Isotope Paleoredox Proxies – Competition and Collaboration Transform Inspiration to Innovation

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Science innovation is commonly depicted as the product of individual inspiration. From Archimedes to Einstein, by way of Copernicus, Kepler, and Galileo, we read the stories of lone heroes inventing and advancing innovative ideas. Reality is much more complicated, extending far beyond the individual (and beyond the individual white males historically at the center of our heroic narratives). "Eureka" moments of inspiration are real, but do not emerge from a vacuum, and the road from a moment of inspiration to a realized innovation is never traveled alone.

Isotope paleoredox proxies developed in this way. A complex network of interactions—reading, listening, presenting, writing, discussing, and debating—led to and from moments of inspiration, turning novel isotopic analyses of elements like Cu, Fe, and Mo, and later Cr, Se, Tl, Hg, and U, into innovative new proxies. Broad communities of diverse individuals collaborated and competed in ways that will never be fully documented or objectively remembered. This presentation will document a bit of that story, paying tribute to the many heroes who are less-sung but no less critical for it.