Tokyo lithium battery transfer

Will Mitsui invest in lithium-ion battery recycling plant in Japan?
Mitsui to invest in lithium-ion battery recycling plant in Japan |2024|Topics |MITSUI &CO.,LTD. Mitsui &Co.,Ltd. ("Mitsui",Head Office: Tokyo,President and CEO: Kenichi Hori) has agreed to set up a new joint venture for lithium-ion battery recycling with VOLTA INC.

Why is Tokyo considering storage batteries?
Tokyo is now discussing the inclusion of storage batteries in the list of materials deemed vital to ensure the country's way of life and economic growth,as they are necessary to expand the use of EVs and renewable electricity,in line with the country's goal to achieve a net-zero society by 2050.

How much lithium does Japan need?
Japan's domestic lithium-ion battery production capacity is expected to reach 150 GWh/yr by 2030,up by around eight times from the current 20 GWh/yr,according to Meti. To achieve its goal,Japan needs to secure 100,000 t/yrof lithium,90,000 t/yr of nickel,150,000 t/yr of graphite,20,000 of t/yr cobalt and 20,000 t/yr of manganese.

Why is Japan stepping up efforts to develop battery recycling technology?
Japan is stepping up efforts to develop its battery recycling technology and secure stable supplies of battery materials as demand for storage batteries is expected to continue rising. Storage battery demand is expected to increase because of greater efforts to decarbonise,especially in the country's high-emitting automobile and power sectors.

Does Japan have a battery recycling program?
There has been a little progress in battery recyclingin Japan largely because of the high costs associated with the process. There are almost no battery metals that can be supplied through the recycling process for now,the country's trade and industry ministry Meti said.

Can 80% of lithium be recovered from used lithium-ion batteries?
(Source photos by Shin Watanabe and Nozomu Ogawa) TOKYO -- Japanese chemical and fiber manufacturer Toray Industries is developing a new technology that can recover more than 80%of lithium from used lithium-ion batteries,with the aim of commercialization by March 2028,Nikkei has learned.

Lithium-ion batteries (LIBs) are being used as power sources for use in electric vehicles and aircraft, and so on. Early detection technique of battery deterioration is required with the spread adoption of electric vehicles and aircraft. Electrochemical impedance spectroscopy is a powerful method to evaluate the internal state of LIB. We ...

Panasonic and Toyota have started joint research with the University of Tokyo on battery resources and

recycling. In addition to CO2 neutrality, the aim of the project is to reduce production costs in the entire battery supply chain.

"Olivine-Type Cathodes - Achievements and Problems -", Atsuo Yamada, 11th International Meetings on Lithium Batteries (IMLB-11), Monterey, USA (2002). "Olivine-type Cathodes for Lithium Batteries", Atsuo Yamada, 103rd Annual Meeting and Exposition of the American Ceramic Society, Indianapolis, USA (2001).

Mitsui & Co., Ltd. ("Mitsui", Head Office: Tokyo, President and CEO: Kenichi Hori) has agreed to set up a new joint venture for lithium-ion battery recycling with VOLTA INC. ("VOLTA", Head Office: Fujinomiya City, Shizuoka Prefecture, Japan, President: Kenta Imai) and Miracle Eternal PTE LTD.

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Japan and the European Union have agreed to collaborate on a scheme to share information about battery material production locations and the supply chain. The move will help the two parties...

Japan was where the world"s first lithium-ion battery and hybrid vehicle were made, but the country is aware that its position in the production of both battery materials and battery cells is falling behind its Asian peers, Fastmarkets heard on Tuesday, January 31

Lithium-ion batteries (or LIB), which are expected to play a large role in efficient energy usage towards achieving a decarbonized society, have become increasingly ...

UTokyo-IIS, PPES, Panasonic, and TTC will work on technological innovation and social implementation of lithium-ion batteries, whose market is expected to further expand ...

Selected Works "Liquid Madelung energy accounts for the huge potential shift in electrochemical systems", Nature Communications, 15, 1319 (2024). "Electrolyte design for lithium-ion batteries with a cobalt-free cathode and silicon oxide anode", Nature Sustainability, 6, 1705-1714 (2023). "Electrolyte science, what"s next?", Next Energy, 100014 (2023).

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For battery cooling, the immersion medium is usually selected to be a dielectric fluid so as to eliminate short circuit. When battery temperature exceeds the saturation point of fluid, boiling happens to extract the heat from batteries and escapes vapor. Compared to single-phase immersion, pool boiling performs higher heat dissipation capacity ...

"Current batteries for low-power devices, such as smartphones or sensors, typically use chemicals such as lithium to store charge, whereas a quantum battery uses microscopic particles like arrays of atoms," said Chen. ...

TOKYO -- Sumitomo Metal Mining will start recycling cobalt, lithium and other key materials from used electric vehicle batteries, employing a cost-competitive proprietary process to extract...

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