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Mitsui Chemicals, Inc.

Mitsui Chemicals Invests in Apeiron Bioenergy, one of the Largest Used Cooking Oil Collectors in Southeast Asia and China Region Bolstering procurement of Waste-based Biomass materials in a move to continue growing the market for bio-based chemicals and plastics

Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) today announced that it invested in Apeiron AgroCommodities Pte. Ltd., rebranded and known as Apeiron Bioenergy (Head Office: Singapore; Founders: Chris Chen, Richard Huang) in June 2022. Apeiron Bioenergy is one of the largest collectors and sellers of used cooking oil in Southeast Asia and China region, which can be employed as a raw material for the production of bio-based chemicals and plastics. This investment will help Mitsui Chemicals expand its procurement of biomass raw materials as it looks to meet growing demand for bio-based chemicals and plastics.



From left:
Apeiron Bioenergy Managing Director Chris Chen
Mitsui Chemicals Representative Director, Member of the Board and Managing Executive Officer YOSHINO Tadashi

Driven by the push for a carbon-neutral society, players around the world are ramping up efforts to replace petroleum-derived raw materials and fuels with Waste-based or biomass-derived alternatives. But given the limited supply of these raw materials available to meet growing demand, feedstock security is expected to become an increasingly crucial point going forward.

There are many options of Waste-based Biomass raw materials, it is used cooking oil, however, that makes the largest contribution to reducing greenhouse gas emissions – on top of which, its inedibility means that it does not contribute to food shortages.

	Major biomass materials	Reduction to GHG emissions
High	Used cooking oil	83%
(Priority)	Animal fats	77%
	Waste oil from the agriculture and forestry sectors (palm oil residue)	49%
Low	Edible vegetable oil (palm oil, rapeseed oil, etc.)	47~54%

Source:
Rules for calculating the greenhouse gas impact of biofuels, bioliquids and their fossil fuel comparators (2018/12/21 Directives)

For Mitsui Chemicals, the investment in Apeiron Bioenergy will help ensure a stable supply of bio-based hydrocarbons, which serve as a raw material for bio-based chemicals and plastics. For Apeiron Bioenergy, meanwhile, the move will add a steady new source of demand. The investment will also have broader benefits, helping expand the market for bio-based chemicals and plastics by way of a business model that combines carbon neutrality with a circular economy.

■ Overview of Apeiron Bioenergy

Company name	Apeiron AgroCommodities Pte. Ltd.
Founders	Chris Chen, Richard Huang
Establishment	August 2007 (unlisted)
Location	Singapore
Business	Collection and sale of Waste-based Biomass materials including used cooking oil

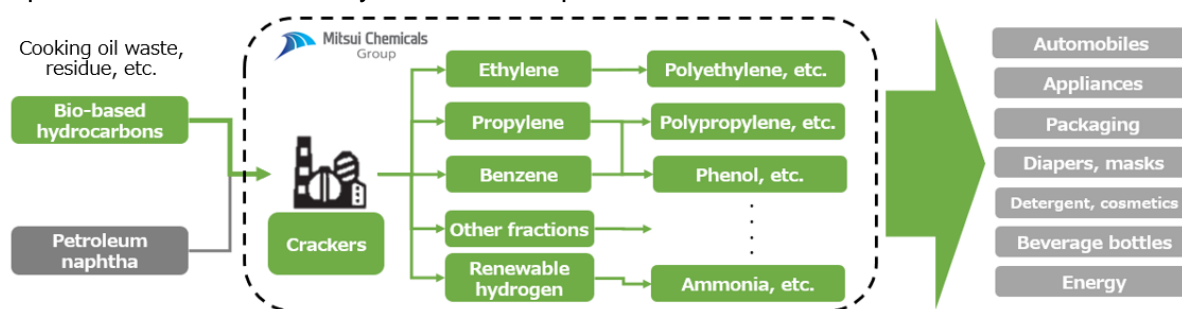
(Reference): Mitsui Chemicals' efforts toward the use of bio-based hydrocarbons

Mitsui Chemicals declared in November 2020 that it will endeavor to become carbon neutral by 2050. By reducing Scope 1 and 2 greenhouse gas emissions from the Mitsui Chemicals Group, as well as maximizing avoided greenhouse gas emissions through the provision of bio-based hydrocarbon derivatives and other products, the company is helping bring about a carbon neutral society with a circular economy,

One effort here has seen Mitsui Chemicals become the first company in Japan to employ bio-based hydrocarbons, which were introduced to the Osaka Works in December 2021. Mitsui Chemicals has since been using these to begin a biomass transition for chemicals such as phenol, as well as plastics such as polypropylene.

Growing the market for bio-based chemicals and plastics will also be a crucial factor in the push to increase biomass content across society as a whole. And by adding to Mitsui Chemicals a reliable source of biomass raw materials, the recent investment will help achieve both stable supply and market growth for the bio-based chemicals and plastics derived from these raw materials.

The process from bio-based hydrocarbons to products:



- Features**
- 1**

Same properties as petroleum-based products
Due to switching to biomass right from the monomer level
 - 2**

Broadening our lineup of bio-based products
Offering more types of bio-based plastic
 - 3**

No social cost
No need to invest into specialized production lines, etc.