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SAKATA INX CORP.

SAKATA INX and Sofab Collaborate to Develop Inkjet-Printable ETL Ink for Perovskite Solar Cells

SAKATA INX CORPORATION and Sofab Inks, Inc., a U.S.-based developer of materials for perovskite solar cells, are collaborating to develop a specialized inkjet-printable ink for the electron transport layer (ETL) of perovskite solar cells. The development combines the companies' respective expertise in advanced materials and inkjet technologies, with the goal of enabling more precise and efficient production processes for next-generation solar technology.

Perovskite solar cells are attracting worldwide attention as a next-generation photovoltaic technology. Their lightweight and thin-film properties are expected to enable a wide range of applications, including building materials, windows, and automobiles. Another significant advantage is their compatibility with flexible substrates.

■ Background and Purpose of the Collaboration

This development combines Sofab's high-performance tin oxide (SnO₂)-based ETL materials with SAKATA INX's nano-dispersion, ink formulation, and thin-film formation technologies cultivated through its industrial inkjet ink business. Applying electronic materials by inkjet printing requires not only high material performance but also stable jetting and the ability to form uniform ultrathin films. By integrating Sofab's materials technology with SAKATA INX's inkjet technology, the companies aim to establish a precise and efficient inkjet deposition process.

■ Key Features of the Development

The ETL inkjet ink currently under development is designed with consideration for reducing damage to the perovskite layer. It could support more precise material deposition, help reduce material waste, and contribute to improved durability and more efficient production processes. The technology can be applied not only to single-junction perovskite solar cells but also to tandem perovskite solar cells, with potential applications in markets worldwide.

■ Development to Be Presented at the Perovskite Connect Conference

The two companies plan to present information about the product under development at the Sofab booth during the Perovskite Connect Conference, to be held in Berlin, Germany, on October 21 and 22, 2026.

■ Potential Contribution to Sustainable and Scalable Manufacturing

The development of an inkjet-printable ETL ink could support more precise material deposition, help reduce material waste, and contribute to more efficient production processes.

As the technology continues to advance, the companies will evaluate its potential to support more sustainable and scalable manufacturing of perovskite solar cells.

About SAKATA INX CORPORATION

Founded in 1896, SAKATA INX is the world's second largest chemical manufacturer in sales of printing inks, with operations in more than 20 countries and regions worldwide, including Asia, the Americas, and Europe. The company manufactures and sells printing inks used for various packages, beverage cans, and information media, industrial inkjet inks for digital printing, and functional materials for displays. Under the business theme of "Creation of Visual Communication Technology," the company aims to "create an information culture that makes people's lives more comfortable" through environmentally-friendly and sustainable products and continues to take on the challenge of entering new fields.

(<https://www.inx.co.jp/english/>)

About Sofab Inks, Inc.

Sofab Inks, Inc. is a developer of materials for perovskite solar cells based in Kentucky, the United States. The company develops functional materials, including tin oxide (SnO₂)-based electron transport layer (ETL) materials, and conducts research and development toward next-generation solar cells offering high efficiency and durability.

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