

## DAFTAR PUSTAKA

- Bani, P., Nauret, F., Oppenheimer, C., Aiuppa, A., Saing, B.U., Haerani, N., Alfianti, H., Marlia, M., and Tsanev, V., 2021, Heterogeneity of volatile sources along the Halmahera arc, Indonesia: *Journal of Volcanology and Geothermal Research*, v. 418, p. 107342, [doi:10.1016/j.jvolgeores.2021.107342](https://doi.org/10.1016/j.jvolgeores.2021.107342).
- Bas, M.J.L., Maitre, R.W.L., Streckeisen, A., Zanettin, B., and IUGS Subcommission on the Systematics of Igneous Rocks, 1986, A Chemical Classification of Volcanic Rocks Based on the Total Alkali-Silica Diagram: *Journal of Petrology*, v. 27, p. 745–750, [doi:10.1093/petrology/27.3.745](https://doi.org/10.1093/petrology/27.3.745).
- Bishop, C.M., 2006, *Pattern recognition and machine learning*: New York, Springer, Information science and statistics, 738 p.
- Castillo, P.R., and Newhall, C.G., 2004, Geochemical Constraints on Possible Subduction Components in Lavas of Mayon and Taal Volcanoes, Southern Luzon, Philippines: *Journal of Petrology*, v. 45, p. 1089–1108, [doi:10.1093/petrology/egh005](https://doi.org/10.1093/petrology/egh005).
- DIGIS Team, 2021, GEOROC Compilation: Convergent Margins:, [doi:10.25625/PVFZCE](https://doi.org/10.25625/PVFZCE).
- Fan, J., Zhao, D., Dong, D., and Zhang, G., 2017, P-wave tomography of subduction zones around the central Philippines and its geodynamic implications: *Journal of Asian Earth Sciences*, v. 146, p. 76–89, [doi:10.1016/j.jseaes.2017.05.015](https://doi.org/10.1016/j.jseaes.2017.05.015).
- Gill, J.B., 1981, *Orogenic Andesites and Plate Tectonics*: Berlin, Heidelberg, Springer Berlin Heidelberg, Minerals and Rocks, v. 16, [doi:10.1007/978-3-642-68012-0](https://doi.org/10.1007/978-3-642-68012-0).

- Hall, R., 2002, Cenozoic geological and plate tectonic evolution of SE Asia and the SW Pacific: computer-based reconstructions, model and animations: *Journal of Asian Earth Sciences*, v. 20, p. 353–431, doi:[10.1016/S1367-9120\(01\)00069-4](https://doi.org/10.1016/S1367-9120(01)00069-4).
- Hall, R., 2012, Late Jurassic–Cenozoic reconstructions of the Indonesian region and the Indian Ocean: *Tectonophysics*, v. 570–571, p. 1–41, doi:[10.1016/j.tecto.2012.04.021](https://doi.org/10.1016/j.tecto.2012.04.021).
- Hall, R., 1987, Plate boundary evolution in the Halmahera region, Indonesia: *Tectonophysics*, v. 144, p. 337–352, doi:[10.1016/0040-1951\(87\)90301-5](https://doi.org/10.1016/0040-1951(87)90301-5).
- Hall, R., and Spakman, W., 2015, Mantle structure and tectonic history of SE Asia: *Tectonophysics*, v. 658, p. 14–45, doi:[10.1016/j.tecto.2015.07.003](https://doi.org/10.1016/j.tecto.2015.07.003).
- Handini, E., Wayan Warmada, I., Hasenaka, T., Barber, N.D., and Shibata, T., 2022, Geochemistry of arc alkaline magmatism of Java Island, Sunda Arc: a statistical review: *IOP Conference Series: Earth and Environmental Science*, v. 1071, p. 012013, doi:[10.1088/1755-1315/1071/1/012013](https://doi.org/10.1088/1755-1315/1071/1/012013).
- Hanyu, T., Gill, J., Tatsumi, Y., Kimura, J-I., and Sato, K., 2012, Across- and along-arc geochemical variations of lava chemistry in the Sangihe arc: Various fluid and melt slab fluxes in response to slab temperature: Geochemical Variations In Sangihe Arc: *Geochemistry, Geophysics, Geosystems*, v. 13, doi:[10.1029/2012GC004346](https://doi.org/10.1029/2012GC004346).
- Harker, A., 1909, *The Natural History of Igneous Rocks*: New York, Macmillan, v. 1.
- Irvine, T.N., and Baragar, W.R.A., 1971, A Guide to the Chemical Classification of the Common Volcanic Rocks: *Canadian Journal of Earth Sciences*, v. 8, p. 523–548, doi:[10.1139/e71-055](https://doi.org/10.1139/e71-055).
- Kepezhinskas, P., Berdnikov, N., Kepezhinskas, N., and Konovalova, N., 2022, Adakites, High-Nb Basalts and Copper–Gold Deposits in Magmatic

Arcs and Collisional Orogens: An Overview: *Geosciences*, v. 12, p. 29, doi:[10.3390/geosciences12010029](https://doi.org/10.3390/geosciences12010029).

Kimura, J.-I., Kent, A.J.R., Rowe, M.C., Katakuse, M., Nakano, F., Hacker, B.R., Van Keken, P.E., Kawabata, H., and Stern, R.J., 2010, Origin of cross-chain geochemical variation in Quaternary lavas from the northern Izu arc: Using a quantitative mass balance approach to identify mantle sources and mantle wedge processes: *CROSS-CHAIN MAGMA VARIATION IN N-IZU ARC: Geochemistry, Geophysics, Geosystems*, v. 11, p. n/a-n/a, doi:[10.1029/2010GC003050](https://doi.org/10.1029/2010GC003050).

Lallemand, S.E., Popoff, M., Cadet, J.-P., Bader, A.-G., Pubellier, M., Rangin, C., and Deffontaines, B., 1998, Genetic relations between the central and southern Philippine Trench and the Sangihe Trench: *Journal of Geophysical Research: Solid Earth*, v. 103, p. 933–950, doi:[10.1029/97JB02620](https://doi.org/10.1029/97JB02620).

Miyashiro, A., 1974, Volcanic rock series in island arcs and active continental margins: *American Journal of Science*, v. 274, p. 321–355, doi:[10.2475/ajs.274.4.321](https://doi.org/10.2475/ajs.274.4.321).

Morris, J.D., Jezek, P.A., Hart, S.R., and Hill, J.B., 1983, The Halmahera Island Arc, Molucca Sea collision zone, Indonesia: *A geochemical survey, in Hayes, D.E. ed., Geophysical Monograph Series, Washington, D. C., American Geophysical Union*, v. 27, p. 373–387, doi:[10.1029/GM027p0373](https://doi.org/10.1029/GM027p0373).

Nakamura, H., Iwamori, H., Nakagawa, M., Shibata, T., Kimura, J.-I., Miyazaki, T., Chang, Q., Vaglarov, B.S., Takahashi, T., and Hirahara, Y., 2019, Geochemical mapping of slab-derived fluid and source mantle along Japan arcs: *Gondwana Research*, v. 70, p. 36–49, doi:[10.1016/j.gr.2019.01.007](https://doi.org/10.1016/j.gr.2019.01.007).

Ozawa, A., Tagami, T., Listanco, E.L., Arpa, C.B., and Sudo, M., 2004, Initiation and propagation of subduction along the Philippine Trench: evidence from the temporal and spatial distribution of volcanoes: *Journal of*

*Asian Earth Sciences*, v. 23, p. 105–111, doi:[10.1016/S1367-9120\(03\)00112-3](https://doi.org/10.1016/S1367-9120(03)00112-3).

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V. and Vanderplas, J., 2023a, Comparing different clustering algorithms on toy datasets: scikit-learn, [https://scikit-learn/stable/auto\\_examples/cluster/plot\\_cluster\\_comparison.html](https://scikit-learn/stable/auto_examples/cluster/plot_cluster_comparison.html) (diakses April 2023).

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V. and Vanderplas, J., 2023b, Comparison of LDA and PCA 2D projection of Iris dataset: scikit-learn, [https://scikit-learn/stable/auto\\_examples/decomposition/plot\\_pca\\_vs\\_lda.html](https://scikit-learn/stable/auto_examples/decomposition/plot_pca_vs_lda.html) (diakses April 2023).

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V. and Vanderplas, J., 2023c, Gaussian mixture models: scikit-learn, <https://scikit-learn/stable/modules/mixture.html> (diakses April 2023).

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V. and Vanderplas, J., 2023d, `sklearn.metrics.silhouette_score`: scikit-learn, [https://scikit-learn/stable/modules/generated/sklearn.metrics.silhouette\\_score.html](https://scikit-learn/stable/modules/generated/sklearn.metrics.silhouette_score.html) (diakses April 2023).

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V. and Vanderplas, J., 2023e, The Iris Dataset: scikit-learn, [https://scikit-learn/stable/auto\\_examples/datasets/plot\\_iris\\_dataset.html](https://scikit-learn/stable/auto_examples/datasets/plot_iris_dataset.html) (diakses April 2023).

- Rollinson, H.R., and Pease, V., 2021, Using geochemical data: to understand geological processes: *Cambridge, UK ; New York, NY, Cambridge University Press.*
- Ruth, D.C.S., and Costa, F., 2021, A petrological and conceptual model of Mayon volcano (Philippines) as an example of an open-vent volcano: *Bulletin of Volcanology*, v. 83, p. 62, doi:[10.1007/s00445-021-01486-9](https://doi.org/10.1007/s00445-021-01486-9).
- Sajona, F.G., Bellon, H., Maury, R.C., Pubellier, M., Quebral, R.D., Cotten, J., Bayon, F.E., Pagado, E., and Pamatian, P., 1997, Tertiary and quaternary magmatism in Mindanao and Leyte (Philippines): geochronology, geochemistry and tectonic setting: *Journal of Asian Earth Sciences*, v. 15, p. 121–153, doi:[10.1016/S0743-9547\(97\)00002-0](https://doi.org/10.1016/S0743-9547(97)00002-0).
- Shlens, J., 2014, A Tutorial on Principal Component Analysis:, doi:[10.48550/ARXIV.1404.1100](https://doi.org/10.48550/ARXIV.1404.1100).
- Solidum, R.U., Castillo, P.R., and Hawkins, J.W., 2003, Geochemistry of lavas from Negros Arc, west central Philippines: Insights into the contribution from the subducting slab: *Geochemistry Of Lavas From Negros Arc: Geochemistry, Geophysics, Geosystems*, v. 4, doi:[10.1029/2003GC000513](https://doi.org/10.1029/2003GC000513).
- Stern, R.J., 2002, Subduction Zones: *Reviews of Geophysics*, v. 40, p. 3-1-3–38, doi:[10.1029/2001RG000108](https://doi.org/10.1029/2001RG000108).
- Sun, S, and McDonough, W.F., 1989, Chemical and isotopic systematics of oceanic basalts: implications for mantle composition and processes: *Geological Society, London, Special Publications*, v. 42, p. 313–345, doi:[10.1144/GSL.SP.1989.042.01.19](https://doi.org/10.1144/GSL.SP.1989.042.01.19).
- Tan, P.-N., Steinbach, M., Karpatne, A., and Kumar, V., 2019, *Introduction to data mining*: NY NY, Pearson, 839 p.

Tatsumi, Y., and Eggins, S., 1995, Subduction zone magmatism: *Cambridge, Mass., USA, Blackwell Science, Frontiers in earth sciences*, 211 p.

Winter, J.D., 2010, *Principles of igneous and metamorphic petrology*: New York, Prentice Hall, 702 p.

Yumul, G.P., Dimalanta, C.B., Maglambayan, V.B., and Marquez, E.J., 2008, Tectonic setting of a composite terrane: A review of the Philippine island arc system: *Geosciences Journal*, v. 12, p. 7, doi:[10.1007/s12303-008-0002-0](https://doi.org/10.1007/s12303-008-0002-0).