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HIGHLIGHTS AND BREAKTHROUGHS

Analyses under the curve, identifying how invisible gold is held in pyrite

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ABSTRACT

When laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS) analyses of pyrite plot below the gold solubility line on a gold vs. arsenic plot and have relatively flat counts on laser ablation time-resolved output graphs, it is often interpreted that the gold is held within the pyrite structure. The study by Ehrig et al. (2023, this issue) shows, using a combination of LA-ICP-MS spot analyses of gold in pyrite, transmission electron microscopy, and electron backscatter diffraction that this is not necessarily the case. Furthermore, they use these same techniques to identify how trace elements, including gold, are remobilized in pyrite during deformation and metamorphism.

Keywords: TEM, gold, arsenic, nanoparticles