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**Computational analysis of lead isotope ratios in artefacts and ores from China: tracing connections, quantifying ambiguity, and rethinking provenance**

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**Citation**

Wang, C. (2026, May 13). *Computational analysis of lead isotope ratios in artefacts and ores from China: tracing connections, quantifying ambiguity, and rethinking provenance*. Retrieved from <https://hdl.handle.net/1887/4303477>

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**Note:** To cite this publication please use the final published version (if applicable).

### Propositions

1. Lead was a key resource in antiquity, and understanding its provenance and circulation is essential for interpreting social and economic organization in ancient societies.
2. In the context of China, the extensive overlap between lead isotope signatures makes it difficult to attribute artifacts to a single source.
3. South China may have served as an early lead source for glassmaking, which hints at consistent long-distance resource supply.
4. Bronze, glass, and lead-glazed ceramics may not have shared a single, unified lead supply system.
5. It is not always appropriate to interpret lead isotope data as unique “fingerprints” of origin in archaeological contexts with extensive isotopic overlap.
6. Provenance research can become more meaningful when it emphasizes connections, material lineages, and areas of uncertainty rather than focusing solely on identifying unique source locations.
7. Geological zoning and ore-forming processes cannot be assumed to guarantee isotopic uniqueness and should not be regarded as the only indicator of provenance reliability.
8. Assumptions about local resource use may often obscure broader regional and inter-regional connections in ancient economies.
9. Reconsidering long-standing interpretive habits could contribute to a better understanding of complex ancient societies.
10. It takes conscious effort to stay optimistic in academic work, and this is equally true in daily life.
11. Although academic success is often measured by results, the true intellectual and personal value of research, as in life, comes from the richness of the process.
12. Each summit reveals another climb.

