

Kyeong Pil Kong

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Education:

2020 – present	University of Southern California	Ph.D. (Earth Sciences)
2015 – 2017	The Pennsylvania State University	M.S. (Geosciences)
2011 – 2015	Washington and Lee University	B.S. (Geology/ Biochemistry)

Professional Experience:

2017 - 2020 Research Analyst, Advanced Resources International

Publications:

Theses

- 2026 **Kong K.** The biogeochemical cycling of marine particulate iron in the Pacific Ocean. PhD dissertation in Earth Sciences, University of Southern California
- 2017 **Kong K.** Mineralogical and geochemical constraints on chromium oxidation induced by birnessite. M.S. thesis in Geosciences, The Pennsylvania State University
- 2015 **Kong K.** Pb and Hf isotope data for mafic lavas from the Three Sisters and Newberry volcano regions of the central Oregon Cascades. B.S. thesis in Geology, Washington and Lee University

Peer-Reviewed

- 2026 Silva S.J., John S.G., West A.J., Bradshaw M., Hu Y., John C.M., **Kong K.**, Odendahl C., Pineda N., Ross A., Schlaff B., Sigdel N., Thomas K. Elevated Environmental Lead Concentrations Following a Major Urban Fire. *ACS ES&T Air*, 3(7), 1789-1796. doi: [10.1021/acsestair.6c00015](https://doi.org/10.1021/acsestair.6c00015)
- Mackey K.R.M., John S.G., Tavares J., Yang S.C., **Kong K.** Copper and light shape a coastal picophytoplankton community via their combined effects on growth limitation and toxicity. *ISME communications*, 6(1), ycag124. doi: [10.1093/ismeco/ycag124](https://doi.org/10.1093/ismeco/ycag124)
- Kong K.**, Yang S.C., Barone B., Hamilton D.S., John S.G. Surface water iron deposition histories and the initiation of phytoplankton blooms in the North Pacific Gyre. *Global Biogeochemical Cycles*, 40, e2025GB008499. doi: [10.1029/2025GB008499](https://doi.org/10.1029/2025GB008499)
- 2025 Kast D.J., Stellmann J., Floback A., Gaffney J., **Kong K.**, Moffett, J. Full Steam Ahead: Ironing Up Science at a Title 1 Elementary School in Southern California. *Current: The Journal of Marine Education*, 40(3), pp. 71–80. doi: [10.5334/cjme.136](https://doi.org/10.5334/cjme.136)
- Seelen E.A., Gleich S. J., Kumler W., Anderson H. A., Bian X., Björkman K.M., Caron D.A., Dyhrman S.T., Ferrón S., Finkel Z.V., Haley S.T., Hu Y.Y., Ingalls A.E., Irwin A. J., Karl D.M., **Kong K.**, Lowenstein D.P., Salazar Estrada A.E., Townsend E., Tracey J.C., Turk-Kubo K., Van Mooy B.A.S., John S.G. Nitrogen and phosphorus differentially control marine biomass production and stoichiometry. *Nature Communications*, 16, 5713. doi: [10.1038/s41467-025-61061-0](https://doi.org/10.1038/s41467-025-61061-0)
- 2024 Bian X., Yang S.C., Raad R.J., Hawco N.J., Sakowski J., Huang K.F., **Kong K.**, Conway T.M., John S.G. A rapid procedure for isotopic purification of copper and nickel from seawater using an automated chromatography system. *Analytical Chemical Acta*, 1312, 342753. doi: [10.1016/j.aca.2024.342753](https://doi.org/10.1016/j.aca.2024.342753)
- 2019 **Kong K.**, Heaney P.J., Fischer T.B., Post J.E., Stubbs J.E., Eng P.J. Mineralogical and geochemical constraints on chromium oxidation induced by birnessite. *Applied Geochemistry*, 108, 104365. doi: [10.1016/j.apgeochem.2019.104365](https://doi.org/10.1016/j.apgeochem.2019.104365)

Conference Proceedings

- 2018** Talkington, C., **Kong, K.** and Ruiz, F., Achieving Near-Zero Methane Emissions Coal Mining. 14th Greenhouse Gas Control Technologies Conference Melbourne (GHGT- 14).
<https://ssrn.com/abstract=3366172>

Awards and Honors:

- 2019** Employee of the Year (peer elected), Advanced Resources International
2017 47th Annual Graduate Student Colloquium Oral Presentation Award, The Pennsylvania State University
2017 Geochemistry Division Invited Student Travel Award, American Chemical Society
2016 Charles E. Knopf, Sr. Memorial Scholarship, The Pennsylvania State University
2014 Johnson Opportunity Grant, Washington and Lee University
Sample collection of lava flows from Mt. Bachelor and the Three Sisters Volcanoes (Oregon, USA)
2014 Lee Summer Research Scholarship, Washington and Lee University
Radiogenic isotope chemistry analyses at the University of New Mexico
2013 HHMI Summer Research Fellowship, Washington and Lee University
2012 HHMI Summer Research Fellowship, Washington and Lee University
2011 Johnson Scholarship, Washington and Lee University
Merit-based full scholarship for undergraduate studies

Selected Presentations:

Oral

- 2025** Environmental controls on particulate iron transport in the North Pacific Ocean, Gordon Research Seminar in Chemical Oceanography, Manchester, NH, USA
2024 Pulses of aerosol soluble iron deposition may stimulate phytoplankton blooms in the NPSG, SoCal BOOM, Santa Barbara, CA, USA
2022 Observations on particulate metal stoichiometry and metal remineralization rates in the North Pacific Subtropical Gyre, Goldschmidt Conference, Honolulu, HI, USA
2019 Incentives for CMM/AMM projects in the United States, UNECE Fourteenth session Group of Experts on Coal Mine Methane, Geneva, Switzerland
2017 Mineralogical and geochemical analyses of chromium oxidation induced by birnessite, American Chemical Society Spring National Meeting, San Francisco, CA, USA

Poster

- 2026** Basin scale cycling of total and labile particulate iron in the Pacific Ocean, Ocean Sciences Meeting, Glasgow, Scotland
2024 Can anthropogenic dust induce sequestration of atmospheric carbon dioxide in oligotrophic regions?, Ocean Carbon & Biogeochemistry meeting, Woods Hole, MA, USA
2014 Pb and Hf isotope data for mafic lavas from the Three Sisters and Newberry volcano regions of the central Oregon Cascades, Geological Society of America Annual Meeting, Vancouver, Canada
2013 Understanding nitrogen and bacterial properties within bovine feces, Science Society and the Arts, Lexington, VA, USA

Field Experience

Days spent at sea: 106

- 2024** R/V Yellowfin San Pedro Ocean Timeseries (SPOT), North Pacific Ocean, 1 day.
2023 R/V Roger Revelle Geotraces GP 17-OCE, South Pacific Ocean, 56 days. Chief Scientist: Benjamin Twining, Jessica N. Fitzsimmons, Greg Cutter

- 2023** R/V Yellowfin San Pedro Ocean Timeseries (SPOT), North Pacific Ocean, 1 day.
- 2022** R/V Kilo Moana SCOPE PARAGON II, North Pacific Ocean, 5 days. Chief Scientist: Matthew Church
- 2022** R/V Thomas G. Thompson SCOPE Gradients IV, North Pacific Ocean , 28 days. Chief Scientist: E. Virginia Armbrust
- 2022** R/V Kilo Moana SCOPE PARAGON I, North Pacific Ocean, 15 days. Chief Scientist: Angelique E. White
- 2014** Collection of lava flows from the Central Cascades Mountains, 5 days. Trip lead: Euan Mitchell
- 2014** Regional Geology course of New Zealand, 21 days. Trip lead: Chris Connors
- 2013** Geological mapping of the Blue Ridge Mountains, 15 days. Trip lead: Chris Connors

Teaching Experience

- 2024** Metals and Life (Geol 165), University of Southern California
Guest Lecturer: *Collecting seawater samples for trace metal analysis at sea*
- 2023** Metals and Life (Geol 165), University of Southern California
Guest lecturer: *Mining in the sea and the role of government in environmental protection*
- 2021** Energy Systems (Geol 241), University of Southern California
- 2020** Metals and Life (Geol 165), University of Southern California
- 2017** The Ocean Around Us (Geosc 040), Pennsylvania State University
- 2016** Earth Materials (Geosc 201), Pennsylvania State University
- 2015** Physical Geology (Geosc 001), Pennsylvania State University

Outreach

- 2021 - present** Young Researchers Program, Leadership Team/mentor recruitment, Los Angeles, CA
- 2017 – 2020** Smithsonian Institution National Museum of Natural History Volunteer, Washington DC
- 2017 – 2020** Wangari Gardens Volunteer, Washington DC

Computing Fluency:

Python, Matlab, R

Language Fluency:

English, Korean