



(2022/02/16)

### **Silica glass guitar pick jazzes up UN International Year of Glass 2022**

An academic-industry partnership developed a glass guitar pic with unique acoustic characteristics

Fukuoka, Japan—Researchers at Kyushu University debuted the world's first silica glass guitar pick with a live performance at the United Nations International Year of Glass 2022 closing ceremony.

The pick was developed by Professor Shigeru Fujino of Kyushu University's Global Innovation Center, in collaboration with Kyoto Sangyo University, Ikeda Picks, and Kohoku Kogyo Co., Ltd.

As ubiquitous as it is, glass can come in different strength and structures. Window glass and the glass used on your phone are quite different after all. Whereas common glass contains different chemicals that alter their physical or optical properties, silica glass is composed of pure silicon dioxide, also known as silica, the main component of glass.

"The molecular structure of silica glass makes it more durable, has better light transmission, and is highly heat and chemical resistant," explains Fujino. "Humans have been using the material since ancient times. The jewel in Tutankhamun's scarab brooch is made of silica glass."

In 2018 Fujino's lab developed the technology to process silica glass into various shapes and contours, previously untenable by conventional methods, easily and economically. To demonstrate silica glass's unique high rigidity, lightweight, and vibration damping qualities, the group came up with the idea of making a one-of-a-kind guitar pick.

"Silica glass has higher mechanical strength and density than celluloid, the common material used in guitar picks," continues Fujino. "Its unique properties produce gorgeous and glittering high-frequency sounds that cannot be obtained with conventional guitar picks."

When the United Nations designated 2022 as the 'International Year of Glass' various events were held around the world to reflect on the history of the material's contribution to human progress. At the closing ceremony held at the University of Tokyo, Fujino introduced the silica glass pick adorned with an ukiyo-e style engraving. It was there that world-famous jazz guitarists, Joshua Breakstone and Satoshi Inoue perform live with the world's first silica glass guitar picks.

The team is in talks with Ikeda Picks and Kohoku Kogyo Co., Ltd., to make these picks commercially available to all musicians.

See the silica guitar pick in action, performed by Associate Professor Shinichiro Ito of Kyoto Sangyo University who collaborated in its development.

<https://youtu.be/rLYEECzWxAg>

Listen to some music performed with the silica guitar pick here.

<https://soundcloud.com/high-purity-silica-glass>

Fujino lab Instagram with other silica glass creations

[https://www.instagram.com/fujinoglasslab\\_kyushu\\_univ\\_jp/](https://www.instagram.com/fujinoglasslab_kyushu_univ_jp/)

Fujino lab introductory video

<https://youtu.be/ZxgYuaxedh8>

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### **About Kyushu University**

[Kyushu University](#) is one of Japan's leading research-oriented institutes of higher education since its founding in 1911. Home to around 19,000 students and 8,000 faculty and staff, Kyushu U's world-class research centers cover a wide range of study areas and research fields, from the humanities and arts to engineering and medical sciences. Its multiple campuses—including one of the largest in Japan—are located around Fukuoka City, a coastal metropolis on the southwestern Japanese island of Kyushu that is frequently ranked among the world's most livable cities and historically known as Japan's gateway to Asia. Through its [Vision 2030](#), Kyushu U will 'Drive Social Change with Integrative Knowledge.' Its synergistic application of knowledge will encompass all of academia and solve issues in society while innovating new systems for a better future.

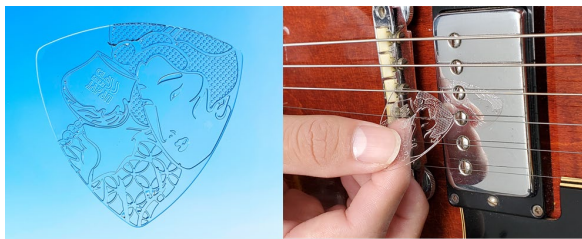


Fig. 1. (Image) The silica glass pick used in the closing ceremony at the UN International Year of Glass. Cheers to the benediction of the International Year of Glass and our future as bright as glass!  
(Credit: Shigeru Fujino)

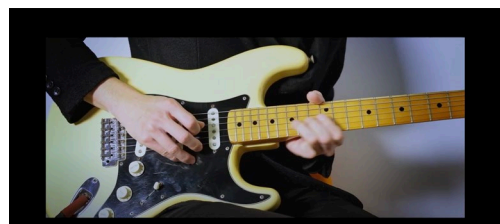


Fig. 2. (Video) The world's first high-purity silica glass pick performed by Kyoto Sangyo University Associate Professor Shinichiro Ito.  
(Credit: Shinichiro Ito/Shigeru Fujino)

Shigeru Fujino, Professor  
Global Innovation Center  
TEL: 092-583-8773  
Mail: [fujino.shigeru.900@m.kyushu-u.ac.jp](mailto:fujino.shigeru.900@m.kyushu-u.ac.jp)