

Tooz and North Ocean Photonics present planar diffractive waveguide with push/pull vision correction at SPIE | AR VR MR

tooz and North Ocean Photonics announced their collaboration, presenting a planar diffractive waveguide integrated with vision correction for AR glasses.

SAN FRANCISCO, CALIFORNIA, USA, January 30, 2024 /EINPresswire.com/ --

At Photonics West SPIE | AR VR MR 2024, [tooz](#) and [North Ocean Photonics](#) announced their collaboration, presenting a planar diffractive waveguide seamlessly integrated with vision correction for Augmented Reality (AR) glasses. The partnership between the ZEISS venture and the Chinese high-tech enterprise signifies a leap forward in the market readiness

of prescription (Rx) technology for waveguides. Attendees at the event can witness the results of this collaboration firsthand through prototype demonstrations at the tooz booth.

Photonics West SPIE | AR VR MR 2024 in San Francisco is the premier conference and exhibition for hardware and technologies for augmented, virtual, and mixed reality. Running from January 29 to January 31, the event provides a platform for companies to showcase their latest innovations, establish connections with potential customers and partners, and shape industry trends.

A powerful alliance for Rx-enabled planar waveguides

As part of his keynote on the SPIE stage, tooz CEO Dr. Kai Stroeder announced the expansion of the company's prescription-based optics portfolio through its strategic collaboration with Chinese micro-optics company North Ocean Photonics. The partners joined forces in 2023 to deliver diffractive planar waveguides with seamlessly integrated, individual vision correction.



tooz and North Ocean Photonics are joining forces to drive the market readiness of prescription technology for waveguides. (© tooz technologies GmbH)

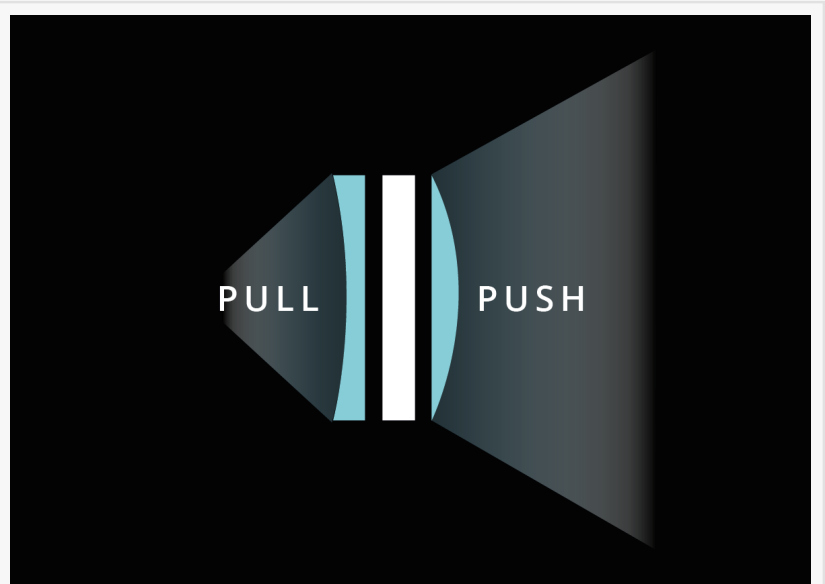
Through a combination of push and pull lenses attached to the planar waveguide, the smart glasses wearer can then see both the AR content and the environment sharp and the augmentation in the desired distance.

North Ocean Photonics is focused on the development and production of its planar diffractive waveguide. tooz is taking care of upgrading these waveguides with a seamless, customized Rx solution. With this partnership in place, the two companies aim to cater the end consumer market with AR optics for all-day smart glasses, providing vision correction for a growing market driven by rising prevalence of myopia worldwide.

Cutting-edge planar waveguides by North Ocean Photonics

Headquartered in Shanghai, China, North Ocean Photonics is a high-tech company specializing in wafer-level optics and integrated optics. For AR applications, the company has developed a family of planar diffractive waveguides characterized by their thinness, wide field of view, and exceptional optical performance. They are compatible with both monochrome and color micro-LED displays and can be utilized for monocular as well as binocular devices. Currently in mass production on a production line in China, North Ocean Photonics' waveguides are easily scalable.

“With many years of experience in designing and manufacturing diffractive AR waveguides, North Ocean Photonics continues to expand its waveguide family, aiming to meet customers’ various needs. However, the global prevalence of myopia presents a substantial challenge to the adoption of AR all-day smart glasses.” says Tao Lin, the Chair of North Ocean Photonics.



The planar diffractive waveguide by North Ocean Photonics is upgraded with customized push/pull correction lenses by tooz. (© tooz technologies GmbH).



Vision correction in AR glasses is a growing market demand served by tooz and North Ocean Photonics. (© tooz technologies GmbH).

“Through this partnership with tooz on customizable vision-corrected solutions, we added another dimension of functionality to our waveguides which will be a crucial step to enable mass adoption in the future.”

tooz’ unique expertise in optics and Rx enablement

In addition to its proprietary [curved, prescription waveguide](#), tooz possesses extensive expertise in incorporating vision correction into planar waveguide optics from other industry players. The seamlessly integrated, waveguide-based correction solution enables smart glasses to be worn by end consumers with all kinds of visual needs, most importantly nearsightedness (myopia) and farsightedness (hyperopia). Thus, people with vision impairment will see both the visual augmentation and the surroundings clearly and sharply.

“With North Ocean Photonics, we found the perfect partner to advance cutting-edge AR optics to the next level.”, says tooz CEO Dr. Kai Stroeder. “The prescription enablement of planar waveguides in existing eyecare value chains will be a game changer for the accelerated market acceptance of AR hardware.”

First demonstration at SPIE | AR VR MR 2024

The North Ocean Photonics planar waveguide with Rx enablement by tooz is showcased for the first time at the Photonics West SPIE | AR VR MR 2024 exhibition in San Francisco, USA. Visitors have the exclusive opportunity to experience the waveguide prototypes with both monochrome and color displays at the tooz booth. Additionally, tooz showcases its own curved waveguide with prescription in its renowned reference designs ESSNZ Berlin and ESSNZ Slim.

About tooz

tooz technologies, founded in 2018 as a spin-off of ZEISS, is a B2B engineering and licensing company. On a mission to upgrade normal prescription glasses with digital virtual screens, tooz develops optical engines and prescription solutions to provide cost effective, unobtrusive smart glass solutions for all-day use with vision correction.

For more information, visit www.tooz.com

About North Ocean Photonics

North Ocean Photonics is a high-tech company established in 2016. With the close loop IDM capability, NOP can provide customized wafer-level optics solutions. Currently, three major product lines have been launched, including 3D depth sensing and LiDAR, AR/MR waveguide and board-to-board and chip-to-chip (5G) optical interconnect.

For more information, visit www.nophotonics.com

Leonie Hoerauf

tooz technologies GmbH
leonie.hoerauf@tooztech.com

This press release can be viewed online at: <https://www.einpresswire.com/article/683820042>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2024 Newsmatics Inc. All Right Reserved.