

YIGAL EREL - CURRICULUM VITAE

ADDRESS

The Fredy and Nadine Herrmann Institute of Earth Sciences, The Hebrew University of Jerusalem
91904, Israel; Telephone: 972-2-6586515, Fax: 972-2-5662581, E-mail: Yigal.ere@huji.ac.il

EDUCATION

B.Sc., Geology 1980 to 1983
The Hebrew University, Israel

M.Sc., Geology 1983 to 1985
The Hebrew University, Israel

Advisors: Drs. Alan Matthews and Yacov Nathan

Ph.D., Geochemistry and Environmental Engineering Science 1985 to 1991
California Institute of Technology, California, USA

Advisors: Drs. Clair C. Patterson and James J. Morgan

Post-doctoral Research Fellow, Environmental Engineering Science 1991 to 1992
California Institute of Technology, California, USA

Advisor: Dr. Michael R. Hoffmann

APPOINTMENTS at THE HEBREW UNIVERSITY

Senior Lecturer, Institute of Earth Sciences 1993 to 1998

Faculty of Sciences

Associate Professor, Institute of Earth Sciences 1998 to 2004

Faculty of Sciences

Professor, Institute of Earth Sciences 2004 to present

Faculty of Sciences

Kozenitsky-Rosenbach Professor of Geology 2019 to present

ACADEMIC DUTIES at THE HEBREW UNIVERSITY

Vice-Dean, Faculty of Science 2016 to 2017

Dean, Faculty of Science 2012 to 2016

Faculty of Science Executive Committee 2007 to 2017

The Hebrew University Senate 2007 to 2016

Head, the Institute of Earth Sciences, Faculty of Science 2007 to 2012

Director, the Multi-Disciplinary Center for Environmental Research 2000 to 2003

Chairman, Program of Environmental Studies, Faculty of Science 2000 to 2003

APPOINTMENTS at OTHER INSTITUTIONS

Visiting Assistant Professor, Department of Earth Sciences 1992 to 1993

Dartmouth College

Visiting Associate, Department of Environmental Engineering Science 1992 to 1995

California Institute of Technology

Adjunct Assistant Professor, Department of Earth Sciences, 1993 to 1997

Dartmouth College

Adjunct Associate Professor, Department of Earth Sciences 1998 to 2000

Dartmouth College

Visiting Associate, Department of Geological Sciences 2004 to 2006

University of Michigan

NON ACADEMIC DUTIES

IUED (Adam Teva VaDin), Board of Directors	2008 to 2012
IUI (Interuniversity Institute for Marine Sciences – Eilat), Board of Directors	2009 to 2012
Bloomfield Science Museum Jerusalem, Board of Directors	2010 to 2016
The Jerusalem Museum of Natural History, Chairperson academic committee	2011 to 2012

CURRENT RESEARCH GRANTS

The Eastern Mediterranean - Levant late Quaternary climates: Paleohydrology and Extreme Floods from the Dead Sea ICDP Core (PALEX) <u>Trilateral Program of the German Science Foundation - DFG</u> PIs: Y. Enzel, A. Brauer, J. Hasan, Co-PIs: Y. Erel, B. Lazar, M. Stein, E. Morin, M. Al-Qutob, B. Plessen, R. Tjallingii.	10/2015 – 9/2021
Anomalies of Elements in the Brain Related to Mood Disorders <u>An internal grant of the Hebrew University</u> PIs: Y. Erel, D. Lichtstein, H. Rosen, J. Erez	10/2019 – 9/2020
Saharan dust & the Neolithic Agriculture Revolution in the Jordan Valley <u>Israel Science Foundation.</u> PI: Y. Erel	10/2019 – 9/2023

GRADUATE STUDENTS**M.Sc. students****1. Orit Sivan, 1994 - 1997**

(co-advisor: D. Mandler, Department of Inorganic Chemistry)
Topic: The redox chemistry of Fe in the photic zone of the Sea of Galilee

2. Avi Moshel, 1994 - 1997

(co-advisor: M. Luria, School of Applied Sciences)
Topic: Exposure of drivers in Israel to CO, NOx and Pb pollution

3. Nilly Pener, 1994 - 1998

(co-advisor: M. Bar-Matthews, The Geological Survey)
Topic: The effect of climate on the release of micronutrients to the soil by rock weathering

4. Tamar Axelrod, 1996 – 2000

Topic: Sources of atmospheric Pb in Israel

5. Yoram Doron, 1998 - 2000

Topic: U-Th-Pb isotope system in rock veins along the Dead Sea Rift Valley

6. Simon Emmanuel, 1999 – 2001

Topic: The effect of climate on the mobility of anthropogenic Pb in soils

7. Nurit Listovski, 2001 – 2004

(co-advisor: A. Matthews)
Topic: Using Pb and Sr isotopes to trace sources of secondary mineral deposits along the Paran Fault

8. Reut Rabi, 2001 – 2004

(co-advisors: M. Stein, The Geological Survey and U. Dayan Department of Geography)
Topic: Characterization of the sources of atmospheric desert dust in Israel using geochemical and meteorological tools

9. Guy Anselmi, 2002 – 2004

Topic: The Effect of Climatic Parameters on the Release of Pb and Sr Isotopes During the Dissolution of Granites

10. Tamar Shoham, 2002 - 2005

(co-advisor: D. Mandler, Institute of Chemistry)

Topic: Development of a device for trace metal monitoring in seawater based on electrochemical deposition

11. Boriana Kalderon, 2002 – 2005

(co-advisors: A. Sandler, The Geological Survey and U. Dayan Department of Geography)

Topic: Mineralogical, and chemical characterization of atmospheric dust in Israel with an emphasis on PM_{2.5}.

12. Lena Levi, 2002 - 2005

(co-advisors: H. Gvirtzman and A. Matthews)

Topic: Transport of Fe particles in porous media – implication to Fe isotope fractionation

13. Jenna Jandorf, 2004 – 2006

(co-advisor: U. Dayan Department of Geography)

Topic: The influence of synoptic circulation patterns on the spatial heterogeneity of PM_{2.5} compositions in Israel

14. Uri Ryb, 2004 – 2007

(co-advisor: A. Matthews)

Topic: Mo isotopes as tracers of the secondary mineral deposits along shear faults related to the Dead Sea transform

15. Itamar Gofberg, 2008 – 2010 (Chemistry)

(co-advisor: D. Mandler, Institute of Chemistry)

Purification of wastewater effluents from toxic heavy metals by their electrochemical precipitation as hydroxides in flow cell

16. Daniel Palchan, 2008 - 2011

(co-advisors: M. Stein and A. Almogi-Labin, GSI)

Sources of Dust that Settled in the northern Red Sea during the Past 150ka

17. Nivi Kessler, 2008 - 2011

(co-advisor: S. Belkin Institute of Life Sciences)

Topic: The toxicity and chemical composition of atmospheric aerosols

18. Ofir Tirosh, 2008 – 2012

(co-advisor: U. Dayan Department of Geography)

Topic: The influence of synoptic circulation patterns on the composition of atmospheric aerosols in several urban centers in Israel.

19. Michal Ben-Israel, 2010 - 2013

(co-advisors: Y. Enzel and R. Amit, GSI)

The geochemistry of primary aeolian loess in the Negev: detecting the different sources of the coarse and fine fractions.

20. Adi O. Shulman, 2018 – 2020

(co-advisor: N. Yahalom-Mack)

Topic: Tracing sources of iron objects from the Iron Age in Israel

Ph.D. students

1. Yehudit Harlavan, 1992 – 1999

(co-advisor: J. D. Blum, Dartmouth College)

Topic: Systematics of Pb isotopes during granitoid weathering: A new tool for studying soil processes

2. Nadya Teutsch, 1994 - 1999

(co-advisor: L. Halicz, The Geological Survey)

Topic: Utilization of Pb isotopes as tracers of the mobility of Pb pollution in soils

3. Yeala (Hareli) Shaked, 1997 – 2002

(co-advisor: A. Sukenik, Israel Oceanographic and Limnological Institute)

Topic: The biogeochemical cycles of Fe in Lake Kinneret

4. Sagi Magriso, 2002 - 2010

(co-advisor: S. Belkin, Institute of Life Sciences)

Topic: Development of biosensors for the detection of heavy metal bio-availability in soils.

5. Uri Ryb, 2009 – 2014

(co-advisor: A. Matmon)

Landscape evolution in carbonate terrains across sub humid (Mediterranean) to hyper arid climatic gradient

6. Assaf Zipori, 2011 – 2017

(co-advisor: Daniel Rosenfeld)

Interactions between aerosols and rain clouds as a function of ion content in rain and cloud water and impacts on cloud microstructure and wet deposition.

7. Daniel Palchan, 2011 – 2017

(co-advisor: M. Stein)

Fine detritus from the Dead Sea deep core: Origins, ways of transport and modes of deposition

8. Shlomy Vainer, 2013 – 2020

(co-advisor: A. Matmon)

Dating and characterization of the geochemical composition of the southern Kalahari Group sediments.

9. Yoav Ben Dor, 2015 – 2020

(co-advisors: Y. Enzel, E. Morin)

Reconstructing paleo-floods in the Dead Sea region: Implications for Middle East climate fluctuations.

10. Tzilla Eshel, 2015 – 2020

(co-advisor: A. Gilboa - Archaeology, Haifa U.)

Silver in the Southern Levant from the Late Bronze Age to the Early Persian Period: Availability, composition, usage, environmental effects and sources.

11. Sharon Ram, 2016 – present

(co-advisor: J. Erez)

The distribution of major, minor and trace elements between the soft tissues and skeleton of Scleractinian corals

12. Yafit Schnell, 2018 – present

(co-advisor: A. Amrani)

Combining organic and U/Mo proxies for determining redox states in lake sediments.

Post-Doctoral Associates

Naama Yahalom-Mack, 2014 - 2016

Shikma Zaarur, 2016 – 2018

Yoav Ben Dor, 2020 - present

PUBLICATIONS

Edited books

Censi P., Darrah T. H., **Erel Y.** (2013) *Medical Geochemistry - Geological Materials and Health*. Springer - Dordrecht, Heidelberg, New York, London. DOI 10.1007/978-94-007-4372-4

Chapters in books

Blum J. D. and **Erel Y.** (2003) Radiogenic isotopes in weathering and hydrology. In *Surface and Ground Water, Weathering, Erosion and Soils*, Editor J. I. Drever. Vol. 5 in *Treatise on Geochemistry*, Editors K. K. Turekian and H. D. Holland. *Elsevier Science*.

Erel Y., Tirosh O., Kessler O., Dayan U., Belkin S., Stein M., Sandler A., and Schauer J. J. (2013) Atmospheric particulate matter (PM) in the Middle East: Toxicity, trans-boundary transport, and influence of synoptic conditions. In *Medical Geochemistry - Geological Materials and Health*. Editors P. Censi, T. H. Darrah, and **Y. Erel**. *Springer*.

Erel Y., Goldstein S. L., Torfstein A., Palchan D., Ben Israel M., and Stein M. (2017) Isotopic tracers of dust and loess in the Levant. In *Quaternary of the Levant*. Editors: Y. Enzel and O. Bar Yosef. *Cambridge University Press*.

Refereed papers

1. **Erel Y.**, Matthews A., Nathan Y. (1988) Potential use of fly ash in the cement industry in Israel. *Cement and Concrete Research*, 18, 503-512.
2. Betterton E. A., **Erel Y.**, Hoffmann M. R. (1988) Aldehyde-Bisulfite adducts: Prediction of some of their thermodynamic and kinetic properties. *Environ. Sci. Technol.*, 22, 92-99.
3. **Erel Y.** and Katz A. (1990) Trace element profiles in calcite veins: A potential diagenetic tool. *Chemical Geol.*, 85, 361-367.
4. **Erel Y.**, Patterson C. C., Scott M. J., Morgan J. J. (1990) Transport of industrial lead in snow through soil to stream water and groundwater. *Chemical Geol.*, 85, 383-392.
5. Church T. M., Veron A., Patterson C. C., Settle D., **Erel Y.**, Maring H. R., Merrill J. T., Flegal A. R. (1990) Trace elements in the North Atlantic troposphere: shipboard results of precipitation and aerosols. *Global Biogeochemical Cycles*, 4, 431-443.
6. **Erel Y.**, Morgan J. J., Patterson C. C. (1991) Transport of natural lead and cadmium in a remote mountain stream. *Geochim. Cosmochim. Acta*, 55, 707-721.
7. **Erel Y.** and Morgan J. J. (1991) The effect of surface reactions on the relative abundances of trace metals in deep-ocean water: *Geochim. Cosmochim. Acta*, 55, 1807-1813.
8. Manea-Krichten M., Patterson C. C., Miller G., Settle D., **Erel Y.** (1991) Comparative increased of lead and barium with age in human tooth enamel, rib and ulna. *Sci. Tot. Environ.*, 107, 179-202.
9. Veron A., Church T. M., Patterson C. C., **Erel Y.**, Merrill J. T. (1992) Continental origin and industrial sources of trace metals in the Northwest Atlantic troposphere. *J. Atmos. Chem.*, 14, 339-351.
10. Shemesh A., Ron H., **Erel Y.**, Kolodny Y., Nur A. (1992) Isotopic composition of vein calcite and its fluid inclusions: Implications to paleohydrology systems, tectonic events and vein formation processes. *Chemical Geol.*, 94, 307-314.
11. Pehkonen S., **Erel Y.**, Hoffmann M. R. (1992) Simultaneous spectrophotometric measurement of Fe(II) and Fe(III) in cloud and fogwater. *Environ. Sci. Technol.* 26, 1731-1736.
12. **Erel Y.** and Morgan J.J. (1992) The relationships between rock-derived lead and iron in natural fresh water systems. *Geochim. Cosmochim. Acta*, 56, 4157-4167.
13. **Erel Y.** and Stolper E. M. (1993) Modeling of rare-earth element partitioning between particles and solution in aquatic environments. *Geochim. Cosmochim. Acta*. 57, 513-518.
14. Veron A., Church T. M., Flegal A. R., Patterson C. C., **Erel Y.** (1993) Response of lead cycling to changes of the tropospheric input into the Sargasso Sea. *J. Geophys. Res.* 98 (C10), 18269-18276.
15. Pehkonen S. O., Siefert R., **Erel Y.**, Webb S., Hoffmann M. R. (1993) Photoreduction of iron oxyhydroxides in the presence of important atmospheric organic compounds. *Environ. Sci. Technol.* 27, 2056-2062.
16. **Erel Y.**, Pehkonen S. O., Hoffmann M. R. (1993) Redox chemistry of iron in coastal stratus clouds. *J. Geophys. Res.* 98 (D10), 18,423-18,434.
17. Blum J. D., **Erel Y.**, Brown K. (1994) $^{87}\text{Sr}/^{86}\text{Sr}$ ratios of Sierra Nevada stream waters: implications for relative mineral weathering rates. *Geochim. Cosmochim. Acta* 58, 5019-5025.
18. **Erel Y.** and Patterson C. C. (1994) Leakage of industrial lead into the hydrocycle. *Geochim. Cosmochim. Acta*. 58, 3289-3296.
19. Siefert R., Pehkonen S., **Erel Y.**, Hoffmann M. R. (1994) Photoproduction of H_2O_2 in aqueous suspensions of ambient aerosol with oxalate. *Geochim. Cosmochim. Acta*. 58, 3271-3280.
20. **Erel Y.**, Harlavan Y., Blum J. D. (1994) Lead isotope systematics of granitoid weathering. *Geochim. Cosmochim. Acta*. 58, 5299-5306.

21. **Erel Y.** and Stolper E. M. (1994) Reply to the Comment by M. Bau on "Modeling of rare-earth element partitioning between particles and solution in aquatic environments." *Geochim. Cosmochim. Acta*, 58, 4525-4526.
22. Pehkonen S. O., **Erel Y.**, Siefert R., Klewicki K, Hoffmann M. R., Morgan J. J. (1995) The dynamic chemistry of transition metals in the troposphere. *Israel J. Earth Sci.* 43, 279-296.
23. Blum J. D. and **Erel Y.** (1995) A silicate weathering mechanism linking increases in marine $^{87}\text{Sr}/^{86}\text{Sr}$ with global glaciations. *Nature*, 373, 415-418.
24. Halicz L., **Erel Y.**, Veron A. (1996) Lead isotope ratio measurements by ICP-MS: accuracy, precision, and long-term drift. *Atomic Spectroscopy*, 175, 186-189.
25. **Erel Y.**, Harlavan Y., Stein M., Blum J. D. (1997) U-Pb Dating of Fe-rich Phases Using a Sequential Leaching Method. *Geochim. Cosmochim. Acta* 61, 1697-1703.
26. Blum J. D. and **Erel Y.** (1997) Rb-Sr isotope systematics of a granitic soil chronosequence: The importance of biotite weathering. *Geochim. Cosmochim. Acta*, 61, 3193-3204.
27. **Erel Y.**, Veron A., Halicz L. (1997) Tracing the transport of anthropogenic Pb in the atmosphere and in soils using isotopic ratios, *Geochim. Cosmochim. Acta*, 61, 4495-4506.
28. Harlavan Y., **Erel Y.**, Blum J. D. (1998) Systematic Changes in lead isotopic composition with soil age in glacial granitic terrains, *Geochim. Cosmochim. Acta*, 62, 33-46.
29. Sivan O., **Erel Y.**, Mandler D., Nishri A. (1998) The dynamic redox chemistry of Fe in the oxidized, photic zone of the Sea of Galilee, *Geochim. Cosmochim. Acta*, 62, 565-576.
30. **Erel Y.** (1998) Mechanisms and velocities of anthropogenic Pb migration in Mediterranean soils. *Environ. Res.*, 78A, 112-117.
31. Burkins D., Blum J. D., Brown K., Reynolds R. C., and **Erel Y.** (1999) Chemistry and mineralogy of a granitic, glacial soil chronosequence, Sierra Nevada Mountains, California. *Chemical Geol.*, 162, 1-14
32. Teutsch N., **Erel Y.**, Halicz L., Chadwick O. A. (1999) The influence of rainfall on metal concentration and behavior in the soil, *Geochim. Cosmochim. Acta*, 63, 3499-3512.
33. **Erel Y.**, Dubowski Y., Halicz L., Erez J., Kaufman A. (2001) Lead concentrations and isotopic ratios in the sediments of the Sea of Galilee. *Environ. Sci. & Technol.* 35, 292-299.
34. Teutsch N., **Erel Y.**, Halicz L., Banin A. (2001) The distribution of natural and anthropogenic lead in Mediterranean soils. *Geochim. Cosmochim. Acta*, 65, 2853-2864.
35. Harlavan Y. and **Erel Y.** (2002) The Release of Pb and REE from granitoids by the dissolution of accessory phases. *Geochim. Cosmochim. Acta*, 66, 837-848.
36. Shaked Y., **Erel Y.**, Sukenik A. (2002) Phytoplankton mediated redox cycle of iron in the epilimnion of Lake Kinneret. *Environ. Sci. & Technol.*, 36, 460-467.
37. Emmanuel S. and **Erel Y.** (2002) Implications from concentrations and isotopic data for Pb partitioning processes in soils. *Geochim. Cosmochim. Acta*, 66, 2517-2527.
38. **Erel Y.**, Axelrod T., Veron A., Mahrer Y., Katsafados P., Dayan D. (2002) Trans-boundary atmospheric lead pollution. *Environ. Sci. & Technol.*, 36, 3230-3233.
39. Paces T., Corcimaru S., Emmanuel S., **Erel Y.**, Novak M., Plyusnin A., Veron A., Wickham S. (2002) Critical loads of hazardous trace elements in soil – water system. *J. Field Science*, 1, 15-22.
40. Novak M., Emmanuel S., Vile, M. A., **Erel Y.**, Veron A., Paces T., Wieder R. K., Vanecek M., Stepanova M., Brizova E., Ryklova J. (2003) The provenance of lead in eight Central European peat bogs determined from isotope ratios, strengths and operation times of regional pollution sources. *Environ. Sci. Technol.* 37, 437-445.
41. Feldstein T., Kashman Y., Abelson A., Fishelson L., Mokady O., Bresler V., **Erel Y.** (2003) Using marine molluscs for environmental monitoring. III. Chemical characterization of animal tissue and sediments. *Helgoland Marine Research*, 57, 212-219.
42. Shaked Y., **Erel Y.**, Sukenik A. (2004) The biogeochemical cycle of Fe and associated elements in Lake Kinneret. *Geochim. Cosmochim. Acta*, 68, 1439-1451. Ten most downloaded papers - 2005.

43. Matthews A., Morgans-Bell H., Emmanuel S., Jenkyns H., Halicz L., **Erel Y.** (2004) Controls of iron isotope fractionation in organic-rich sediments. *Geochim. Cosmochim. Acta*; 68, 3107-3123.
44. Shaked Y., Kutska A., Morel F. M. M., **Erel Y.** (2004) Simultaneous determination of iron reduction and uptake by phytoplankton. *Limnol. Ocean., Meth.*; 2, 137-145.
45. **Erel Y.**, Blum J. D., Roueff E., Ganor J. (2004) Lead and strontium isotopes as monitors of experimental granitoid mineral dissolution. *Geochim. Cosmochim. Acta*, 68, 4649-4663.
46. Ganor J., Roueff E., **Erel Y.**, Blum J. D. (2005) The dissolution kinetics of a granite and its minerals – implications for comparison between laboratory and field dissolution rates. *Geochim. Cosmochim. Acta*, 69, 607-621.
47. Emmanuel S., **Erel Y.**, Matthews A., Teutsch N. (2005) A preliminary mixing model for Fe isotopes in soils. *Chemical Geology*; 222, 23-34.
48. **Erel Y.**, Dayan U., Rabi R., Rudich Y., Stein M. (2006) Trans boundary transport of pollutants by atmospheric mineral dust. *Environ. Sci. & Technol.*, 40, 2996-3005.
49. **Erel Y.**, Listovsky N., Matthews A., Ilani S., Avni Y. (2006) Tracing end-member fluid sources in sub-surface iron mineralization and dolomitization Along a proximal fault to the Dead Sea Transform. *Geochim. Cosmochim. Acta*, doi:10.1016/j.gca-2006.08.019.
50. **Erel Y.**, Kalderon-Asael B., Dayan U., Sandler A. (2007) European Atmospheric Pollution Imported by Cooler Air Masses to the Eastern Mediterranean during the Summer. *Environ. Sci. & Technol*, 41, 5198-5203.
51. Jenkyns H., Matthews A., Tsikos H. **Erel Y.** (2007) Nitrate reduction, sulfate reduction and sedimentary iron-isotope evolution during the Cenomanian-Turonian Oceanic Anoxic Event. *Paleoceanography* 22 doi:10.1029/2006PA001355.
52. Magrisso S., **Erel Y.**, Belkin S. (2008) Microbial reporters of metal bioavailability. *Microbial Biotechnology*. 1, 320 – 330. doi:10.1111/j.1751-7915.2008.00022.x. Top cited papers of Microbial Biotechnology 2012.
53. Novak M., **Erel Y.**, Zemanova L., Bottrell S. H., Adamova M. (2008) A comparison of lead pollution record in Sphagnum peat with known historical Pb emission rates in the British Isles and the Czech Republic. *Atmospheric Environment*. 42, 8997–9006.
54. Matthews A., Emmanuel S., Levi L., Gvirtzman H., **Erel Y.** (2008) Kinetic fractionation of Fe isotopes during transport through a porous quartz sand column. *Geochim. Cosmochim. Acta* 72, 5908–5919.
55. Harlavan Y., **Erel Y.** Blum J. D. (2009) The coupled release of REE and Pb to the soil labile pool with time by weathering of accessory phases, Wind River Mountains, WY. *Geochim. Cosmochim. Acta*. 73, 320–336.
56. Eldan M., Shoham T., **Erel Y.**, Mandler Y. (2009) Monitoring heavy metals in seawater by electrochemically induced deposition as hydroxides. *Electroanalysis*. 21, No. 3-5, 368 – 378. DOI: 10.1002/elan.200804454.
57. Ryb U, **Erel Y.**, Matthews A., Avni Y., Gordon G., Anbar A. D. (2009) Large molybdenum isotope variations trace sub-surface fluid migration along the Dead Sea Transform. *Geology*, 37; 463–466; doi: 10.1130/G25331A.1.
58. Andersen M. B., **Erel Y.**, Bourdon B. (2009) Experimental evidence for ²³⁴U-²³⁸U fractionation during granite weathering with implications for ²³⁴U/²³⁸U in natural waters. *Geochim. Cosmochim. Acta* 73, 4124-4141.
59. Kalderon-Asael B., **Erel Y.**, Sandler A., Dayan U. (2009) Mineralogical and chemical characterization of suspended atmospheric particles over the east Mediterranean based on synoptic-scale circulation patterns. *Atmospheric Environment* 43(25), 3963-3970.
60. Magrisso S., Belkin S., **Erel Y.** (2009) Lead bioavailability in soil and soil components. *Water Air Soil Poll.*, 202, 315-323.
61. **Erel Y.** and Torrent J. (2010) Contribution of Saharan dust to Mediterranean soils assessed by sequential extraction and Pb and Sr isotopes. *Chemical Geology* 275, 19–25.

62. Tsikos H., Matthews A., **Erel Y.**, Moore J. M. (2010) Iron isotopes constrain biogeochemical redox cycling of iron and manganese in a Palaeoproterozoic stratified basin. *Earth Planet. Sci. Lett.* doi: 10.1016/j.epsl.2010.07.032.
63. Dayan U., **Erel Y.**, Shpund J., Kordova L., Wanger A., Schauer J. J. (2011) The Impact of local sources and meteorological factors on nitrogen oxide and particulate matter concentrations: A case study of The Day of Atonement in Israel. *Atmospheric Environment* 45, 3325-3332, doi: 10.1016/j.atmosenv.2011.02.017.
64. Enzel Y, Amit R., Grodek T., Ayalon A., Lekach J., Porat N., Bierman P., Blum J. D., **Erel Y.** (2011) Late Quaternary depositional landforms in Nahal Yael, Israel: "Impact of climatic change on an arid watershed1", *Geological Society of America Bulletin*. doi: 10.1130/B30538.1
65. Zipori A., Rosenfeld D., Shpund J., Steinberg D. M., **Erel Y.** (2012) Targeting and impacts of AgI cloud seeding based on rain chemical composition and cloud top phase characterization. *Atmospheric Research* 114, 119-130.
66. Kessler N., Schauer J. J., Yagur-Kroll S., Melamed S., Tirosh O., Belkin S., **Erel Y.** (2012) A bacterial bioreporter panel to assay the cytotoxicity of atmospheric particulate matter. *Atmospheric Environment* 63, 94-101.
67. Palchan D., Stein M., Almogi-Labin A., **Erel Y.**, Goldstein S. L (2013) Dust transport and synoptic conditions over the Sahara-Arabia deserts during the MIS6/5 and 2/1 transitions from physical, chemical and isotopic properties of Red Sea cores. *Earth Planet. Sci. Lett* 382,125–139.
68. Ryb U., Matmon A., **Erel Y.**, Haviv I., Katz A., Starinsky A., Angert A., ASTER Team (2014) Controls on denudation rates in tectonically stable Mediterranean carbon-ate terrain. *Geol. Soc. Am. Bull.*126, 552–568.
69. Ryb U., Matmon A., **Erel Y.**, Haviv I., Benedettic L., Hidy A. J. (2014) Styles and rates of long-term denudation in carbonate terrains under a Mediterranean to hyper-arid climatic gradient. *Earth Planet. Sci. Lett.* 406, 142–152.
70. Ben Israel M., Enzel Y., Amit R., **Erel Y.** (2015) Provenance of the various grain-size fractions in the Negev loess and potential changes in major dust sources to the Eastern Mediterranean. *Quaternary Res.* 83, 105–115.
71. Zipori A., Rosenfeld D., Tirosh O., Teutsch N., **Erel Y.** (2015) Effects of aerosol sources and chemical compositions on cloud drop sizes and glaciation temperatures, *J. Geophys. Res. Atmos.*, 120, doi:10.1002/2015JD023270.
72. Matmon A., Hidy A., Vainer S., Crouvi O., Fink D., **Erel Y.**, ASTER Team, Horwitz L., Chazan M. (2015) New chronology for the southern Kalahari Group sediments with implications for sediment-cycle dynamics and early hominin occupation. *Quaternary Res.* 84, 118–132.
73. Beherec M. A., Levy T. M, Tirosh O., Najjar M., Knabb K. A., **Erel Y.** (2015) Iron Age nomads and their relation to copper smelting in Faynan (Jordan): Trace metal and Pb and Sr isotopic measurements from the Wadi Fidan 40 cemetery. *J. Archaeological Sci.* 65, 70-83.
74. Knabb K. A., **Erel Y.**, Tirosh O., Rittenour T., Laparidou S., Najjar M., Levy T. E. (2016) Environmental impacts of ancient copper mining and metallurgy: Multi-proxy investigation of human-landscape dynamics in the Faynan valley, southern Jordan. *J. Archaeological Sci.* 74, 85-101.
75. Yahalom-Mack, N., Langgut, D., Dvir, O. Tirosh. O., Eliyahu-Behar, A., **Erel, Y.**, Langford, B., Frumkin, A., Ullman, M. and Davidovich, U. (2015) The earliest lead object in the Levant. *PLOS ONE*, 10 (12): e0142948. doi:10.1371.
76. Yahalom-Mack, N., Martin, M.A.S., Tirosh, O., **Erel, Y.** and Finkelstein, I. (2016) Lead isotope analysis of slag-tempered Negev Highlands pottery. *Antiquo Oriente*,13, 83-98.
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