura, T., and Hu, Y.-F. (2021) Potassium phases and isotopic composition in modern marine biogenic carbonates. *Geochimica et Cosmochimica Acta*, **304**, 364-380. DOI:10.1016/j.gca.2021.04.018

39. Li, W., Liu, X-M., **Wang, K.**, and Koefoed, P. (2021) Lithium and potassium isotope fractionation during silicate rock dissolution: an experimental approach. *Chemical Geology*, **568**, 120142. DOI:10.1016/j.chemgeo.2021.120142

38. Moynier, F., Hu, Y., **Wang, K.**, Zhao, Y., Deng, Z., Moureau, J., Li, W., Simon, J., and Teng, F-Z. (2021) Potassium isotopic composition of various samples using a collision-cell inductively coupled plasma mass spectrometer, Nu Instrument Sapphire. *Chemical Geology*, **571**, 120144. DOI:10.1016/j.chemgeo.2021.120144

37. **Wang, K.**, Peucker-Ehrenbrink, B., Chen, H., Lee, H., and Hasenmueller, E.A. (2021) Dissolved potassium isotopic composition of major world rivers. *Geochimica et Cosmochimica Acta*, **294**, 145-159. DOI:10.1016/j.gca.2020.11.012

36. Jiang, Y., Koefoed, P., Pravdivtseva, O.V., Chen, H., Li, C-H., Huang, F., Qin, L-P., Liu, J., and **Wang, K.** (2021) Early Solar System aqueous activity: K isotope evidence from Allende. *Meteoritics & Planetary Science*, **56**, 61-76. DOI:10.1111/maps.13588

35. **Wang, K.**, Close, H.*G., Tuller-Ross, B., and Chen, H. (2020) Global average potassium isotope composition of modern seawater. *ACS Earth and Space Chemistry*, **4**, 1010-1017.DOI:10.1021/acsearthspacechem.0c00047

34. Wang, A., Yan, Y., Jolliff, B. L., McLennan, S. M., **Wang, K.**, Shi, E., and Farrell, W. M. (2020) Chlorine release from common chlorides by Martian dust activity. *Journal of Geophysical Research: Planets,* **125**, e2019JE006283. DOI:10.1029/2019JE006283

33. Koefoed, P. *, Pravdivtseva, O.V., Chen, H., Gerritzen, C., Thiemens, M.M., and **Wang, K.** (2020) Potassium isotope systematics of the LL4 chondrite Hamlet: Implications for chondrule formation and alteration. *Meteoritics & Planetary Science*, **55**, 1833-1847. DOI:10.1111/maps.13545

32. Tian, Z.*, Jolliff, B.L., Korotev, R.L., Fegley, B. Jr., Lodders, K., Day, J.M.D., Chen, H., and **Wang, K.** (2020) Potassium isotopic composition of the Moon. *Geochimica et Cosmochimica Acta*, **280**, 263-280. DOI:10.1016/j.gca.2020.04.021

31. Day, J.M.D., Moynier, F., Sossi, P.A., **Wang, K.**, Meshik, A.P., Pradivtseva, O.V., Pettit, D.R. (2020) Moderately volatile element behavior at high temperature determined from nuclear detonation. *Geochemical Perspectives Letters*, **13**, 54-60. DOI:10.7185/geochemlet.2014

30. Liu, H., **Wang, K.**, Sun, W-D., Xiao, Y., Xue, Y-Y., and Tuller-Ross, B. (2020) Extremely light K in subducted low-T altered oceanic crust: Implications for K recycling in subduction zone. *Geochimica et Cosmochimica Acta*, **277**, 206-223. DOI:10.1016/j.gca.2020.03.025

29. Chen, H., Liu, X-M., and **Wang, K.** (2020) Potassium isotope fractionation during chemical weathering of basalts. *Earth and Planetary Science Letters*, **539**, 116192. DOI:10.1016/j.epsl.2020.116192

28. Bloom, H.*, Lodders, K., Chen, H., Zhao, C., Tian, Z., Koefoed, P., Pető, M. K., Jiang, Y., and **Wang, K.** (2020) Potassium isotope compositions of carbonaceous and ordinary chondrites: Implications on the origin of volatile depletion in the early solar system. *Geochimica et Cosmochimica Acta*, **277**, 111-131. DOI:10.1016/j.gca.2020.03.018

27. Zhao, C.*, Lodders, K., Bloom, H., Chen, H., Tian, Z., Koefoed, P., Pető, M. K. and **Wang, K.** (2020) Potassium isotopic compositions of enstatite meteorites. *Meteoritics & Planetary Science*, **55**, 1404-1417. DOI:10.1111/maps.13358

26. Chen, J., Jolliff, B.L., Wang, A., Korotev, R.L., **Wang, K.**, Carpenter, P.K., Chen, H., Ling, Z., Fu, X., Ni, Y., Cao, H., and Huang, Y. (2019) Petrogenesis and shock metamorphism of basaltic lunar meteorites Northwest Africa 4734 and 10597. *Journal of Geophysical Research: Planets*, **124**, 2583-2598. DOI:10.1029/2019JE006084

25. Jiang, Y., Chen, H., Fegley, B. Jr., Lodders, K., Hsu, W., Jacobsen, S.B., and **Wang, K.** (2019) Implications of K, Cu and Zn isotopes for the formation of tektites. *Geochimica et Cosmochimica Acta*, **259**, 170-187. DOI:10.1016/j.gca.2019.06.003

24. Tuller-Ross B.*, Marty B., Chen H., Kelley K. A., Lee H. L., and **Wang K.** (2019) Potassium isotopic systematics of oceanic basalts. *Geochimica et Cosmochimica Acta*, **259**, 144-154. DOI:10.1016/j.gca.2019.06.001

23. Tian, Z.*, Chen, H., Fegley, B. Jr., Lodders, K., Barrat, J-A., Day, J.M.D., and **Wang, K.** (2019) Potassium isotope compositions of Howardite-Eucrite-Diogenite meteorites. *Geochimica et Cosmochimica Acta*, **266**, 611-632. DOI:10.1016/j.gca.2019.08.012

22. Tuller-Ross B.*, Savage P.S., Chen H., and **Wang K.** (2019) Potassium isotope fractionation during magmatic differentiation of basalt to rhyolite. *Chemical Geology*, **525**, 37-45. DOI: 10.1016/j.chemgeo.2019.07.017

21. Chen, H., Meshik, A.P., Pravdivtseva, O.V., Day, J.M.D., **Wang, K.** (2019) Potassium isotope fractionation during high-temperature evaporation determined from the Trinity nuclear test. *Chemical Geology*, **522**, 84-92. DOI:10.1016/j.chemgeo.2019.04.028

20. Lockmiller, K.A., **Wang, K.**, Fike, D.A., Shaughnessya, A.R., Hasenmueller, E.A. (2019) Using multiple tracers (F^-, B, $\delta^{11}B$, and optical brighteners) to

distinguish between municipal drinking water and wastewater inputs to urban streams. *Science of the Total Environment*, **671**, 1245-1256. DOI:10.1016/j.scitotenv.2019. 03.352

19. Chen, H., Tian, Z., Tuller-Ross, B., Korotev, R. L., and **Wang, K.** (2019) High-precision potassium isotopic analysis by MC-ICP-MS: An inter-laboratory comparison and refined K atomic weight. J*ournal of Analytical Atomic Spectrometry*, **34**, 160-171. DOI: 10.1039/C8JA00303C

18. Li, Y., Wang, W., Huang, S., **Wang, K.**, and Wu, Z. (2018) First-principles investigation of the concentration effect on equilibrium fractionation of K isotopes in feldspars. *Geochimica et Cosmochimica Acta*, **245**, 374-385. DOI:10.1016/j.gca.2018.11.006

17. **Wang, K.**, and Korotev, R. (2018). Meteorites. In *Oxford Encyclopedia of Planetary Science*. Oxford University Press. DOI:10.1093/acrefore/9780190647926.013.16

16. Wu, Z., Wang, A., Farrell, W. M., Yan, Y., **Wang, K.**, Houghton, J., and Jackson, A. W. (2018) Forming perchlorates on Mars through plasma chemistry during dust events. *Earth and Planetary Science Letters*, 504, 94-105. DOI:10.1016/j.epsl.2018.08.040

15. Parendo, C. A., Jacobsen, S. B. and **Wang, K.** (2017) K isotopes as a tracer of seafloor hydrothermal alteration. *Proceedings of the National Academy of Sciences*, **114**, 1827-1831. DOI: 10.1073/pnas.1609228114

14. **Wang, K.**, and Jacobsen, S. B. (2016) Potassium isotopic evidence for a high energy Giant Impact origin of the Moon. *Nature*, **538**, 487-490. DOI:10.1038/nature19341

13. **Wang, K.**, and Jacobsen, S. B. (2016) An estimate of the Bulk Silicate Earth potassium isotopic composition based on MC-ICPMS measurements of basalts. *Geochimica et Cosmochimica Acta*, **178**, 223-232. DOI: 10.1016/j.gca.2015.12.039

12. **Wang, K.**, Jacobsen, S. B., Sedaghatpour, F., Chen, H., Korotev, R.L. (2015) The earliest Lunar Magma Ocean differentiation recorded in Fe isotopes. *Earth and Planetary Sciences Letters*, **430**, 202-208. DOI: 10.1016/j.epsl.2015.08.019

11. Barrat, J. A., Rouxel, O., **Wang, K.**, Moynier, F., Yamaguchi, A., Bischoff, A. and Langlade, J. (2015) Early stages of core segregation recorded by Fe isotopes in an asteroidal mantle. *Earth and Planetary Sciences Letters*, **419**, 93-100. DOI:10.1016/j.epsl.2015.03.026

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9. **Wang, K.**, Day, J.M.D., Korotev, R.L., Zeigler, R.A., Moynier, F. (2014) Iron isotope fractionation during sulfide-rich felsic partial melting in early planetesimals. *Earth and Planetary Sciences Letters*, **392**, 124-132. DOI:10.1016/j.epsl.2014.02.022

8. Moynier, F., Fujii, T., **Wang, K.**, Foriel, J. (2013) Ab initio calculations of the Fe(II) and Fe(III) isotopic effects in citrates, nicotianamine, and phytosiderophore, and new Fe isotopic measurements in higher plants. *Comptes Rendus Geosciences*, **345**, 230-240. DOI: 10.1016/j.crte.2013.05.003

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6. **Wang, K.**, Moynier, F., Podosek, F., Foriel, J. (2012) An iron isotope perspective on the origin of the nanophase metallic iron in lunar regolith. *Earth and Planetary Sciences Letters*, **337-338**, 17-24. DOI: 10.1016/j.epsl.2012.05.021

5. Bishop, MC, Moynier F., Weinstein, C., Fraboulet, J.G., **Wang, K.**, Foriel, J. (2012) The Cu isotopic composition of iron meteorites, *Meteoritics & Planetary Sciences*, **47**, 268–276. DOI: 10.1111/j.1945-5100.2011.01326.x

4. **Wang, K.**, Moynier, F., Dauphas, N., Barrat, J.A., Craddock, P., Sio, C. (2012) Iron isotope fractionation in planetary crusts. *Geochimica et Cosmochimica Acta*, **89**, 31-45. DOI: 10.1016/j.gca.2012.04.050

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2. Weinstein, C., Moynier, F., **Wang, K.**, Paniello, R., Foriel, J., Catalano, J., Pichat, S. (2011) Isotopic fractionation of Cu in plants. *Chemical Geology*, **286**, 266-271. DOI: 10.1016/j.chemgeo.2011.05.010

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Invited Talks

Seminar: Buseck Center for Meteorite Studies Hybrid Seminar Series, December 3, 2025
Colloquium Lecture: Goethe-Universität Frankfurt am Main, Germany, November 27, 2024.
Seminar: Max Planck Institute for Solar System Research, Göttingen, Germany, November 14, 2024.
Colloquium Lecture: Georg-August-Universität Göttingen, Germany, October 23, 2024.
Invited Talk: Earth and Planets Origin and Evolution Workshop, Paris, France, May 16, 2024.
Public Talk: O'Fallon and Edwardsville High Schools, Illinois, February 24, 2024.
Colloquium Lecture: Lamont-Doherty Earth Observatory, October 15, 2021.

Colloquium Lecture: University of Washington, February 18, 2021.
Summer School: Northwest University (China), August 16, 2020.
F.G. Houtermans Award Talk: Goldschmidt 2020, Honolulu, USA, June 22, 2020.
Public Talk: St. Louis County Library, October 8, 2019.
Invited Lectures: China University of Geosciences, Wuhan, China, September 17, 18, 2019.
Invited Talk: Goldschmidt 2019, Barcelona, Spain, August 21, 2019.
Annual Kieler-Woche Lecture: Universität Kiel, Germany, June 24, 2019.
Summer School: University of Science and Technology of China, July 17, 2018.
Invited Lecture: St. Louis Astronomical Society Monthly Meeting: March 16, 2018.
Colloquium Lecture: University of Arizona, February 27, 2018.
Colloquium Lecture: University of New Mexico, February 2, 2018.
Colloquium Lecture: University of North Carolina, Chapel Hill, November 2, 2017.
Summer School: Shandong University, Weihai, China, July 11 – 15, 2016.
Invited Talk: Goldschmidt 2016, Yokohama, Japan, July 1, 2016.
Seminar: University of Rochester, New York, February 14, 2014.
Seminar: The University of Texas at El Paso, February 18, 2013.
Seminar: Carnegie institution of Washington; February 12, 2013.

Conference Presentations

84. Simonetti, A., Neal, C.R., Crow, C.A., Day, J.M.D., Liu, Y., Thompson, M.S., **Wang, K.** (2026) Deciphering KREEP signatures from the boron perspective. 57th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract #1443.

83. Gmerek, A.T., Crow, C.A., Neal, C.R., Day, M.D., Liu, Y., Simonetti, A., Thompson, M.S., Erickson, T.M., **Wang, K.** (2026) Geochronology and microstructures of Apollo 14 KREEP-rich basalts and impact melt. 57th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract #1684.

82. Srivastava, Y., Day, J.M.D., **Wang, K.**, Crow, C., Liu, Y., Thompson, M.S., Simonetti, A., Neal, C.R. (2026) Reassessment of lunar pristine crustal lithologies in the context of KREEP. 57th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract #1191.

81. Gamaleldien, H., **Wang, K.**, Zhang, X.J., Smithies, H. (2025). Potassium isotopic constraints on Earth's earliest stable continental crust. 35th Goldschmidt Conference (Prague, Czech Republic). Abstract#:28129.

80. Neal, C. R., Crow, C. A., Day, J. M. D., Liu, Y., Simonetti, A., Thompson, M. S., and **Wang, K.** (2025) The Variability of KREEP: Primordial Signatures from the Lunar Magma Ocean (LMO) or Post-LMO Processing? 56th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2810.

79. Ogliore, R. C., Liu, X., Koefoed, P., and **Wang, K.** (2025) Techniques to choose collector materials for IO sample return. 56th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1744.

78. Broussard, M., Neuman, M., Koefoed, P., Moynier, F., Nie, N. X., Morris, R. V., Jolliff, B. L., and **Wang, K.** (2025) Copper and zinc isotopic variation in ANGSA Apollo 17 double drive tube 73001/2 reveals space weathering history of lunar regolith. 56th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1826.

77. Broussard, M., Koefoed, P., Lodders, K., Carpenter, P. K., Irving, A. J., Jolliff, B. L., and **Wang, K.** (2025) Major and trace elemental composition of the CI chondrite Oued Chebeika 002. 56th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1828.

76. Koefoed, P., **Wang, K.**, Alexander, C. M. O'D., Barrat, J.-A., Haenecour, P., Barnes, J. J., Nguyen, A. N., Connolly, H. C. Jr., and Lauretta, D. S. (2024) Bulk Elemental Composition of Aggregate Material from Asteroid Bennu. 34th Goldschmidt Conference (Chicago, USA). Abstract#:24111.

75. Magna, T., **Wang, K.**, Kachlík, V., Stedra, V., Rapprich, V., Koefoed, P., Neuman, M., and Ackerman, L. (2024) From Cadomian accretion through subduction to Variscan exhumation of the Mariánské Lázně metaophiolite Complex (Bohemian Massif): Potassium isotope perspective. 34th Goldschmidt Conference (Chicago, USA). Abstract#:22397.

74. Liu, H., Xue, Y.-Y., Geldmacher, J., Wiechert, U., Hoernle, K., Li, W., An, S., Tian, F., Gu, H.-O., Sun, H., **Wang, K.**, and Sun, W.-D. (2024) Potassium isotope evidence for subducted upper and lower oceanic crust in ocean island basalt sources. 34th Goldschmidt Conference (Chicago, USA). Abstract#:22844.

73. Broussard, M., Neuman, M., Jolliff, B. L., Koefoed, P., Korotev, R. L., Morris, R.V., and **Wang, K.** (2024) The isotopic variations of potassium and iron in Apollo 17 double drive tube 73001/2 and their implications for regolith history and space weathering. 55th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1680.

72. Koefoed, P., **Wang, K.**, Alexander, C. M. O'D., Barrat, J. A., Haenecour, P., Barnes, J. J., Nguyen, A. N., Connolly, H. C. Jr., and Lauretta, D. S. (2024) Bulk major and trace elemental composition of an aggregate sample from Asteroid Bennu. 55th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2264.

71. **Wang, K.**, Koefoed, P., Haenecour, P., Barnes, J. J., Nguyen, A. N., Connolly, H. C. Jr., and Lauretta, D. S. (2024) The potassium isotope composition of aggregate material from asteroid Bennu. 55th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2286.

70. Koefoed, P., Barrat, J.-A., Pravdivtseva, O., Alexander, C.M.O'D., Lodders, K., Ogliore, R., and **Wang, K.** (2023) The potassium isotope composition of CI chondrties and the origin of isotopic variations among primitive planetary bodies. 86th Annual Meeting of The Meteoritical Society 2023 (Los Angeles, USA), Abstract#: 6131.

69. Vaci, Z., Gargano, A.M., Koefoed, P. and **Wang, K.** (2023) Potassium and chlorine isotope compositions of ordinary chondrites. 33rd Goldschmidt Conference (Lyon, France). Abstract#: 16035.

68. Neuman, M., Cornelison, D.M., Holzheid, A., Lodders, K., Fegley, B. Jr., and **Wang, K.** (2023) Knudsen effusion study of equilibrium isotope fractionation during evaporation in the early solar system. 33rd Goldschmidt Conference (Lyon, France). Abstract#: 18648.

67. Li, W., Coogan L.A., **Wang, K.**, Takahashi, Y., Shakouri M., Hu, Y., and Liu, X.-M. (2023) Hydrothermal origin of heavy K isotope composition in altered oceanic crust. 33rd Goldschmidt Conference (Lyon, France). Abstract#: 17348.

66. Haenecour, P., Smith, L. R., Neuman, M., Koefoed, P., **Wang, K.**, and Dominik, K., (2023) Major and trace element composition of carbonaceous chondrites: insight into their alteration histories. 54th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1825.

65. Neuman M., Koefoed, P., **Wang, K.**, Jolliff, B.L., Korotev, R.L., Morris, R.V., Broussard, M., and the ANGSA Science Team (2023) Composition of Apollo 17 double drive tube 73001 / 73002. 54th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1625.

64. Smith, L. R., Haenecour, P., Barnes, J., Dominik, K., Neuman, M., **Wang, K.**, Ogliore, R., and Koefoed, P. (2023) Abundance of presolar grains in the C3.00-ungrouped chondrite Chwichiya 002. 54th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2425.

63. Vaci, Z., Koefoed, P., Tian, Z., **Wang, K.**, Day, J. M. D., Barrat, J. A., and Agee. C. B. (2022) Potassium isotopic compositions of evolved achondrites. 85th Annual Meeting of The Meteoritical Society (Glasgow, Scotland), Abstract#: 6034.

62. Smith, L. R., Haenecour, P. H., Barnes, J. J., Domanik, K., Neuman, M., **Wang, K.**, and Ogliore, R. (2022) Phosphide-rich clasts in the C2-ungrouped Tarda meteorite. 85th Annual Meeting of The Meteoritical Society 2022 (Glasgow, Scotland), Abstract#: 6406.

61. Zhu, K., Becker, H., Jiang, Y., Koefoed, P., and **Wang, K.** (2022) Constraining the kinship between CB and CH chondrites and the formation of CB chondrules using Cr isotopes. 85th Annual Meeting of The Meteoritical Society (Glasgow, Scotland), Abstract#: 6388.

60. **Wang, K.** and Ionov, D. (2022) Potassium isotope evidence for slab-derived fluids in the sub-arc mantle. 32nd Goldschmidt Conference (Honolulu, USA). Abstract#: 9823.

59. Li, W., Liu, X.-M., **Wang, K.**, Hu, Y. and Chadwick, O. A. (2022) Soil potassium isotope composition during four million years of ecosystem development in Hawai'i. 32nd Goldschmidt Conference (Honolulu, USA). Abstract#: 9822.

58. Wang, X.-K., Liu, X.-M., Jurikova, H., **Wang, K.**, & Shakouri, M. (2022) Potassium isotope fractionation in cultured brachiopods *Magellania venosa*. 32nd Goldschmidt Conference (Honolulu, USA). Abstract#: 11304.

57. Zhang, X.J., Tian, Z., Day, J.M.D., Moynier, F., and **Wang, K.** (2022) Rubidium isotope composition of Mars. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1666.

56. Neuman, M., Gargano, A., Shearer, C.K., **Wang, K.**, Sharp, Z., and Ziegler, K. (2022) Volatile element evolution in the martian crust. Communications with the martian surface and atmosphere? 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1385.

55. Morris, R. V., Haney, N. C., Agresti, D. G., Neuman, M. D., **Wang, K.**, Jolliff, B. L., Shearer, C. K., Schmitt, H. H., and ANGSA Science Team (2022) Stratigraphy of the Apollo 17 landslide core 73002 from FMR maturity and VNIR and Mössbauer spectroscopy. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1849.

54. Tian, Z., Neuman, M., Koefoed, P., and **Wang, K.** (2022) Potassium isotope constraints on near-surface fractionation effects of bulk lunar soils and Apollo 15 deep drill core. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2798.

53. Valenciano, J.L., Neal, C. R., Neuman, M. D., **Wang, K.**, Jolliff, B. L., Shearer, C. K., and the ANGSA Science Team (2022) Major and trace element analysis of Apollo 17 drive tube 73002: first dissection. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2818.

52. Koefoed, P., Folco, L., Di Vincenzo, G., Nie, N.X., Glass, B. P., and **Wang, K.** (2022) The K isotope systematics of microtektites from the Australasian strewn field. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2272.

51. Smith, L. R., Haenecour, P., Barnes, J. J., Dominik, K., Neuman, M., **Wang, K.**, and Ogliore, R. (2022) Detailed coordinated analysis of the mineralogy, petrography and elemental composition of the carbonaceous chondrite falls Tarda and Kolang. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2832.

50. Smith, L. R., Haenecour, P., Barnes, J. J., Dominik, K., Neuman, M., **Wang, K.**, and Ogliore, R. (2022) Mineralogy, petrography and presolar components of the Chwichiya 002 ungrouped chondrite. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2873.

49. Koefoed, P., Barrat, J.A., Pravdivtseva, O., Alexander, C.M.O'D., Lodders, K., and **Wang, K.** (2022) Constraining the Solar System initial K isotope composition: The K isotopes of CI chondrites. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2238.

48. Neuman, M., Macris, C. A., Koefoed, P., and **Wang, K.** (2022) Potassium isotope fractionation from levitation laser heating. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2087.

47. Shearer, C.K., McCubbin, F.M., Zeigler, R.A., Gross, J., Simon, S.B., Meshik, A., McDonald, F., Morris, R.V., Schmitt, H.H., Neuman, M., **Wang, K.**, Jolliff, B.L., Joy, K., Sharp, Z., Cato, M., Gargano, A., Eckley, S., Cano, E., Para, R., Simon, J., Welten, K.C., Barnes, J.J., Dyar, M., Burgess, K., Petro, N., Curran, N.M., Elsila, J.E., Gillis-Davis, J., Sehlke, A., Cohen, B., Pravdivseva, O., Thompson, M.S., Neal, C.R., Lucey, P., Sun, L., and the ANGSA science team (2022) Preparing for Artemis through lessons learned from Apollo 17. Highlighting the progress of the ANGSA initiative. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2546.

46. Neuman, M., Koefoed, P., **Wang, K.**, Jolliff, B. L., Morris, R.V., and the ANGSA Science Team (2022) Major and trace elemental variations and lithologic component analysis in Apollo 17 drive tube 73002. 53rd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1567.

45. Koefoed, P., Pravdivtseva, O., Ogliore, R., Jiang, Y., Lodders, K., and **Wang, K.** (2021) K isotope systematics of the CB chondrite Gujba: testing the impact plume model of formation. 52nd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2310.

44. Neuman, M.D., Jolliff, B.L., Koefoed, P., **Wang, K.**, and the ANGSA Science Team (2021) Apollo 17 drive tube 73002 major and trace element characterization. 52nd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1470.

43. Tian, Z., Magna, T., Day, J.M.D., Mezger, K., Scherer, E.E., Lodders, K., Hin, R.C., Koefoed, P., Bloom, H., and **Wang, K.** (2021) Potassium isotope composition of Mars reveals a mechanism of planetary volatile retention. 52nd Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2192.

42. **Wang, K.** (2020) Isotopic constraints on the origin and evolution of Martian volatiles. 30th Goldschmidt Conference (Honolulu, USA). Abstract#:2735.

41. Chen, H., **Wang, K.**, Tian, Z., and Halliday, A.N. (2020) Copper isotopic composition in lunar samples. 30th Goldschmidt Conference (Honolulu, USA). Abstract#:382.

40. Liu, H., Xue, Y-Y., Zhang, G., Sun, W-D., Tian, Z., Tuller-Ross, B., and **Wang, K.** (2020) Potassium isotopic composition of low-temperature altered oceanic crust and its impact on the global K cycle. 30th Goldschmidt Conference (Honolulu, USA). Abstract#:1585.

39. Ionov, D., and **Wang, K.** (2020) Potassium isotope composition of mantle peridotite. 30th Goldschmidt Conference (Honolulu, USA). Abstract#:1142.

38. Tian, Z., Magna, T., Day, J.M.D., Mezger, K., Scherer, E.E., Lodders, K., Koefoed, P., Bloom, H., and **Wang, K.** (2020) Potassium isotopic compositions of martian meteorites – implications for a "drier" early Mars through accretional volatile loss. 51st Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2572.

37. Jiang, Y., Koefoed, P., Li, C.-H., Hsu, W.B., and **Wang, K.** (2020) Potassium elemental and isotopic compositions of chondritic components in Allende carbonaceous chondrite. 51st Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2539.

36. Koefoed, P., and **Wang, K.** (2020) K isotope systematics of individual chondrules from the unequilibrated ordinary chondrites QUE 97008, GRO 95658, GRO 95539 and MET 00452. 51st Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2522.

35. Jolliff, B. L., **Wang, K.**, Korotev, R.L., Simon, S.B., Papike, J.J., Shearer, C.K., and the ANGSA Science Team. (2020) Apollo 17 station 3 samples: What to expect among lithologic components in ANGSA double drive tube 73001 and 73002. 51st Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1970.

34. Ogliore, R.C., Cohen, M., **Wang, K.** Chen, H. and Liu, N. (2020) Searching for contemporary supernova dust in deep-sea sediments. 51st Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1695.

33. Barickman, M.H., Turner, S.J., Parai, R., Fike, D.A., Krawczynski, M., and **Wang, K.** (2019) Boron isotopic constraints on slab and mantle-derived fluid and melt sources of Nicaraguan volcanics. 2019 American Geophysical Union Fall Meeting (San Francisco, CA). Abstract#: V51D-0187.

32. Chen, H., Ma, L., Sun, Y., **Wang, K.**, and Huang, K. (2019) Potassium isotopic composition of loess. 2019 American Geophysical Union Fall Meeting (San Francisco, CA). Abstract#: V54A-02.

31. Yan, J., Catalano, J., Chen, H. and **Wang, K.** (2019) Zinc release and reimmobilization during Fe(II)-induced ferrihydrite transformation. 29th Goldschmidt Conference (Barcelona, Spain). Abstract#: 3785.

30. Lockmiller, K., **Wang, K.**, Fike, D., Shaughnessy, A., and Hasenmueller, E. (2019) Using multiple tracers to distinguish between municipal drinking water and wastewater inputs to streams. 29th Goldschmidt Conference (Barcelona, Spain). Abstract#: 2042.

29. **Wang, K.**, Koefoed, P., Tian, Z., Bloom, H., Zhao, C., and Chen, H. (2019) Potassium isotopic constraints on vaporisation and volatile element evolution during planet formation. 29th Goldschmidt Conference (Barcelona, Spain). Abstract#: 3582.

28. Tian, Z., Chen, H., Jolliff, B., Korotev, R., Fegley, B. Jr., Lodders, K., and **Wang, K.** (2019) Mass balance for the bulk Moon K budget and isotopic composition. 29th Goldschmidt Conference (Barcelona, Spain). Abstract#: 3370.

27. Liu, H., **Wang, K.**, Sun, W-D., Xiao, Y., and Xue, Y-Y. (2019) Extremely light K isotopes enriched in subducted low-T altered oceanic crust: Implications for K recycling in the subduction zone. 29th Goldschmidt Conference (Barcelona, Spain). Abstract#: 1996.

26. Tian, Z., Chen, H., Korotev, R. L., Koefoed, P., and **Wang, K.** (2019) Potassium isotope constraints on near-surface fractionation effects of bulk lunar soils. 50th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1586.

25. Koefoed, P., Pravdivtseva, O., Chen, H., Gerritzen, C., and **Wang, K.** (2019) K isotope systematics of individual chondrules from the LL4 chondrite Hamlet. 50th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1672.

24. Zhao, C., Bloom, H., Chen, H., Tian, Z., Koefoed, P., Lodders, K., and **Wang, K.** (2019) Potassium isotopic compositions of enstatite chondrites and aubrites. 50th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2689.

23. Wang, A., Yan, Y., Houghton, J., Jolliff, B.L., and **Wang, K.** (2019) Plasma chemistry induced by martian dust storms and dust devils. 50th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2031.

22. Wang, A., Yan, Y., Jolliff, B.L., and **Wang, K.** (2019) Iron phase transformations induced by plasma chemistry during martian dust events. 50th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2036.

21. Chen, J., Jolliff, B.L.,Korotev, R.L., **Wang, K.**, Wang, A., Carpenter, P.K., Chen, H., and Ling, Z. (2019) Northwest Africa 10985: a new lunar gabbro? 50th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 2463.

20. Lee, H. L., Peucker-Ehrenbrink, B., Chen, H., Hasenmueller, E. A., and **Wang, K.** (2018) Potassium isotopes in major world rivers: Implications for weathering and seawater budget. 28th Goldschmidt Conference (Boston, USA). Abstract#: 1434.

19. Tuller-Ross, B., Lee, H. L., Chen, H., Marty, B., Kelley, K. A., and **Wang, K.** (2018) Potassium isotopic systematics of oceanic basalts. 28th Goldschmidt Conference (Boston, USA). Abstract#: 2580.

18. Tian, Z., Chen, H., Fegley, B. Jr., Lodders, K., Korotev, R.L., and **Wang, K.** (2018) Potassium isotopic composition of the Moon. 28th Goldschmidt Conference (Boston, USA). Abstract#: 2537.

17. Chen, H., Liu, X., and **Wang, K.** (2018) Potassium isotopic fractionation during continental weathering. 28th Goldschmidt Conference (Boston, USA). Abstract#: 385.

16. Yan, J., Catalano, J. G., **Wang, K.**, and Chen, H. (2018) Zinc release, reimmobilization, and isotope fractionation during Fe(II)-catalyzed ferrihydrite transformation. 28th Goldschmidt Conference (Boston, USA). Abstract#: 2889.

15. Bloom, H., Chen, H., Fegley, B. Jr., Lodders, K., and **Wang, K.** (2018) Potassium isotope compositions of carbonaceous and ordinary chondrites: implications on the origin of volatile depletion in the early solar system. 49th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1193.

14. Chen, H., Meshik, A. P., Pravdivtseva, O. V., Day, J. M. D. and **Wang, K.** (2018) Evaporative fractionation of potassium isotopes during the first nuclear detonation and implication on the formation of the Moon. 49th Lunar and Planetary Science Conference, Abstract#: 1609.

13. Tian, Z., Chen, H., Fegley, B. Jr., Lodders, K., Barrat, J-A., and **Wang, K.** (2018) Potassium isotope differences among chondrites, Earth, Moon, Mars, and 4-Vesta - Implication on the planet accretion mechanisms. 49th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1276.

12. Jiang, Y., Chen, H., Fegley, B. Jr., Lodders, K., Hsu, W., Jacobsen, S.B., and Wang, K. (2018) New high-precision potassium isotopes of tektites. 49th Lunar and Planetary Science Conference (The Woodlands, TX), Abstract#: 1311.

11. **Wang, K.**, Tian., Z., Chen, H., Fegley, B., Lodders, K., and Barrat, J-A. (2017) Potassium isotopic fractionation during the volatile depletion in early solar system. 27th Goldschmidt Conference (Paris, France). Abstract#: 4149.

10. **Wang, K.**, and Jacobsen, S. B. (2016) New K isotopes support the Moon formed by a high energy giant impact. 2016 American Geophysical Union Fall Meeting (San Francisco, CA). Abstract#: V41D-05.

9. **Wang, K.**, Jacobsen, S. B., Sedaghatpour, F., Chen, H., Korotev, R.L. (2016) Fractionation of Fe isotopes in the lunar magma ocean. 26th Goldschmidt Conference (Yokohama, Japan). Abstract#: 3324.

8. **Wang, K.**, and Jacobsen, S. B. (2016) Potassium isotope fractionation in the continental crust. 26th Goldschmidt Conference (Yokohama, Japan). Abstract#: 3325.

7. **Wang, K.**, and Jacobsen, S. B. (2016) Potassium isotope cosmochemistry revisited. 47th Lunar and Planetary Science Conference (The Woodlands, TX). Abstract#: 1667.

6. **Wang, K.**, Jacobsen, S. B., Sedaghatpour, F., Chen, H., Korotev, R.L. (2015) Lunar dunite reveals the same iron isotopic composition of the bulk silicate Earth and Moon, 46th Lunar and Planetary Science Conference (The Woodlands, TX). Abstract#: 1980.

5. **Wang, K.**, Moynier, F., Paniello, R.C. (2013) Iron isotopic fractionation during metal/silicate segregation in enstatite chondrite and aubrite parent bodies, 44th Lunar and Planetary Science Conference (The Woodlands, TX). Abstract#: 2254.

4. **Wang, K.**, Moynier, F., Dauphas N., Barrat, J-A., Day, J.M.D., Sio, C.K., Korotev, R.L., Zeigler, R.A. (2012) Iron isotopic fractionation in early planetary crusts, 2012 American Geophysical Union Fall Meeting (San Francisco, CA). Abstract#: P44A-06.

3. **Wang, K.**, Moynier, F., Dauphas, N., Barrat, J-A., Craddock, P., Sio, C. (2012) Iron isotopic compositions of angrites and stannern-trend eucrites, 43rd Lunar and Planetary Science Conference (The Woodlands, TX). Abstract#: 1146.

2. **Wang, K.**, Moynier, F., Podosek, F., Foriel, J. (2012) Iron isotope and the origin of nanophase iron in lunar regolith. 43rd Lunar and Planetary Science Conference (The Woodlands, TX). Abstract#: 1148.

1. Huang, J., Xiao L., **Wang, K.** (2009) Xifeng circular basin: another failed potential crater in China. 40th Lunar and Planetary Science Conference (The Woodlands, TX). Abstract#: 1035.

Service

Journal Reviewer
Geochimica et Cosmochimica Acta (31); Earth and Planetary Sciences Letters (11); Chemical Geology (4); Proceedings of the National Academy of Sciences (4); Meteoritics & Planetary Sciences (2); American Mineralogist (2); Nature Geoscience (2); Geochemical Perspectives Letters (2); The Planetary Science Journal (1); The Astrophysical Journal (1); Geology (1); Nature Communications (1); Science Advances (1); Science China Earth Sciences (1); Icarus (1)

Proposal/Grant Reviewer
National Aeronautics and Space Administration; National Science Foundation; German Research Foundation; European Research Council; Canada Foundation for Innovation

Conference Session Chair/Organizer
Lunar and Planetary Science Conference; Goldschmidt Conference

School Committees
Past Member, A&S Academic Integrity committee
Member, A&S Faculty Council

Departmental Committees
Co-chair, colloquia and visitors
Member, undergraduate studies committee
Member, graduate studies committee

Teaching

L19 EEPS 1710: The Solar System	2017 – 2025
L19 EEPS 4460: Stable Isotope Geochemistry	2017, 2021, 2023
L19 EEPS 5660: Advances in Stable Isotope Geochemistry	2018, 2020, 2022
L19 EEPS 5680: Scientific Exploration of the Moon	2026

Mentoring

Xuanyu Liu, Graduate Student, Washington University in St. Louis	2024 – present
Megan Broussard, Graduate Student, Washington University in St. Louis	2022 – present
Isaac Bendon, Graduate Student, Washington University in St. Louis	2023 – 2025
Camryn Smalling, Undergraduate, Washington University in St. Louis	2022 – 2023
Miriam Gammerman, Undergraduate, Washington University in St. Louis	2021 – 2022
Judy Zhang, Undergraduate, Washington University in St. Louis	2021 – 2022
Juan Xu, Visiting Graduate Student, University of Science and Technology of China	2019 – 2020
Piers Koefoed, MCSS Postdoc Fellow, Washington University in St. Louis	2018 – 2025
Mason Neuman, Graduate Student, Washington University in St. Louis	2018 – 2024
Haiyang Liu, Visiting Postdoc Fellow, Institute of Oceanology, Chinese Academy of Sciences	2018 – 2019
Carina Gerritzen, Visiting Undergraduate, Universität zu Köln, Germany	2018
Chen Zhao, Visiting Undergraduate, China University of Geosciences, Wuhan	2018
Hannah Bloom, Undergraduate, Washington University in St. Louis	2017 – 2020
Brenna Tuller-Ross, Masters Student, Washington University in St. Louis	2017 – 2019
Heather Lee, Undergraduate, Washington University in St. Louis	2017
Annabel Shu, Undergraduate, Washington University in St. Louis	2017

	Zhen Tian, Graduate Student, Washington University in St. Louis	2016 – 2021
	Wilson Kuhnel, Undergraduate, Harvard University	2015 – 2016

Professional Affiliations

Geochemical Society
Meteoritical Society
American Geophysical Union

Selected Media Coverages

Forbes: Martian Blues: Did Planet's Size Affect Its Ability To Hold Onto Water?

NPR: Mars Had Liquid Water On Its Surface. Here's Why Scientists Think It Vanished

TIME: Mars Was Always Destined to Die

Forbes: Doomed From The Start, Mars May Have Never Had Enough Water For Life

Newsweek: How Mars Lost Its Water, the Key Ingredient of Life

POPULAR SCIENCE: Mars may be too small to have ever been habitable

Forbes: What a nuclear test can teach us about the Moon

NBC: Moon's birth may have vaporized most of Earth, study shows

POPULAR SCIENCE: New evidence shows the moon formed from melted bits of Earth

The Christian Science Monitor: Was the birth of our moon more violent than we thought?

RT: Boom rescaled: 'Extremely giant impact' may be behind making of Earth's moon