

Erik Castañeda, Universidad Nacional Autónoma de México (UNAM), México, for his Project: *Fertility indices and crustal assimilation signatures in copper porphyries in Northwestern Mexico*.

Erik recently completed his Ph.D. in Geosciences, with a specialization in geochemistry and petrology, at the Instituto de Geociencias, UNAM, and is currently awaiting publication of his papers to finish his degree requirements. Under the supervision of Dr. Alexander Iriondo, he worked as a research assistant in the Laboratorio de Caracterización Mineral at UNAM.

His research focuses on isotope geochemistry and the petrology of magmatic systems and ore deposits, tied primarily to the Cretaceous tectonic evolution of the SW margin of North America.



His doctoral project characterizes the copper porphyries at the La Caridad and Cananea mines in Sonora, Mexico, with an emphasis on the fertility conditions associated with the formation of these deposits. His work extends well beyond this, however, tracing the tectonic evolution of the SW North American margin from the Lower Cretaceous—exposed in the Peninsular Ranges Batholith in California—through the Cretaceous-Eocene, represented by the Cretaceous-Eocene Mexican Magmatic Arc and its associated copper porphyries in northwestern Mexico. The study examines how the underlying mantle evolved and how intracrustal assimilation-fractional crystallization processes modify and drive metal accumulation in the crust and aims to determine whether zircon geochemistry can serve as an exploration tool for distinguishing fertile from barren porphyries.

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