EU-Japan Centre for Industrial Cooperation
一般財団法人 日欧産業協力センター

Japanese Industry and Policy News
November (Nov. 4 – Dec. 1) 2022

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Capable of reducing crude oil sludge by more than 50%

Japan Oil, Gas and Metals National Corporation (JOGMEC), Cosmo Oil Co., Ltd., and Abu Dhabi Oil Co., Ltd., announced on November 2 that they have successfully developed crude oil sludge volume reduction (SVR) technology that can reduce sludge by more than 50% and recovered useful oil from sludge. Sludge is a mixture of oil, water, and solids (sand, rust, etc.) contained in crude oil that settles and accumulates at the bottom of the tank. In the past, it was discharged outside the tank during regular tank open inspections and disposed of as industrial waste.

JOGMEC website (in Japanese):
https://www.jogmec.go.jp/news/release/news_08_00024.html

Euglena developed next-generation biodiesel fuel using 100% Euglena-derived raw materials

On November 2, Euglena Co., Ltd. announced it has confirmed that the 100% derived raw material fuel which is a next-generation biodiesel fuel made only from fats and oils extracted from the microalgae Euglena (Japanese name: MIDORIMUSHI), has the same performance as diesel oil derived from petroleum by the demonstration test conducted by Isuzu Motors Ltd. Currently, used cooking oil is used as the main raw material for the production of biodiesel fuel in Japan and overseas, but there are concerns about a shortage of supply.

Euglena website:
https://www.euglena.jp/en/news/20221102-2/

Sumitomo Chemical and two universities develop "soft solid" type solid state battery

Sumitomo Chemical announced on November 7 that it has jointly developed a "soft solid" type battery with Kyoto University and Tottori University. This time,

by using a new material, they succeeded in achieving a capacity of about 230 Wh/kg in a non-pressurized method, and succeeded in making the solid electrolyte flexible, which had been an issue until now. This battery can eliminate the parts required for pressurization, so it is expected to significantly reduce the weight and cost of the battery. And the early commercialization of highly safe solid-state batteries for EVs, etc, is also expected.

Sumitomo Chemical website (in Japanese):
https://www.sumitomo-chem.co.jp/news/detail/20221107.html

Foreign exchange reserves fall 3.5% in October

The Ministry of Finance announced on Nov. 8 that foreign exchange reserves at the end of October were US$ 1,194,568 million, down US$ 43,488 million (3.5%) from the end of September. Foreign exchange intervention by buying the JP¥ and selling the US$ and rising US interest rates had an impact. The rate of decline was the second largest after September (4.2%), when the JP¥ buying intervention was implemented for the first time in 24 years.

MOF website:
https://www.mof.go.jp/english/policy/international_policy/reference/official_reserve_assets/e0410.html

The current account surplus in the first half of this fiscal year decreased by 58.6% year-on-year

According to the balance of payments statistics (preliminary report) for the first half of fiscal 2022 (April to September) released by the Ministry of Finance on Nov. 9, the current account balance, which indicates the status of transactions of goods and services with foreign countries and investment income, is a surplus of JP¥ 4.8458 trillion. The surplus decreased by JP¥ 6.8627 trillion (58.6%) from the same period of the previous year, marking the largest decline in the first half since 1985. The main reason for this was the depreciation of the JP¥ and rising fuel prices, which pushed up the amount of imports, turning the balance of payments into the red.

MOF website:
https://www.mof.go.jp/english/policy/international_policy/reference/balance_of_payments/release_date.htm

Fast Retailing trains Rohingya refugees in sewing skills

Fast Retailing, which operates the UNIQLO brand, announced on Nov. 9 that it cooperates with the United Nations High Commissioner for Refugees (UNHCR) to train women Rohingya refugees in Bangladesh on sewing skills. They make sanitary cloth napkins that can be used repeatedly as a paid volunteer so that they can earn living expenses. The reward is 50 taka (approximately JP¥ 72) per hour, and participants work 4 hours a day, 5 times a week. The plan is to train 1,000 people by 2025.

Fast Retailing website:
https://www.fastretailing.com/eng/sustainability/news/2211091300.html

Eight Japanese companies invested to establish a new company with the aim of domestically producing advanced semiconductors

A new company invested by eight major Japanese companies for the domestic production of advanced semiconductors announced on November 11 that they aim for mass production in 2027, five years later. Eight companies, including Toyota Motor Corporation, Sony Group, and NTT, have invested. The new company "Rapidus" plans to allocate JP¥ 5 trillion for capital investment over 10 years. Eight companies will invest a total of JP¥ 7.3 billion, and the government will provide subsidies of JP¥ 70 billion. This is because geopolitical risks such as the Taiwan Strait Crisis are increasing, and once an emergency occurs, there is a high possibility that Japan will not be able to secure semiconductors as before.

Rapidus website:
https://www.rapidus.inc/news_topics/information/press1en/

Ministry of Economy, Trade and Industry announces efforts to establish design and manufacturing infrastructure for next-generation semiconductors

On November 11, the Ministry of Economy, Trade and Industry (METI) announced its efforts to establish a foundation for designing and manufacturing next-generation semiconductors in the latter half of the 2020s. According to this, a new research and development organization for next-generation semiconductor research will be established by the end of this year, and the name will be "Leading-edge Semiconductor Technology Center (LSTC)". The company also announced that it has decided to select Rapidus Co., Ltd. for its research and development project. This fundation was established based on the agreement at the First Japan-U.S. Commercial and Industrial Partnership (JUCIP) Ministerial Meeting held in May this year.

METI website:
Announcement Regarding Efforts Toward the Establishment of Design and Manufacturing Bases for Next-Generation Semiconductors (meti.go.jp)

Supercomputer “Fugaku” ranked 2nd in Top500

The supercomputer "Fugaku", which RIKEN (RIKEN) started trial use in April 2020 and shared in March 2021, is ranked in the world supercomputer ranking "HPCG (High Performance Conjugate Gradient)" ranked No. 1 in "Graph500" for 6 consecutive years, No. 2 in "TOP500" and No. 3 in "HPL-AI". These rankings were announced on November 14 at SC22, an international conference on HPC (High Performance Computing) being held at the Kay Bailey Hutchison Convention Center Dallas, USA. Fugaku has held the top spot for four consecutive terms since June 2020, but lost the top to the US's “Frontier” in May of this year.

RIKEN website (in Japanese):
https://www.riken.jp/pr/news/2022/20221115_1/index.html

Developed a "soil biodegradable tree shelter" that returns to the soil

Sumitomo Forestry, Achilles, and GCJ announced on November 10 that they had jointly developed a "soil biodegradable tree shelter." "Soil Biodegradable Tree Shelter" uses biodegradable resin containing plant-derived raw materials as an alternative to polypropylene products. After use, it is naturally degraded by microorganisms in the soil in the forest, greatly reducing the environmental burden. It eliminates the need to carry out the shelter, which greatly reduces the

CO2 generated during transportation and incineration, and reduces the burden on the workers who remove the shelter. These shelters are used to prevent deer and wild rabbits from eating trees that have just been planted.

SUMITOMO FORESTRY website (in Japanese) :
https://sfc.jp/information/news/2022/2022-11-10.html

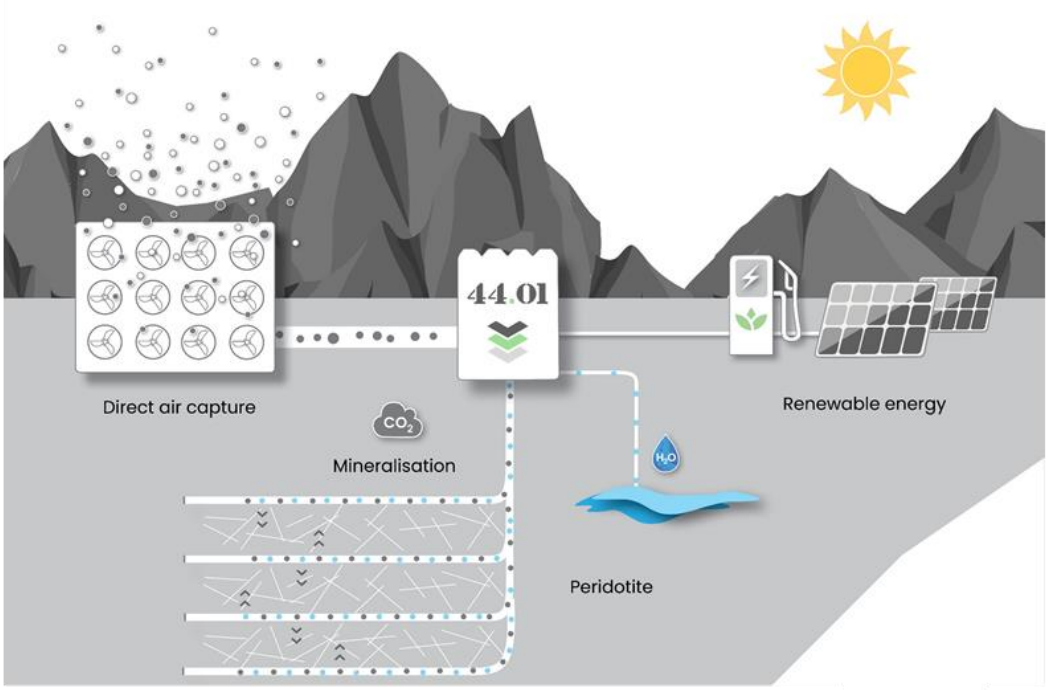
Polypropylene shelter　　Soil biodegradable tree shelter

Photo from SUMITOMO FORESTRY website

Sumitomo Corporation Collaborates with UK CO2 Mineralization Startup
Sumitomo Corporation announced on November 10 that it will collaborate with British start-up Protostar Group, which provides CO2 mineralization services. CO2 mineralization is attracting attention from the viewpoint of permanence and stability because CO2 can be permanently fixed underground as a mineral. Protostar Group is currently working on the world's only CO2 mineralization using peridotite (the rock that makes up the Earth's interior). The Protostar Group operates under the brand name "44.01" and has already successfully demonstrated a small scale in the field. Starting with Oman, the company aims to develop its business around the world, with the goal of commercial CO2 mineralization by 2023 and 1 billion tons of CO2 by 2040. Especially in the

Middle East, the United States, Europe, Japan, etc., it has been confirmed that peridotite exists near the surface, and suitable areas for CO2 mineralization are widely distributed.

Sumitomo Corporation website:
https://www.sumitomocorp.com/en/jp/news/topics/2022/group/20221110



Concept from Sumitomo Corporation website

IHI has started considering the first green ammonia production and sales business in Dubai

On November 10, IHI announced that IHI and ENOC, a state-owned oil and gas company of the United Arab Emirates (UAE), Dubai and surrounding emirates, would start manufacturing and producing green ammonia from renewable energy using solar resources. First, they will start examining and investigating the business feasibility of sales. If realized, it will be the first green ammonia project in Dubai. The two companies will manufacture green ammonia at multiple existing oil terminals owned by ENOC's wholly-owned subsidiary HTL, and sell ammonia for the purpose of exporting to the Japanese and Asian markets, as well as local power generation and fuel supply for ships.

IHI website:

https://www.ihi.co.jp/en/all_news/2022/resources_energy_environment/1198094_3488.html

International standard (ISO 34502) for safety evaluation of automated driving systems proposed by Japan was issued

The Ministry of Economy, Trade and Industry (METI) announced on November 16 that an international standard proposed by Japan regarding procedures and scenarios for evaluating the safety of automated driving systems had issued. The feature of Japan's proposal is a more feasible "scenario-based approach" for deriving critical scenarios. This is a method of decomposing each element of an automated driving system into three elements of "recognition", "judgment", and "operation". And it systematically organizes the events that lead to danger for each, leading to a scenario without omission. If the number of scenarios becomes nearly infinite, optimal verification work will be hindered, but this approach makes it easy to consider just enough scenarios for safety assurance.

METI website (in Japanese):
https://www.meti.go.jp/press/2022/11/20221116006/20221111005.html

IAEA conducts review of treated water from Fukushima Daiichi Nuclear Power Station

According to the Ministry of Economy, Trade and Industry, officials from the International Atomic Energy Agency (IAEA) visited Japan from November 14 to 18 to review the safety of ALPS-treated water at TEPCO's Fukushima Daiichi Nuclear Power Plant. 7 IAEA staff and 9 international experts from Argentina, China, South Korea, France, the Marshall Islands, Russia, the United Kingdom, the United States, and Vietnam visited the site. The review mission on the safety of ALPS-treated water is carried out based on the terms of reference (TOR) signed between the IAEA and Japan in July last year, and this is the second time. The first was held from February 14th to 18th this year. The results of this review are scheduled to be published as a report by the IAEA around the beginning of next year.

METI website:
https://www.meti.go.jp/english/press/2022/1118_001.html

APEC Leaders' Declaration containing both opinions concerning Russia's invasion

The Asia-Pacific Economic Cooperation (APEC) Summit, which was held in Bangkok, the capital of Thailand, by 21 countries and regions, including Japan, the United States, China, and Russia, closed on Nov.19 with the adoption of a summit declaration. Most members strongly condemned the war and emphasized that it exacerbates the fragility and vulnerability of the world economy, the declaration said, bearing in mind the situation in Ukraine. However, it also indicated that there was a difference of opinion over Russia, and basically followed the summit declaration of the Group of 20 major countries and regions (G20) summit that ended on Nov. 16.

METI website:
https://www.apec.org/meeting-papers/annual-ministerial-meetings/2022/2022-apec-ministerial-meeting

METI Compiles FY2021 Energy Supply and Demand Results

METI and the Agency for Natural Resources and Energy have compiled the energy supply and demand results (preliminary report) for FY2021. According to the report, overall energy demand increased by 2.0% from the previous year. Among them, coal increased by 12.1%, city gas by 4.5%, electric power by 2.0%, and oil by 0.4%. On the supply side, overall supply increased by 3.4% year-on-year. Fossil fuels increased by 1.4%, the first increase in eight years. On the other hand, renewable energy (including hydropower) increased for the ninth consecutive year. Energy-related CO2 emissions increased by 1.2% from the previous year and decreased by 20.7% from FY2013 to 980 million tons, remaining below 1 billion tons for the second consecutive year.

METI website (in Japanese):
https://www.meti.go.jp/press/2022/11/20221122001/20221122001.html

Yamaha adopts biomaterials for watercraft parts

Yamaha Motor announced on November 16 that it will use plant-derived cellulose nanofiber reinforced resin "Cellenpia Plas (R)" for its marine products. This is the first attempt in the world to put biomaterials to practical use in transportation equipment parts. The material will be developed jointly with

Nippon Paper Industries. This CNF reinforced resin is manufactured by kneading and dispersing CNF, a biomass material that utilizes wood resources, into a resin such as polypropylene. It is possible to reduce the weight by 25% or more compared to existing resin materials. It also has excellent material recyclability, which helps reduce the amount of plastic used and greenhouse gas emissions.

YAMAHA website:
https://global.yamaha-motor.com/news/2022/1116/pwc.html

Toshiba ESS uses rocks for heat storage and power generation

Toshiba Energy Systems & Solutions Corporation (Toshiba ESS) announced Nov. 21 that it set up Japan's first test facility with a heat capacity of approximately 500 kWh at Toshiba's Yokohama Plant on November 21, and began full-scale technology development and verification in the development of rock heat storage technology. Toshiba ESS, together with Chubu Electric Power Co., Inc. and Marubeni Corporation, is working on technology development for an energy storage service business using rock heat storage technology as a commissioned work by the Ministry of the Environment. So far, the three companies have focused on rock heat storage technology, which is expected to be superior to lithium-ion batteries and hydrogen in terms of environmental friendliness, economy, and facility reliability, and have been conducting joint basic research.

Toshiba ESS website (in Japanese):
https://www.global.toshiba/jp/news/energy/2022/11/news-20221121-01.html

Sumitomo Forestry digitizes forest information and visualizes CO2 absorption

Sumitomo Forestry announced on November 21 that Maniwa City, Okayama Prefecture, NTT, Regional Revitalization Co-Design Research Institute and the company have conducted a joint demonstration project to digitize forest information and visualize CO2 absorption. Based on the CO2 absorption data obtained from the demonstration, the company plans to promote the creation of carbon credits in the city's forests using the "J-credit" system. Proceeds from the sale of credits will be used for forest maintenance costs such as thinning

and planting, promoting the cyclical use of forests and supporting sustainable forest management in the city. In addition, they will continue to improve this model to improve the functions of forests as CO2 absorption sources and create new sources of revenue.

SUMITOMO FORESTRY website (in Japanese):
https://sfc.jp/information/news/2022/2022-11-21.html

METI explains Fukushima nuclear power plant treated water (ALPS) to diplomatic groups in Tokyo

On November 25, the Ministry of Economy, Trade and Industry (METI) announced that it held a video briefing session for the diplomatic groups in Tokyo regarding the handling of ALPS (Advanced Liquid Processing System) treated water from the Fukushima Daiichi Nuclear Power Plant. At the briefing, the Ministry of Foreign Affairs, the Agency for Natural Resources and Energy, and TEPCO presented the content of the application for approval of changes to the implementation plan for the Fukushima Daiichi Nuclear Power Station, which was submitted by TEPCO to the Nuclear Regulation Authority, and explained the overview of the 2nd IAEA review on the safety of ALPS-treated water, which was conducted from Nov. 14 to 18. METI says it keep on disseminating information on the status of the Fukushima Daiichi Nuclear Power Station to the international community.

METI website:
https://www.meti.go.jp/english/press/2022/1125_001.html

ANA, JAXA, etc. GHG measurement from the sky aiming for social implementation

The Japan Energy and Metals National Corporation (JOGMEC) announced on November 24 that it has signed a business contract with All Nippon Airways for commissioned research on technology to measure greenhouse gases (GHG) from the sky using drones. The Japan Aerospace Exploration Agency (JAXA), which is working with ANA on demonstration verification, will cooperate with this project. Through this survey, they aim to socially implement a "top-down method" that measures GHG from the sky using satellites and drones. By using a top-down approach, comprehensive emission status can be observed at a site

or region. In the survey, ANA and JAXA will utilize the know-how of measuring greenhouse gases from aircraft using remote sensing technology, which has been verified for some time. At the same time as working on a method that enables methane measurement on the ground surface without modifying the aircraft, they will also work on a methane measurement method using a top-down method using drones.

JOGMEG website (in Japanese):
https://www.jogmec.go.jp/news/release/news_08_00027.html

Joint development of CO2 recovery technology with MHI and ExxonMobil
Mitsubishi Heavy Industries (MHI) announced on November 30 that its subsidiary, Mitsubishi Heavy Industries Engineering has formed a partnership with ExxonMobil, a US oil major, to jointly develop carbon dioxide (CO2) recovery technology. Kansai Electric Power, which has basic technology along with Mitsubishi Heavy Industries Engineering, will also join. Mitsubishi Heavy Industries will first license the base technology to ExxonMobil. ExxonMobil is working on a project to inject captured CO2 into geological formations for storage. By adding MHI's technology, which features a high CO2 recovery rate, they aim to further reduce environmental impact and reduce costs. Mitsubishi Heavy Industries Engineering has delivered a total of 14 commercial CO2 capture plants to countries around the world, and has a track record of capturing more than 1 million tons of CO2 annually in commercial use.

MITSUBISHI HEAVY INDUSTRIES website:
https://www.mhi.com/news/22113001.html

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