IRCSEM

SHIBAYAMA LAB.

[Mineral Processing and Recycling]

Integrated Research Center for Sustainable Energy and Materials

Mineral Processing Engineering

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Development of Advanced Mineral Processing Technology and Recycling Process

Our laboratory is investigating development of treatment process of unutilized resources which are impurity containing and/or low grade and valuable metals contain electronic waste. The typical research work introduce as follows.

Development of advanced mineral processing technology of unutilized mineral resources

- ◆Treatment process of impurity bearing copper mineral.
- ◆Metal recovery form low grade ore and mine tailing. etc

Development of precious metal extraction process from wasted materials

- ◆ Precious metal leaching process from printed circuit board by halogen leaching.
- Development of novel extractant for selective extraction of precious metal.

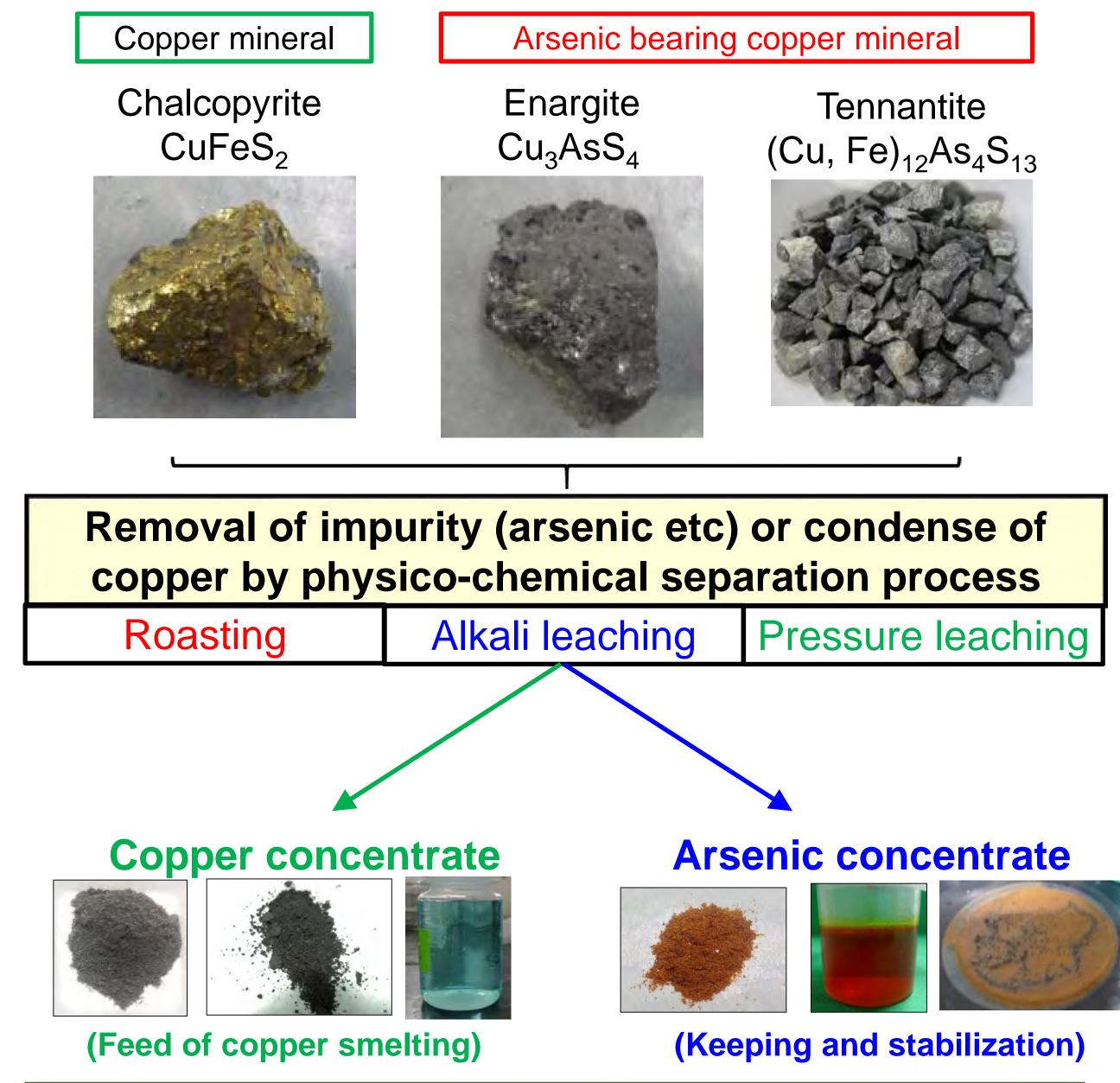
<u>Development of Advanced Mineral Processing</u> <u>Technology for Utilization of Mineral Resources</u>

Development of arsenic and antimony removal process to produce clean copper concentrate

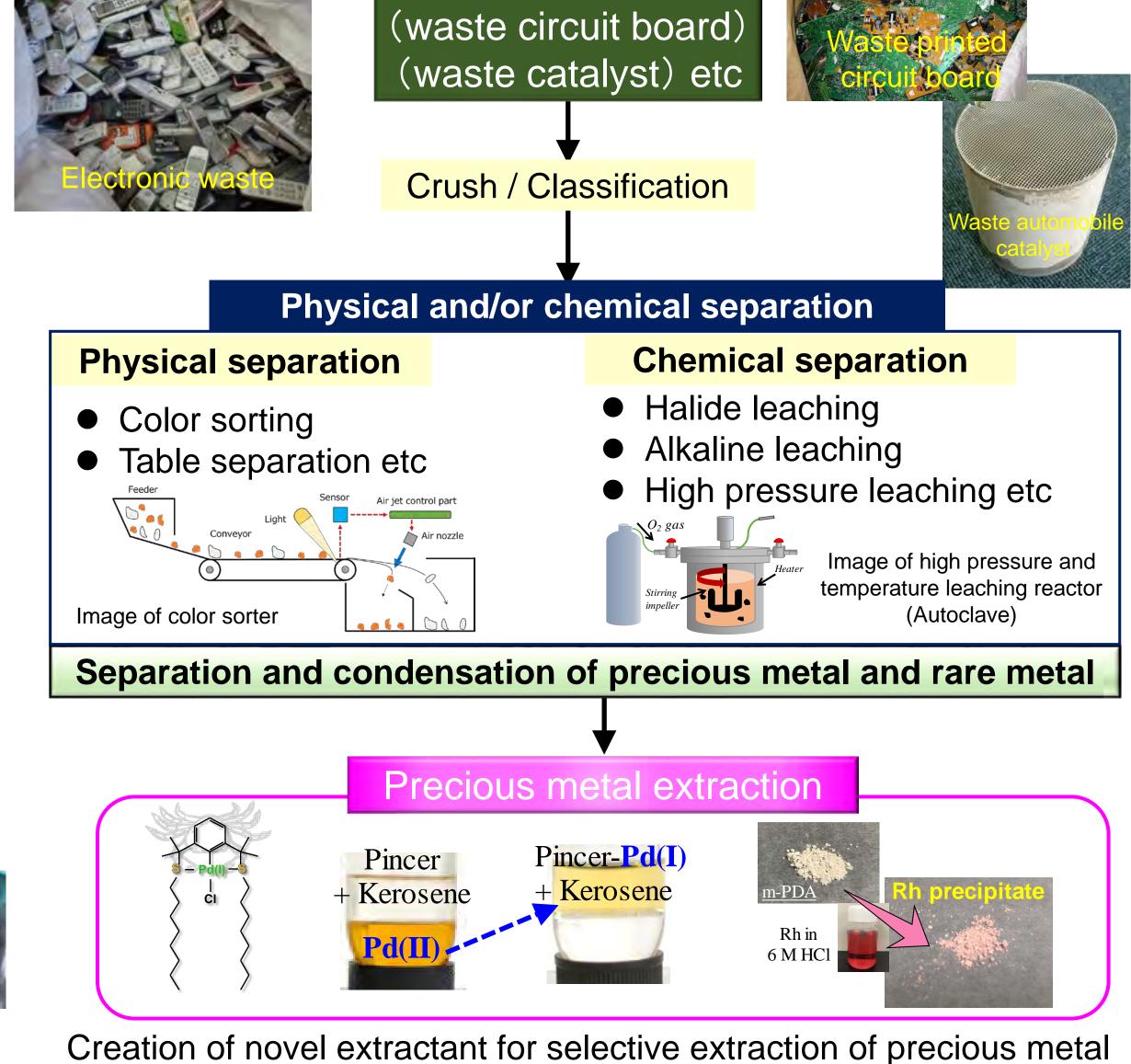
Development of Precious Metal Extraction Process from Wasted Materials

Development of precious metal extraction process to recycle precious metal from wasted materials

E-waste



Comparison of each method to find optimum process



For effective extraction of precious metal ad rare metal