

Resource Summary Report

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EarthChem

RRID:SCR_002207

Type: Tool

Proper Citation

EarthChem (RRID:SCR_002207)

Resource Information

URL: <http://www.earthchem.org/>

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Description: Accepts and makes available geochemical, geochronological, and petrological data (analytical and synthesis) through this community-driven effort to facilitate the preservation, discovery, access and visualization of data generated. * PetDB holds geochemical data from sub-oceanic igneous and metamorphic rocks generated at mid-ocean ridges including back-arc basins, young seamounts, and old oceanic crust. Data are compiled primarily from the published literature. * SedDB integrates marine and terrestrial sediment geochemical data compiled primarily from the published literature. * Deep Lithosphere Data Set contains geochemical and petrological data from lower crust and upper mantle xenoliths. (more info) * VentDB contains hydrothermal spring geochemistry that hosts and serves the full range of compositional data acquired on seafloor hydrothermal vents from all tectonic settings. * NAVDAT - The Western North American Volcanic and Intrusive Rock Database * Geochron is an application that helps with the onerous task of data management for geochronological and thermochronological studies. * EarthChemPortal is the one-stop-shop for geochemical data that gives users the ability to search federated databases PetDB, NAVDAT, and GEOROC simultaneously, integrated into a common output format. (more info) * The EarthChem Library is a repository for geochemical datasets (analytical data, experimental data, synthesis databases) and other digital resources relevant to the field of geochemistry, contributed by the geochemistry community. * SESAR - System for Earth Sample Registration

Abbreviations: EarthChem

Synonyms: IEDA: EarthChem

Resource Type: service resource, database, storage service resource, data repository, data or information resource

Keywords: geochemical, geochronological, petrological

Funding: NSF

Availability: Free, Available for download, Freely available

Resource Name: EarthChem

Resource ID: SCR_002207

Alternate IDs: nlx_154721, r3d100011538

Alternate URLs: <https://doi.org/10.17616/R3V644>

Record Creation Time: 20220129T080212+0000

Record Last Update: 20260728T043128+0000

Ratings and Alerts

No rating or validation information has been found for EarthChem.

No alerts have been found for EarthChem.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 24 mentions in open access literature.

Listed below are recent publications. The full list is available at [nidm-terms](#) .

Damerow JE, et al. (2025) Opening doors to physical sample tracking and attribution in Earth and environmental sciences. Scientific data, 12(1), 1047.

Liu CT, et al. (2025) The sub-arc mantle has remained oxidized since the Neoproterozoic oxygenation event. Nature communications, 16(1), 7675.

Wang C, et al. (2025) A database for igneous rocks of the Newfoundland Appalachians. Scientific data, 12(1), 767.

Zhang F, et al. (2024) The constant oxidation state of Earth's mantle since the Hadean. Nature communications, 15(1), 6521.

Basili M, et al. (2024) Subsurface microbial community structure shifts along the geological features of the Central American Volcanic Arc. PloS one, 19(11), e0308756.

Timmerman S, et al. (2023) Sublithospheric diamond ages and the supercontinent cycle. Nature, 623(7988), 752.

Liu SA, et al. (2023) Copper isotope evidence for sulfide fractionation and lower crustal foundering in making continental crust. *Science advances*, 9(36), eadg6995.

Zhang ZJ, et al. (2023) Lithospheric thickness records tectonic evolution by controlling metamorphic conditions. *Science advances*, 9(50), eadi2134.

Wallace KL, et al. (2022) Community established best practice recommendations for tephra studies-from collection through analysis. *Scientific data*, 9(1), 447.

Koffman BG, et al. (2022) Provenance of Anthropogenic Pb and Atmospheric Dust to Northwestern North America. *Environmental science & technology*, 56(18), 13107.

Prabhu A, et al. (2021) Global earth mineral inventory: A data legacy. *Geoscience data journal*, 8(1), 74.

Leicher N, et al. (2021) Lake Ohrid's tephrochronological dataset reveals 1.36Ma of Mediterranean explosive volcanic activity. *Scientific data*, 8(1), 231.

Wang C, et al. (2021) The Deep-Time Digital Earth program: data-driven discovery in geosciences. *National science review*, 8(9), nwab027.

Chiaradia M, et al. (2021) Zinc systematics quantify crustal thickness control on fractionating assemblages of arc magmas. *Scientific reports*, 11(1), 14667.

Antonelli MA, et al. (2021) Calcium isotope evidence for early Archaean carbonates and subduction of oceanic crust. *Nature communications*, 12(1), 2534.

Aiuppa A, et al. (2019) CO₂ flux emissions from the Earth's most actively degassing volcanoes, 2005-2015. *Scientific reports*, 9(1), 5442.

Eguchi J, et al. (2019) Great Oxidation and Lomagundi events linked by deep cycling and enhanced degassing of carbon. *Nature geoscience*, Dec 2019.

Liu H, et al. (2019) Continuous plate subduction marked by the rise of alkali magmatism 2.1 billion years ago. *Nature communications*, 10(1), 3408.

Gamal El Dien H, et al. (2019) Global geochemical fingerprinting of plume intensity suggests coupling with the supercontinent cycle. *Nature communications*, 10(1), 5270.

Sternai P, et al. (2017) Magmatic pulse driven by sea-level changes associated with the Messinian salinity crisis. *Nature geoscience*, 10(10), 783.