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SOLAMENT Solar-smart Material to be Unveiled at JAPAN MOBILITY SHOW 2023

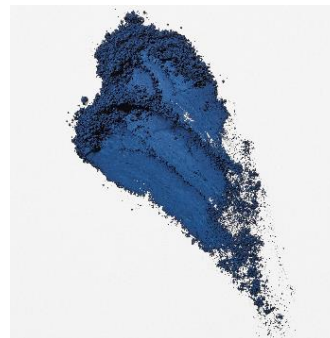
Prototype Transparent “DOWN-LESS DOWN JACKET” to be Exhibited

Sumitomo Metal Mining Co., Ltd. (TSE: 5713) announces that it will exhibit its CWO®, originally invented by the Company and nanoscale particles that has the unique ability to absorb near infrared ray (NIR), as a material technology called SOLAMENT™ in the Tokyo Future Tour program of the organizers of JAPAN MOBILITY SHOW 2023 to be held at Tokyo Big Sight.

SOLAMENT is a solar-smart material technology based on the CWO invented by Sumitomo Metal Mining that is patented in Japan and overseas. It utilizes its function for absorption of NIR contained in sunlight and other forms of light, and Sumitomo Metal Mining will strengthen its push into markets including apparel, construction materials, agriculture, and healthcare.

At JAPAN MOBILITY SHOW 2023, a transparent SOLAMENT DOWN-LESS DOWN JACKET that warms the wearer up without the need for down feather will be exhibited in a booth as a prototype to provide visitors with an experience of SOLAMENT's functionality and potential.

SOLAMENT Material Technology from Sumitomo Metal Mining



SOLAMENT is a portmanteau of the words *solar* (which refers to the sun) and *element*. The Japanese word *so/a* (meaning ‘sky’) is also incorporated in this word, and this expresses the fact that the material exercises its functionality to an even greater extent under an open sky. The logo is comprised of a design with the motif of sunlight and a hexagonal crystal structure of CWO onto which an X with the meaning of collaboration has been overlaid to express growing potential.

Since before the rollout of SOLAMENT, this material has been utilized under the name CWO in a wide variety of products in fields including automobiles, construction materials, and agriculture. Such products include window glass material for automobiles to suppress in-car temperature increases and material for clothes that can be expected to reduce the burden placed on the skin by ultraviolet and NIR.

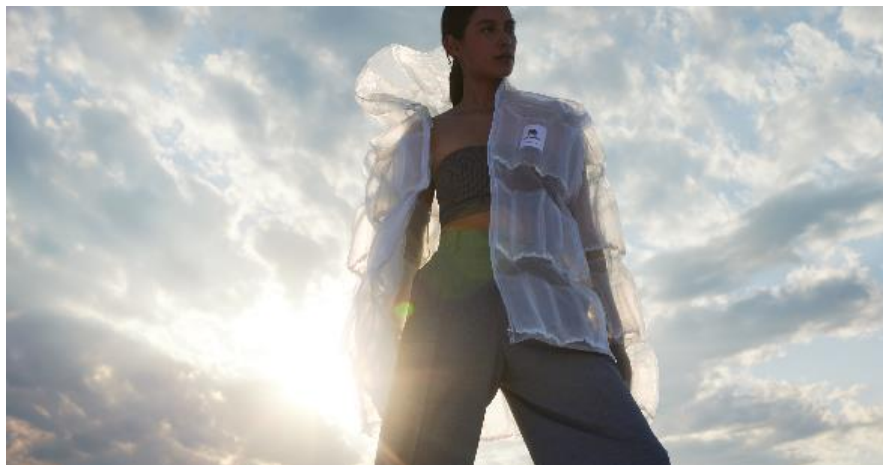
By relaunching it as the SOLAMENT solar-smart material technology, the Company aims to have as many people as possible find out about the potential, and broaden the scope of cooperation and utilization for the SOLAMENT. And with JAPAN MOBILITY SHOW 2023 being held as an event that goes beyond the boundaries of the automobile industry, Sumitomo Metal Mining shall exhibit the SOLAMENT DOWN-LESS DOWN JACKET apparel product in order to build anticipation toward expanding mobility that is not limited to transportation.

SOLAMENT website: <https://crossmining.smm.co.jp/solament/en/>

SOLAMENT DOWN-LESS DOWN JACKET Prototype

Here, the Company embarked on a prototype project focusing on the first ever utilization of SOLAMENT in the field of apparel. Through a collaboration with Droga5 Tokyo, a creative agency under the Accenture umbrella, Sumitomo Metal Mining has successfully created a DOWN-LESS DOWN JACKET that is transparent and light, and has the ability to keep the wearer warm without using any down. By using SOLAMENT, whose properties include being able to change light into heat, in the material, the material itself gives off heat and produces a surprising amount of warmth.

And in addition to its design and comfort, it also has credentials from the perspective of ethical consumption that takes into account the environment and society given its unique characteristic of not using down. Fashion designer Kosuke Tsumura oversaw the design of the prototype.



[Testing Results]

A temperature comparison when wearing the SOLAMENT DOWN-LESS DOWN JACKET revealed temperature changes equivalent to a standard down jacket thanks to its superb transparency and NIR absorption capacity.

	Jacket used	Temperature change during irradiation with NIR	Supplementary information
(1)	Standard down jacket containing down	+6.1°C (23.7→29.8°C)	—
(2)	SOLAMENT DOWN-LESS DOWN JACKET	+6.3°C (23.7→30.0°C)	Temperature increase comparable to a down jacket despite a cavity shape with no down
(3)	Jacket in (2) with no SOLAMENT	+3.5°C (23.7→27.2°C)	Low heat increase rate

*Comparison of temperatures when wearing with artificial sunlight exposure for 10 minutes at the same room temperature.

Overview of Exhibit at Tokyo Future Tour Organizer's Program in JAPAN MOBILITY SHOW 2023

The prototype SOLAMENT DOWN-LESS DOWN JACKET will be located in the Tokyo Future Tour that sets out a future changed by mobility in a large experiential theater, and depicts the future by showcasing four different themes alongside specific products and services in a range of shows, and is exhibited in Life & Mobility where scenes from daily life in the future play out.

At the SOLAMENT FIRST SHOWCASE exhibition booth, the reborn SOLAMENT solar-smart material technology will be unveiled. The booth will exhibit a prototype of the SOLAMENT DOWN-LESS DOWN JACKET as an item of apparel symbolizing a future that changes through variety in mobility. Visitors are free to try it on, and experience the functionality and philosophy of SOLAMENT.

Exhibition location: Life & Mobility Area, Tokyo Big Sight

https://www.japan-mobility-show.com/en/organizer_program/tokyo_future_tour/



Illustration of Exhibition Booth

Comment of SOLAMENT Project Leader

“Possessed only by Sumitomo Metal Mining, SOLAMENT is a patented product with an effect that sets it apart from other heat-generating and heat-shielding materials. It has various potential uses depending on the way it is used, including heat generation, heat shielding, and prevention of secret filming. If used in clothing, it can become a powerful partner for athletes to go beyond, and if used in agriculture, it will enable crops to be grown in places where and when it has been impossible to grow crop.”

“We believe that this material has the potential to open up a future that no one else has been able to, and to open up a world and culture that goes beyond imagination. Please take this opportunity to experience SOLAMENT. We are sure people will be able to instinctively feel its potential.”

For more details of the event, please see the official website:

<https://www.japan-mobility-show.com/en/>