

## .: Top Stories

### Eight Predictions for the Photonics Industry in 2023

2022 saw war break out in Europe, supply chains strained by the everlasting pandemic, and, just this month, a long-anticipated breakthrough in laser fusion making global headlines and raising hopes for the future prospect of green energy. And the laser industry? Read on.

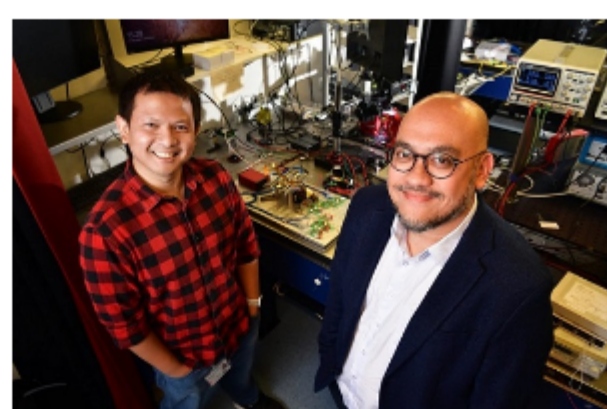
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### Microwave Photonic Filter Shifts Paradigm for Future Communications

Researchers from the University of Twente developed a multifunctional PIC that enables programmable filtering functions with a reported record-high dynamic range. The advancement addresses concepts and technologies that include integration, versatile programmability, and techniques for enhancing key radio frequency performance metrics. Though prior R&D in microwave photonics has targeted improvements to these aspects, the researchers said, the recent work introduces an approach to do so simultaneously in a single circuit.

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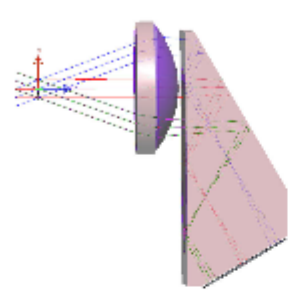
### Optical Tweezer System Conducts High-Accuracy Cell Screening

Researchers from the Single-Cell Center of the Qingdao Institute of Bioenergy and Bioprocess Technology (QIBEBT) of the Chinese Academy of Sciences have proposed an optical tweezer-assisted pool-screening and single-cell isolation (OPSI) system that could be used to screen bacterial and cancer cells. Tests showed the system achieved a 99.7% purity of sorting target cells of bacteria, yeast, and humans.

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### [CODE V & LightTools Optical Design Software](#)

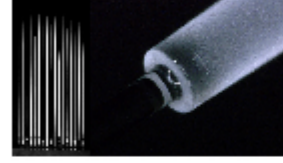
#### Synopsys Inc., Optical Solutions Group

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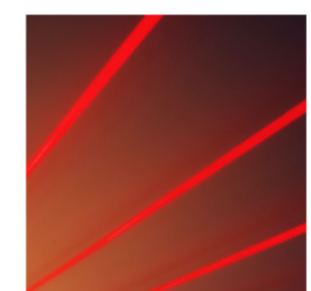
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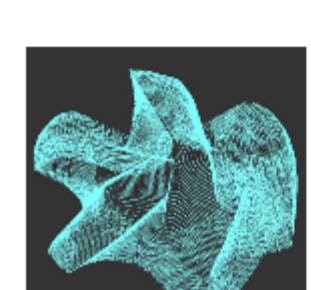


### Key Considerations for Part and Sample Holding in Interferometric Characterization

Wed, Jan 18, 2023 1:00 PM - 2:00 PM EST

Interferometry is a powerful tool when used to characterize optical surface form errors, as well as accumulated errors, when measuring transmitted wavefronts. Opticians and engineers have many methods available to facilitate such measurements but can often overlook the effects caused by part holding or fixturing. Frank DeWitt of XONOX Technology Inc. discusses what should be considered when approaching part holding and fixturing for interferometric measurements, the features that are critical to the item being measured, and the required outputs of the measurement.

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### 3D Optical Metrology: Capabilities for a New Era

Thu, Jan 19, 2023 1:00 PM - 2:00 PM EST

Kevin Harding of Optical Metrology Solutions provides an overview of the many 3D optical metrology tools available today. He discusses applications from general manufacturing of durable parts to precision component measurement. He shares examples, typical performance specifications, and the limitations of the many tools on the market today. Harding then considers each technology for both the type of application it is best suited to address, as well as its speed and resolution. Finally, he shows where each technology fits within the bigger picture of practical applications.

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