

Yoseph Datu Adiatma, Ph.D.

Geoscientist | Geochemistry & Material Characterization | Resource Exploration | Numerical Modeling
Department of Earth Ocean and Atmospheric Science & National High Magnetic Field Laboratory (NHMFL)
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Ph.D.-trained geoscientist with combined industry and academic experience in materials characterization, isotope geochemistry, and subsurface resource evaluation. Skilled in trace metal and rare earth element (REE) analysis. Proven ability to integrate fieldwork, laboratory analysis, and numerical modeling to solve applied problems in academic and industry settings.

Passionate about applying geochemistry and materials characterization to support magnet materials development, separation processes, and supply chain resilience for critical materials.

Professional Experience

Postdoctoral Research Associate, OSU and FSU	2023 - present
<ul style="list-style-type: none">Conducted trace element geochemical analyses (Sm, Nd, Sr, Ca, Li, Ti isotopes & trace metal concentrations) on shale and carbonate rocksManaged clean lab operations and trained students (graduate and undergraduate)Designed and led multi-day geological field campaignsSecured competitive research funding (e.g., CRC Seed Grant, \$70,000).	
Subsurface Geologist, Vico Indonesia (contract-via LAPI ITB)	2014 – 2016
<ul style="list-style-type: none">Developed static reservoir models for the Semberah Field (Kutai Basin Indonesia)Performed petrophysical analysis to guide downhole fluid analysisCollaborated with multidisciplinary teams to characterize reservoir properties and estimate remaining hydrocarbon resources.	
Field Geologist, Noras Nusantara	Summer 2012
<ul style="list-style-type: none">Conducted comprehensive geological mapping and sampling of coal seam formations in Ketungau Basin IndonesiaPrepared detailed technical reports documenting coal seam characteristics, geological interpretations, and resource assessments.	
Field Engineer Intern, Schlumberger	Summer 2011
<ul style="list-style-type: none">Assisted oilfield operations through direct participation in drilling and measurement activities at Limau Field South Sumatra IndonesiaAssisted senior field engineers with tool lay down procedures and various sensor calibration processesCompleted comprehensive intern project utilizing Petrel software for reservoir modeling and analysis.	

Education

PhD in Earth Science, <i>The Ohio State University</i>	Fall 2023
MS in Earth Science, <i>The Ohio State University</i>	Fall 2018
BS in Geology, <i>Institut Teknologi Bandung</i>	Spring 2014

Technical Skills

Geochemistry & Material Characterization

- Isotope analysis using TIMS and MC ICP MS (including neodymium (Nd), samarium (Sm), strontium (Sr), lithium (Li), and thallium (Tl) isotopes)
- High-precision rare earth and trace element analysis using ICP-MS and ICP OES
- Ultra-low blank sample processing for sub ppb elemental concentration analysis
- Basic mass spectrometer troubleshooting and lab. maintenance

Field Geology

- High-resolution stratigraphic logging, Facies analysis, and sequence stratigraphy
- Geologic Mapping
- Structural geology mapping and fault kinematic analysis

Numerical Modeling and Data Analytics

- Statistical analysis and data visualization using Python and Matlab
- Statistical learning techniques (e.g., artificial neural network using Sci-Kit Learn and PyTorch)
- Geochemical Modeling (isotope mixing model, reservoir box model, diagenesis model)
- Spatial data analysis using (QGIS, cartopy, and GeoPandas)

Community Service and Leadership Roles

Reviewer (Geology, Science Advances, Marine & Petroleum Geology, etc)	2023 - present
Session Organizer , Geological Society of America Annual Meetings	2019 - 2025
Earth Science Delegate , Council of Graduate Student OSU	2022
Student Representative , School of Earth Science Graduate Study Committee	2022
President , AAPG Student Chapter Institut Teknologi Bandung	2012

Selected Latest Publications and Presentations

Peer-reviewed articles

2024	Adiatma, Y.D., Saltzman, M.R., Liu X-M., Wang, X-K., Edwards, C.T., Lithium isotope stratigraphy and Ordovician weathering. <i>Earth and Planetary Science Letters</i> 647, 119030.
2024	Adiatma, Y.D., Saltzman, M.R., Griffith, E.M., 2024. Calcium isotope constraints on a Middle Ordovician carbon isotope excursion. <i>Earth and Planetary Science Letters</i> 641, 118805.

Selected conference abstracts

2025	Saltzman, M.R., Griffith, E.M., Adiatma, Y.D., Haber, P., Fantle, M. S., Pairing Ca and C isotopes to disentangle diagenesis and carbon cycling during Paleozoic carbon isotope excursions. Presented at Goldschmidt Conference 2025 in Prague, Czech Republic
2024	Adiatma, Y.D., Schwarts, M.J., Ahlberg, P., Owens, J.D., Young, S.A., Multiproxy chemostratigraphic constraints on paleoredox conditions during the Early to Middle Ordovician interval in the Baltic Basin. Presented at the GSA Connects 2024 meeting in Anaheim, California