

## Accepted Manuscript

Sulfur isotope fractionation in pyrite during laser ablation: Implications for laser ablation multiple collector inductively coupled plasma mass spectrometry mapping

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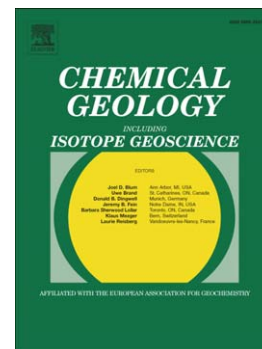
PII: S0009-2541(16)30697-0  
DOI: doi: [10.1016/j.chemgeo.2016.12.037](https://doi.org/10.1016/j.chemgeo.2016.12.037)  
Reference: CHEMGE 18207

To appear in: *Chemical Geology*

Received date: 26 June 2016  
Revised date: 22 December 2016  
Accepted date: 23 December 2016

Please cite this article as: Zhu, Zhi-Yong, Jiang, Shao-Yong, Ciobanu, Cristiana L., Yang, Tao, Cook, Nigel J., Sulfur isotope fractionation in pyrite during laser ablation: Implications for laser ablation multiple collector inductively coupled plasma mass spectrometry mapping, *Chemical Geology* (2016), doi: [10.1016/j.chemgeo.2016.12.037](https://doi.org/10.1016/j.chemgeo.2016.12.037)

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**Sulfur isotope fractionation in pyrite during laser ablation: Implications  
for Laser Ablation Multiple Collector Inductively Coupled Plasma Mass  
Spectrometry mapping**

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**Abstract:** This study reports a detailed evaluation of how key parameters of operation influence the measurement of sulfur isotopes using laser ablation multiple collector inductively coupled plasma mass spectrometry (LA-MC-ICP-MS). Sulfur isotopes are observed to display a fractionation up to 2‰  $\delta^{34}\text{S}$  during analysis of pyrite with different laser parameters using a 193nm ArF excimer laser. In order to understand why the laser parameters affect S isotope fractionation when measuring

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