



../August 2023

RevCell Co., Ltd.

AC Biode Co., Ltd.

**RevCell Co., Ltd. and AC Biode Co., Ltd. Introduce CO2 Capture from Air Filters
to Make Glass Raw Materials
- Decarbonizing Raw Materials for the Glass Industry –**

RevCell and AC Biode are expanding their operations internationally in the field of DAC (Direct Air Capture) systems, which capture CO₂ from the air and regenerate it into glass raw materials.

“While DAC and CO₂ capture play vital roles in climate change mitigation, the costs remain preventively high.” explains Tadashi Kubo, CEO of AC Biode. “It is not just that, but one there is another huge problem. What do we do with the CO₂ after it has been captured?” Injection into the ground is feasible in some areas of the world. In Japan, where RECO GLASS originated it cannot be used as long term storage due to the seismic activity.

The system developed by RevCell involves adsorbing CO₂ using filters like those found in air purifiers, converting it into glass raw materials, and recycling it into glass at glass manufacturing plants. For glass manufacturers very little changes. The manufacturing process and chemical composition remain the same. This allows for a variety of applications such as bottles, luxury cosmetic containers, glassware, construction materials, crystal trophies for events, and regional souvenirs. In Japan, RevCell and AC Biode are collaborating with major cleanroom manufacturers for air purifiers with DAC capabilities and with leading glass manufacturers for glass recycling.

Currently, RECO GLASS is receiving app support. This will all visualize CO₂ adsorption levels, connecting via QR codes. AC Biode is promoting transparency in the carbon capture market. To create efficient supply chains the company is now looking for local partnerships with SMEs and events like the Olympic games.

The system was showcased at events such as the May 2023 G7 Hiroshima Summit, Expo City Dubai in the United Arab Emirates, ChangeNow in Paris, France's VivaTechnology in

Paris, and competitions hosted by Audi (Paris) and the Korean government's accelerator program (Seoul), receiving high praise domestically and internationally. Commercialization of air purifiers with DAC functionality is scheduled for this fall, with simultaneous expansion into overseas markets, including Japan, Europe, and Asia.

About RevCell

RevCell Co., Ltd. pursues the theme of "Understanding Air through Science" and engages in various business ventures. In response to the pressing issue of the "COVID-19 pandemic," the company develops negative-pressure facilities to contain viruses. These include negative-pressure equipment for fever clinics, facilities for isolating patients within facilities, and P3 rooms that can be used as experimental or biohazard rooms for containment. Addressing the urgent challenge of "global warming," the company began research on filters to adsorb carbon dioxide in 2018. In 2019, they launched CO₂ cleaners to lower CO₂ concentrations in enclosed spaces. In August 2022, they successfully produced glass using used (CO₂ adsorbed) adsorbents as raw materials, showcasing their innovative carbon circulation technology at the G7 Hiroshima Summit. They are soon to release air purifiers with DAC capabilities in collaboration with major cleanroom manufacturers.



P3 Room for RECO filter testing



Booth at the G7 Summit in Hiroshima

[Company Overview]

Company Name:	RevCell Co., Ltd.
Founded:	May 9, 2009
Capital:	JPY 5,050,000

Location: F-1307 Nakagawa 1-2, Tsuzuki-ku, Yokohama City, Kanagawa Prefecture

Representative: President and CEO, Kenji Yamamoto

Business Activities: Carbon Recycling Business, Negative-Pressure Facility Business

Intellectual Property: 8 trademarks, 9 patents, 2 designs, 1 copyright, numerous pending applications

Affiliations: Carbon Recycling Fund, Hiroshima Prefecture Carbon Circular Economy Promotion Council, Central TLO, Yokohama SDGs Design Center, Japan Organic Conference, Disaster Safety Association, Yokohama Chamber of Commerce and Industry

Website Carbon Offset: [REVCELL Carbon Offset](#)

Website P3 Room: revcellnpr.com

About AC Biode

AC Biode's mission is to "contribute to reducing global warming gases and solving global waste problems, including ocean plastics, through chemical technology." They focus on the development of flow batteries and circuits, catalysts for depolymerization of waste plastics (Plastalyst), and various adsorbent developments. With corporate entities in Japan and Luxembourg and offices in Cambridge, UK, they operate in Europe and Japan globally. They have successfully depolymerized polyethylene and PET bottles into monomers and have multiple patents pending.



Experiment at Keihanna Plaza Lab in Kyoto

For inquiries regarding products and technologies, please visit:

<https://acbiode.com/contact.html>

Job Opportunities

AC Biode is actively recruiting experts in material science (organic, inorganic, hybrid, polymer, natural polymers), electrochemistry, and catalysis.

Location: Keihanna Plaza Lab (Kyoto Prefecture), with opportunities for international travel.

Skills: Proficiency in organic and inorganic synthesis, handling various experimental reagents, familiarity with vacuum and pressure systems and operations, ability to handle flammable and inert gases appropriately.

Languages: Japanese or English. While Japanese language skills are preferred, they are not mandatory.

CVs do not require photos or gender information.

If you are interested in contributing to environmental issues through chemical technology, please feel free to contact us. Please submit your CV in Japanese or English (both languages are not mandatory; cover letters are not required).

▼ **For inquiries regarding recruitment, please contact:**

Tadashi.kubo@acbiode.com

Company Overview

Company Name:	AC Biode S.a r.l. (Luxembourg entity), AC Biode Co., Ltd.
Website:	https://acbiode.com/
Founded:	April 1, 2019
Capital:	JPY 100 million (Japanese entity)
Locations:	Luxembourg; 498-6 Iwakura Hanazono-cho, Sakyo-ku, Kyoto City, Kyoto Prefecture; Keihanna Plaza Lab (Research Institute), Seika-cho, Kyoto Prefecture; Cambridge, UK; Otemachi, Tokyo
Representative:	President and CEO, Tadashi Kubo



Business Activities: Development of flow batteries and circuits, catalysts for depolymerization of waste plastics, development and deployment of various adsorbents