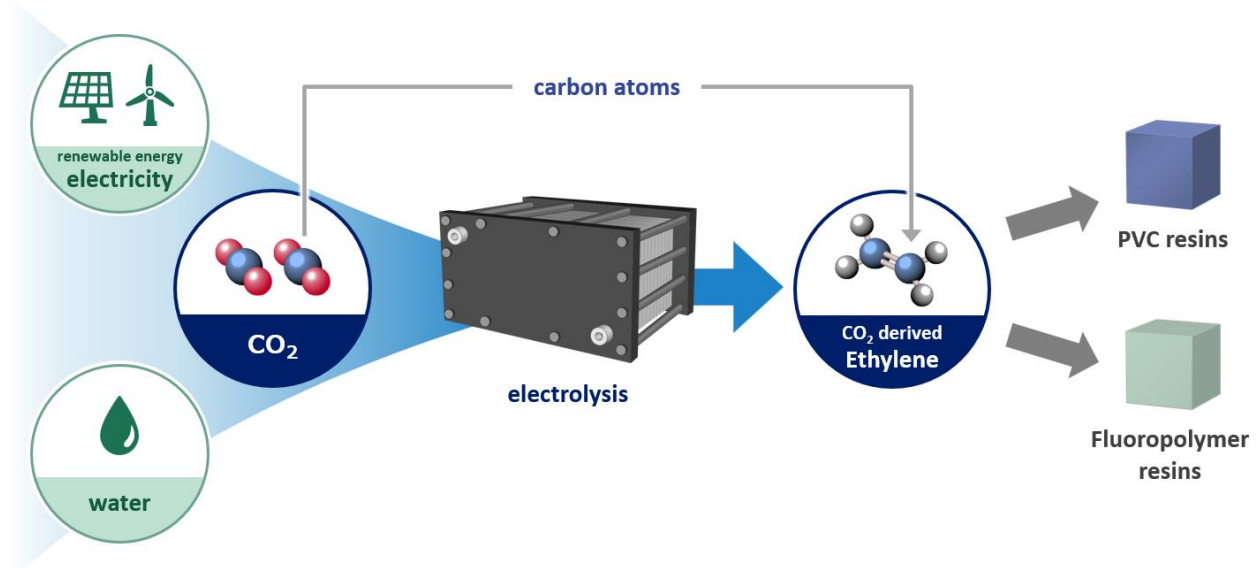


### AGC Begins Research on Ethylene Production Using CO<sub>2</sub> as Raw Material - Promoting Research on CCU Technology to Achieve “Carbon Net Zero” -

**Tokyo, December 24, 2024**— AGC (AGC Inc., Headquarters: Tokyo; President: Yoshinori Hirai), a world-leading manufacturer of glass, chemicals and other high-tech materials, has agreed to a joint research contract with Canada-based climate tech startup company, [CERT Systems Inc.](#) (hereafter CERT) to conduct research on the production of ethylene using CO<sub>2</sub> as a raw material through electrolysis technology. In this joint research, the AGC Group will begin examining the introduction of CCU technology in order to replace ethylene, which is used as a raw material for products such as polyvinyl chloride and fluoropolymer resin, with ethylene derived from CO<sub>2</sub>.



#### Image of this joint research, replacing raw materials of the AGC Group's products with ethylene derived from CO<sub>2</sub>

As an innovative technology for achieving carbon neutrality by 2050, CO<sub>2</sub> capture and utilization (CCU<sup>\*1</sup>) technology has been attracting attention in recent years. Three main reaction methods for producing CO<sub>2</sub>-derived ethylene are being considered: hydrogen-based reactions, electrolysis reactions, and photosynthesis-based reactions. In particular, the electrolysis method, which is the subject of this study, is attracting a great deal of attention worldwide due to the high convenience of its raw materials, which are renewable energy-derived electricity and water, in addition to CO<sub>2</sub>.

In this joint research, CERT and the AGC Group will leverage the knowledge gained from CERT's successful pilot demonstration experiment in 2020, which was the world's first<sup>\*2</sup> to produce ethylene from industrial emissions using CO<sub>2</sub> electrolysis technology, and will conduct research towards the practical application of CO<sub>2</sub> electrolysis plants. The AGC Group plans to work with its manufacturing bases to verify the process and assess the feasibility of this technology.

In its medium-term management plan, [AGC plus-2026](#), the AGC Group has set “promotion of sustainability management” as one of its main strategies, and has set a target of achieving “carbon net zero<sup>\*3</sup>” by 2050. Through this joint research, the AGC Group aims to achieve CCU technology using CO<sub>2</sub> electrolysis.

<Media inquiries>

Chikako Ogawa, General Manager, Corporate Communications & Investor Relations Division  
AGC Inc.

(Contact: Nakao; Tel: +81-3-3218-5603; [Contact form](#))

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## News Release

### NOTE

\*1 Carbon dioxide Capture and Utilization

\*2 Estimated by CERT

\*3 Scope 1 + 2

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