

JX Metal Endowed Research Unit

[Research on non-ferrous metals recycling]

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<http://www.metals-recycling.iis.u-tokyo.ac.jp>

Metals processing and recycling technology

Recycling Metals

Metals-recycling necessary for sustaining high-tech society

For sustainable society with amenity, it is absolutely necessary to supply valuable materials stably and their resources-recycling effectively under strict environmental preservation. The core technology is non-ferrous metals smelting & recycling, that is an academic area of the application of fundamentals to industrial production. The aim of this Unit is to develop the high class recycling technology utilizing non-ferrous smelting technologies.

There two main themes; the first is to develop engineering technology itself, and the second is the development and securing of human resources in this special field.

To attain these two aims simultaneously, the Unit is carrying out some projects written below.

- ◆ Submission of reliable thermodynamic and kinetic data for researchers
 - To summarize the existing data, verify them and submit them to the world for improving developing speed.
 - To fill the deficit on the table through new research.
- ◆ Development of new usage of non-ferrous metallurgical slag
 - To convert copper-smelting slag to the raw material for iron-making and to improve quality for existing market.
 - To seek a possibility to recover rare metals from slag.
- ◆ Research on behavior of impurities during resources-recycling
 - To immobilize elements, which don't have a big market, in mining, smelting and recovering processes.
- ◆ Forum for simulation technology on hydro-metallurgical processes
 - To hold forum on simulation softwares for hydro-metallurgical process and waste water treating process encouraging and stimulating younger researchers.

