Mabel Owusu Adansi, Ohio University, Athens, OH for her project: *Trace Element Systematics and Zoning in Rutile: Implications for Thermometry & Protolith Application*.

Mabel Adansi a graduate student at Ohio University, is an accomplished geologist whose passion for mineralogy and geochemistry drives her innovative research. Originally from Ghana, I earned my BSc in Geological Engineering from the University of Mines and Technology in 2020. During my studies, I investigated felsic vein systems in host rocks near Aketakyi in the Birimian, South Ashanti Belt, Ghana, to understand their formation, composition, and mineralization processes, which are significant for their potential links to gold mineralization in the region. I worked as a geologist at Adamus Resources Limited, an Australian mining company, from 2020 to 2023. I gained expertise in gold mineralization, geological mapping, grade control, and advanced tools such as Surpac, SQL, OrePro, acQuire, and other software, ensuring precise ore-waste delineation and optimizing mining operations.

The Ian S.E. Carmichael Research Award will support my research that examines rutile's geochemical signatures in subduction-related rocks from four paleosubduction complexes (Sivrihisar Massif and Elekdağ Ophiolite, Turkey; Jenner Beach, Franciscan Complex, USA; South Motagua Fault Zone, Guatemala; and the Saman and Rio Juan Complex in the Dominican Republic). Using petrographic microscopy, scanning electron microscopy (SEM), and laser ablation-inductively coupled plasma mass spectrometry (LA-ICP-MS), I will analyze trace elements and rare earth elements (REEs) such as Zr, Nb, Cr, and V to improve Zr-in-rutile thermometry and protolith identification. This work will deepen our understanding of subduction zone dynamics, aiding tectonic reconstructions, geothermometry, and mineral exploration.

In my free time, I enjoy reading, community outreach, and exploring nature.