Idemitsu Kosan Co.,Ltd. (Headquarters: Chiyoda-ku, Tokyo; Representative Director President and CEO: Shunichi Kito), in collaboration with the other companies and universities indicated below, have been developing technologies to convert CO2 emitted from thermal power plants and factories into resources by making use of industrial waste. The partners proposed “Research and development of an accelerated mineral carbonation process utilizing calcium in industrial wastes” in response to a public call from the New Energy and Industrial Technology Development Organization (NEDO) for project proposals in “Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation / Development of Technologies for CO2 Reduction and Utilization / Development of Technologies for CO2 Utilization in Carbonates, Concrete Products, and Concrete Structures.” The proposal was selected as a commissioned research and development project in the Development of Technologies for CO2 Utilization in Carbonates, Concrete Products, and Concrete Structures category.

The commission period for this project is five years from fiscal 2020 to fiscal 2024. The partners will conduct technology development aimed at the practical application and spread of a process for extracting calcium as a raw material from industrial waste containing a lot of calcium, such as waste concrete, and mineralizing it through reaction with CO2 in exhaust gas. In order to increase the efficiency of calcium extraction and carbonation, the partners will also conduct tests and evaluations on accelerated carbonation technology, establish technology while optimizing the overall process,
and evaluate the CO₂ reduction effect.

With the selection of this project, the partners will engage in industry-academia-government collaboration to develop new technologies related to the mineralization of CO₂ emitted from power plants and factories, and accelerate efforts for their practical implementation in a wide range of areas, from raw material procurement to application development.

■ Partners
Idemitsu Kosan Co., Ltd (Shunichi Kito, Representative Director President and CEO)
Ube Industries, Ltd. (Masato Izumihara, President & Representative Director)
JGC Corporation (Yutaka Yamazaki, Representative Director, President)
JGC Japan Corporation (Shoji Yamada, Representative Director, President)
Seikei University (Hiroshi Kitagawa, President)
Tohoku University (Hideo Ohno, President)

Reference: Image of CO₂ mineral carbonation through carbonation and its utilization

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