

February 26, 2021

JX Nippon Mining & Metals Corporation

## **Establishment of Joint Research Chair with the Graduate School of Engineering at Osaka University —Starting Joint Research to Promote Circular Economy—**

JX Nippon Mining & Metals Corporation (President: Murayama Seiichi; “the Company”) is proud to announce that it will establish the JX Nippon Mining & Metals Joint Research Chair for Circular Economy Promotion at the Graduate School of Engineering, National University Corporation Osaka University (President: Nishio Shojiro; “Osaka University”), on April 1.

Responses to global climate change and the conservation of our terrestrial, atmospheric, and marine environments have become major issues in recent years. The creation of a circular economy has been proposed as a possible solution to these issues. Utilization of artificial intelligence and the internet of things is essential to achieve this goal, and as a result, the importance of nonferrous metal materials, such as copper and rare metals, that are used in electronic devices and other products is increasing significantly. Preventing these materials from becoming exhausted, we must boost production efficiency and further enhance recycling efforts, and supporting the information society of the future, we must achieve the higher level of functionality of these materials, for promoting resource recycling.

This time, the Graduate School of Engineering at Osaka University, which has a strong focus on practical learning, utilizing the latest research outcomes to benefit the real world, and the Company have decided to come together in a new industry-academia collaboration with a shared vision of promoting resource recycling and contributing to the creation of a circular economy. To that end, the advanced materials technologies possessed by the university will be combined with the technologies the Company has developed over the decades in the nonferrous metals field. The joint research chair to be established through this collaboration has the following two main aims related to research and development and social implementation:

- (1) Research and development and social implementation related to smelting, refining, and recycling that reflect the overall material flow of nonferrous metals; and
- (2) Research and development and social implementation related to reducing energy requirements for manufacturing; creating more advanced techniques for joining, bonding, corrosion resistance, and reliable evaluation; leveraging numerical analysis methods; and creating new materials.

Miyabayashi Yoshitsugu, the Company’s Senior Executive Officer, and Associate Professor Mori Hiroaki from Osaka University will lead the course as full-time Specially Appointed Professors.

Through this industry-academia collaboration with the Graduate School of Engineering at Osaka University, the Company aims to achieve a circular economy, thereby moving to a technology-based firm in line with the JX Nippon Mining & Metals Group Long-Term Vision 2040, and contributing to the achievement of a sustainable society.

## Joint Research Chair Overview

Title	JX Nippon Mining & Metals Joint Research Chair for Circular Economy Promotion
Venue	Rooms 601 and 602, Techno-Alliance Building C
Course Duration	April 1, 2021–March 31, 2024

### Specially Appointed Professors (scheduled to assume their office on April 1, 2021)

- Specially Appointed Professor Miyabayashi Yoshitsugu (full-time)  
Current position: Senior Executive Officer, JX Nippon Mining & Metals Corporation  
Fields of specialization: Smelting, refining, and recycling nonferrous metals
- Specially Appointed Professor Mori Hiroaki (full-time)  
Current position: Associate Professor, Department of Management of Industry and Technology, Graduate School of Engineering, Osaka University  
Fields of specialization: Welding and joining, material processing, and microstructure control

### Reference



The Osaka University Techno-Alliance Building where the joint research chair will be established