

# Yoseph Datu Adiatma

## Qualification Summary

PhD in Earth Science with experience in sedimentology, stratigraphy, paleoclimatology, isotope geochemistry, and numerical modeling. Main research centers in reconstructing changes in geologic and paleoclimate processes using geochemical proxies (e.g.,  $\delta^{13}\text{C}$ ,  $^{87}\text{Sr}/^{86}\text{Sr}$ ,  $\delta^{44/40}\text{Ca}$ ,  $\delta^7\text{Li}$ ,  $\epsilon_{\text{Nd}}$ ) and their roles in shaping the macro-evolution of life on Earth (i.e., long-term changes in biodiversity and rapid mass extinction events).

## Education

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

## Academic Appointments

2024 - present	Postdoctoral Research Associate, Florida State University <i>Perform geochemical analyses (<math>\text{I/Ca}</math>, <math>\delta^{238}\text{U}</math>, <math>\text{Fe}</math> speciation) on Paleozoic-aged sedimentary rocks to reconstruct the paleoredox states of the Cambrian to Ordovician seawater.</i>
Fall 2023	Postdoctoral Research Associate, The Ohio State University <i>Performed calcium isotope analyses (<math>\delta^{44/40}\text{Ca}</math>) on Paleozoic-aged carbonate rocks and developed numerical models to constrain the role of diagenesis in affecting geochemical proxies in carbonate rocks.</i>
2018 - 2023	Graduate Research Associate, The Ohio State University, <i>Collected samples, performed numerous geochemical analyses (<math>\delta^7\text{Li}</math>, <math>^{87}\text{Sr}/^{86}\text{Sr}</math>, <math>\epsilon_{\text{Nd}}</math>, <math>\text{Sr/Ca}</math>, <math>\delta^{44/40}\text{Ca}</math>) on Ordovician-aged carbonate rocks, and developed a suite of numerical models to reconstruct changes in global silicate weathering and its role in causing multimillion year climate cooling.</i>

## Publications

### Peer-reviewed articles

2022	Avila, T.D., Saltzman, M.R., <b>Adiatma, Y.D.</b> , Joachimski, M.M., Griffith, E.M., Olesik, J.W., 2022. <i>Role of seafloor production versus continental basalt weathering in Middle to Late Ordovician seawater <math>^{87}\text{Sr}/^{86}\text{Sr}</math> and climate.</i> Earth and Planetary Science Letters 593, 117641.
2022	Conwell, C.T., Saltzman, M.R., Edwards, C.T., Griffith, E.M., <b>Adiatma, Y.D.</b> , 2022. <i>Nd isotopic evidence for enhanced mafic weathering leading to Ordovician cooling.</i> Geology.

2019                    **Adiatma, Y.D.**, Saltzman, M.R., Young, S.A., Griffith, E.M., Kozik, N.P., Edwards, C.T., Leslie, S.A., Bancroft, A.M., 2019. *Did early land plants produce a stepwise change in atmospheric oxygen during the Late Ordovician (Sandbian ~458 Ma)?* Palaeogeography, Palaeoclimatology, Palaeoecology 534, 109341.

Manuscripts in review / in preparation

*in review*                    **Adiatma, Y.D.**, Saltzman, M.R., Griffith, E.M., *Calcium isotope constraints on a Middle Ordovician carbon isotope excursion.* in review for Earth and Planetary Science Letters

*in preparation*                    **Adiatma, Y.D.**, Saltzman, M.R., Liu X-M., Wang, X-K., Edwards, C.T., *Lithium isotope evidence of elevated silicate weathering during the Early Ordovician.* in preparation.

## Selected Conference Abstracts and Presentations

2023                    **Adiatma, Y.D.**, Saltzman, M.R., Griffith, E.M., Haber, P.C., Braun, M.G., Edwards, C.T., Diamond, C.W., 2022. Calcium isotope constraints on the origin of the Mid-Darriwilian Carbon Isotope Excursion. Presented at the GSA Annual Meeting, Pittsburgh, PA.

2022                    **Adiatma, Y.D.**, Saltzman, M.R., Griffith, E.M., Haber, P.C., Edwards, C.T., Diamond, C.W., 2022. Calcium Isotope Constraints on Diagenetic Effects in Carbon Isotope ( $\delta^{13}\text{C}$ ) Data: A Case Study from Middle Ordovician Carbonate Strata at Meiklejohn Peak, Nevada. Presented at the AGU Fall Meeting, Chicago, IL.

Haber, P.C., Saltzman, M.R., Griffith, E.M., **Adiatma, Y.D.**, 2022. Early Mississippian calcium isotope stratigraphy and implications for conditions of carbonate deposition. Presented at the Joint Annual North-Central and Southeastern GSA Section Meeting, Cincinnati, OH.

## Honors and Awards

2022                    The Michael S. Johnson Outstanding Graduate Student Award, The Ohio State University, School of Earth Sciences

2010 – 2013                    Dean's List, Institut Teknologi Bandung, Faculty of Earth Sciences and Technology

## Research Grants

2020                    Graduate Student Research Grants, Geological Society of America (\$2800)

2020                    Grants-in-Aid, American Association of Petroleum Geologist (\$2500)

2017 - 2021                    Friends of Orton Hall, The Ohio State University, School of Earth Sciences (range from \$1500 to \$5000)

2013                    L. Austin Weeks Grant American Association of Petroleum Geologist (\$500)

## Field Work Experience

2019	Collierstown, Virginia, USA (1 week)
2018	Germany Valley, West Virginia, USA (1 week)
2018	Antelope Range, Nevada, USA (1 week)
2017	East River Mountain, West Virginia, USA (1 week)
2013	Tapin District, South Kalimantan, Indonesia (5 weeks)

## Professional Associations and Leadership Roles

Indonesia Association of Geologists (IAGI) -- Geological Society of America (GSA) -- American Geophysical Union (AGU) -- American Association of Petroleum Geologists (AAPG)

Student Representative to the Graduate Study Committee at OSU School of Earth Sciences (2021)  
Earth Science Delegate to the OSU Council of Graduate Students (2022)

## Skills

### Geochemistry and Mass Spectrometry

- Sr, Nd, Li, Ca column chemistry
- Basic operations and method development of thermal ionization mass spectrometry (TIMS)
- Basic operations of inductively coupled plasma optical emission spectrometry and mass spectrometry (ICP OES and ICP MS)
- Geochemical modeling

### Programming

- Python
- Matlab

### Miscellaneous

- Unix-like OS operations (Ubuntu, RHEL, FreeBSD)
- Version control software (git)
- High Performance Computing (HPC)