



October 3, 2022

Press Release

Sumitomo Metal Mining Co., Ltd.
Tohoku University

Establishment of the SMM × Tohoku University GX Materials Science Co-Creation Research Center

**- Exploring research themes including materials for the utilization of
hydrogen with the aim of achieving a circular economy by 2050 -**

[Overview]

Sumitomo Metal Mining Co., Ltd. (“SMM,” Head office: Minato-ku, Tokyo, President and Representative Director: Akira Nozaki) and Tohoku University (Location: Sendai City, Miyagi Prefecture, President: Hideo Ohno) has established the SMM × Tohoku University GX Materials Science Co-Creation Research Center (“Co-Creation Research Center”) (*2) on October 1, 2022, with the aim of making proposals and plans for R&D themes concerning GX (Green Transformation) material science (*1). On the basis of an industry-academic collaborative initiative that leverages the comprehensive fundamental research capabilities possessed by the Advanced Institute for Materials Research (“AIMR,” Director: Prof. Shinichi Orimo), the two parties will explore co-creation research themes pertaining to areas such as materials for utilizing hydrogen with a focus on achieving a circular economy by 2050, will and aim to develop new topics for joint research while achieving results in these areas.

Through discussions over two years from 2018, SMM and Tohoku University have formulated an “Ideal State” and “Vision” for 2050 in order to archive the vision of realizing a solar energy society. On the basis of these, we have commenced initiatives based on the Vision Co-Creation Partnership, and have fostered among the researchers a mindset of committing to their dreams through joint research, all with the aim of achieving our vision for the creation of a solar energy society. We have also made efforts to contribute to solutions for energy and environmental problems that are global in scale through the creation in innovative materials science.

The Co-Creation Research Center will fully leverage accumulated knowledge and new fundamental research capabilities while also providing a venue for flexible interaction among diverse human resources and developing youthful human resources with the ability to come up with lines of development into new materials to contribute to green transformation themselves and make proposals. And through this, it will work towards implementing into society manufacturing technologies that are in harmony with people and the environment.

(*1) GX (Green Transformation) materials science

Materials science that contributes to the development of new materials for the switch to clean renewable energy that does not emit greenhouse gases and to the reform of the socioeconomic system and the structure of industry while linking this to growth with the aim of achieving carbon neutrality by 2050.

(*2) Co-Creation Research Center

A system that, as well as establishing a base for collaboration with companies on the university's premises, enables comprehensive cross-departmental access to university faculty, knowledge, equipment, and more, and thus encourages a wide range of collaborative activities, such as joint research planning and promotion, development of human resources, and collaborations with ventures launched by the university.

[Overview of the Co-Creation Research Center]

1. Name

SMM × Tohoku University GX Materials Science Co-Creation Research Center

2. Purpose

To make proposals and plans for R&D themes concerning GX material science

3. Activities

(1) Materials for the utilization of hydrogen in a hydrogen-based society

Exploration of co-creation research themes and planning of proposals for the development of materials relating to various hydrides (hydrogen storage materials) that are highly safe, portable, and can store hydrogen at high density, as well as the utilization of hydrogen

(2) Future battery materials for a circular economy

Exploration and planning of co-creation research themes for materials development to create batteries for the future that surpass the energy density of conventional secondary batteries while taking environmental conservation and recyclability into consideration.

(3) Other advanced materials to help achieve GX

Exploration of, and planning and proposals for, co-creation research themes in material development in a wide range of fields relating to the switch to green energy, such as effective electric power utilization and solar energy use.

(4) Development of young human resources to work on GX materials

Development of youthful human resources with the ability to think of new material research themes for themselves, and facilitate co-creation themes in future

4. Administrators

(1) General Administrator

Junji Iida, General Manager of Planning & Administration Dept., Technology Division, Sumitomo Metal Mining Co., Ltd.

(Tohoku University, Specially appointed professor (research))

(2) Administration Support Staff

Prof. Shinichi Orimo, Director of Advanced Institute for Materials Research (AIMR), Tohoku University

5. Location

Tohoku University, Advanced Institute for Materials Research (AIMR), Main Building

6. Working period

October 1, 2022, to September 30, 2025



Executive Vice President Takuro Ueda of Tohoku University (left) and General Manager of Technology Division Shuichi Ogasawara of SMM



Tohoku University, Advanced Institute for Materials Research (AIMR), Main Building

[Reference]

Related older press release

Towards the creation of a Solar Energy Society for 2050 Start of initiatives based on a Vision Co-Creation Partnership with Tohoku University (June 12, 2020)

https://www.smm.co.jp/en/news/release/uploaded_files/20200612_E.pdf

[Inquiries]

- Concerning the Co-Creation Research Center
Tohoku University, Advanced Institute for Materials Research (AIMR),
Strategic Public Relations Office
Tel: 022-217-6146
E-mail : aimr-outreach@grp.tohoku.ac.jp
- Concerning organizational collaboration
Tohoku University, Head Office of Enterprise Partnerships, Planning
Office
Tel: 022-795-5269
E-mail: sanren-kikaku-s@grp.tohoku.ac.jp
Sumitomo Metal Mining Co., Ltd., Public Relations & Investor Relations
Dept.
Tel: 03-3436-7705
E-mail: smm_koho@smm-g.com