

Resource Summary Report

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PetDB

RRID:SCR_002209

Type: Tool

Proper Citation

PetDB (RRID:SCR_002209)

Resource Information

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

Proper Citation: PetDB (RRID:SCR_002209)

Description: Accepts and provides access to geochemical and petrological data for ocean floor igneous and metamorphic rocks, (whole rock, volcanic, glass, mineral, and melt inclusion analyses), and mantle and lower-crustal xenolith samples. Data are compiled primarily from the published literature. Authors are encouraged to submit their datasets and databases to EarthChem.

Abbreviations: PetDB

Synonyms: PetDB - the Petrological Database

Resource Type: data or information resource, database

Keywords: petrological, geochemical, chemical, isotopic, mineralogical, rock, mineral, melt inclusion, igneous, metamorphic, ocean floor, mid-ocean ridge, basalt, abyssal, peridotite, xenolith, petrology, mantle

Funding: NSF

Availability: Free, Freely available

Resource Name: PetDB

Resource ID: SCR_002209

Alternate IDs: nlx_154723, r3d100011235

Record Creation Time: 20220129T080212+0000

Record Last Update: 20260729T044035+0000

Ratings and Alerts

No rating or validation information has been found for PetDB.

No alerts have been found for PetDB.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 21 mentions in open access literature.

Listed below are recent publications. The full list is available at [kravitz2](#) .

Qiu KF, et al. (2025) The mantle source of REE-rich alkaline silicate magmas can be enriched by continent-derived sediment subduction. *Nature communications*, 16(1), 11191.

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

Ernst DM, et al. (2025) Polynomial modelling of high-quality yet incomplete rare earth element data sets and a holistic assessment of REE anomalies. *Scientific reports*, 15(1), 5360.

Yu Z, et al. (2025) Deep mantle earthquakes linked to CO₂ degassing at the mid-Atlantic ridge. *Nature communications*, 16(1), 563.

Munch FD, et al. (2024) Deep mantle plumes feeding periodic alignments of asthenospheric fingers beneath the central and southern Atlantic Ocean. *Proceedings of the National Academy of Sciences of the United States of America*, 121(46), e2407543121.

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

Aulbach S, et al. (2022) Evidence for oxygen-conserving diamond formation in redox-buffered subducted oceanic crust sampled as eclogite. *Nature communications*, 13(1), 1924.

Liu CZ, et al. (2022) Archean cratonic mantle recycled at a mid-ocean ridge. *Science advances*, 8(22), eabn6749.

Weiss Y, et al. (2021) Helium in diamonds unravels over a billion years of craton metasomatism. *Nature communications*, 12(1), 2667.

Li H, et al. (2021) Basalt derived from highly refractory mantle sources during early Izu-Bonin-Mariana arc development. *Nature communications*, 12(1), 1723.

Garzon M, et al. (2021) Episodic growth of felsic continents in the past 3.7 Ga. *Science advances*, 7(39), eabj1807.

Zhang Y, et al. (2021) Serpentine-derived slab fluids control the oxidation state of the subarc mantle. *Science advances*, 7(48), eabj2515.

Yu X, et al. (2020) Non-mantle-plume process caused the initial spreading of the South China Sea. *Scientific reports*, 10(1), 8500.

Chen S, et al. (2019) Molybdenum systematics of subducted crust record reactive fluid flow from underlying slab serpentine dehydration. *Nature communications*, 10(1), 4773.

Belay IG, et al. (2019) Origin of ocean island basalts in the West African passive margin without mantle plume involvement. *Nature communications*, 10(1), 3022.

Ranaweera LV, et al. (2018) Circa 1 Ga sub-seafloor hydrothermal alteration imprinted on the Horoman peridotite massif. *Scientific reports*, 8(1), 9887.

Ge R, et al. (2018) Remnants of Eoarchean continental crust derived from a subducted proto-arc. *Science advances*, 4(2), eaao3159.

Liu C, et al. (2017) Geochemical and mineralogical evidence that Rodinian assembly was unique. *Nature communications*, 8(1), 1950.

Zhang GL, et al. (2016) Interactions of the Greater Ontong Java mantle plume component with the Osborn Trough. *Scientific reports*, 6, 37561.

Cheng H, et al. (2016) Jurassic zircons from the Southwest Indian Ridge. *Scientific reports*, 6, 26260.