

This Week in PHOTONICS



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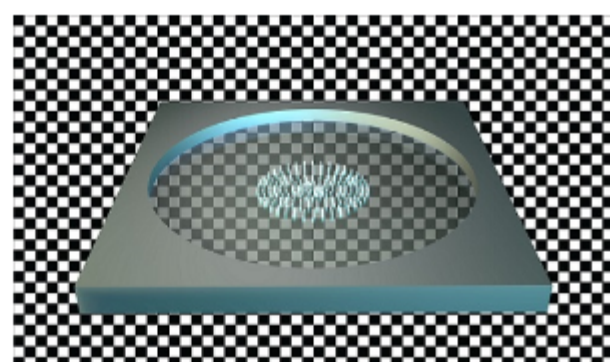
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Top Stories

Metalens Design Knocks Down the Nanopillars

Researchers at the Harvard John A. Paulson School of Engineering and Applied Sciences (SEAS) developed a metalens that uses deep narrow holes, rather than tall pillars, to focus light to a single point. The metalenses were fabricated using conventional semiconductor industry processes and standard materials, allowing it to be manufactured at scale in the future.

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Quantum Chip Prototype Bridges Quantum and Traditional Networks

Researchers from Rochester Institute of Technology (RIT) and national photonic device company AdvR designed and built a quantum chip prototype that the developers say is able to bridge traditional fiber optic networks with quantum computing networks.

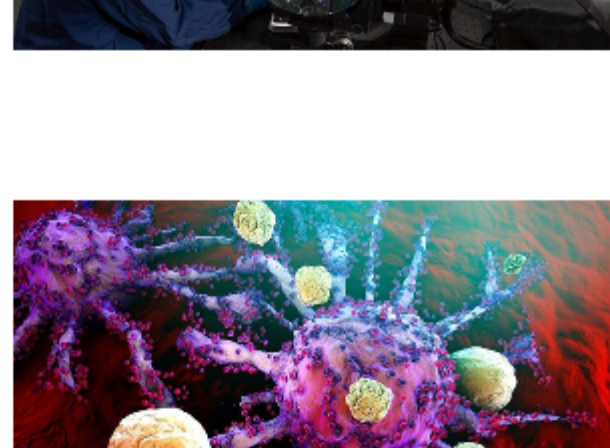
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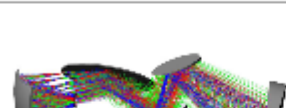
Raman Spectroscopy and Machine Learning Team Up to Predict Immunotherapy Response in Patients

Using Raman spectroscopy and machine learning, a team at Johns Hopkins University developed a noninvasive technique to assess how cancer patients will respond to immunotherapy. The researchers used Raman spectroscopy to map the biochemical composition of tumors in detail, and machine learning to determine biomarkers indicating patient response to immunotherapy treatment.

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Featured Products



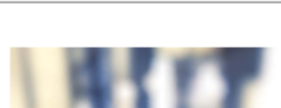
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Upcoming Webinars

Ray Optics Simulations

Tue, Nov 2, 2021 2:00 PM - 3:00 PM EDT

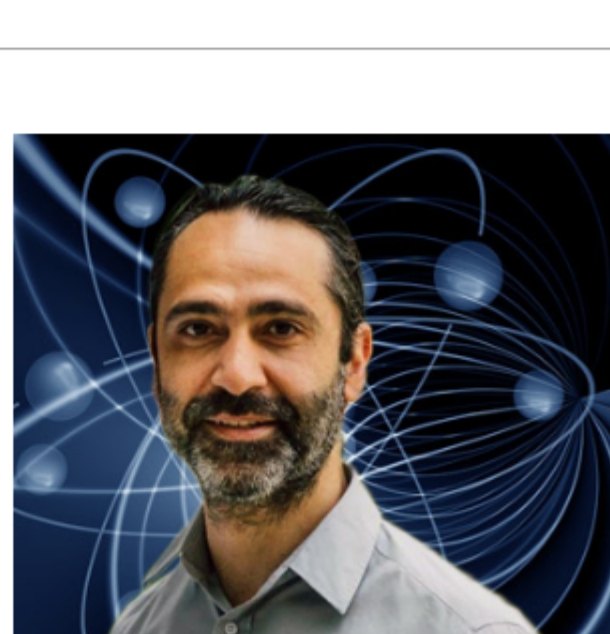
Tune into this webinar to learn about optical ray tracing using the COMSOL Multiphysics® software. Christopher Boucher of COMSOL presents a live demo in the software. Boucher shows how to create a fully parameterized geometry of a typical lens system; trace rays through the system; and post-process the results. He also explains more specialized ray features, such as the analysis of ray intensity and polarization, and how COMSOL's Ray Optics Module add-on can be combined with structural and thermal simulation for highly accurate structural-thermal-optical performance (STOP) analysis. Presented by COMSOL, Inc.

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All Things Photonics

Ivan Aprahamian, author of the 2020 *ACS Central Science* paper "The Future of Molecular Machines," kicks off Season 4 with a look at recent advancements to light-activated molecular motors. Applications include smart drug delivery and nanomedicine, applied spectroscopy, functional materials, and more. **Nick Vamivakas**, University of Rochester professor of quantum optics and quantum physics, discusses how to build a quantum workforce: How do we educate its future members, what will they do, and how do we chart their progress?

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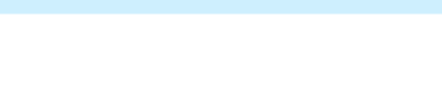
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