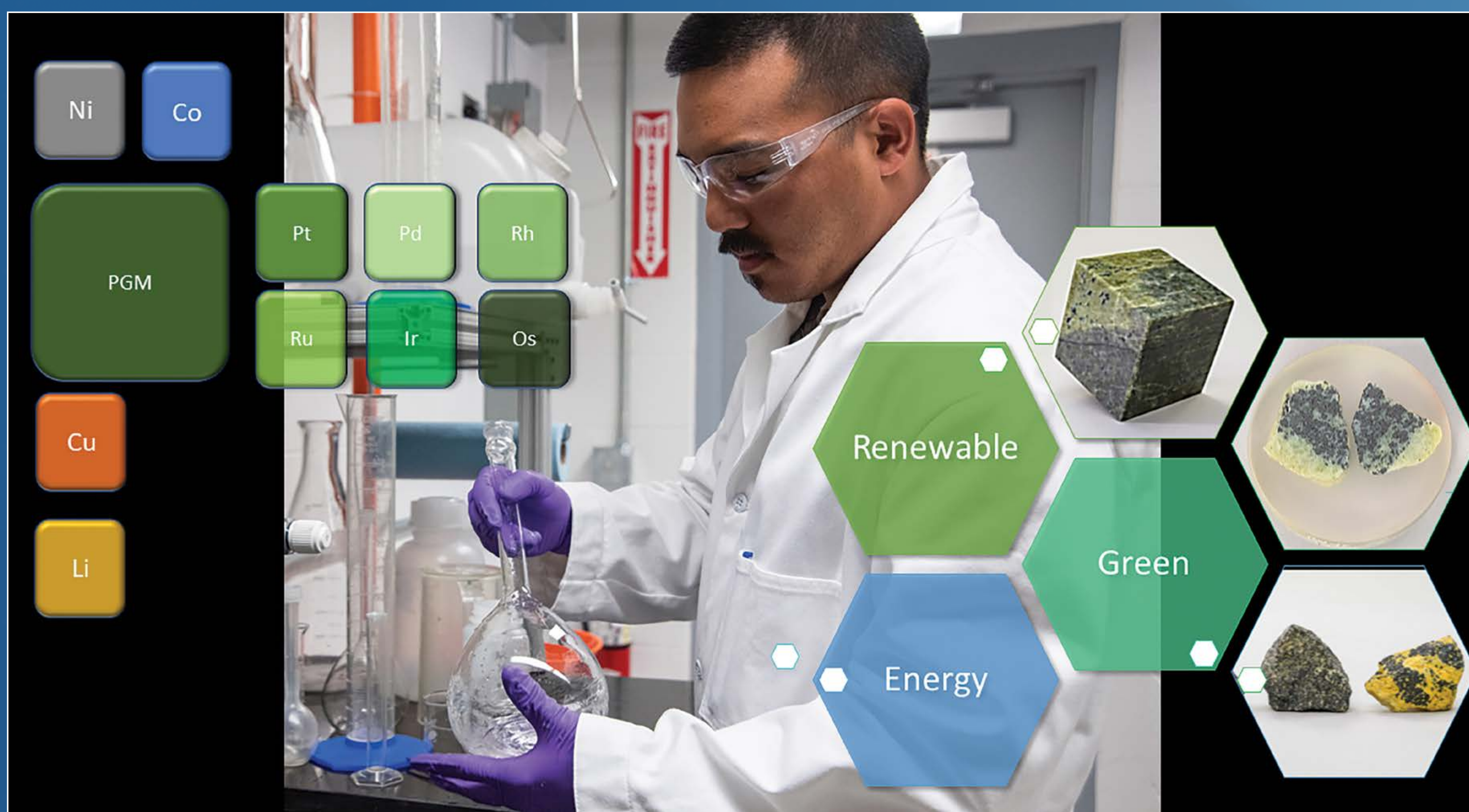


# NETL DISCOVERS SOURCES OF PLATINUM GROUP METALS AS PART OF A PROCESS FOR ATMOSPHERIC CARBON REMOVAL

*This breakthrough has positive implications as an evolving decarbonization technology by developing a sustainable domestic supply chain in conjunction with mineral carbonation waste streams that relies on enhanced mineralization or natural weathering to remove carbon dioxide (CO<sub>2</sub>).*



Platinum group minerals discovered in samples from the Twin Sisters olivine mine in Whatcom County, Washington.

Ultramafic rocks contain minerals that are naturally highly reactive to CO<sub>2</sub>. These rocks are mined and processed to remove atmospheric CO<sub>2</sub> in a practice called mineral carbonation. NETL research focused on pulling critical minerals such as chromium, cobalt, and nickel from these rocks prior to mineral carbonation also discovered valuable quantities of platinum group metals (PGMs).

- Coupling the recovery of PGMs from rocks that are already being mined for CO<sub>2</sub> removal improves the economics of both processes.
- PGMs are crucial catalysts in green hydrogen technologies.
- PGMs are also critical catalytic materials in the manufacturing and automotive sectors.

## RESEARCH PRIORITY



DOMESTIC CRITICAL MINERALS PRODUCTION

## PERFORMERS



NETL ANNUAL  
**ACCOMPLISHMENTS**  
2023



U.S. DEPARTMENT OF  
**ENERGY**

Fossil Energy and  
Carbon Management

