

Geochemistry as A Tool in Archaeological Investigations: Applications, Potentials, and Limitations



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[Zoom Link](#) (Mixed-mode)

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Over the past few decades, archaeology has transformed into a highly interdisciplinary field, drawing on methodological and theoretical insights from a diverse range of disciplines, including social sciences, political sciences, biology, chemistry, and geology. This talk will explore the applications of geochemical methods in archaeological research, with a particular focus on strontium isotope analysis. This technique examines the ratios of two stable isotopes of strontium ($^{87}\text{Sr}/^{86}\text{Sr}$), which vary across different geological regions, creating distinct isotopic signatures. These signatures are often transferred through the food web with minimal fractionation. By analyzing and comparing the strontium isotope compositions in human and animal tissues against local baselines, archaeologists can address questions regarding past mobility patterns. Strontium isotope analysis has proven instrumental in solving numerous archaeological/historical mysteries, including the origins of individuals buried at Stonehenge in the United Kingdom. However, despite its strengths, the application of this method in archaeology is accompanied by several limitations and caveats that researchers must carefully consider.



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