**Analisis Konten dan Pengelompokkan Literatur Struktur Tektonik Indonesia**

**Topik (1) struktur tektonik pada subduction atau fault zone yang berkaitan dengan aktivitas seismik (gempa) ataupun pergeseran tektonik**

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| **Author** | **Tahun** | **Judul** | **Sumber publikasi** | **Metode/ instrumen** | **Wilayah** | **Tujuan penelitian** |
| Kopp et al. | 2001 | Crustal structure of the central Sunda margin at the onset of oblique subduction | Geophysical Journal International, 147 (2), pp. 449-474. | Multichannel seismic reflection modelling dan gravity modelling | Sunda arc (Sumatera) | Meneliti struktur crustal pada zona batas subduction kompleks Sumatera bagian selatan dan selat Sunda dimana partisi regangan terjadi karena subduksi miring |
| Michel et al. | 2001 | Crustal motion and block behavior in SE-Asia from GPS measurements | Earth and Planetary Science Letters, 187 (3-4), pp. 239-244. | GPS (3-D forward dislocation modelling) | Sumatera dan Manila | Membuat model untuk memperkirakan laju pergeseran jangka panjang patahan dan blok disepanjang Sunda arc dan Manila arc |
| Michel et al. | 2001 | Regional GPS data confirm high strain accumulation prior to the 2000 June 4 Mw=7.8 earthquake at southeast Sumatra | Geophysical Journal International, 146 (3), pp. 571-582. | GPS | Indonesia bagian barat dan tengah | Meneliti pergerakan blok crustal tektonik di Asia Tenggara |
| Yokoyama | 2001 | The largest magnitudes of earthquakes associated with some historical volcanic eruptions and their volcanological significance | Annals of Geophysics, 44 (5-6), pp. 1021-1029. | Literature review | Global (G. Karakatau dan G. Tambora | Meneliti skala magnitudo gempa terdahsyat dalam kaitannya dengan erupsi gunung berapi yang sudah terjadi dan karakteristik vulkanis gunung berapi |
| Hoffmann-Rothe, Ritter, Haak | 2001 | Magnetotelluric and geomagnetic modelling reveals zones of very high electrical conductivity in the upper crust of Central Java | Physics of the Earth and Planetary Interiors, 124(3-4), pp. 131-151 | Magnetotelluric method (MT) dan geomagnetic depth sounding method (GDS), inversion model | Sunda arc (Jawa) | Membuat model magnetotelluric and geomagnetic untuk menentukan konduktivitas elektrik pada bagian crustal teratas |
| Kopp et al. | 2002 | Crustal structure of the Javas margin from seismic wide-angle and multichannel reflection data | Journal of Geophysical Research: Solid Earth, 107 (2), pp. 1-24. | Multichannel reflection seismic profiling | Sunda | Meneliti struktur crustal pada zona penyatuan batas Sunda |
| Bock et al. | 2003 | Crustal motion in Indonesia from Global Positioning System measurements | Journal of Geophysical Research: Solid Earth, 108(8). | GPS | Sunda Shelf, the South Banda arc, the Bird’s Head region of New Guinea, and East Sulawesi | Meneliti pergerakan blok crustal dan deformasi internal crustal |
| Barber dan Crow | 2003 | An Evaluation of Plate Tectonic Models for the Development of Sumatra | Gondwana Research, 6(1), pp. 1-28 | Literature review (analisis stratigraphy, struktur dan palaeontology data geologi) | Sumatera | Meneliti evolusi tektonik wilayah Sumatera untuk keperluan penyusunan peta geologi faktual |
| Petersen et al. | 2004 | Probabilistic seismic hazard analysis for Sumatra, Indonesia and across the Southern Malaysian Peninsula | Tectonophysics, 390, pp. 141-158. | Earthquake source model and ground motion prediction equations, hazard maps dari US National Seismic Hazard Maps | Sumatera dan selatan semenanjung Malaysia | Menganalisis probabilistik bencana gempa di Sumatera dan selatan semenanjung Malaysia dan mendiskusikan mana yang paling banyak mengalami gempa |
| Widiyanto dan Fauzi | 2005 | Note on seismicity of the Bali convergent region in the eastern Sunda Arc, Indonesia | Australian Journal of Earth Sciences, 52(3), pp. 379-383. | Seismic tomographic models | Bali | Meneliti distribusi gempa dengan hipocenter dalam berdasarkan data US Geological Survey (USGS), gempa dangkal dan intermediate dengan menggunakan jaringan seismik lokal dari BMKG |
| Briggs et al. | 2006 | Deformation and Slip Along the Sunda Megathrust in the Great 2005 Nias-Simeulue Earthquake | Science, 311, pp. 1897-1901. | GPS | Sumatera Utara | Meneliti deformasi dan pergeseran Sunda megathrust pasca gempa Nias-Simeulue |
| Socquet et al. | 2006 | Microblock rotations and fault coupling in SE Asia triple junction (Sulawesi, Indonesia) from GPS and earthquake slip vector data | Journal of Geophysical Research: Solid Earth, 111. | Kombinasi GPS modelling dan earthquake slip vectors | Sulawesi | Membuat model untuk menentukan deformation wilayah Sulawesi menggunakan data geodesi dan seismologi |
| Sakaguchi, Gilbert dan Zandt | 2006 | Converted wave imaging of the Toba Caldera, Indonesia | Geophysical Research Letters, 33 | Seismic receiver functions | Toba Caldera | Mengetahui lokasi dan kedalaman magma bodies di bawah Toba caldera dan meneliti hubungan fitur tsb terhadap lower crust dan upper mantle |
| Catherine dan Gahalaut | 2007 | A glimpse of earthquake cycle in the Sumatra region | Current Science, 92(1), pp. 114-118. | GPS | Sumatera | Meneliti deformasi crustal selama dan setelah gempa Sumatra-Andaman 2004 dan gempa Sumatera 2005 |
| Wagner et al. | 2007 | Joint inversion of active and passive seismic data in Central Java | Geophysical Journal International, 170 (2), pp. 923-932. | Menggabung-kan inversi data seismik pasif dan aktif menggunakan local tomographic software | Jawa Tengah (G. Merapi), jaringan MERAMEX | Membuat model inversi tomographic 3D untuk aliran crustal |
| Abidin et al. | 2009 | Crustal deformation studies in Java (Indonesia) using GPS | Journal of Earthquake and Tsunami, 3(2), pp. 77-88. | GPS | Jawa | Meneliti deformasi crustal pada zona patahan gempa Cimandiri, Lembang and Baribis faults yang disebabkan gempa Yogyakarta dan Jawa bagian selatan 2006 |
| Heidbach et al. | 2010 | Global crustal stress pattern based on the World Stress Map database release 2008 | Tectonophysics, 482, pp. 3-15. | statistical stress pattern analysis, spatial wave-length analysis | Global | Menentukan variasi global panjang gelombang spatial pola tekanan berdasarkan peta stress dunia th 2008 |
| Newman et al. | 2011 | The 25 October 2010 Mentawai tsunami earthquake, from real‐time discriminants, finite‐fault rupture, and tsunami excitation | Geophysical Research Letters, 38(5), pp. 1-7. | Program Rterg (Rapid energy‐duration discriminant for tsunami earthquakes) | Sumatera, Mentawai | Menjelaskan penyebab terjadinya gempa dan tsunami Mentawai, memperkirakan durasi real-time, dan energi gempa |
| Sens-Schonfelder dan Wegler | 2011 | Passive image interferometry for monitoring crustal changes with ambient seismic noise | Comptes Rendus – Geoscience, 343, pp. 639-651. | Passive image interferometry | Jawa Tengah, Gunung Merapi, Patahan zona Jepang, dan permukaan bulan | Mengaplikasikan metode Passive image interferometry untuk memonitor perubahan crustal secara kontinu |
| Lüschen et al. | 2011 | Structure, evolution and tectonic activity of the eastern Sunda forearc, Indonesia, from marine seismic investigations | Tectonophysics, 508, pp. 6-21. | Multichannel reflection seismic profiling | Sunda forearc | Meneliti struktur, evolusi dan aktivitas tektonik Sunda forearc bagian timur |
| Bohm, Haberland dan Asch | 2013 | Imaging fluid-related subduction processes beneath Central Java (Indonesia) using seismic attenuation tomography | Tectonophysics, 590, pp. 175-188. | Seismic attenuation tomography | Jawa Tengah, Gunung Merapi | (Menggunakan jaringan MERAMEX) Meneliti proses-proses terkait fluida pada subduction zone dan membandingkan struktur crustal dan bagian teratas mantle di Jawa Tengah dengan region lain |
| Tang et al. | 2013 | 3-D active source tomography around Simeulue Island offshore Sumatra: Thick crustal zone responsible for earthquake segment boundary | Geophysical Research Letters, 40, pp. 48-53. | Seismic tomography, first-arrival travel-time tomography | Sumatera, lepas pantai Pulau Simeulue | Meneliti ketebalan crustal dan pengaruhnya pada segmentasi rupture gempa Sumatra 2004 dan 2005 |
| Shulgin et al. | 2013 | Subduction system variability across the segment boundary of the 2004/2005 Sumatra mega thrust earthquakes | Earth and Planetary Science Letters, 365, pp. 108-119. | Seismic tomography, garvity modelling | Sumatera, lepas pantai Pulau Simeulue | Meneliti variasi struktur crustal di sepanjang batas segmen rupture gempa 2004 dan 2005 |
| Muksin et al. | 2013 | Three-dimensional upper crustal structure of the geothermal system in Tarutung (North Sumatra, Indonesia) revealed by seismic attenuation tomography | Geophysical Journal International, 195(3), pp. 2037-2049. | Seismic attenuation tomography | Sumatera Utara | Meneliti struktur crustal teratas sistem geothermal Tarutung |
| Hurukawa, Wulandari dan Kasahara | 2014 | Earthquake History of the Sumatran Fault, Indonesia, since 1892, Derived from Relocation of Large Earthquakes | Bulletin of the Seismological Society of America, 104(4), pp. 1750–1762. | Metode Modified Joint Hypocenter Determination (MJHD) | Patahan Sumatera | Memetakan episentrum gempa diatas M7 di patahan Sumatera, mengidentifikasi kemungkinan terjadinya gempa dari crustal dangkal, mendeteksi rentang aktivitas seismik untuk mitigasi |
| Cahyadi dan Heki | 2014 | Coseismic ionospheric disturbance of the large strike-slip earthquakes in North Sumatra in 2012: Mw dependence of the disturbance amplitudes | Geophysical Journal International, 200(1), pp. 116-129. | GPS, Coseismic Ionospheric Disturbance (CID) analysis | Sumatera Utara | Meneliti CID gempa Sumatera 2012 dan pergerakan crustal |
| Zulfakriza et al. | 2014 | Upper crustal structure of central Java, Indonesia, from transdimensional seismic ambient noise tomography | Geophysical Journal International, 197, pp. 630-635. | Ambient Noise Tomography | Jawa Tengah | (Menggunakan jaringan MERAMEX) Meneliti struktur crustal teratas wilayah Jawa Tengah |
| Haberland, Bauer dan Asch | 2014 | Accretionary nature of the crust of Central and East Java (Indonesia) revealed by local earthquake travel-time tomography | Journal of Asian Earth Sciences, 96, pp. 287-295. | Seismic tomography | Jawa Tengah dan Jawa Timur | (Menggunakan jaringan MERAMEX) Meneliti karakteristik accretionary crustal di subduction zone wilayah Jawa Tengah dan Jawa Timur |
| Akilan, Balaji dan Srivinas | 2014 | Are the tectonic blocks around the Wharton basin dispersed during an earthquake? A GPS-geodesy solution | Indian Journal of Geo-Marine Sciences, 43(4), pp. 453-462. | GPS | Sunda arc, Cekungan Wharton | Meneliti adanya deformasi crustal setelah terjadinya gempa Sumatera 2004 dan 2012 |
| Koulali et al. | 2016 | Crustal strain partitioning and the associated earthquake hazard in the eastern Sunda-Banda Arc | Geophysical Research Letters, 43, pp. 1943–1949. | GPS | Bagian Timur Sunda arc-Banda | Menjelaskan mekanisme pemisahan subduction zone antara lempeng Australia dan blok Sunda untuk mitigasi gempa |
| Alif et al. | 2016 | Evidence of Postseismic Deformation Signal of the 2007 M8.5 Bengkulu Earthquake and the 2012 M8.6 Indian Ocean Earthquake in Southern Sumatra, Indonesia, Based on GPS Data | Journal of Applied Geodesy, 10(2), pp. 103-108. | GPS | Sumatera Selatan | Meneliti terjadinya deformasi crustal pada subduction zone dan bagian dalam patahan Sumatra setelah gempa Bengkulu 2007 dan gempa Samudera Hindia 2012 |
| Wolbern and Rumpker | 2016 | Crustal thickness beneath Central and East Java (Indonesia) inferred from P receiver functions | Journal of Asian Earth Sciences, 115, pp. 69-79. | Seismic tomography | Jawa Tengah dan Jawa Timur | (Menggunakan jaringan MERAMEX) Meneliti ketebalan crustal |
| Ryberg, Muksin dan Bauer | 2016 | Ambient seismic noise tomography reveals a hidden caldera and its relation to the Tarutung pull-apart basin at the Sumatran Fault Zone, Indonesia | Journal of Volcanology and Geothermal Research, 321, pp. 73-84. | Ambient seismic noise tomography | Sumatra | Meneliti aliran pada crustal dangkal Patahan Sumatra dan kaitannya dengan terbentuknya kaldera tersembunyi dan Cekungan Tarutung |
| Ju, Sun dan Luo | 2017 | Characteristics of global strong earthquakes and their implications for the present-day stress pattern | Journal of Earth System Science, 126. | focal mechanisms | Global | Menentukan pola tekanan dan interaksi pada plat litosphere berdasarkan karakteristik gempa besar secara global |
| Cipta et al. | 2018 | Basin Resonance and Seismic Hazard in Jakarta, Indonesia | Geosciences, 8(128). | Metode Ground Motion Prediction Equations (GMPEs) dan simulasi numerik gelombang seismik (SPECFEM2D) | Jawa, Jakarta | Mengetahui pengaruh resonansi cekungan Jakarta terhadap terjadinya gempa pada tingkat crustal, megathurst, dan interslab sebagai input mitigasi gempa pada gedung-gedung tinggi |
| Pawirodikromo et al. | 2018 | Comparison of 10 % and 2/3 of 2 % PE for 50 years seismic hazard at Yogyakarta Special Province (YSP), Indonesia constructed from the probabilistic seismic hazard analysis | International Journal of Civil Engineering and Technology (IJCIET), 9(9), pp. 1593–1610. | The Ground Motion Prediction Equation (GMPE) | Jawa, Yogyakarta | Membandingkan Probabilistic Seismic Hazard Analysis (PSHA) lama, yaitu 10% dan baru (2/3 dari 2%) untuk Probablistic Seismic Assessment (PSA) periode 50 tahun |
| Lange et al. | 2018 | Structure of the central Sumatran subduction zone revealed by local earthquake travel-time tomography using an amphibious network | Solid Earth, 9 (4), pp. 1035-1049. | Seismic tomography | Sumatra bagian tengah | Meneliti struktur crustal subduction zone Sumatra bagian tengah |
| Govers et al. | 2018 | The Geodetic Signature of the Earthquake Cycle at Subduction Zones: Model Constraints on the Deep Processes | Reviews of Geophysics, 56, pp. 6 –49. | Cyclic geodynamic models | Tohoku (Japan), Maule (Chile), Sumatra | Meneliti karakteristik terkait geodesi berdasarkan siklus gempa pada subduction zone |
| Muzli et al. | 2018 | The 2016 Mw 6.5 Pidie Jaya, Aceh, North Sumatra, earthquake: Reactivation of an unidentified sinistral fault in a region of distributed deformation | Seismological Research Letters, 89 (5), pp. 1761-1772. | Seismic tomography | Sumatra, Aceh | Meneliti reaktivasi patahan unknown (setelah gempa Aceh 2016) di wilayah yang mengalami deformasi acak |
| Daryono et al. | 2019 | Earthquake Geology of the Lembang Fault, West Java, Indonesia | Tectonophysics, 751, pp. 180-191. | Analisis geomorfologi, IFSAR (Interferometric Resolution Synthetic Aperture Radar) elevation data dan LIDAR (Light Detection and Ranging), elevation data dari DSM dan DTM model, GIS | Jawa Barat, Patahan Lembang | Mengetahui sifat pergeseran patahan Lembang dan memprediksi gempa yang dapat dihasilkan |
| Griffin et al. | 2019 | Historical Earthquakes of the Eastern Sunda Arc: Source Mechanisms and Intensity-Based Testing of Indonesia’s National Seismic Hazard Assessment | Bulletin of the Seismological Society of America, 109(1), pp. 43–65. | Ground-motion models (GMMs) dan Ground Motion to Intensity Conversion Equations (GMICEs) | Sunda arc bagian timur | Mengetahui mekanisme sumber dan pengujian terhadap data seismik |
| Diambama et al. | 2019 | Velocity structure of the earthquake zone of theM6.3 Yogyakarta earthquake 2006 from a seismic tomography study | Geophysical Journal International, 216 (1), pp. 439-452. | Seismic tomography | Jawa, Yogyakarta | Meneliti aliran bawah permukaan Patahan Opak untuk mengetahui penyebab gempa Yogya 2006 |
| Gunawan dan Widyantoro | 2019 | Active tectonic deformation in Java, Indonesia inferred from a GPS-derived strain rate | Journal of Geodynamics, 123, pp. 49-54. | GPS | Jawa | Meneliti deformasi crustal di Jawa untuk mengidentifikasi wilayah tektonik aktif setelah gempa Yogya 2006 |
| Cummins et al. | 2020 | Earthquakes and tsunamis caused by low-angle normal faulting in the Banda Sea, Indonesia | Nature Geoscience | GPS dan geologi analysis | Perairan Banda | Mengetahui penyebab gempa dan tsunami megathurst |
| Rusdy et al. | 2020 | Shallow crustal earthquake models, damage, and loss predictions in Banda Aceh, Indonesia | Geoenvironmental Disasters, 7(8). | GIS analisis, earthquake-generated ground motion model | Sumatera, Banda Aceh | Membuat model gempa crustal dangkal, menentukan rasio kerusakan bangunan dan distribusinya, dan memperkirakan potensi luka dan ekonomi |
| Widjajanti et al. | 2020 | Present-day crustal deformation revealed active tectonics in Yogyakarta, Indonesia inferred from GPS observations | Geodesy and Geodynamics | GPS | Jawa, Yogyakarta | Meneliti deformasi crustal setelah gempa Mw7.8 dan Mw 6.3 Yogyakarta untuk mitigasi bencana gempa |
| Anggono et al. | 2020 | Crustal shear-wave velocity structure in Western Java, Indonesia from analysis of teleseismic receiver functions | Journal of Earth System Science, 129(6). | Metode teleseismic receiver functions | Jawa bagian barat (Cekungan Jawa sebelah barat laut, zona Bogor, dan pegunungan selatan) | meneliti struktur crustal (ketebalan crustal dan laju aliran) berdasarkan aliran gelombang shear (S-wave velocity) |
| Yang, Singh, Tripathi | 2020 | Did the Flores backarc thrust rupture offshore during the 2018 Lombok earthquake sequence in Indonesia? | Geophysical Journal International, 221 (2), pp. 758-768. | Interferometric synthetic aperture radar (InSAR), seismic profilling data | Pulau Lombok | Membuktikan apakah deformasi (rupture) dari Flores backarc penyebab gempa Lombok |
| Guntoro, Sardjono dan Guntoro | 2020 | Gravity analyses and crustal structure of the Eastern East Java Sea, Indonesia | International Journal of Scientific and Technology Research, 9 (1), pp. 3944-3948. | Gravity analysis dan interpretasi struktur crustal dengan tomography | Jawa Timur | Meneliti struktur crustal di cekungan laut Jawa Timur sebelah timur |
| Suhardja et al. | 2020 | Crustal thickness beneath Mt. Merapi and Mt. Merbabu, Central Java, Indonesia, inferred from receiver function analysis | Physics of the Earth and Planetary Interiors, 302. | Receiver function analysis | Jawa Tengah (G. Merapi dan Merbabu) | Memetakan batas antara crustal bumi dan bagian teratas mantle |

**Topik (2) proses fisika pada magma plumbing system dan evolusi magma (magma differentiation)**

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| **Author** | **Tahun** | **Judul** | **Sumber publikasi** | **Metode/ instrumen** | **Wilayah** | **Tujuan penelitian** |
| Masturyono et al | 2001 | Distribution of magma beneath the Toba caldera complex, Indonesia, constrained by three-dimensional p-wave velocities, seismicity and gravity data | Geochemistry, Geophysics, Geosystems, 2. | Three dimensional Tomografi, seismicity dan gravity data | Toba (Sumatera Utara) | meneliti distribusi magma didalam sistem subcaldera Toba |
| Chadwick et al. | 2007 | Carbonate Assimilation at Merapi Volcano, Java, Indonesia: Insights from Crystal Isotope Stratigraphy | Journal of Petrology, 48(9), pp. 1793-1812. | Isotope Sr stratigraphy analisis | Jawa Tengah (G. Merapi) | Meneliti evolusi magma G. Merapi berdasarkan komposisi isotop kristal |
| Handley et al. | 2008 | Untangling differentiation in arc lavas: Constraints from unusual minor and trace element variations at Salak Volcano, Indonesia | Chemical Geology, 255, pp. 360-376. | Geochemistry analisis (Sr-Hf-Nd isotope analysis) | Gunung Salak, Jawa Barat | Meneliti penyebab perbedaan konsentrasi TiO2, P2O5, Y, HFSE dan REE pada batuan vulkanis gunung salak yang berasal dari bagian atas dan sisi samping vent. |
| De Hoog, Taylor dan Van Bergen | 2009 | Hydrogen-isotope systematics in degassing basaltic magma and application to Indonesian arc basalts | Chemical Geology, 266, pp. 256–266. | hydrogen fractionation model, Oxygen isotope analysis | Sunda dan Sangihe arc | Meneliti proses perubahan isotop hidrogen selama proses degassing magma basaltic-andesite |
| Reddy et al. | 2009 | Deformation-related microstructures in magmatic zircon and implications for diffusion | Contributions to Mineralogy and Petrology, 157, pp. 231–244. | microstructural analysis of zircon dengan electron backscatter diffraction (EBSD), Panchromatic cathodoluminescence (PCL), orientation contrast imaging | Sunda arc, Java (G. Lawu dan Ponorogo) | Meneliti terjadinya deformasi microstruktur zircon magmatik dan implikasinya bagi karakteristik difusi zircon |
| Deegan et al. | 2010 | Magma-Carbonate Interaction Processes and Associated CO2 Release at MerapiVolcano, Indonesia: Insights from Experimental Petrology | Journal of Petrology, 51(5), pp. 1027-1051. | Eksperimen dekarbonasi, analisis isotop Sr dan trace elemen (menggunakan ICP-MS), analisis tekstur kristal (XRF) | Jawa Tengah, G. Merapi | Meneliti proses interaksi antara magma dengan karbonat crustal |
| Handley, Macpherson dan Davidson | 2010 | Geochemical and Sr–O isotopic constraints on magmatic differentiation at Gede Volcanic Complex, West Java, Indonesia | Contributions to Mineralogy and Petrology, 159, pp. 885–908. | Major and trace element analysis, Sr and Oxygen isotope analysis, mineral analysis, petrography and stratigraphy | Jawa Barat (G. Gede) | Meneliti peran fractional crystallisation dan pencampuran magma, serta arc crust pada proses evolusi magma |
| Herrington et al. | 2011 | Temporal association of arc–continent collision, progressive magma contamination in arc volcanism and formation of gold-rich massive sulphide deposits on Wetar Island (Banda arc) | Gondwana Research, 19, pp. 583-593 | Analisis geochemistry dengan spectrometer X-ray fluorescence, mass spectrometer, laser fluorination (LF) | Banda arc, Pulau Wetar | Meneliti hubungan arc-collision dan kontaminasi magma terhadap kandungan deposit sulfida yang kaya emas |
| Chesner | 2012 | The Toba Caldera Complex | Quaternary Iinternational, 258, pp. 5-18. | Literatur review | Sumatera, Toba | Mengetahui pola erupsi berdasarkan sifat fisika vulkanologi kaldera yang kaya akan silika, evolusi geokimia magma silika, dan penginderaan geofisika sub-vulkanik aktif. |
| Dahren et al. | 2012 | Magma plumbing beneath Anak Krakatau volcano, Indonesia: evidence for multiple magma storage regions | Contributions to Mineralogy and Petrology, pp. 163, pp. 631–651. | Thermobarometric model (terdiri dari clinopyroxene-melt thermobarometry, plagioclase-melt thermobarometry, clinopyroxene composition, barometry and olivine-melt thermometry) | Perairan Sunda, Gunung Anak Krakatau | mengetahui mekanisme sistem magma gunung berapi untuk memprediksi sifat letusan |
| Kushendratno et al. | 2012 | Recent explosive eruptions and volcano hazards at Soputan volcano—a basalt stratovolcano in north Sulawesi, Indonesia | Bulletin of Volcanology, 74, pp. 1581–1609. | GPS, analisis data seismik, emisi gas dan petrologi | Sulawesi Utara, Gunung Soputan | Mengetahui mekanisme letusan gunung berapi basalt untuk mitigasi erupsi |
| Gertisser et al. | 2012 | Processes and Timescales of Magma Genesis and differentiation Leading to the Great Tambora Eruption in 1815 | Journal of Petrology, 53(2), pp. 271-293. | Hf isotop analysis | Sumbawa, G. Tambora | Meneliti proses penurunan/perubah-an magma trachybasalt ke trachyandesite yang dierupsikan pada 1815 |
| Troll et al. | 2012 | Crustal CO2 liberation during the 2006 eruption and earthquake events at Merapi volcano, Indonesia | Geophysical Research Letters, 39. | Geochemistry analysis (C isotop analysis) | Jawa Tengah, G. Merapi | Meneliti pengaruh crustal terhadap pelepasan CO2 selama erupsi dan gempa Yogyakarta th 2006 |
| Gardner et al. | 2013 | Crustal Differentiation Processes at Krakatau Volcano, Indonesia | Journal of Petrology, 54(1), pp. 149-182. | Isotop analysis O, Sr dan Nd | Sunda, G. Krakatau | Meneliti proses-proses pembentukan crustal G. Krakatau berdasarkan data produk letusan dan crustal th 1883, 1993 dan 2002 |
| Troll et al. | 2013 | Magmatic differentiation processes at Merapi Volcano: inclusion petrology and oxygen isotopes | Journal of Volcanology and Geothermal Research, 261, pp. 38-49. | Petrography method, geochemistry analysis (O isotop analysis) | Jawa Tengah, G. Merapi | Meneliti pengaruh crustal terhadap proses terbentuknya magma dalam sistem G. Merapi untuk mengetahui fenomena yang dapat mendorong erupsi hebat |
| Chadwick et al. | 2013 | Petrology and geochemistry of igneous inclusions in recent Merapi deposits: a window into the sub-volcanic plumbing system | Contributions to Mineralogy and Petrology, 165, pp. 259–282. | Analisis Petrography, geochemistry dan geobaromethry | Jawa, Gunung Merapi | Mengetahui sistem pompa dan proses pembentukan magma sub-vulkanik Gunung Merapi |
| Costa et al. | 2013 | Petrological insights into the storage conditions, and magmatic processes that yielded the centennial 2010 Merapi explosive eruption | Journal of Volcanology and Geothermal Research, 261, pp. 209-235 | Analisis petrography, geochemistry, geobaromethry dan model termodinamika dengan algoritma MELTS | Jawa, Gunung Merapi | Mengetahui mekanisme proses pembentukan magma penyebab letusan Gunung Merapi 2010 |
| Halldórsson et al. | 2013 | Resolving volatile sources along the western Sunda arc, Indonesia | Chemical Geology, 339, pp. 263-282. | Inverted funnel method, Gas chromatography | Sunda arc bagian barat | Mengetahui kandungan gas volatil yang terdapat pada sub-arc mantle (subducting slab dan mantle wedge) berdasarkan isotop He-C-N pada over-riding arc crust |
| Innocenti et al. | 2013 | The pre-eruption conditions for explosive eruptions at Merapi volcano as revealed by crystal texture and mineralogy | Journal of Volcanology and Geothermal Research, 261, pp. 69-86. | Metode petrographic menggunakan petrographic microscope, analisis crystal size distribution | Jawa, Gunung Merapi | Membandingkan struktur kristal dan mineralogi tephra pre-erupsi dengan kandungan magma bagian dome dan lava |
| Jeffrey et al. | 2013 | The pre-eruptive magma plumbing system of the 2007–2008 dome-forming eruption of Kelut volcano, East Java, Indonesia | Contributions to Mineralogy and Petrology, 166, pp. 275–308 | Analisis Petrography, geochemistry | Jawa, Gunung Kelut | Mengetahui sistem pompa dan proses pembentukan magma penyebab letusan Gunung Kelut 2007-2008 |
| Van Der Zwan, Chadwick dan Troll | 2013 | Textural history of recent basaltic-andesites and plutonic inclusions from Merapi volcano | Contributions to Mineralogy and Petrology, 166, pp. 43-63. | Analisis Crystal Size Distribution (CSD) | Jawa, Gunung Merapi | Mengetahui mekanisme proses kristalisasi yang menyebabkan erupsi Merapi kaya basaltic-andesites |
| Chaussard, Amelung dan Aoki | 2013 | Characterization of open and closed volcanic systems in Indonesia and Mexico using InSAR time series | Journal of Geophysical Research: Solid Earth, 118(8), pp. 3957-3969. | Interferometric synthetic aperture radar (InSAR) | Tarns-Mexican Belt (wilayah Indonesia di Gunung Kerinci, Sinabung dan Merapi) | Meneliti pola deformasi gunung berapi untuk mengetahui sistem vulkanik terbuka atau tertutup |
| Luehr et al. | 2013 | Fluid ascent and magma storage beneath Gunung Merapi revealed by multi-scale seismic imaging | Journal of Volcanology and Geothermal Research, 261, pp. 7-19. | Seismic tomography | Jawa Tengah, G. Merapi | Menelti kenaikan fluida dan sistem penyimpanan magma G. Merapi |
| Charter dan Dasgupta | 2015 | Hydrous basalt–limestone interaction at crustal conditions: Implications for generation of ultracalcic melts and outflux of CO2at volcanic arcs | Earth and Planetary Science Letters, 427, pp. 202-214. | Experimental petrology | Global (untuk Indonesia, G. Merapi) | Menggunakan eksperimen petrologi untuk meneliti karakteristik reaksi dan proses pemecahan karbonat sehingga terbentuk lelehan ultrakalsit dan CO2 pada gunung berapi |
| Prambada et al. | 2016 | Eruptive history of Sundoro volcano, Central Java, Indonesia since 34 ka | Bulletin of Volcanology, 78(81). | Stratigraphy, radiokarbon penentuan umur, petrography, dan analisis geokimia batuan | Jawa, Yogyakarta | Merekonstruksi erupsi Gunung Sundoro untuk prediksi volume erupsi |
| Erdman et al. | 2016 | Constraints from Phase Equilibrium Experiments on Pre-eruptive Storage Conditions in Mixed Magma Systems: a Case Study on Crystal-rich Basaltic Andesites from Mount Merapi, Indonesia | Journal of Petrology, 57(3), pp. 535-560. | Phase equilibrium experiments | Jawa Tengah, G. Merapi | Menggunakan eksperimen untuk mengetahui kondisi penyimpanan magma sebelum letusan dan proses pengisisan kembali magma dari penampungan crustal teratas |
| Deegan et al. | 2016 | Pyroxene standards for SIMS oxygen isotope analysis and their application to Merapi volcano, Sunda arc, Indonesia | Chemical Geology 447, pp. 1-10. | Secondary Ion Mass Spectrometry (SIMS), laser fluorination (LF) | Jawa, Gunung Merapi | Menstandarisasi SIMS dengan mineral batuan asli Augite dan Enstatite, dan menggunakannya untuk pengujian kandungan pyroxyne Merapi |
| Me´ trich et al. | 2017 | New Insights into Magma Differentiation and Storage in Holocene Crustal Reservoirs of the Lesser Sunda Arc: the Rinjani–Samalas Volcanic Complex (Lombok, Indonesia) | Journal of Petrology, 58(11), pp. 2257–2284. | Geochemistry analysis (ICP-MS, spectrophotometry), Radiocarbon dating | Lombok (Kompleks gunung berapi Rinjani-Samalas) | Meneliti proses magmatik didalam sistem G. Rinjani-Samalas dan perubahan magma |
| Geiger et al. | 2018 | Multi-level magma plumbing at Agung and Batur volcanoes increases risk of hazardous eruptions | Scientific Reports, 8(1). | Mineral-melt equilibrium thermobarometry dan analisis oksigen dan isotop He | Bali, Gunung Batur dan Agung | Mengetahui sistem magma Gunung Batur dan Gunung Agung untuk memprediksi sifat letusan |
| Whitley et al. | 2019 | Crustal CO2 contribution to subduction zone degassing recorded through calc-silicate xenoliths in arc lavas | Scientific Reports, 9. | Petrography method, geochemistry analysis (C dan O isotop analysis) | Jawa Tengah, G. Merapi | Meneliti efisiensi dan waktu terjadinya proses pelepasan CO2 crustal serta kontribusinya pada CO2 atmosfer |
| Park et al. | 2019 | Chalcophile element fertility and the formation of porphyry Cu ± Au deposits | Mineralium Deposita, 54, pp. 657–670. | EPMA, ICP-MS | Global (Argentina, Jepang, Indonesia, Cile). Indonesia: Papua | Membuktikan bahwa kelimpahan logam calcophile di sumber magma menyebabkan terbentuknya deposit Cu dan Au |

**Topik (3) evolusi struktur tektonik disebabkan tumbukan lempeng benua (arc-continent collision)**

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| **Author** | **Tahun** | **Judul** | **Sumber publikasi** | **Metode/ instrumen** | **Wilayah** | **Tujuan penelitian** |
| Charlton et al. | 2002 | The permian of Timor: stratigraphy, palaeontology, palaeogeography | Journal of Asian Earth Sciences, 20(6), pp. 719-774. | Literature review | Timor | Meneliti stratigraphy, palaeontology and palaeogeography batuan permian dari Timor |
| Elburg et al. | 2002 | Origin of geochemical variability by arc-continent collision in the Biru Area, Southern Sulawesi (Indonesia) | Journal of Petrology, 43(4), pp. 581-606. | whole-rock mayor dan trace element analisis, Pb-Sr-Nd Isotope analisis | Sulawesi Selatan (Biru area) | Meneliti penyebab keberagaman geokimia di area Biru tempat tumbukan arc-continent |
| Widiwijayanti et al. | 2003 | Structure and evolution of the Molucca Sea area: constraints based on interpretation of a combined sea-surface and satellite gravity dataset | Earth and Planetary Science Letters, 251(1-2), pp. 135-150. | interpretation of a combined sea-surface and satellite gravity dataset menggunakan aplikasi dan model tertentu | Laut Molucca (Indonesia Timur) | Meneliti struktur dan evolusi wilayah laut Molucca |
| Djajadihardja et al. | 2004 | Evolution of an accretionary complex along the north arm of the Island of Sulawesi, Indonesia | Island Arc, 13, pp. 1-17. | Multichannel seismic reflection profiling | Sulawesi Utara | Meneliti evolusi struktur accretionary prism Sulawesi Utara berdasarkan seismic reflection profile dan membandingkan struktur accretionary dengan accretionary complex Nankai |
| Fournier et al. | 2004 | Backarc extension and collision: an experimental approach to the tectonics of Asia | Geophysical Journal Iinternational, 157, pp. 871–889. | Eksperimen deformation modelling | Global | Membuat model untuk mengetahui peran skala besar perluasan subduction zone terhadap tectonik hasil collision pada deformasi litosphere Asia bagian timur |
| Widiwijayanti et al. | 2004 | Geodynamic evolution of the northern Molucca Sea area (Eastern Indonesia) constrained by 3-D gravity field inversion | Tectonophysics, 386, pp. 203-222. | 3-D gravity field inversion image | Laut Molucca (Indonesia Timur) | Meneliti evolusi dan struktur tektonik crustal wilayah Laut Molucca utara |
| Elburg et al. | 2005 | Australia and Indonesia in collision: geochemical sources of magmatism | Journal of Volcanology and Geothermal Research, 140, pp. 25-47. | Isotope analysis Sr, Nd and Pb | Indonesia-Australia collision zone (Alor, Lirang, Wetar, Romang) | Meneliti komposisi geokimia batuan di Indonesia-Australia collision zone untuk mengetahui pengaruh crustal terhadap pembentukan magma |
| Gaina dan Muller | 2007 | Cenozoic tectonic and depth/age evolution of the Indonesian gateway and associated back-arc basins | Earth-Science Reviews, 83, pp. 177-203. | Seismic tomography, paleobathymetry, literature review, kombinasi interpretasi geophysical dan geological data | Global | Mereview evolusi tektonik wilayah perbatasan antara Asia Tenggara dan Pasifik Barat dan membuat model tektonik untuk transformasi lempeng yang berdekatan dengan Indonesia selama Cenozoic |
| Kaneko et al. | 2007 | On-going orogeny in the outer-arc of the Timor–Tanimbar region, eastern Indonesia | Gondwana Researc, 11, pp. 218-233. | Review Structural and petrological studies of the high P/T metamorphic belt | Timor-Tanimbar (Indonesia bagian Timur) | Meneliti struktur dan proses terbentunya orogeny di outer-arc Timor Tanimbar region |
| Smyth et al. | 2007 | The deep crust beneath island arcs: Inherited zircons reveal a Gondwana continental fragment beneath East Java, Indonesia | Earth and Planetary Science Letters, 258, pp. 269-282. | U–Pb dating: Zircon grains were analysed for Pb isotope composition and U, Th and Pb concentrations | Jawa Timur | Meneliti perkembangan arc berdasarkan distribusi dan umur zircon dan membuktikan adanya fragment continental Gondwana di crustal dalam wilayah Jawa Timur |
| Elburg dan Kamenetsky | 2008 | Limited influence of subducted continental material on mineralogy and elemental geochemistry of primitive magmas from Indonesia–Australia collision zone | Lithos, 105, pp. 73-84. | Trace elements analysis, Isotope analysis Sr, Nd and Pb isotope | Indonesia-Australia collision zone | Meneliti komposisi isotop batuan dan kristal untuk mengetahui pengaruh material subducted continental terhadap komposisi magma di zona tumbukan Indonesia-Australia. |
| Harris et al. | 2009 | Transition from subduction to arc-continent collision: Geologic and neotectonic evolution of Savu Island, Indonesia | Geosphere, 5(3), pp. 152-171. | biostratigraphic analyses, stratigraphy, Seismic reflection tomography (structure), GPS (strain) and geomorphology analysis | Pulau Savu (Indonesia Timur) | Meneliti terjadinya transisi dari subduction ke arc-continent collision berdasarkan evolusi geologi dan tektonik yang terjadi di Pulau Savu |
| Sapin et al. | 2009 | Alternating thin versus thick-skinned decollements, example in a fast tectonic setting: The Misool–Onin–Kumawa Ridge (West Papua) | Journal of Structural Geology, 31, pp. 444-459. | Seismic stratigraphy yang diperoleh dari pengeboran minyak, topography dan bathymetry analisis | Papua Bbarat (Misool–Onin–Kumawa Ridge) | Meneliti evolusi MOKR dengan pengamatan geometri struktur, meneliti waktu dan aliran tektonik sejak pertengahan Miocene, mengajukan model tahapan pembentukan MOKR |
| Kadarusman et al. | 2010 | World's youngest blueschist belt from Leti Island in the non-volcanic Banda outer arc of Eastern Indonesia | Gondwana Research, 18, pp. 189-204. | Petrological studies of the high P/T metamorphic belt, Geothermobarometry | Timor-Tanimbar, Pulau Leti (Indonesia Timur) | Meneliti proses terbentuknya mineral dan bantalan amphibole, merekonstruksi terbentuknya metamorphic belt dan evolusi wilayah Timor-Tanimbar menggunakan petrologic criteria |
| Maruyama et al. | 2010 | A new perspective on metamorphism and metamorphic belts | Gondwana Research, 18. pp. 106-137. | Literature review | Indonesia (Timor-Tanimbar), Fransiscan dan Sanbagawa belts | mengajukan konsep baru berkaitan dengan geodinamika dan tektonik regional metamorphic belts. |
| Ely et al. | 2011 | Evolution of Ataúro Island: Temporal constraints on subduction processes beneath the Wetar zone, Banda Arc | Journal of Asian Earth Sciences, 41, pp. 477-493. | Geochemical analysis | Zona Wetar, Banda arc | Meneliti evolusi geokimia dan proses subduksi dari Banda arc hingga utara wilayah Timor |
| Nguyen et al. | 2013 | Rapid Pliocene uplift of Timor | Geology, 41(2), pp. 179-182. | Topography analysis, geochronology analysis | Banda arc, Timor | Meneliti deformasi crustal melalui kenaikan pliocene di Pulau Timor |
| Pownall, Hall, Watkinson | 2013 | Extreme extension across Seram and Ambon, eastern Indonesia: evidence for Banda slab rollback | Solid Earth, 4, pp. 277–314. | Digital elevation models (DEMs), Shuttle Radar Topography Mission (SRTM) dan Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) surveys | Banda arc, Seram | Membuktikan adanya perpanjangan crustal dari Seram hingga Ambon |
| Hutchison | 2014 | Tectonic evolution of Southeast Asia | Bulletin of the Geological Society of Malaysia, 60, pp. 1 – 18 | Literatur review (geokimia, analisis foraminifera, dll) | Asia Tenggara (Untuk Indonesia: Sumatra dan Kalimantan | Mereview evolusi tektonik di Asia Tenggara |
| Maulana, Yonezu dan Watanabe | 2014 | Geochemistry of Rare Earth Elements (REE) in the Weathered Crusts from the Granitic Rocks in Sulawesi Island, Indonesia | Journal of Earth Science, 25(3), pp. 460–472. | Geochemistry analysis (XRD, Spectrometry) | Sulawesi (Mamasa dan Palu) | Meneliti kandungan Rare Earth Eelements (REE) batuan granit pada weathered crustal (dipengaruhi cuaca) |
| Maulana et al. | 2016 | Origin and geodynamic setting of Late Cenozoic granitoids in Sulawesi, Indonesia | Journal of Asian Earth Sciences, 124, pp. 102-125. | Petrographic method, Sr, Nd, and Pb isotop analysis, whole rock O analysis | Sulawesi | Meneliti proses terbentuknya dan geodinamis setting granitoid dari akhir zaman Cenozoic |
| Zheng et al. | 2016 | Structures around the Tinjar-West Baram Line in northern Kalimantan and seafloor spreading in the proto-South China Sea | Geological Journal, pp. 513-523. | Rekonstruksi paleomagnetik | Tinjar, Kalimantan | Menentukan proses geodinamika pembentukan dan evolusi Tinjar-west Baram line |
| Porritt et al. | 2016 | Continent–arc collision in the Banda Arc imaged by ambient noise tomography | Earth and Planetary Science Letters, 449, pp. 246-258. | Ambient noise tomography | Banda arc | Meneliti struktur crustal mantle dan litosphere wilayah Banda arc dan hubungan antara tumbukan arc-continent (collision arc-continent) dengan orogenesis |
| Hennig et al. | 2017 | Rapid cooling and exhumation as a consequence of extension and crustal thinning: Inferences from the Late Miocene to Pliocene Palu Metamorphic Complex, Sulawesi, Indonesia | Tectonophysics, 712-713, pp. 600-622. | Geothermobarometric dan 40Ar/39Ar dan (U-Th)/He thermochronology | Palu, Sulawesi | Meneliti karakteristik proses tektonik yang mendorong rapid-cooling dan exhumation pada batuan metamorf Palu (Palu Metamorf complex) |
| Pownall, Hall dan Armstrong | 2017 | Hot lherzolite exhumation, UHT migmatite formation, and acid volcanism driven by Miocene rollback of the Banda Arc, eastern Indonesia | Gondwana Research, 51, pp. 92-117. | Petrography, Iherzolite thermobarometry, geochronology (K–Ar, 40Ar/39Ar, Rb–Sr, and U–Pb age analysis) | Banda arc (Seram dan Ambon) | Meneliti evolusi batuan pada T tinggi, pelelehan dan proses asam magma pada endapan protolith batuan Kobipoto complex |
| White et al. | 2017 | The geological history of the Latimojong region of western Sulawesi, Indonesia | Journal of Asian Earth Sciences, 138, pp. 72-91. | Analisis biostratigraphy dan geochemistry | Sulawesi Barat, Latimojong | Memperbarui peta geologi dan stratigraphy wilayah Latimojong (Latimojong Metamorphic Complex, Toraja Group, pegunungan Makale dan Enrekang Volcanics) |
| White et al. | 2019 | Tectonic Mode Switches Recorded at the Northern Edge of the Australian Plate During the Pliocene and Pleistocene | Tectonics, 38, pp. 281–306 | Analisis dengan Laser Ablation‐Inductively Coupled Plasma‐Mass Spectrometry (LA‐ICP‐MS) | Lengguru, Papua Barat | Memperkirakan berapa lama dan bagaimana terjadinya deformasi di wilayah Lengguru belt |

**Topik (4) proses magmatik atau sedimentologi yang dipengaruhi subduction zone**

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| **Author** | **Tahun** | **Judul** | **Sumber publikasi** | **Metode/ instrumen** | **Wilayah** | **Tujuan penelitian** |
| Vroon et al. | 2001 | Oxygen isotope systematics of the Banda Arc: Low d18O despite involvement of subducted continental material in magma genesis | Geochimica et Cosmochimica Acta, 65(4), pp. 589-609. | Laser-ﬂuorination (LF) oxygen isotope analysis, conventional whole-rock analisis, Sr analysis | 60 pegunungan di Banda arc (Indonesia Timur) | Membandingkan densitas oksigen isotop cara konvensional dan cara LF dan mendiskusikan pengaruh subducted material pada pembentukan magma |
| Turner dan Foden | 2001 | U, Th, Ra disequilibria, Sr, Nd and Pb isotope and trace element variations in Sunda arc lavas: predominance of subducted sediment component | Contributions to Mineralogy and Petrology, 142(1), pp. 43-57. | Mass spectometri U, Th, Ra; Sr, Pb, Nd isotope analysis; mayor and trace element analysis | Sunda arc (Sumatera, Jawa hingga Flores) | Meneliti geokimia lava untuk mengetahui proses fisika pembentukan magma |
| Gertisser dan Keller | 2003 | Trace element and Sr, Nd, Pb, O isotope variations in medium-K and high-K volcanic rocks from Merapi volcano, Central Java, Indonesia: Evidence for the involvement of subducted sediments in Sunda arc magma genesis | Journal of Petrology, 44(3), pp. 457-489. | Mayor dan Trace element analisis menggunakan XRF; dan Sr, Nd, Pb and O isotope analisis | Jawa Tengah (G. Merapi) | Meneliti batuan vulkanis medium K dan high K untuk mengetahui pengaruh subducted material pada proses pembentukan magma |
| Elburg, Van Bergen dan Foden | 2004 | Subducted upper and lower continental crust contributes to magmatism in the collision sector of the Sunda-Banda arc, Indonesia | Geology, 32(1), pp. 41-44. | Pb isotope analysis | Banda-Sunda arc collision zone | Meneliti pengaruh bagian paling atas dan paling bawah continental crust tersubduksi pada proses pembentukan magma di zona tumbukan Sunda-Banda arc |
| Setidjadi et al. | 2006 | Cenozoic Island Arc Magmatism in Java Island (Sunda Arc, Indonesia): Clues on Relationships between Geodynamics of Volcanic Centers and Ore Mineralization | Resource Geology, 56(3), pp. 267–292. | Using geoscience datasets for the entire Java island to build a database. Database linked to GIS to visualize, query, spatial analysis, and map production. Petrochemical data dari literatur | Sunda arc (Jawa) | Meneliti faktor-faktor penentu mineralisasi logam di Pulau Jawa dan meneliti hubungan antara lokasi deposit mineral dengan pusat-pusat vulkanik |
| Smyth, Hall dan Nichols | 2008 | Significant volcanic contribution to some quartz-rich sandstones, East Java, Indonesia | Journal of Sedimentary Research, 78, pp. 335–356. | Thin-selection analysis, SEM, SEM-CL, back scatter imaging | Jawa Timur | Merangkum karakter yang membedakan batuan quartz dari berbagai region dan membahas sandstones kaya kuarsa di Jawa Timur, penyebab komposisi quarts yang tinggi berdasarkan potential continental, metamorphic, volcanic, and sedimentary source |
| Smith et al. | 2009 | Nature and genesis of Kalimantan diamonds | Lithos, 112, pp. 822-832. | Fourier transform infra red spectroscopy, analysis internal structure dengan cathodoluminescence (CL) imaging | Kalimantan | Meneliti proses terbentuknya berlian Kalimantan melalui penelitian terhadap karakteristik dan umur batuan berlian. |
| Fiorentini dan Garwin | 2010 | Evidence of a mantle contribution in the genesis of magmatic rocks from the Neogene Batu Hijau district in the Sunda Arc, South Western Sumbawa, Indonesia | Contributions to Mineralogy and Petrology, 159(6), pp. 819-837. | whole-rock mayor dan trace element analisis, Pb, Sr, Nd isotope analisis | Distrik Batu Hijau, Barat Daya Sumbawa | Meneliti pengaruh mantle pada proses pembentukan dan karakteristik batuan magma |
| Nebel et al. | 2011 | The effect of sediment recycling in subduction zones on the Hf isotope character of new arc crust, Banda arc, Indonesia | Earth and Planetary Science Letters, 303, pp. 240-250. | Petrography dan isotope measurement | Banda arc | Mengetahui pengaruh Hf daur ulang pada subduction zones Banda arc terhadap kandungan isotop Hf batuan. |
| Handley et al. | 2014 | Insights from Pb and O isotopes into along-arc variations in subduction inputs and crustal assimilation for volcanic rocks in Java, Sunda arc, Indonesia | Geochimica et Cosmochimica Acta, 139, pp. 205-226. | Ba/Hf ratio analysis, Pb isotope analysis | Sunda arc, Jawa Barat (G. Gede, Salak, Galunggung), Jawa Tengah (Merbabu, Merapi), Jawa Timur (Ijen) | Meneliti pengaruh proses asimilasi crustal dan crustal material zona tersubduksi terhadap batuan gunung di Jawa |
| Nebel et al. | 2015 | Redox-variability and controls in subduction zones from an iron-isotope perspective | Earth and Planetary Science Letters, 432, pp. 142-151. | Analisis Fe isotope dan mass spectrometry | Banda arc | Meneliti keberagaman redox dan pengaruh subduction zone pada isotop besi (Fe) |
| Friederich, Moore dan Flores | 2016 | A regional review and new insights into SE Asian Cenozoic coal-bearing sediments: Why does Indonesia have such extensive coal deposits? | International Journal of Coal Geology, 166, pp. 2-35. | Palaeogeography dan Palaeoclimatology | Sunda bagian utara dan selatan, Kepulauan Filipina | Meneliti kandungan batubara di wilayah penelitian dan membuktikan adanya sedimen kaya batubara dari zaman Cenozoic |
| He and Zhang | 2018 | S-to-P Conversions from Mid-mantle Slow Scatterers in Slab Regions: Observations of Deep/Stagnated Oceanic Crust? | Pure and Applied Geophysics, 175, pp. 2045-2055. | Seismic array analysing technique | Indonesia bagian Timur, Wilayah Izu-Bonin Papua dan Peru | Meneliti pengaruh subducted oceanic crust terhadap struktur bagian tengah mantle (mid-mantle structure) pada slab wilayah penelitian |
| Lunt | 2019 | The origin of the East Java Sea basins deduced from sequence stratigraphy | Marine and Petroleum Geology, 105, pp. 17-31. | Stratigraphy | Jawa Timur | Meneliti terbentuknya cekungan Laut Jawa bagian timur berdasarkan komposisi sedimen |
| Wu et al. | 2019 | The continental crust contributes to magmatic hydrothermal gold deposit in Ciemas, West Java, Indonesia: Constraints from Hf isotopes of zircons and in situ Pb isotopes of sulfides | Ore Geology Reviews, 112. | Analisis Hf isotop dan Pb isotop dengan laser ablation system | Jawa Barat, Ciemas | Meneliti kontribusi struktur crustal pada kandunga emas wilayah Ciemas berdasarkan kandungan Hf isotopes pada zircon dan isotop insitu Pb pada sulfide |
| Maulana, Brocker dan Dan | 2020 | Petrogenesis and geochronology of Cenozoic intrusions in the Poboya and Sassak gold and copper districts in Western Sulawesi, Indonesia: Implications for the mineralization processes and magma sources | Journal of Asian Earth Sciences, 193. | Petrographic analysis, geochemical analysis dan Geochronology | Sulawesi Barat | Meneliti proses mineralisasi dan sumber magma berdasarkan geokimia batuan di distrik emas dan tembaga di Poboya dan Sassak |
| Nugraheni, Sunjaya dan Burhannudinnur | 2020 | The enrichment mechanism of rare earth elements in weathered granitoids, in placer and bauxite laterite | International Journal of Scientific and Technology Research, 9(3), pp. 1506-1511. | Major dan trace elements dengan menggunakan XRF, Petrography analysis | Bukit Tinggi (Negara Bagian Pahang Malaysia) dan Pulau Bangka | to elucidate the geochemical behavior of Rare Earth Elements (REE) to conceive their concentration within secondary REE-bearing minerals. |