

To Whom It May Concern

Company name	Toyo Gosei Co., Ltd.
Name of Representative	Yujin Kimura President and Representative Director (Code No: 4970 TSE Standard Market)
Contact	Natsuo Watase Director General Manager of Corporate Planning Department
TEL	+81-3-5822-6170

Presentation on AR UV Nanoimprint Resin
at SPIE (The International Society for Optical Engineering)

Toyo Gosei Co., Ltd. (President and Representative Director: Yujin Kimura) will be presenting on the research and development of resin for AR UV nanoimprint at SPIE AR | VR | MR, to be held in San Francisco, California, USA, from January 29th (Monday) to 31st (Wednesday), 2024. This marks the first time that our company will be presenting at SPIE AR | VR | MR.

1. About SPIE AR | VR | MR

SPIE (The International Society for Optical Engineering) is the international society for optics and photonics. It organizes conferences in various fields, including optoelectronics, remote sensing, information communication, and mechanical optics, where researchers, engineers, investors, entrepreneurs, customers, and suppliers from around the world participate.

Our company will participate in the AR (Augmented Reality) | VR (Virtual Reality) | MR (Mixed Reality) conference, contributing to an oral session on the research and development of UV nanoimprint resins.

2. Details of the Presentation

Nanoimprint technology is a fine patterning technology allowing the transfer of nano-scale patterns from the mold to resin on the substrate. Among the technologies, UV nanoimprint has the advantage of fabrication patterns at angles that were challenging with traditional lithographic pattern techniques. Furthermore, the processing flow consists of four simple stages: coating, pressing, curing, and releasing of the mold, making it cost-effective and easy to introduce for mass production. Nanoimprint technology is expected to witness market expansion against the backdrop of the metaverse, and the potential for application development using nanoimprint technology is broadening beyond the AR glasses market. In this context, using a working stamp replicated from an expensive master mold has become the standard practice. In this conference, we plan to present results achieved using our working stamp resin "PAK-TRAD series," replicating the shape of the master mold and subsequently using the working stamp repeatedly in the product molding process. This approach demonstrates excellent reproducibility and high processing accuracy in fabrication of high refractive index resin products.

Title: Durability evaluation of repeated imprint using working stamp: influence of productivity for diffractive optical elements

Presenter*/Author: Taigo Akasaki*, Risa Tanaka, Takeshi Osaki, Toyo Gosei Co., Ltd.

Date: 29 January 2024 · 9:40 AM – 10:00 AM PST

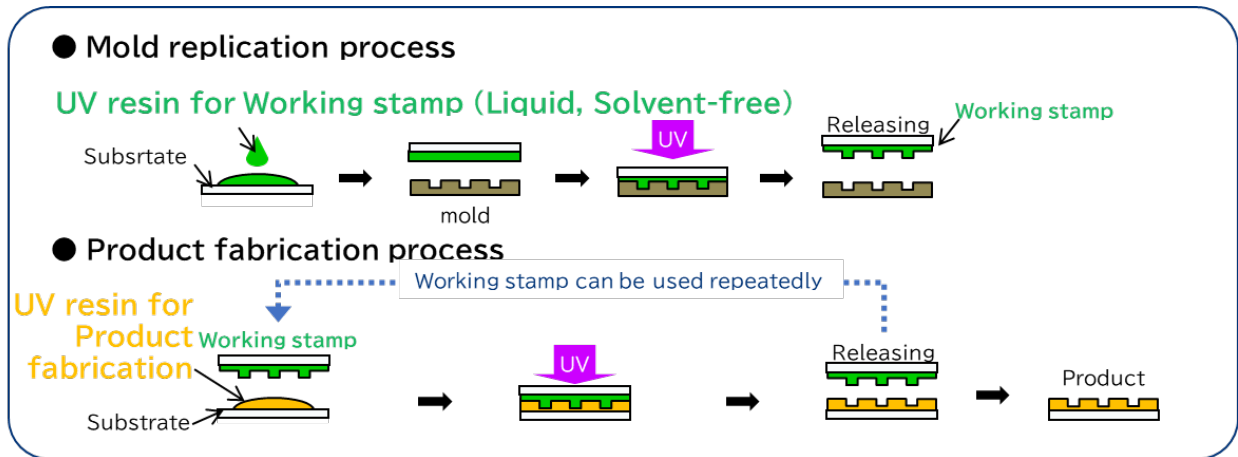
Venue: Moscone Center, Room 3006 (Level 3 West)

Session:9 Fabrication and process for XR technology

Website:<https://spie.org/conferences-and-exhibitions/ar-vr-mr>

【Features of our UV nanoimprint resins for working stamps】

- High durability for repeat imprinting
- High releasing property
- Solvent-free, no pre-bake process for solvent removal
- UV cure only, no post-bake process to ensure curing



End