

This Week in PHOTONICS



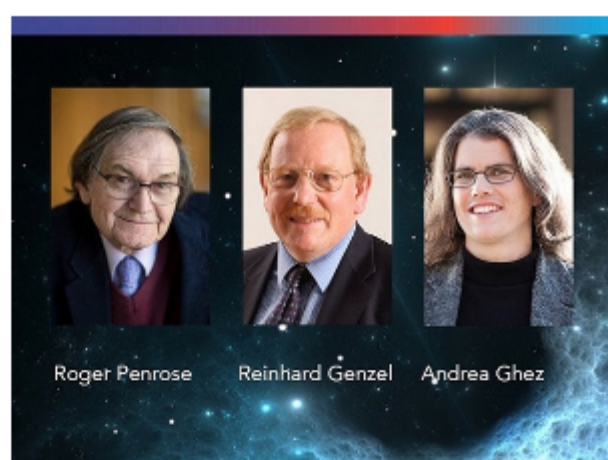
2021 Prism Awards Call for Entries Deadline: October 31

.: Top Stories

Adaptive Optics, Infrared Imaging in the Spotlight as Three Earn Nobel Prize in Physics

Laureates Roger Penrose, Reinhard Genzel, and Andrea Ghez have been awarded the 2020 Nobel Prize in physics for discoveries related to black hole formation (Penrose) and of a black hole at the center of the Milky Way (Genzel and Ghez). The technique of infrared speckle imaging was vital to the observations of Genzel and Ghez, who will share half of this year's prize award.

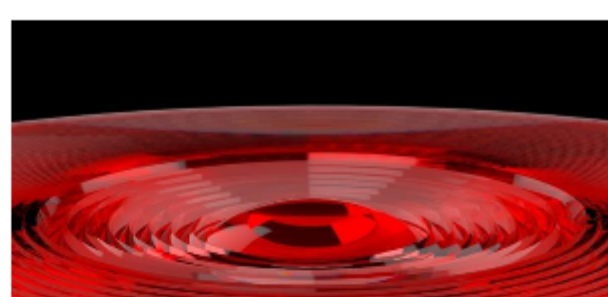
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Ultrathin SRS Microscopy Lens Conquers Cross-Phase Modulation, Clears Path for Diagnostic Imaging

King Abdullah University of Science and Technology (KAUST) researchers developed an ultrathin stimulated Raman scattering (SRS) lens that will simplify and improve the quality of molecular-level microscopic analysis. The optical device combats the likelihood that intense interactions between laser pulses and samples will generate cross-phase modulation.

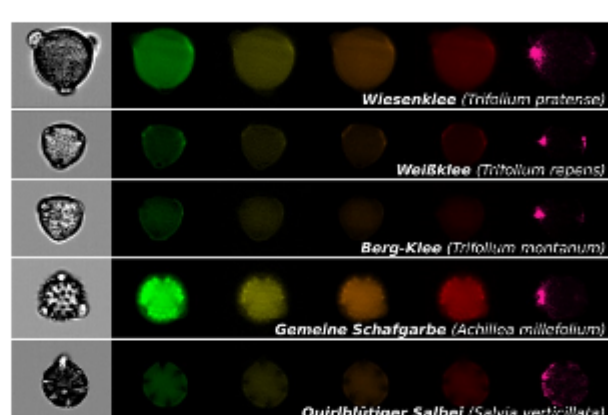
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Imaging Flow Cytometry and Microscopy Combine for Pollen Identification

Collaborating scientists from the Helmholtz Centre for Environmental Research (UFZ) and the German Centre for Integrative Biodiversity Research (iDiv) developed an image-based particle analysis system, reliant upon laser light and AI, to automate the process of pollen analysis. The method combines flow cytometry and deep learning to create a tool that identifies species and quantifies pollen grains in a sample.

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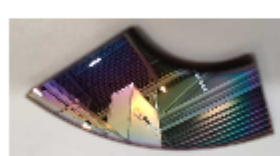
peaXXus - Multi-spot Optics for Multi-kW Lasers

AdlOptica GmbH
Laser beam shaping by splitting laser energy and

focusing in nine focuses is realized by peaXXus optics of patent pending design developed for laser material processing techniques like welding, cladding based on multi-kW lasers. Focusing a laser beam in 3x3 matrix of separate focuses with variable energy distribution is a powerful and flexible tool with variable energy distribution...

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Delta Optical Thin Film A/S

In addition to their well-known line of Continuously Variable Filters Delta Optical Thin Film A/S now also offers Circular Variable Filters. These are interference narrow bandpass filters of advanced design, which are deposited on circular substrates, called segments. Film thickness, and therefore the wavelength of peak transmittance varies linearly and continuously with angular position on the segment.

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.: Upcoming Webinars

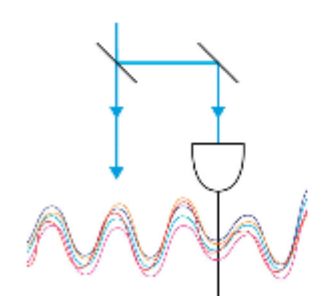


Lightguides for Mixed Reality Glasses: Design Techniques and Challenges

Wed, Oct 21, 2020 10:00 AM - 11:00 AM EDT

In AR and MR glasses, the propagation of light through light guides with diffraction gratings requires simulation techniques beyond ray tracing. Lightguide design for AR/MR constitutes an emerging technology. Some of the technical challenges are understood and solved. Others remain to be investigated and hurdles need to be overcome. Suitable modeling and design techniques, as well as software, are indispensable for further progress. This webinar, presented by Frank Wyrowski, CEO of LightTrans International UG, will explain a suitable physical-optics modeling technology, as well as challenges in lightguide design with different layouts and architectures. This webinar is sponsored by Bühler Leybold Optics.

[Register Now](#)



Focus on Recovering Signals in Optical Experiments

Thu, Oct 22, 2020 11:00 AM - 12:00 PM EDT

Capturing meaningful information while avoiding sizable overheads is crucial for all experiments in optics. In this webinar, Claudius Riek, Ph.D., of Zurich Instruments will look into the effect that specific settings for spectroscopy instruments have on the measurement results, focusing on: filter function, filter order and time constant. He will then explore the relevance of typical properties of electronic measurement devices for optical experiments such as dynamic range, measurement bandwidth and signal input noise. Presented by Zurich Instruments.

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