

November 1, 2021

National Institute of Advanced Industrial Science and Technology
JX Nippon Metals & Mining Corporation

Establishment of JX Metals-AIST Advanced Material and Technology for Future Society Cooperative Research Laboratory: Accelerating Material and Technology Development Relating to Nonferrous Metals to Create the Sustainable Society of the Future

▪ **Key Points**

- The National Institute of Advanced Industrial Science and Technology (“AIST”) and JX Nippon Metals & Mining Corporation (“JX Metals”) have established a Cooperative Research Laboratory* with effect from today.
- The laboratory will leverage the synergy between AIST’s materials utilization technologies and JX Metals’ wide-ranging technologies and knowledge relating to nonferrous metals.
- The laboratory will accelerate development of materials and technologies contributing to the creation of the sustainable society of the future, including materials for next-generation wireless telecommunications devices.

* In order to conduct research and development more closely related to strategies of companies, AIST establishes cooperative research laboratories, bearing partner company names, within its organization. Partner companies provide research funding, etc., and AIST provides research resources, such as research facilities and intellectual property. Researchers assigned by partner companies and AIST researchers jointly conduct research and development.

▪ **Overview**

AIST (President: Kazuhiko Ishimura) and JX Metals (President: Seiichi Murayama) have established the JX Metals-AIST Advanced Material and Technology for Future Society Cooperative Research Laboratory (“Cooperative Research Laboratory”) with effect from today.

The Cooperative Research Laboratory will contribute to the creation of the sustainable society of the future by teaming AIST’s manufacturing process technologies and material properties assessment technologies with JX Metals’ wide-ranging technologies and knowledge relating to nonferrous metals. This will be achieved by promoting practical deployment of innovative materials and technologies as well as efforts to develop technologies that will generate further innovation.



From left, JX Metals President: Seiichi Murayama, AIST President: Kazuhiko Ishimura

▪ **Cooperative Research Laboratory: Details**

In recent years, attention has focused on next-generation wireless telecommunications, which are essential to creating the sustainable society of the future, and highly functional next-generation devices need to be developed to achieve this aim. As part of this process, it will be crucial to advance development of materials to form wiring used in such devices, manufacturing process technologies, and assessment technologies for frequency bands to be used for next-generation high-speed wireless telecommunications.

By merging and further developing materials development technologies and manufacturing process technologies possessed by AIST and JX Metals, the Cooperative Research Laboratory aims to achieve rapid practical deployment of materials for highly functional next-generation devices. To establish platform technologies for next-generation wireless telecommunications, research will target development of new manufacturing methods for flexible circuit boards, technologies for bonding copper foil and resin, and assessment of high-frequency conductivity of copper foil and materials bonding copper foil and resin.

The laboratory will also go beyond these fields to develop materials and technologies in various domains relating to nonferrous metals.

▪ **Cooperative Research Laboratory: Profile**

1. Name: JX Metals-AIST Advanced Material and Technology for Future Society
Cooperative Research Laboratory
2. Location: AIST Tsukuba Central 5
3. Laboratory Director: Hideaki Fukuyo (JX Nippon Research Institute for Technology
& Strategy Co., Ltd.)
4. Personnel: 14 (planned)

▪ **Inquiries**

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