

Niterra Co., Ltd.

Niterra to Debut Entire Exhibit during Final Ceremony at Expo 2025 Osaka, Kansai, Japan

NAGOYA, JAPAN, Mar. 10, 2025 — Niterra Co., Ltd., Japan's leading manufacturer of spark plugs and sensors with an evolving portfolio focused on ceramics and beyond, is excited to unveil its entire exhibit and virtual content during the final ceremony for the Future Society Showcase Project. The event will occur on March 10th at the Future Life Expo "Future City" pavilion at Expo 2025 Osaka, Kansai, Japan.



Exhibit Overview

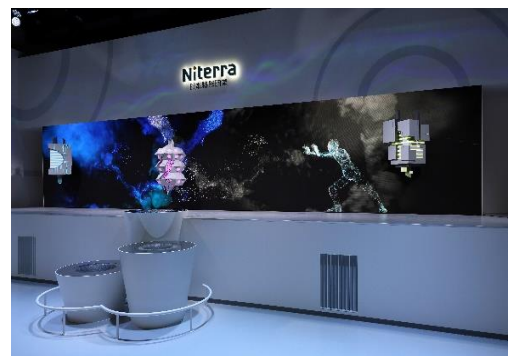
■Exhibit Overview

Niterra's exhibit presents "Autonomous Portable Circulation Technology" as a key initiative for a brighter future. This technology envisions a society where devices can autonomously deliver sustainable resources and energy to anyone, anywhere, and anytime. The exhibit concept, CyclusNiterrium - Niterra Laboratory for Circular Society, embodies the theme of "Brightening the Future of the Earth's Future with the Power of 'Water' and 'Air'."

-Exhibit Highlights-

(1)Water and Air Circulation Performance *Debut

In this immersive performance, Niterra leverages its circulation technology centered around the CyclusAqua. This symbolic water feature allows visitors to witness how water and air can transform to illuminate the Earth's future by mobile circulation devices.



Water Symbol, "CyclusAqua"

(2) Portable Circulation Devices for the Future ***Debut**

The exhibit will showcase three models of future circulation devices: (SOEC^{*1}, Methanation^{*2}, and SOFC^{*3}). These models signify a transition from current prevalent stationary devices to a vision of mobile units.

^{*1} SOEC: Solid Oxide Electrolysis Cell, a device that extracts hydrogen from water through electrolysis.

^{*2} Methanation: A technology that produces methane from hydrogen and carbon dioxide.

^{*3} SOFC: Solid Oxide Fuel Cell, a device that generates electricity and water through a chemical reaction between methane and oxygen.

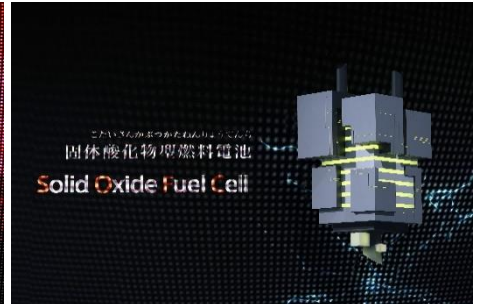
<Image Models>



SOEC (Solid Oxide Electrolysis Cell)



Methanation



SOFC (Solid Oxide Fuel Cell)

The exhibit demonstrates the functions of each device, allowing visitors to observe how water and air transform while highlighting the potential of Nitterra's circular technology.

(3) The Aerial Sense Device **(Debut - Physical Unit)**

Incorporating an ultrasonic generator and utilizing Nitterra's lead-free piezoelectric ceramics and haptic technology, users can experience tactile sensations related to the Niteons^{*4} special abilities. There are several Niteons, each with a unique ability that allows a different interactive experience. For example, the hydrogen Niteon "SuiSui," equipped with SOEC technology, electrolyzes water to generate hydrogen bubbles. Contact with these hydrogen bubbles lets users feel the sensation of popping bubbles.



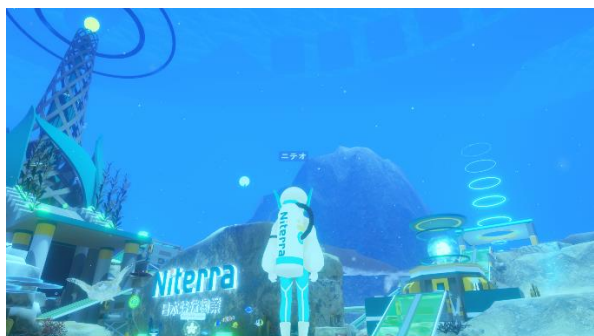
SuiSui, Interactive through the Aerial Sense Device

^{*4} Niteon: A coined word combining our English company name "Nitterra" and "Add-on," referring to a group of original characters (autonomous portable circulation technologies) embodying our circular technologies.

■ Virtual Expo: ***Debut**

A room at the Virtual Expo features two areas that provide an interactive and fun way to learn about circulation technology from a researcher's perspective in a world where Niteons are active. The first area, the Niteon undersea demonstration facility "Niterrium," enables visitors to engage in missions, conduct Niteon research, and perform biological surveys. The second area, the Niteon Lab, allows Niteon generation and exploration of various research materials.

<Images of the Virtual EXPO>



"Niterrium", Niteon's Undersea Demonstration Facility



Niteon Lab

<Reference Information>

-Expo 2025 Osaka, Kansai, Japan Future Society Showcase Project, Future Life Expo "Future City":
<https://www.expo2025.or.jp/en/future-index/future-life/city/>

-Niterra's Past Press Releases:

https://www.niterragroup.com/english/news/upload/dca19dd4ce7843ea7d168334494e1a33_1.pdf

<https://www.niterragroup.com/english/news/upload/b368de9f74dc65c93e90c24d318119f0.pdf>

-Niterra's Special Website for Expo 2025 Osaka, Kansai

<https://www.niterragroup.com/english/expo2025/>

About Niterra

Founded in Nagoya, Japan in 1936, Niterra Co., Ltd. (formerly NGK SPARK PLUG CO., LTD.) is renowned for its NGK-branded spark plugs and NTK-branded ceramic products. Niterra, a coined word combining the Latin words "niteo" (shine) and "terra" (Earth), was introduced in April 2023 to express the reborn company's commitment to sustainability through an evolving portfolio focused on ceramics and beyond. Under the corporate message "IGNITE YOUR SPIRIT," Niterra is now expanding into the growth fields of mobility, healthcare, environment and energy, and communications. The company's consolidated revenues in fiscal 2023 (to March 2024) totaled 614.4 billion yen (4,389 million USD). Niterra has 32 bases in Japan and 61 overseas, and approximately 16,000 employees worldwide. Please visit <https://www.niterragroup.com/english/>.