

Resource Summary Report

Generated by [ASWG](#) on Aug 3, 2026

EarthChem

RRID:SCR_002207

Type: Tool

Proper Citation

EarthChem (RRID:SCR_002207)

Resource Information

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

Proper Citation: EarthChem (RRID:SCR_002207)

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: data or information resource, database, data repository, service resource, storage service 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: 20260803T040328+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 [ASWG](#) .

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.

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

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

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

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 1.36???Ma 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.