

Dr. Kaarel Mänd

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Website:  [kaarelmmand.github.io](https://github.com/kaarelmmand)

Google Scholar:  scholar.google.com/citations?user=srxWszgAAAAJ

ETIS: www.etis.ee/CV/Kaarel_Mand

University of Tartu
Department of Geology
Ravila 14A
Tartu 50411
Estonia

Professional Appointments

- 2020 – present **Research Fellow**
University of Tartu, Department of Geology, Estonia
- 2018 – 2019 **Teaching Assistant**
University of Alberta, Department of Earth and Atmospheric Sciences, Canada
- 2018 – 2020 **Peer Writing Tutor**
University of Alberta, Centre for Writers, Canada
- 2016 – 2020 **Environmental Chemistry Specialist**
University of Tartu, Department of Geology, Estonia
- 2013 – 2015 **Laboratory Assistant**
University of Tartu, Department of Geology, Estonia

Education

- 2016 – 2021 **PhD in Geochemistry**
University of Alberta, Department of Earth and Atmospheric Sciences, Canada
Supervisors: Kurt O. Konhauser, Aivo Lepland, Kalle Kirsimäe
- 2014 – 2016 **MSc in Geology cum laude**
University of Tartu, Department of Geology, Estonia
Supervisor: Kalle Kirsimäe
- 2010 – 2013 **BSc in Geology cum laude**
University of Tartu, Department of Geology, Estonia
Supervisor: Kalle Kirsimäe

Grants & Funded Projects

- 2020 – 2023 Estonian Research Council: **"Vanadium distribution and compounds in Tremadocian black shale and potential extraction technologies."** PI: Rutt Hints. *Tallinn University of Technology, University of Tartu.* Grant ID: [ResTA18](#).
- 2016 – 2021 Ministry of Education and Research of the Republic of Estonia, Archimedes Foundation: **Kristjan Jaak Scholarship for doctoral study abroad.** Kaarel Mänd, for study at University of Alberta, Canada.

Awards & Honors

2019 – 2020	Ashley & Janet Cameron Graduate Scholarship <i>UAlberta North, University of Alberta, Canada</i>
2019	Graduate Fellowship <i>University of Alberta, Canada</i> Graduate Student Teaching Award <i>University of Alberta, Canada</i>
2018	Vega Graduate Scholarship <i>University of Alberta, Canada</i> Harrington Paleoenvironmental Scholarship <i>University of Alberta, Canada</i> Steve and Elaine Antoniuk Graduate Scholarship in Arctic Research in Earth and Atmospheric Sciences <i>University of Alberta, Canada</i>
2016 – 2020	Doctoral Recruitment Scholarship <i>University of Alberta, Canada</i>
2014	National Contest for University Students: 1st prize in Bio- and Environmental Science (undergraduate level) <i>Estonian Research Council, Estonia</i>

Academic Service

Administration

2021 – present	Erasmus+ Departmental Coordinator Negotiating inter-university agreements, evaluating student applications. <i>Department of Geology, University of Tartu</i>
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Committees

Future	Undergraduate Student Admissions Committee <i>Department of Geology, University of Tartu</i> Master's Dissertation Examination Committee <i>Department of Geology, University of Tartu</i>
2022 – present	Vision and Integration Committee of the Institute of Ecology and Earth Sciences Conference organization, student advocacy, ecological advocacy. <i>University of Tartu 2020</i>

Reviewer

- Science
- Nature Communications
- Proceedings of the National Academy of Sciences
- Earth and Planetary Science Letters
- Chemical Geology
- Precambrian Research
- Canadian Journal of Earth Sciences

- Estonian Journal of Earth Sciences

Examiner

- 2021 MSc dissertation examiner (Nanyun Zhang)
University of Tartu, Institute of Chemistry
- BSc dissertation examiner (Maria Ojap)
University of Tartu, Department of Geology

Conferences

- 2021 Schola Geologica XVII
Session chair.
Tartu, Estonia
- 2020 Northern Research Day 2020
Oral presentation awards adjudicator.
Edmonton, AB, Canada
- 2019 2nd Geobiology Society Conference
Session chair and co-organizer.
Banff, AB, Canada
- 2017 1st Geobiology Society Conference
Co-organizer.
Banff, AB, Canada

Open-Source Software

- 2020 – present **pyrolite** | <https://pyrolite.readthedocs.io/en/main/>
A set of tools for getting the most from your geochemical data.
Role: 🧑🏫 Code contributor
Code: 🔄 github.com/morganjwilliams/pyrolite

Teaching & Mentorship

Courses

- 2021 – present LTOM.03.006: **Isotope Geochemistry and Geochemical Modelling**
Teaching the module on transition metal isotopes.
University of Tartu, Estonia
- 2018 – 2019 EA100: **Planet Earth**
Lab instructor and examiner for two lab groups (40 students per year).
University of Alberta, Canada
- 2018 EA205: **Environment Earth**
Teaching the module on earthquakes.
University of Alberta, Canada
- 2014 LOOM.03.010: **Field-training of Earth Sciences I**
Field co-instructor.
University of Tartu, Estonia

Supervision

- Future** **Bojidar Mandjukov**
Lead PhD advisor.
University of Tartu, Department of Geology, Estonia
Co-supervisor: Anthony Chappaz
- 2019** **Baptiste Coutret**
Direct supervisor on BSc thesis and undergraduate internship.
University of Alberta, Canada; Université de Poitiers, France
Co-supervisors: Abderrazak El Albani, Kurt O. Konhauser

Media & Outreach

- 2022** Interviewed by *Novaator* web portal, “Eesti geoloogid otsivad maapõuest keeruka elu tekke jälgi” (13 April 2022): novaator.err.ee/1608563866
- 2021** Interviewed by *Eos* magazine, “Updating Dating Helps Tackle Deep-Time Quandaries” (22 February 2022): eos.org/features/updating-dating-helps-tackle-deep-time-quandaries
- 2020** Interviewed by *Smithsonian Air & Space* magazine, “Long-lasting Oxygen in Earth’s Early Atmosphere May Have Jump-Started the Evolution to Animal Life” (19 May 2020): smithsonianmag.com/air-space-magazine/..
- Interviewed by *Õhtuleht* newspaper, “MILJARDIPARADOKS LAHENE! Eesti teadlased kirjutavad ümber maakera ajalugu” (12 May 2020): oh tuleht.ee/1001539
- Interviewed by the radio show “Labor” on *Vikerraadio* (09 May, 2020): vikerraadio.err.ee/1082611/labor-ohuhapniku-ajalugu-ja-viljakusmolekulid
- Interviewed by the radio show “Alberta Morning News” on 770 CHQR Newstalk (03 May 2020).
- Interviewed by *Strana Rosatom: Laboratory* magazine.
- Co-published press report on the web portal *Novaator*, “Keskikka jõudnud Maa atmosfäär püsis ootamatult hapnikurikas” (19 March 2020): novaator.err.ee/1065971
- Co-published press report on the web portal *EurekaAlert!*, “Study challenges common view of oxygen scarcity on Earth 2 billion years ago” (24 March 2020): eurekaalert.org/news-releases/665842
- 2018** Published press report on the web portal *Science Trends*, “Geochemical Methods Help Resolve A Long-Standing Debate In Amber Palaeontology” (17 December 2018): sciencetrends.com/..
- 2015** Instructor at an outreach day for high-school students as part of the *RGNO2015* oceanographic summer school in Swakompund, Namibia.
- Volunteer at *Science Town, Tartu Hanseatic Days* in Tartu, Estonia.
- 2014 – 2015** Various geoscience recruiting talks and tours for the University of Tartu, Department of Geology, Estonia.





Presentations

- 2021 **Mänd, K.** Planavsky, NJ, Porter, SM, Robbins, LJ, Wang, C, Kreistmann, T, Paiste, K, Paiste, P, Deines, YE, Kirsimäe, K, Lepland, A, Konhauser, KO. Protracted oxygenation in the Paleoproterozoic did not result in proliferation of mitochondrial organisms, *Goldschmidt 2021*, Bordeaux, France (online).
Abstract:  doi.org/10.7185/gold2021.6732
- Kreistmann, T, Lepland, A, Bau, M, Prave, AR, Paiste, K, **Mänd, K.** Romashkin, AE, Kirsimäe, K. Rare Earth Elements And Carbon Isotope Record from the Carbonates of the Zaonega Formation, *Shungite-2020–2021*, Petrozavodsk, Russia (online).
Abstract:  elibrary.ru/item.asp?id=46491364
- Paiste, K, Fike, DA, Kirsimäe, K, **Mänd, K.** Paiste, P, Jones, C, Lepland, A, Prave, AR, Romashkin, AE. Testing the Global Significance of the Sulfur Isotope Record of the Paleoproterozoic Zaonega Formation, *Shungite-2020–2021*, Petrozavodsk, Russia (online).
Abstract:  elibrary.ru/item.asp?id=46491364
- Mänd, K.** The origins of biodiversity: Did changing oxygen levels in the Proterozoic induce the rise of complex life? *Seminars on Animal Ecology*, Tartu, Estonia.
Slides:  kaarelmänd.github.io/publication/mand-2021-originsbiodiversity-did
- 2020 **Mänd, K.** Kaotatud paradiis ja keeruka elu häll: Hapnik ja päristuumsed 2 miljardit aastat tagasi, *Schola Geologica XVI: Living densely together*, Tartu, Estonia.
Slides:  kaarelmänd.github.io/publication/mand-2020-kaotatudparadiisja
- Lepland, A, Bakakas, K, Moussavou, M, Kreistmann, T, Paiste, K, **Mänd, K.** Deines, YE, Romashkin, AE, Prave, AR, Kirsimäe, K. Lomagundi-Jatuli Carbon Isotope Excursion – Isotopic Shift Happens, *Goldschmidt 2020*, Hawaii, USA (online).
Abstract:  doi.org/10.46427/gold2020.1460
- Williams, MJ, Schoneveld, L, Miller, L, Mao, Y, **Mänd, K.** Gosses, J, Dalton, H, Bath, A, Barnes, SJ. pyrolite: Tools for Data Driven Geochemistry, *AGU 2020*, Online.
Abstract:  ui.adsabs.harvard.edu/abs/2020AGUFMIN040..06W
- Wilmeth, DT, Myers, KD, Lalonde, SV, **Mänd, K.** Konhauser, KO, Grandin, P, van Zuilen, MA. Oxygen and pH gradients within silicifying microbial mats in El Tatio, Chile, *Gordon Research Conference “Geobiology 2020”*, Galveston, Texas, USA.
- 2019 **Mänd, K.** Robbins, LJ, Lalonde, SV, Thoby, M, Paiste, K, Kreistmann, T, Paiste, P, Reinhard, CT, Romashkin, AE, Kirsimäe, K, Lepland, A, Konhauser, KO. Oxygenated oceans persisted after the Lomagundi Event: evidence from the Zaonega Formation, *2nd Geobiology Society Meeting*, Banff, Alberta, Canada.
Poster:  kaarelmänd.github.io/publication/mand-2019-oxygenatedoceanspersisted
Abstract:  cms.eas.ualberta.ca/geobiology2019
- Hao, W, **Mänd, K.** Li, Y, Alessi, DS, Konhauser, KO. Acid weathering, clay transport and enhanced phosphate supply to early Paleoproterozoic oceans following the Great Oxidation Event, *2nd Geobiology Society Meeting*, Banff, Alberta, Canada.
Abstract:  cms.eas.ualberta.ca/geobiology2019
- 2018 **Mänd, K.** Thoby, M, Lalonde, SV, Paiste, K, Robbins, LJ, Lepland, A, Kirsimäe, K, Konhauser, KO. High molybdenum abundance in the 2 Ga Zaonega Formation: Implications for seawater following the Lomagundi Excursion, *Gordon research conference “Geobiology 2018”*, Galveston, Texas, USA.
Poster:  kaarelmänd.github.io/publication/mand-2018-highmolybdenumabundance

- Paiste, K., Lepland, A., Zerkle, A.L., Wing, B.A., Kreitsmann, T., Kirsimäe, K., Izon, G., Mänd, K., Bui, T.H. Paiste, K., Lepland, A., Zerkle, AL, Wing, B., Kreistmann, T., Kirsimäe, K., Izon, G, **Mänd, K**, Bui, TH. Multiple S and Corg isotopes recording environmental changes in the ca. 2Ga Zaonega Fm, Onega Basin, Russia, *Gordon research conference “Geobiology 2018”*, Galveston, Texas, USA.
- 2017 **Mänd, K**, Lepland, A, Thoby, M, Lalonde, SV, Paiste, K, Robbins, LJ, Kirsimäe, K, Konhauser, KO. Trace metal enrichment in 1.98 Ga black shales of the Zaonega Formation, *1st Geobiology Society Meeting*, Banff, Alberta, Canada.
Poster:  kaarelmänd.github.io/publication/mand-2017-tracemetalenrichment
- 2016 **Mänd, K**, Bailey, JV, Lepland, A, Kirsimäe, K. Origin of rod and dumbbell shaped phosphate precipitates in Namibian shelf sediments, *32nd Nordic Geological Winter Meeting*, Helsinki, Finland.
Slides:  kaarelmänd.github.io/publication/mand-2016-originroddumbbell
- 2015 **Mänd, K**, Bailey, JV, Lepland, A, Kirsimäe, K. Apatitic micronodules in Namibian shelf sediments: Mineralized microbes or diagenetic precipitates? *Goldschmidt 2015*, Prague, Czechia.
Slides:  kaarelmänd.github.io/publication/mand-2015-apatiticmicronodules-namibian
Abstract:  goldschmidtabstracts.info/abstracts/abstractView?id=2015003584
- Mänd, K**. Phosphatised microstructures in ancient and modern phosphorites, *Scientific knowledge applied to the sustainable use of coastal upwelling ecosystems*, Swakopmund, Namibia.
Slides:  kaarelmänd.github.io/publication/mand-2015-phosphatisedmicrostructuresancient
- 2014 **Mänd, K**. Mikrofossiilid maailma vanimates fosforiitides, *Schola Geologica X*, Järeda, Estonia.
Slides:  kaarelmänd.github.io/publication/mand-2014-mikrofossiilidmaailmavanimates_

Publications

Peer-reviewed Papers

- 2022 Yan, H, Pi, D-H, Jiang, S-Y, Mao, J, Xu, L, Yang, X, Hao, W, **Mänd, K**, Li, L, Konhauser, KO, Robbins, LJ, Mineral paragenesis in Paleozoic manganese ore deposits: Depositional versus post-depositional formation processes, *Geochimica et Cosmochimica Acta*, 325, 65–86.
DOI:  [10.1016/j.gca.2022.03.030](https://doi.org/10.1016/j.gca.2022.03.030)
- Hao, W, Chen, N, Sun, W, **Mänd, K**, Kirsimäe, K, Teitler, Y, Somelar, P, Robbins, LJ, Babechuk, MG, Planavsky, NJ, Alessi, DS, Konhauser, KO, Binding and transport of Cr(III) by clay minerals during the Great Oxidation Event, *Earth and Planetary Science Letters* 584, 117503.
DOI:  [10.1016/j.epsl.2022.117503](https://doi.org/10.1016/j.epsl.2022.117503)
- Mänd, K**, Planavsky, NJ, Porter, SM, Robbins, LJ, Wang, C, Kreistmann, T, Paiste, K, Paiste, P, Romashkin, AE, Deines, YE, Kirsimäe, K, Lepland, A, Konhauser, KO, Chromium evidence for protracted oxygenation during the Paleoproterozoic, *Earth and Planetary Science Letters* 584, 117501.
DOI:  [10.1016/j.epsl.2022.117501](https://doi.org/10.1016/j.epsl.2022.117501)
Preprint:  doi.org/10.31223/X5NP6G

Soomer, S, Somelar, P, **Mänd, K**, Lepland, A, Kirsimäe, K, Geochemistry and mineralogy of Paleoproterozoic metasediments in the Imandra-Varzuga Greenstone Belt: Implications for sediment provenance, tectonic settings and weathering intensity at the transition to oxygenated surface environments, *Precambrian Research* 371, 106578.

DOI:  [10.1016/j.precamres.2022.106578](https://doi.org/10.1016/j.precamres.2022.106578)

Wilmeth, DT, Myers, KD, Lalonde, SV, **Mänd, K**, Konhauser, KO, Grandin, P, van Zuilen, MA, Evaporative silicification in floating microbial mats: patterns of oxygen production and preservation potential in silica-undersaturated streams, El Tatio, Chile, *Geobiology* 20, 310–330.

DOI:  [10.1111/gbi.12476](https://doi.org/10.1111/gbi.12476)

2021


Mänd, K, Robbins, LJ, Planavsky, NJ, Bekker, A, Konhauser, KO, Iron Formations as Palaeoenvironmental Archives, *Elements in Geochemical Tracers in Earth System Science*, Cambridge University Press.

DOI:  [10.1017/9781108993791](https://doi.org/10.1017/9781108993791)

Zhang, Y, Li, J, Chen, L, Wei, Y, Shi, Q, Wang, D-G, Wu, Q-M, Song, L-Y, Tian, M, Kuang, H-W, Liu, Y-Q, **Mänd, K**, Bai, H-Q, Liu, Z-L, Wang, Y-C, Qiao, D-W, Zhu, W-J, Manganese carbonate stromatolites of the Ediacaran Doushantuo Formation in Chengkou, northern Yangtze Craton, China, *Journal of Palaeogeography* 10, 22.

DOI:  [10.1186/s42501-021-00099-9](https://doi.org/10.1186/s42501-021-00099-9)

Farrell, ÚC..., **Mänd, K...**, Planavsky, NJ, Lau, KV, Johnston, DT, Sperling, EA, The Sedimentary Geochemistry and Paleoenvironments Project, *Geobiology* 19, 545–556.

DOI:  [10.1111/gbi.12462](https://doi.org/10.1111/gbi.12462)

Tong, X, Wang, C, Peng, Z, Li, Y, Hao, W, **Mänd, K**, Robbins, LJ, Zhang, L, Ke, Q, Zhai, M, Konhauser, KO, Depositional and Environmental Constraints on the Late Neoproterozoic Dagushan Deposit (Anshan-Benxi Area, North China Craton): An Algoma-Type Banded Iron Formation, *Economic Geology* 116, 1575–1597.

DOI:  [10.5382/econgeo.4841](https://doi.org/10.5382/econgeo.4841)

Shen, F, Yue, L, Liu, Z, Yang, W, **Mänd, K**, Jin, H, Li, F, Zhou, Y, Zhang, M, Jiang, R, Heterogeneity of tight sandstone reservoirs based on fractal theory: the Xu-6 member of Xujiahe Formation in Guang'an area, central Sichuan Basin, *Arabian Journal of Geosciences* 14, 1515.

DOI:  [10.1007/s12517-021-07851-4](https://doi.org/10.1007/s12517-021-07851-4)

Lumiste, K, **Mänd, K**, Bailey, JV, Stüeken, EE, Paiste, K, Lang, L, Sepp, H, Lepland, A, Kirsimäe, K, Constraining the conditions of phosphogenesis: stable isotope and trace element systematics of Recent Namibian phosphatic sediments, *Geochimica et Cosmochimica Acta* 302, 141–159.

DOI:  [10.1016/j.gca.2021.03.022](https://doi.org/10.1016/j.gca.2021.03.022)

Hao, W, **Mänd, K**, Li, Y, Alessi, DS, Somelar, P, Moussavou, M, Romashkin, AE, Lepland, A, Kirsimäe, K, Planavsky, NJ, Konhauser, KO, The kaolinite shuttle links the Great Oxidation and Lomagundi events, *Nature Communications* 12, 2944.

DOI:  [10.1038/s41467-021-23304-8](https://doi.org/10.1038/s41467-021-23304-8)

Code:  github.com/kaarelmänd/hao_et_al_kaolinite_shuttle

Hao, W, **Mänd, K**, Swaren, L, Myers, KD, Lalonde, SV, Wilmeth, DT, van Zuilen, MA, Wilson, SA, Alessi, DS, Konhauser, KO, Trace elemental partitioning on clays derived from hydrothermal muds of the El Tatio Geyser Field, Chile, *Journal of Geophysical Research: Solid Earth* 126, e2020JB021422.

DOI:  [10.1029/2020JB021422](https://doi.org/10.1029/2020JB021422)

Mänd, K, Lalonde, SV, Paiste, K, Thoby, M, Lumiste, K, Robbins, LJ, Kreistmann, T, Romashkin, AE, Kirsimäe, K, Lepland, A, Konhauser, KO, Iron Isotopes Reveal a Benthic Iron Shuttle in the Palaeoproterozoic Zaonega Formation: Basinal Restriction, Euxinia, and the Effect on Global Palaeoredox Proxies, *Minerals* 11, 368.

DOI: [doi 10.3390/min11040368](https://doi.org/10.3390/min11040368)

Tong, X, **Mänd, K**, Li, Y, Zhang, L, Peng, Z, Wu, Q, Li, P, Zhai, M, Robbins, LJ, Wang, C, Konhauser, KO, Iron and Carbon Isotope Constraints on the Formation Pathway of Iron-Rich Carbonates within the Dagushan Iron Formation, North China Craton, *Minerals* 11, 94.

DOI: [doi 10.3390/min11010094](https://doi.org/10.3390/min11010094)

2020

Kreistmann, T, Lepland, A, Bau, M, Prave, A, Paiste, K, **Mänd, K**, Sepp, H, Martma, T, Romashkin, AE, Kirsimäe, K, Oxygenated conditions in the aftermath of the Lomagundi-Jatuli Event: The carbon isotope and rare earth element signatures of the Paleoproterozoic Zaonega Formation, Russia, *Precambrian Research* 347, 105855.

DOI: [doi 10.1016/j.precamres.2020.105855](https://doi.org/10.1016/j.precamres.2020.105855)

Yan, H, Pi, D, Jiang, S-Y, Hao, W, Cui, H, Robbins, LJ, **Mänd, K**, Li, L, Planavsky, NJ, Konhauser, KO, Hydrothermally induced 34S enrichment in pyrite as an alternative explanation of the Late-Devonian sulfur isotope excursion in South China, *Geochimica et Cosmochimica Acta* 283, 1–21.

DOI: [doi 10.1016/j.gca.2020.05.017](https://doi.org/10.1016/j.gca.2020.05.017)

Paiste, K, Lepland, A, Zerkle, AL, Kirsimäe, K, Kreistmann, T, **Mänd, K**, Romashkin, AE, Rychanchik, DV, Prave, AR, Identifying global vs. basinal controls on Paleoproterozoic organic carbon and sulfur isotope records, *Earth-Science Reviews* 207, 103230.

DOI: [doi 10.1016/j.earscirev.2020.103230](https://doi.org/10.1016/j.earscirev.2020.103230)

Yan, H, Pi, D-H, Jiang, S-Y, Hao, W, **Mänd, K**, Robbins, LJ, Li, L, Konhauser, KO, New constraints on the onset age of the Emeishan LIP volcanism and implications for the Guadalupian mass extinction, *Lithos* 360–361, 105441.

DOI: [doi 10.1016/j.lithos.2020.105441](https://doi.org/10.1016/j.lithos.2020.105441)

Mänd, K, Lalonde, SV, Robbins, LJ, Thoby, M, Paiste, K, Kreistmann, T, Paiste, P, Reinhard, CT, Romashkin, AE, Planavsky, NJ, Kirsimäe, K, Lepland, A, Konhauser, KO, Palaeoproterozoic oxygenated oceans following the Lomagundi–Jatuli Event, *Nature Geoscience* 13, 302–306.

DOI: [doi 10.1038/s41561-020-0558-5](https://doi.org/10.1038/s41561-020-0558-5)

Robbins, LJ, **Mänd, K**, Planavsky, NJ, Alessi, DS, Konhauser, KO, Trace Metals, *Encyclopedia of Astrobiology*, Springer.

DOI: [doi 10.1007/978-3-642-27833-4_5422-1](https://doi.org/10.1007/978-3-642-27833-4_5422-1)





2019

Lumiste, K, **Mänd, K**, Bailey, JV, Paiste, P, Lang, L, Lepland, A, Kirsimäe, K, REE+Y uptake and diagenesis in Recent sedimentary apatites, *Chemical Geology* 525, 268–281.

DOI: [doi 10.1016/j.chemgeo.2019.07.034](https://doi.org/10.1016/j.chemgeo.2019.07.034)

Soomer, S, Somelar, P, **Mänd, K**, Driese, SG, Lepland, A, Kirsimäe, K, High-CO₂, acidic and oxygen-starved weathering at the Fennoscandian Shield at the Archean-Proterozoic transition, *Precambrian Research* 327, 68–80.

DOI: [doi 10.1016/j.precamres.2019.03.001](https://doi.org/10.1016/j.precamres.2019.03.001)

- 2018 Paiste, K, Lepland, A, Zerkle, AL, Kirsimäe, K, Izon, G, Patel, NK, McLean, F, Kreistmann, T, **Mänd, K**, Bui, TH, Romashkin, AE, Rychanchik, DV, Prave, AR, Multiple sulphur isotope records tracking basinal and global processes in the 1.98 Ga Zaonega Formation, NW Russia, *Chemical Geology* 499, 151–164.
DOI:  [10.1016/j.chemgeo.2018.09.025](https://doi.org/10.1016/j.chemgeo.2018.09.025)
- Mänd, K**, Kirsimäe, K, Lepland, A, Crosby, CH, Bailey, JV, Konhauser, KO, Wirth, R, Schreiber, A, Lumiste, K, Authigenesis of biomorphic apatite particles from Benguela upwelling zone sediments off Namibia: The role of organic matter in sedimentary apatite nucleation and growth, *Geobiology* 16, 640–658.
DOI:  [10.1111/gbi.12309](https://doi.org/10.1111/gbi.12309)
- Mänd, K**, Muehlenbachs, K, McKellar, RC, Wolfe, AP, Konhauser, KO, Distinct origins for Rovno and Baltic ambers: Evidence from carbon and hydrogen stable isotopes, *Palaeogeography, Palaeoclimatology, Palaeoecology* 505, 265–273.
DOI:  [10.1016/j.palaeo.2018.06.004](https://doi.org/10.1016/j.palaeo.2018.06.004)
- 2014 Lepland, A, Joosu, L, Kirsimäe, K, Prave, AR, Romashkin, AE, Črne, AE, Martin, AP, Fallick, AE, Somelar, P, Üpraus, K, **Mänd, K**, Roberts, NMW, van Zuilen, MA, Wirth, R, Schreiber, A, Potential influence of sulphur bacteria on Palaeoproterozoic phosphogenesis, *Nature Geoscience* 7, 20–24.
DOI:  [10.1038/NGEO2005](https://doi.org/10.1038/NGEO2005)

Non-peer-reviewed Papers

- 2021 **Mänd, K**, Eessõna [Foreword], *Schola Geologica XVII, Vaatame edasi!*, Estonian Naturalists' Society, p. 8. sygiskool.ee/2014/?page_id=11
- 2014 **Mänd, K**, Mikrofossiilid maailma vanimates fosforiitides, *Schola Geologica X, Fosfor – aegade algusest tänapäevani*, Estonian Naturalists' Society, pp. 12–15. sygiskool.ee/2014/?page_id=11

Miscellaneous

- 2018 Cover image for *Geobiology* journal, volume 16 (2018), issue 6.
onlinelibrary.wiley.com/toc/14724669/2018/16/6

Affiliations

- 2019 – present Geobiology Society