

Enhancement of Facilities for Lithium-ion Battery Electrolyte Ionel™ (LiFSI)

NIPPON SHOKUBAI CO., LTD. (Headquarters: Osaka, Japan, President: Yujiro Goto, hereinafter "Nippon Shokubai") has decided to begin facility design of new electrolytes "Ionel™ - Lithium bis(fluorosulfonyl) imide <LiFSI>" for lithium-ion batteries by setting up the "Ionel Construction Team" on October 1, 2020 in order to construct new manufacturing facilities (annual production capacity; 2,000 tons, location; Nisshoku Techno Fine Chemical Co., Ltd.) using its own process. The decision is made because current production capacity, the annual production capacity of 300 ton, is insufficient for the increasing demand.

In recent years, due to the growing awareness of environmental issues, the electric vehicles (EV) market has been steadily expanding with high expectations for EV as a leading next-generation vehicle for energy saving and low pollution. The use of Ionel™ as the electrolyte of lithium-ion batteries for EV significantly improves the cycle characteristics, rate characteristics, and storage stability of batteries over a wide temperature range from low to high temperatures. As a result, Ionel™ is used not only as an additive in electrolytes but also as a main salt in electrolytes, and demand for Ionel™ is expanding mainly in Asia. Demand for Ionel™ is also expected to expand as it improves the performance of next-generation innovative batteries such as all-solid-state batteries.

LiFSI is difficult to achieve high purity, and its production and quality control require a high level of know-how. Nippon Shokubai has established a technology to stably produce 2,000 tons of LiFSI per year by utilizing its unique production technology developed so far. Also, Ionel™ is a high-purity LiFSI protected by our company patents, so customers can use it with confidence in terms of quality, price and intellectual property.

Commercial production of new production facilities is scheduled to begin in the spring of 2023, and we aim to achieve sales of over 10 billion yen by 2024. As the LiFSI market is expected to expand globally, we are considering new capital investment plans in Europe to meet demand after 2025.

Outline of Nisshoku Techno Fine Chemical Co., Ltd.

Headquarter and Plant: 9-1, Koya-Shinmachi, Ichikawa-Shi, Chiba, Japan

Established: December 27th, 1954

Capital: 90 million yen

Business: Manufacturing and selling chemical products

Main shareholder: NIPPON SHOKUBAI CO., LTD. (96.83%)

Number of employees: 98

Website: <https://www.ns-technofine.co.jp/index.html>



Fig.1 Lithium bis(fluorosulfonyl) imide <LiFSI>



Fig.2 Nisshoku Techno Fine Chemical Co., Ltd.

About NIPPON SHOKUBAI Co., Ltd.: Since 1941, Nippon Shokubai has grown up its business with unique catalyst technology. Nippon Shokubai has supplied, for example, ethylene oxide, acrylic acid, automobile catalysts, process catalysts and so on. Among all, our global market share of superabsorbent polymer is the largest in the world now. Nippon Shokubai is a global chemical company operating under its corporate mission "TechnoAmenity-Providing affluence and comfort to people and society with our unique technology." <https://www.shokubai.co.jp/en/>

【Contacts】

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