

July 14, 2020

Sojitz Corporation

Sojitz, Tokuyama, and NanoMist Technologies to Start Carbon Recycling  
Research and Development Project  
- Challenge for Implementation of CO<sub>2</sub> Recycling -

Sojitz Corporation (“Sojitz”), together with Tokuyama Corporation (“Tokuyama”) and NanoMist Technologies Co., Ltd. (“NanoMist Technologies”), has been notified that it will be selected for a New Energy and Industrial Technology Development Organization (“NEDO”) consignment project designed to develop and propagate carbon recycling technologies: “Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation / Development of Technologies for CO<sub>2</sub> Reduction and Utilization / Development of Technologies for CO<sub>2</sub> Utilization in Carbonates, Concrete Products, and Concrete Structures.”

This is a three-year project that will run through the 2022 fiscal year. The project seeks to achieve the cost reduction of CO<sub>2</sub> separation and capture, as well as its reuse, which are technological issues announced in the Ministry of Economy, Trade and Industry’s roadmap\*<sup>1</sup> for carbon recycling technologies. Currently, CO<sub>2</sub> derived from limestone combustion is used as a raw material in the production process of carbonates (soda ash). But in this project, it is our aim that CO<sub>2</sub> in the combustion exhaust gas of coal-fired power plants can be absorbed by a technically developed NanoMist\*<sup>2</sup> and used as a replacement raw material for carbonate production, thereby reducing CO<sub>2</sub> emissions.

Through this project, Sojitz will try to solve social issues in countries around the world by realizing the early implementation of carbon recycling in society with new Japanese-developed technologies.

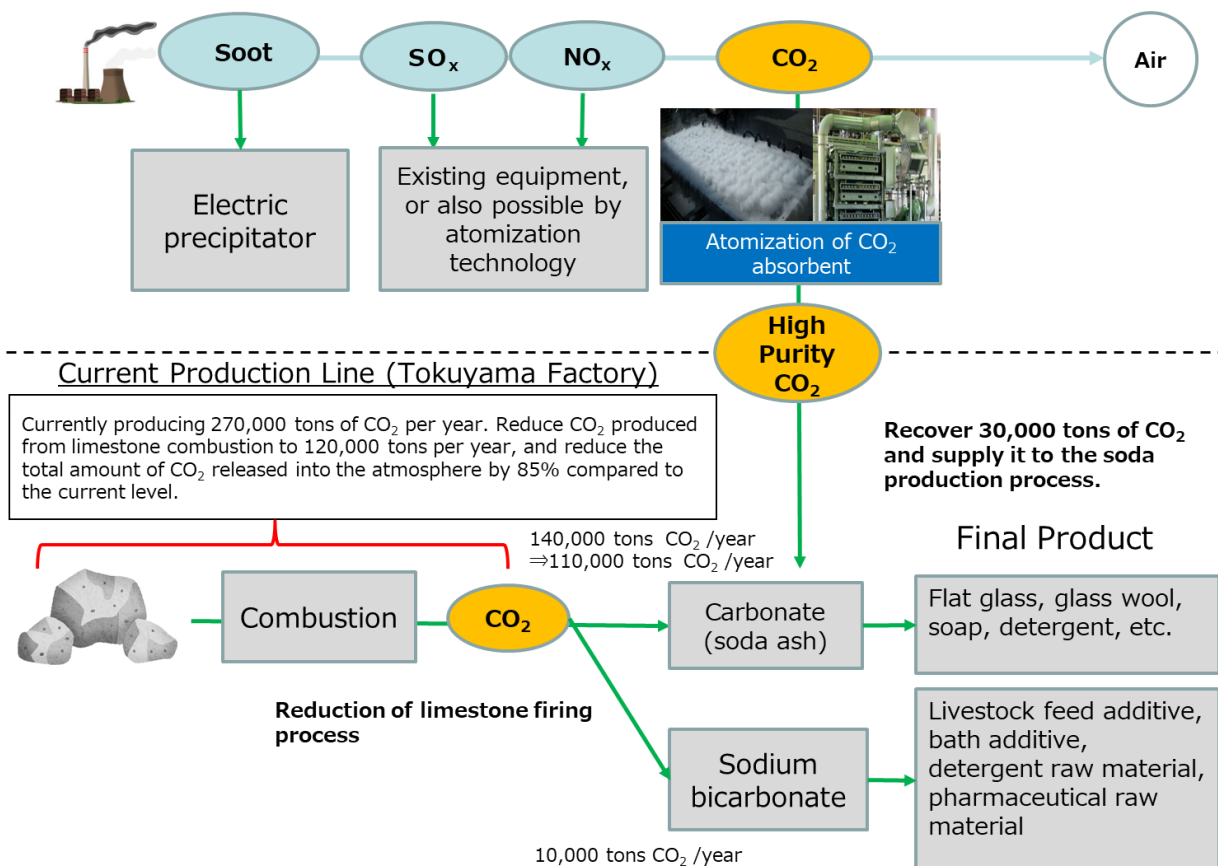
As a global company, Sojitz Group considers environmental issues a crucial topic to be addressed in its management moving forward. Striving for a sustainable society, we will work to preserve the environment and prevent pollution in our business activities, while creating businesses that are both highly competitive and environmentally friendly.

Roles of each company

- Sojitz: Project management, feasibility evaluation, LCA evaluation
- Tokuyama: Development of CO<sub>2</sub> extraction technology, engineering work
- NanoMist Technologies: Development of CO<sub>2</sub> absorption technology using a fine mist
- All three companies: Formulation of conceptual designs, development of CO<sub>2</sub> absorbent materials

- \*1 Announced in June 2019, the roadmap identifies cost reduction for separating and capturing CO<sub>2</sub> as a technological target to be reached by 2030 (1,000 to 2,000 JPY per ton of CO<sub>2</sub>).
- \*2 Originally developed by NanoMist Technologies, ultrasonic waves are used to atomize an aqueous solution to a particle size of five micrometers or less. By making the solution into a ‘NanoMist’, the surface area is increased, thereby improving CO<sub>2</sub> absorption efficiency and reducing costs.

[Related Information]



[Project Overview]

Company Overview – Tokuyama Corporation

Established	February 1918
Located	1-1 Mikage-cho, Shunan-shi, Yamaguchi
Representative Director	Hiroshi Yokota, President and Executive Officer
Main Business	<p>Manufacturing and sale of...</p> <ul style="list-style-type: none"> <li>• Chemicals Division: Soda, chlor-alkali, PVC, NOC</li> <li>• Special Products Division: Electronics materials (polycrystalline silicon), dry silica, high-purity chemicals for the electronics industry, aluminum nitride</li> <li>• Cement Division: Cement business and Recycling &amp; Environment business</li> <li>• Life Amenity Division: Fine chemicals, microporous film, synthetic resin film, ion exchange membranes, dental materials</li> </ul>

Company Overview – NanoMist Technologies Co., Ltd.

Established	October 2002
Located	635-1 Kizu, Muya-cho, Naruto-shi, Tokushima
Representative Director	Kazuo Matsuura, President & CEO
Main Business	<p>Development, manufacture, and sale of...</p> <ul style="list-style-type: none"> <li>• Atomization and separation equipment</li> <li>• Sewage purification equipment</li> <li>• Hot spring concentrators</li> <li>• VOC recovery and recycling equipment</li> <li>• Fine powder manufacturing equipment</li> </ul>

[For questions regarding this release, contact:]

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