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Optical Coatings Take a Leap Forward

A novel crystalline coating technique that produces low-loss mirrors could help accelerate progress in the development of lasers for precision measurement applications. The work, a collaboration between the University of Vienna and JILA, a joint institute of the University of Colorado at Boulder and NIST, builds on advancements in semiconductor lasers, quantum optomechanics and microfabrication to demonstrate low-loss mirrors based on substrate-transferred epitaxial multilayers that exhibit both unprecedentedly low mechanical loss and high optical quality. The creation of such high-quality optical coatings could have a significant impact on the performance of narrow-linewidth lasers used in precision sensing applications.

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FEATURED VIDEO

Continuum - Vista Dye Laser

The Vista dye laser offers the highest resolution (<0.03 cm-1) with the highest conversion efficiency (>30%) and the finest precision scanning, all combined to deliver optimal performance with every scan. Continuum (408) 727-3240 www.continuumlasers.com

Plasmonics Gives Performance Boost to Polymer LEDs, Solar Cells

A new plasmonic material based on carbon dot-supported silver nanoparticles, which produce a surface plasmon resonance effect, has boosted the performance of polymer LEDs and polymer solar cells while keeping their structure simple.

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3-D Display Doesn't Disturb 2-D Viewers

Watching 3-D TV with stereo glasses can be cumbersome, and taking them off to give your eyes a break only leaves you staring at a blurry image. But a 3D+2D display could change that, enabling viewers with glasses to see images in 3-D, while those without them see clear images in standard 2-D.

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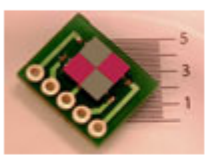

Multispectral Photodiodes

PIXELTEQ

PixelSensor multispectral photodiodes combine custom spectral filters with the fast linear response of photodiodes - opening new possibilities for application-specific optical sensors.

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Off-Axis Light Weighted Hyperboloid

Hampton Controls

Hampton Controls manufactures a variety of optical components including large mirrors and lenses up to 2.5 meters, off-axis parts, with large size coring, lightweighted substrates, and extremely tight optical surface requirements.

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IsoPlane Spectrograph

Princeton Instruments

Inspired Innovation - Imagine a spectrograph that sharply focuses data at every wavelength, allows the unrestricted use of large-format detectors, and directs photons to where they are supposed to go.

More info >>

Faraday Isolators

Electro-Optics Technology

EOT's 2µm Faraday Isolator is ideal for use with thulium and holmium lasers in the 2000 to 2100nm region. The isolator provides >30dB isolation for power levels up to 30W and has a pulsed damage threshold of 5J/cm2 at 10ns.

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E-Skin Lights Up at a Touch

A user-interactive sensor network on flexible plastic could help robots become more touchy-feely, literally, enabling a new form of human-machine interaction.

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Asher Promoted to President at Princeton Instruments

Asher had been vice president of product development and engineering at PI for the past eight years.

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Nanowafer Tunable for Optimal Light Absorption

A nanoengineered wafer that can be optimally tuned for light absorption is the thinnest, most efficient absorber of visible light to date, report engineers at Stanford University.

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On this edition of the industry's only weekly newscast: a nanowafer tunes for optimal light absorption, subtle differences in butterfly wings could inspire new materials, paper-thin electronic skins light up at a touch, and a 16-year-old from Oregon develops a method to optimize quantum dots for solar applications. Hosted by Photonics Media's Laura Marshall and Melinda Rose.

Subtle Butterfly Wing Differences Could Inspire New Materials

Subtle differences in the small crystal structures responsible for the varied patterns of wing color in multiple butterfly species within a single genus could lead to new material coatings that change color by design.

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Advanced Thin Films Wins Optical Coatings Challenge

Optical designers Darren Berns and Zach Gerig of Advanced Thin Films achieved the best result for their coating design in the 2013 Optical Interference Coatings Conference Manufacturing Problem Contest.

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Photodetector Discerns Polarized Light Intrinsically

Few photodetector materials can discern polarized light — individual electromagnetic waves oscillating parallel to one another — directly without the use of a grate or a filter. For a newly created carbon-based broadband photodetector, however, polarimetry is intrinsic to the active material.

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Industry Events

SPIE Optics & Photonics 2013 - August 25 - 29, 2013 · San Diego, CA
Visit Photonics Media at Booth 416

SPIE Optics + Photonics is the largest interdisciplinary technical conference in North America, presenting the latest research and technologies in solar, nano, optics, photonics and space optics. The conference's four symposia (Nanoscience + Engineering, Solar Energy + Technology, Organic Photonics + Electronics, and Optical Engineering + Applications) will offer more than 3200 presentations, including plenary and featured talks on topics such as metamaterials for molded optical wavefronts, asteroid-tracking and collision-mitigation, Kepler's search for Earthlike planets and nanoparticle technology to convert solar energy directly into saturated steam for sterilizing tools and waste. The show also will include more than 40 professional development courses, poster sessions, panel discussions and a tribute to H. John Caulfield.

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