



Symbiobe

~Symbiosis between humans and the globe through the power of microbes~

- **Company Name** : Symbiobe Inc. (Company website: [Symbiobe Inc.](https://www.symbiobe.com))
- **Representative Director**: Koji Ito **Director (CTO)**: Keiji Numata
- **Year of Establishment**: January 2021
- **Business Description**: Developing technologies to capture carbon and convert it into sustainable materials like fertilizer, aquaculture feed, and synthetic silk fiber by photosynthetic organisms

Key Words

- # Turning air into resources
- # Industrial Bio
- # Air Fertilizer, Air Feed, Air Silk
- # A spin-off from Kyoto University

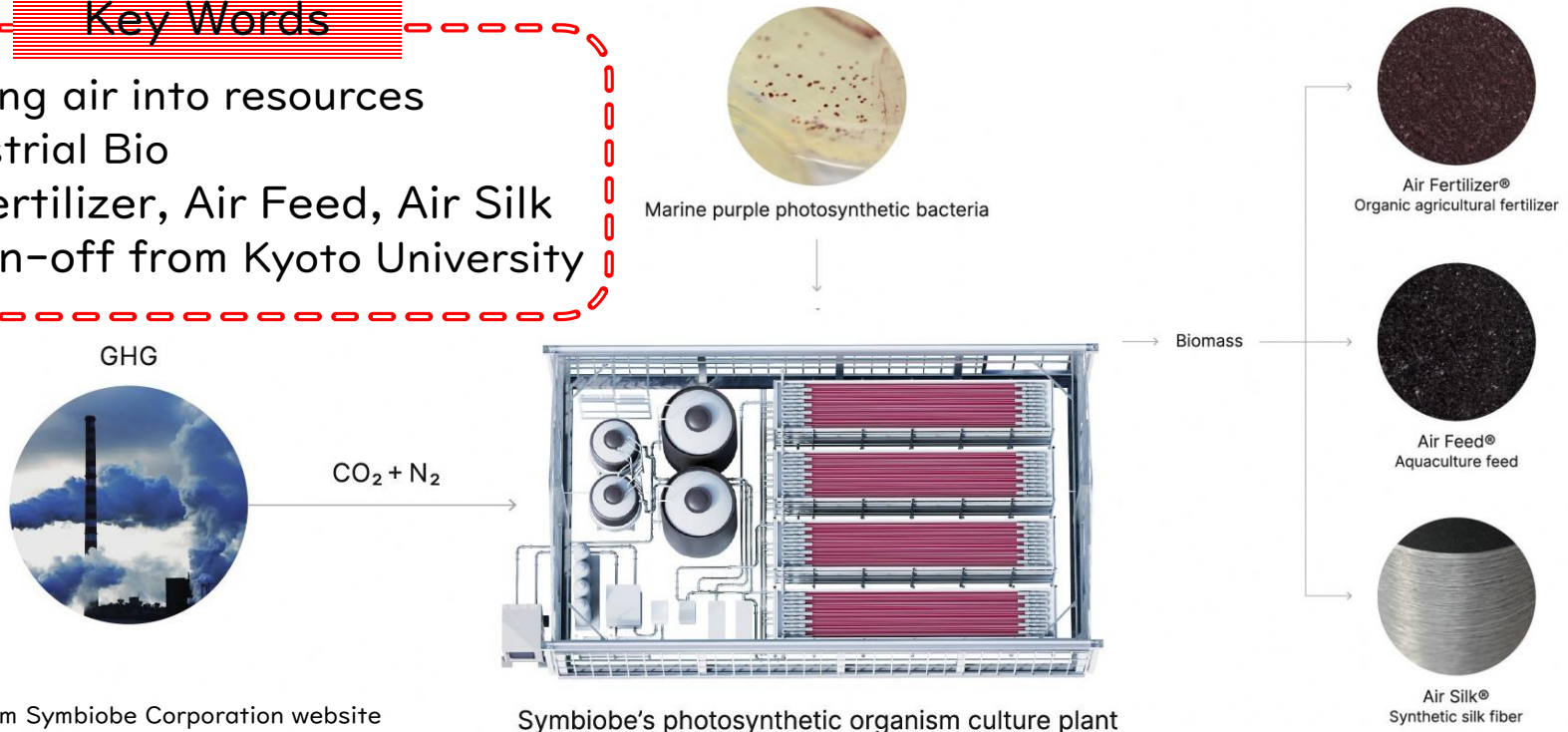


Figure: taken from Symbiobe Corporation website

Symbiobe's photosynthetic organism culture plant

smile by
easy, eco, and efficient
separation



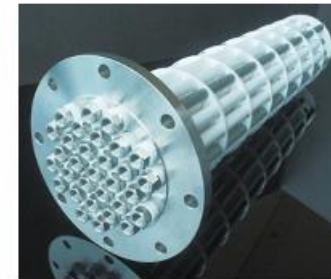
- **Company Name** : eSep Inc. (Company website : <https://esep.kyoto/>)
- **CEO** : Ken-ichi SAWAMURA
- **Year of Establishment** : October 2013
- **Business Description** : Development of nano-ceramic membrane technology and provision of related equipment and systems, etc.

Key Words

#Carbon-Neutral
#Nano-Ceramic Membranes
#Energy Saving
#Downsizing
#Keihanna Science City
(Keihanna, Japan)

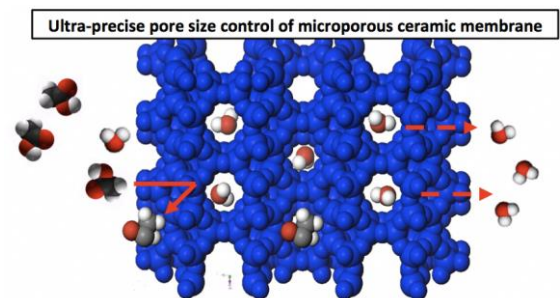
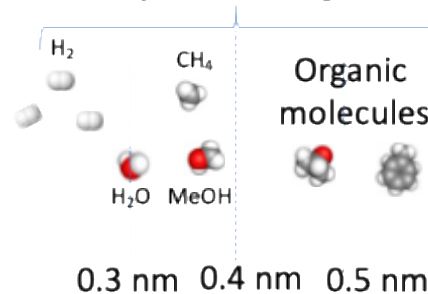


Membrane Elements



Membrane Module

Our separation target



Introduction of Start-up Companies in Kyoto Prefecture

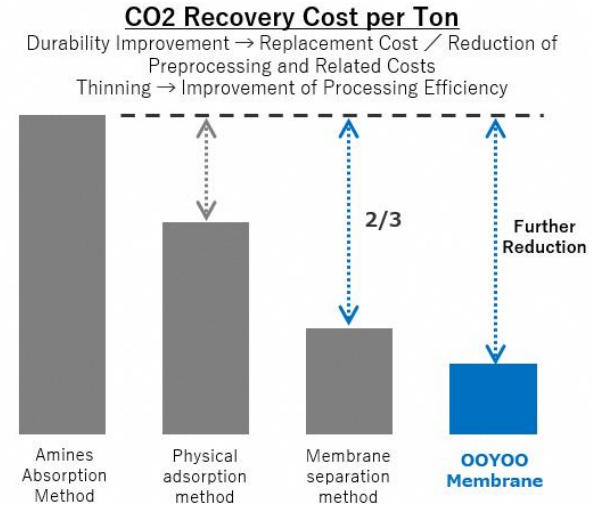
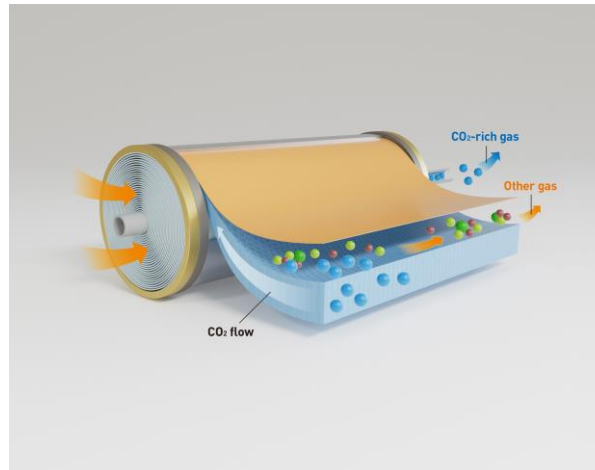


~Faster, Smaller, Smarter. Clean Air Technology for a Sustainable Future~

- **Company Name** : OOOO Ltd. (Company website : [OOYO Ltd.](#))
- **Representative Director**: Shogo Otani **Director**: Easan Sivaniah
- **Year of Establishment**: January 2020
- **Business Description**: Development of air and other gas separation technologies and sales of related products

Key Words

- #Gas Separation Membrane
- #CCUS
- #Low-cost and Compact
- #Kyoto University-based Start-up



CCUS Value Chains

Emission



Carbon Capture



Transportation



Utilization



or

Storage



The cost associated with recovery constitutes the majority and acts as a bottleneck in the expansion of CCUS.

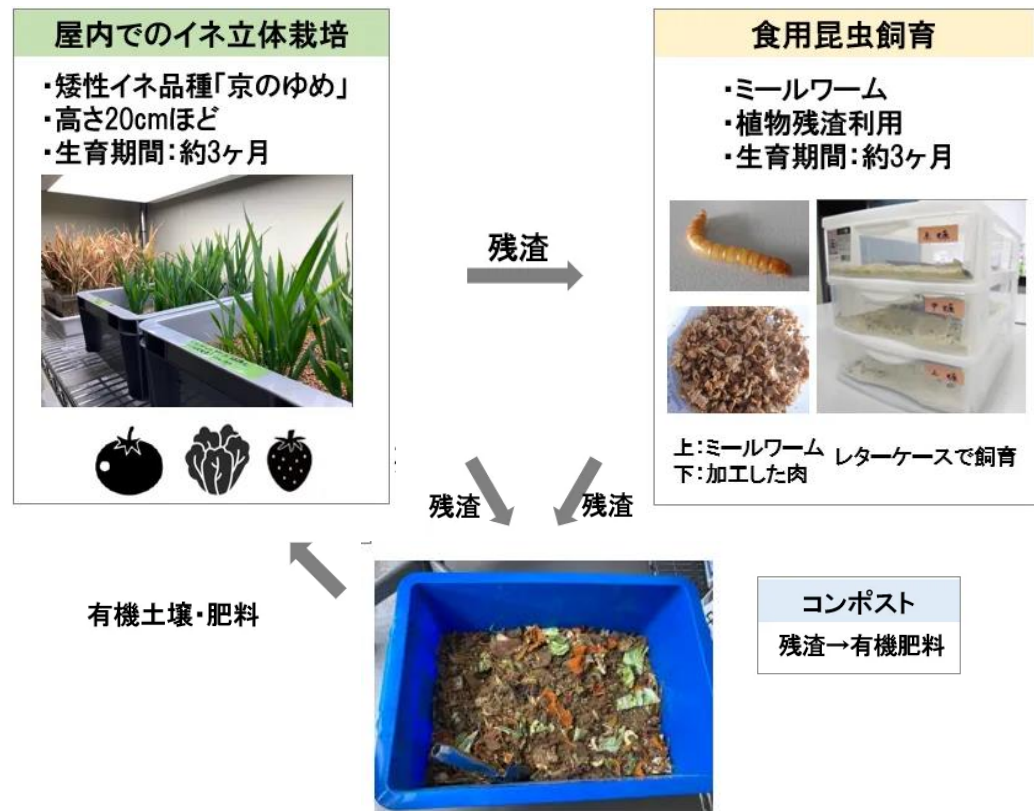
Future Food R&D Center

~ Safe and Secure Food, Made by Our Own Hands ~

- Company Name : Future Food R&D Center Corporation
(Company website : [Future Food R & D Center](#))
- Representative Director: Takehiro Masumura Director : Seiji Takeda
- Year of Establishment: June 2022
- Business Description : Development and production of “dwarf rice” and insect-based foods to enable zero-carbon rice cultivation through short harvest cycles and greenhouse cultivation

Key Words

- # Sustainable Food
- # Dwarf Rice
- # Insect-Based Food
- # Kyoto Prefectural University Initiative





DeepForest

~Meeting Forest Challenges with Technology~

- Company Name : DeepForest Technologies Co., Ltd.
(Company website : [DeepForest Technologies \(deepforest-tech.co.jp\)](https://deepforest-tech.co.jp))
- Representative Director : Masanori Onishi
- Year of Establishment : March 2022
- Business Description : Providing forest analysis software and measuring carbon dioxide absorption, mainly using drones and AI.

Key Words

- #Forest Analysis Software
- #Drones and AI
- #carbon credit
- #Kyoto University-based startup



Figure: taken from DeepForest Technologies Co., Ltd. website

Bioworks

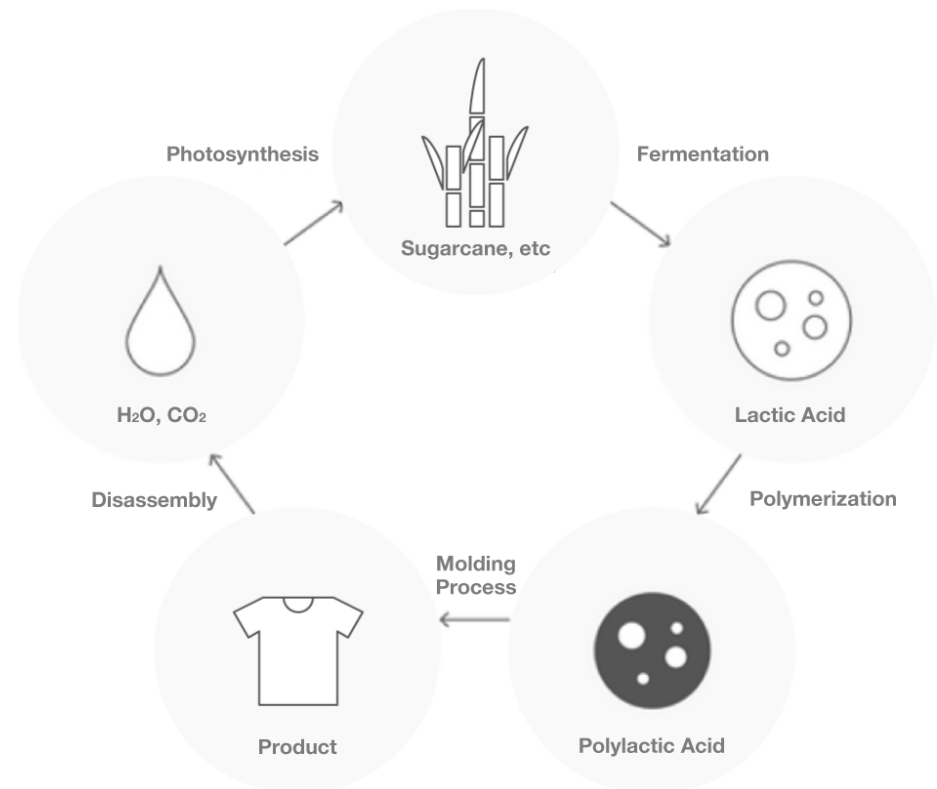
Sowing the seeds of a new “prosperity”

~Creating a new circular society and environment from “material” ~

- Company Name : Bioworks Corporation (Company website : [Bioworks Corporation](https://www.bioworks.co.jp/))
- Representative Director : Koji Sakamoto
- Year of Establishment : October 2015
- Business Description : Development, manufacturing and sales of modified polylactic acid compounds (PlaX™) and products

Key Words

#Next-generation materials
derived from plants
#apparel business
#Sustainability
#Keihanna Science City
(Keihanna, Japan)



Curelabo

~Upcycling of Unused Resources~

- Company Name : Curelabo Corporation(Company website : Curelabo Corporation)
- Representative Director: Naoto Yamamoto
- Year of Establishment: March 2021
- Business Description : Development, production, and sales of materials utilizing unused resources such as sugarcane

Key Words

- # Upcycling
- # Sugarcane Bagasse
- # Bagasse
- # Circular Economy
- # Industry-Academia Collaboration

Carbonization
(for soil
improvement)

Plant
Residues



Paper Yarn
and Fabric

Japanese
Paper

~chemical technology that enables the green revolution~

- Company Name : AC Biode
(Company website : [AC Biode – CHEMICAL TECHNOLOGY FROM LUXEMBOURG & JAPAN](http://www.acbiode.com))
- Representative Director : Tadashi Kubo
- Year of Establishment : April 2019
- Business Description : Development and manufacture of chemical catalysts that break down plastic waste, lignin, and other organic waste at approximately 200°C. Development of the world's first stand-alone AC battery and special circuit for renewable energy storage.

Key Words

#plastic waste
 #Low-temperature, low-pressure catalysts
 #Realization of a Recycling-Oriented Society
 #Luxembourg

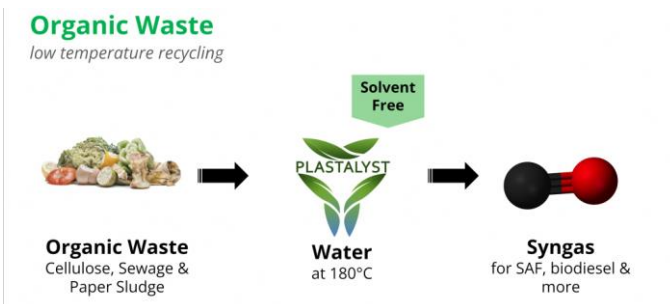
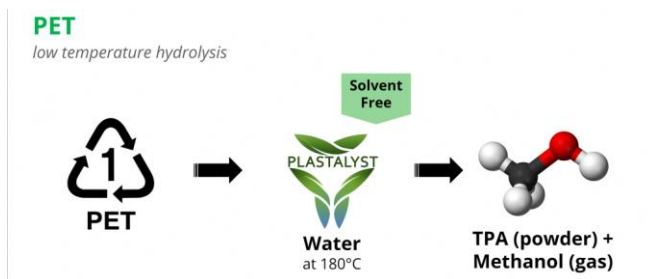
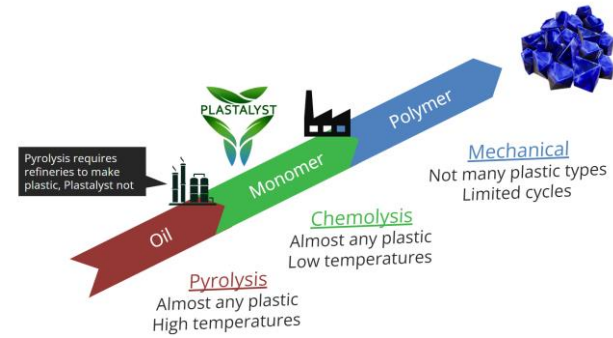


Figure: taken from AC Biode website