June 12, 2023

Sojitz Corporation

Sojitz Establishes New Company for Realizing Practical Implementation of DAC Technology Utilizing Nano-separation Membranes by Late 2020s – Accelerating Social Implementation of Revolutionary Technology Developed by Kyushu University –

Sojitz Corporation ("Sojitz") has established Carbon Xtract Corporation ("Carbon Xtract") as a new company to accelerate social implementation of separation membrane-based Direct Air Capture technology ("m-DAC™")*1 by the late 2020s.
Sojitz first signed a memorandum with Kyushu University in February 2022 to pursue research for the practical implementation of m-DAC™ technology by 2030, but Sojitz will now accelerate this timeline through the establishment of Carbon Xtract.

As a measure to address global warming, countries across the world are working to achieve net-zero CO_2 emissions by 2050. According to the International Energy Agency (IEA), restrictions on consumption of fossil fuels can reduce just over 90% of today's current emission volumes. However, in order to achieve net-zero emissions by 2050, DAC technology must be used to directly recapture close to 70 million tons of CO_2 from the atmosphere by 2030.*2 In order to advance these efforts, Japan enacted the Green Transformation (GX) Promotion Act on May 12, 2023. This new act builds a market environment with systems that support up-front investment for the social implementation of revolutionary technology related to decarbonization such as DAC.

Sojitz aims to achieve early product commercialization and social implementation of m-DAC™. Based on the essential need for collaboration with latent consumers from the R&D stage, Sojitz has partnered with materials venture, NanoMembrane Technologies, Inc.,*3 to establish Carbon Xtract. Moving forward, Sojitz will promote product commercialization and utilization of m-DAC™ through co-creation with its customer networks to become a leading company in the small-scale and distributed DAC market.

[CG image of m-DAC™ technology (produced by Kyushu University School of Design)]

Sojitz positions sustainability as a key management issue. Realizing a decarbonized society is part of Sojitz's Sustainability Challenge,*4 and the company sees decarbonization as a social responsibility. Sojitz strives to advance social implementation of Kyushu University's revolutionary technology and contribute to the realization of a decarbonized society. Sojitz will continue to facilitate social implementation of technology developed by universities and research institutions in order to contribute to the realization of a decarbonized society.

(*1) m-DAC™ technology: A direct air capture (DAC) technology that utilizes a nano-separation membrane to directly capture CO_2 from the atmosphere. Kyushu University is advancing development of m-DAC™ technology, which allows CO_2 to be collected by simply passing air through the membrane. Unlike previous CO_2 separation membranes, the nano-separation membrane is distinguished by its high CO_2 permeability.

(*2) International Energy Agency (IEA), Unlocking the potential of direct air capture: Is scaling up through carbon markets possible?/IEA Commentary (May, 2023)

(*3) Kyushu University is also considering investment in Carbon Xtract.

(*4) Sojitz Sustainability Challenge:
https://www.sojitz.com/en/csr/priority/challenge.php

[Related Information]

[Company Overview – Carbon Xtract Corporation]

Representative Director	Tetsuo Moriyama
Established	May 26, 2023
Main Business	Development and sale of devices and products utilizing nano-separation membrane technology that can selectively capture CO_2 from the atmosphere

[Related News Releases]

1)
"Kyushu University and Sojitz Conclude Memorandum for Implementation of Membrane-based Direct Air Capture Technology and Related Technology Solutions to Capture Carbon Dioxide from the Atmosphere." Sojitz Corp. Press release, 9 February 2022.
https://www.sojitz.com/en/news/2022/02/20220209.php

2)
"Kyushu University, Sojitz, and Kyushu Electric Power Sign MOU for Joint Development and Verification of DAC-U Systems Utilizing Direct Air Capture Technology." Sojitz Corp. Press release, 22 March 2023.
https://www.sojitz.com/en/news/2023/03/20230322-01.php

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