

# Economic Geology & Planetary Science

## Genesis of magmatic, metasomatic and hydrothermal ore deposits

- Development of innovative geochemical exploration tools for a variety of ore deposits.
- Ore genesis in the lower continental crust

## Critical Mineral Supply Chain Resilience

- Forensic geochemistry
- Critical mineral discovery and source diversification

## The evolution of terrestrial planets and protoplanets

- Oxygen and sulfur evolution in the deep interiors of planetary bodies and its effect on the composition of atmospheres.

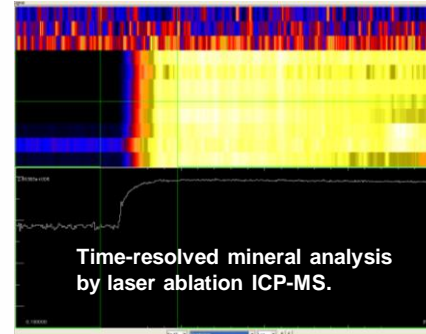
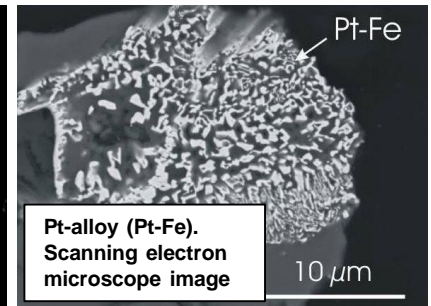
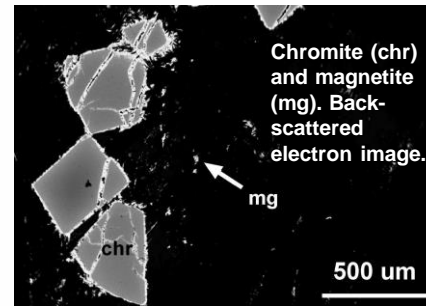
### PoC:

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## Linking fundamental geoscientific research to mining industry applications

### Keywords

- #Economic Geology, #Mineral Deposits, #Geology, #Geochemistry, #Laser Ablation ICP-MS, #Commodities, #Critical Minerals, #Early Earth, #Planetary Evolution

### Recent Funding

- NSF, NASA, Doe Run Company

### Recognitions

- S&T Academy of Mines & Metallurgy Junior Faculty Award 2019
- NASA postdoctoral fellowship award 2014-2016